

**FOOD FOR LIFE: AN EXPLORATION OF CONTEXT, METHODOLOGY  
AND RESEARCH IMPACT OF A COMPLEX PROGRAMME  
EVALUATION**

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Jennie Naidoo and Jane Wills (eds)



## *Health studies : an introduction*

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# Sociology and health

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## Learning outcomes

This chapter will enable readers to:

- Identify the key characteristics of sociology as a discipline
- Understand key sociological concepts and debate their relevance to health and healthcare
- Understand research evidence exploring the social patterning of health and disease
- Debate various theoretical explanations for the social patterning of health and disease
- Understand theories and concepts relating to the social impact of healthcare and the social roles of the healthcare professions

## Overview

When we become ill, it sometimes seems that bad luck has singled us out for special attention, yet an extensive body of evidence suggests that health and disease are patterned in complex ways that defy notions of luck or chance, indicating a more systematic process of disease causation. In Part 1, the social patterning of health and illness is explored. Evidence linking social divisions, such as class, gender and ethnicity, with experiences of health and healthcare is examined. Finding adequate explanations for the persistence of social inequalities, as well as strategies to eliminate or reduce them, is an important goal of health policy, and one to which sociology can make a distinctive contribution. Part 2 explores the methodological approaches of sociology to understanding the ways in which people interpret and manage ill health in their lives. The attempts of health professionals to manage and cure ill health have come under sociological scrutiny. In particular, sociologists have looked beyond the altruism often assumed of health professionals to examine the individual, group and social impact of professional practice. Sociology relies on evidence and theory. In addition to a critical examination of the available sources of evidence, such as mortality rates, sociology involves the development and testing of theoretical frameworks and perspectives that seek to explain broad patterns of health and illness.

## Introduction

In contrast to disciplines such as biology and psychology, which focus on health at the individual level, sociology examines the social dimensions of health, illness and healthcare. Sociology is a broad discipline including diverse approaches and perspectives. Some of the key questions addressed by sociologists researching health and illness include:

- What accounts for socioeconomic inequalities in health and illness?
- How do social structures, institutions and processes affect the health of individuals?
- What are the characteristics of healthcare work?
- What is the nature of professional–client relationships?
- How do ordinary people make sense of health and illness?
- What impact do healthcare services have on individuals and society?

The ideas and practices surrounding Western scientific medicine have been a central concern within sociology. These ideas are often taken for granted as the basis on which much healthcare provision is organized. However, they only emerged alongside the economic and cultural changes brought about by the



spread of industrial capitalism during the eighteenth and nineteenth centuries (Stacey, 1988). This period was characterized by urbanization and a changing class structure. The growth of the middle classes provided new markets for healthcare, which supported the newly established profession of medicine.

These events were underlined by a widespread support for the ideas as well as the practices of medicine. However, support for scientific medicine reached a peak in the postwar period and medicine's dominance in healthcare has since been challenged. Scientific medicine is seen as limited, in that it draws on the belief that mind and body are separate entities. This notion of 'Cartesian dualism', named after the philosopher Descartes, is seen as problematic for at least two reasons:

1. It leads to a rather mechanistic approach in which illness and disease are treated as mechanical malfunctions
2. It leads to a reductionist approach, that is, it reduces diseases to a single, usually physical, cause.

This form of scientific medicine is challenged by complex, chronic conditions that affect an increasing number of people. For example, there is no real agreement on the existence of physical causes for conditions such as repetitive strain injury and myalgic encephalomyelitis (ME). Scientific medicine has, however, always coexisted with a number of rival or alternative approaches. In recent years, the support for such alternatives seems to have grown, with an increasing number of people seeking help from complementary therapists as well as, or instead of, medical professionals.

## Part 1 The contribution of sociology to health studies

### example 5.1

#### Application of sociology to contemporary health issues

- Large-scale social upheavals often follow sudden changes in the global economy. For example, the 2008 collapse of international financial markets led to a rapid increase in rates of unemployment and poverty. Drawing on theories such as political economy, social capital and social solidarity, sociologists seek to explain how such changes impact on patterns of mental and physical health
- The care provided by healthcare

professionals, for example nurses in hospital settings, is often under the public and political spotlight following reports of negligence or malpractice. In this context, a sociological approach might seek to explore how professionals manage their own everyday routines and behaviours.

- 'Self-surveillance' may have a greater bearing on practice than overt forms of control or sanction, and have implications for everyday interactions with patients
- Recent evidence in many Western countries suggests that rates of illegal drug use are falling among younger age groups.

This appears to be a reversal of a general upward trend since the 1970s. Sociologists are interested to explain the social processes at work that might account for this phenomenon. An intriguing parallel to this decline has been the rise of the internet and, in particular, social media. We might speculate that the use of social media is leading to changes in young people's health-related behaviour

- Rates of tuberculosis (TB) are increasing in high-income countries, having declined steadily throughout the twentieth century. Some commentators have suggested that this rise is partly due to migrants from low-income countries – particularly sub-Saharan Africa and the Indian subcontinent – who are more likely to carry the TB infection. Sociologists are interested not only in investigating the claims for this

link, but also in examining the implications for defining migrants as a 'risk group', including the potential for fuelling racial discrimination in healthcare

- Post-traumatic stress disorder (PTSD) has been used as a diagnostic category for people who are severely affected by major life events such as threat of injury, sexual assault or threat of death. Symptoms include chronic anxiety, distressing flashbacks and blocked memories. PTSD is increasingly applied to victims of recent military conflicts and natural disasters. Sociologists are interested in evidence of the societal risks that might lead to PTSD, but also examine how ideas of PTSD have become commonplace and the wider implications of this label for how we perceive and respond to risk more generally

Sociologists have sought to understand these diverse perspectives on health. They have examined the conditions of healthcare provision and the social relationships between healthcare providers and recipients. Healthcare institutions and their social context have been an important focus of study for sociologists. Social factors such as **gender**, for example, seem to exert a powerful influence on the makeup of the various health professions, particularly nursing and medicine.

Sociology provides a number of well-established approaches to questions such as those about the social patterning of health and disease and the social impact of healthcare interventions. While sociology overlaps with other disciplines such as epidemiology, psychology and social policy, sociology is also a distinct discipline with its own theoretical and methodological frameworks. For example, while sociologists draw on epidemiological data to analyse patterns of health and illness, they are concerned to understand the social processes affecting illness and healthcare rather than mapping the aggregate population risk. Similarly, while sociologists increasingly share with psychologists a concern with subjective experiences of ill health, they emphasize social and cultural rather than individual aspects of these.

Sociological writings are infused with key concepts such as social class, social context, social structure and social process. There is no single shared understanding among sociologists about the definitions of these concepts, although notions of power are central to many sociological accounts of health and illness. Recently, in response to wider socioeconomic and cultural changes, new debates and perspectives have emerged. Changing experiences of work,

the impact of globalization on economic and cultural life, and changing ideas about gender roles and emerging patterns of family life have all influenced sociological writings. The debate is reflected in increasing concerns with, for example, identity, consumption, the body and the emotions. Sociologists have also debated whether these changes reflect an intensified late modern society or herald a new postmodern condition. At the same time, central themes such as social divisions of **class**, gender and **ethnicity** remain central to the sociology of health and illness.

## Socioeconomic inequalities in health

A key area that sociology has investigated in relation to health is that of **social inequalities** and their impact on health. During the last century, life expectancy in relatively affluent countries such as the UK, the US and Europe has risen steadily, yet there remains a strong inverse relationship between mortality and morbidity rates and socioeconomic status (Townsend and Davidson, 1982; Adler et al., 1994; Roberts and Power, 1996; Drever and Bunting, 1997; Acheson, 1998; Kunst et al., 1998; van Rossum et al. 2000; Lantz et al., 2001; Marmot et al., 2010; Mackenbach, 2012). Such inequalities in health exist not only within high-income countries but are a recurrent feature between social groups in all national settings (WHO, 2008).

See Chapter 3 for more details about data collection and the interpretation of epidemiological data.

connections

In the UK, the Report of the Working Group on Inequalities in Health, known as the Black Report (Townsend and Davidson, 1982), examined standardized mortality ratios for different social classes in order to assess the scale of inequality and monitor changes over time. The working group used occupational class as a measure of inequality, adopting the Registrar General's classification of social class 1 (professional occupations) to social class V (unskilled manual occupations). The well-known findings of the Black Report include a marked and persistent difference in mortality rates between the occupational classes, for both sexes and at all ages. A steep class gradient, showing that the risk of death increases with lower social class, was observed for most causes of death. The pattern for respiratory diseases was particularly strong. Babies born to parents in social class V were found to be at double the risk of death in the first month of life compared with the babies of professional class parents.

The authors concluded that the introduction of the NHS, which aimed to provide free healthcare to all regardless of income or social status, had not eliminated health inequalities. Furthermore, patterns of relative inequality seemed to have changed little over time despite an overall improvement in life expectancy. In relation to infant mortality, social class differences had actually increased during key periods. Mortality alone was acknowledged as a crude indicator of population health. Evidence from sources such as the General

Household Survey was presented to show that patterns of morbidity followed a similar class gradient to that of mortality, with people in lower socioeconomic groups reporting higher levels of ill health than those in higher socioeconomic groups. Finally, inequalities were also found to exist in the utilization of health services, with working-class people making less use of services and receiving less good care than their middle-class counterparts.

The original report (1980) received a rather frosty reception by the then Conservative government, which seemed reluctant to embrace the notion of health inequality. More recently, the changing public health agenda has encouraged a renewed focus on socioeconomic influences on health. This has been underlined by a concern with widening income inequalities and the growing problems of poverty and homelessness. Subsequent independent inquiries, notably the Acheson Report (1998) and the Marmot Review (Marmot et al., 2010), found that inequalities in health have not only persisted but have, in some cases, become greater. Other factors, such as ethnicity and housing status, were also found to be associated with increased risk of mortality and morbidity. Socioeconomic status is also linked to health-related behaviours such as cigarette smoking and dietary habits. For example, the Acheson Report found that the percentage of smokers among men in the unskilled manual classes was more than two and a half times that seen in the professional classes.

Table 5.1 shows trends in life expectancy at birth in England and Wales for the years 1982–86, 1992–96 and 2002–06 from the Office of National Statistics' Longitudinal Survey. During the period 1982–2006, socioeconomic inequalities in male and female life expectancy increased despite improvements over time

**Table 5.1 Life expectancy at birth by gender and NS-SEC class, 1982–86, 1992–96 and 2002–06**

Analytic classes	1982–86		1992–96		2002–06	
	Males	Females	Males	Females	Males	Females
1. Higher managerial and professional	75.6	80.9	77.5	82.3	80.4	83.9
2. Lower managerial and professional	74.3	79.7	76.5	81.2	79.6	83.4
3. Intermediate	73.3	79.6	75.3	81.4	78.5	82.7
4. Small employers and own a/c workers	73.6	79.1	75.6	80.7	77.8	82.6
5. Lower supervisory and technical	72.3	78.5	73.8	79.4	76.8	80.4
6. Semi-routine	71.3	78.1	72.4	79.2	75.1	80.6
7. Routine	70.7	77.1	71.6	78.3	74.6	79.7
<b>All</b>	<b>71.7</b>	<b>77.4</b>	<b>73.8</b>	<b>79.2</b>	<b>77.0</b>	<b>81.1</b>
<i>Range highest-lowest</i>	<i>4.9</i>	<i>3.8</i>	<i>5.9</i>	<i>4.0</i>	<i>5.8</i>	<i>4.2</i>

Source: ONS, 2011a

for all classes. Put another way, the greatest growth in life expectancy was experienced by those classified in the highest two classes, and the least growth in life expectancy was experienced by those in the two least advantaged classes. In 2000, the system of classification changed from the previous Registrar General's classification based on occupation to the National Statistics Socio-economic Classification (NS-SEC). NS-SEC has been constructed to measure the employment relations and conditions of occupations in modern societies. In the period 2002–06, a boy born into the 'higher managerial and professional' class, such as directors of major organizations, doctors and lawyers, could expect to live almost six years longer than a boy born to parents classified as having 'routine' occupations such as labourers and cleaners.

The additional years gained from increased life expectancy are not always lived in good health. Data from the 2011 General Lifestyle Survey (ONS, 2013a) included the following:

- 32% of adults aged 16 and over in private households in Great Britain reported having a limiting long-standing illness (LLSI) or disability
- The proportions reporting an LLSI increased with age: 12% (aged 16–44), 25% (aged 45–64), 36% (aged 65–74) and 47% (aged 75 and over)
- The lowest rate of LLSI is found among those working in managerial and professional occupations (13% of males and 15% of females), compared with 23% of males and 26% of females for those working in routine and manual occupations
- People who had never worked or were long-term unemployed had the highest rate of LLSI (38%) of any socioeconomic group.

## Explaining health inequalities

Sociologists are not interested simply in mapping patterns of health inequality: they also seek to provide explanations for these patterns. These explanations have important implications for the planning and delivery of health and social services.

**?** What accounts for the socioeconomic patterns of health and disease?

A range of different explanations was debated in the Black Report and subsequent publications. The debate centred on four types of explanation for inequalities in health: artefact, social selection, cultural, and material/structural.

### *The artefact explanation*

Following the publication of the Black Report (Townsend and Davidson, 1982), there was a debate on the nature, definition and measurement of social

class. For some, the apparent widening of health inequalities was a product of the methods of measurement used (Illsley, 1986). This approach questions the validity of comparing death rates between social class groupings whose size and composition are changing over time. Economic developments and changes in employment have led to the diminishing size of social class V, which contains traditional unskilled groups such as manual workers.

In order to overcome the difficulties suggested by the artefact explanation, several studies have adopted alternative methodologies and drawn on different data sets to examine the evidence (Bartley et al., 1998; Shaw et al., 2000). Researchers have increasingly made use of longitudinal data to explore the relationships between deprivation and health over the life course (Bartley, 2004). The evidence suggests that there is a persistent inverse relationship between health and socioeconomic status regardless of how socioeconomic status is measured.

**thinking about** Do you think people's health affects their employment? If so, in what ways?

### *The social selection explanation*

The social selection explanation suggests that the poorer health status of those in the lower social classes reflects a tendency towards downward mobility of people with ill health rather than an outcome of class inequality. The healthiest members of each socioeconomic group may be absorbed into higher groups, leaving those with the greatest number of health problems behind.

Longitudinal research, which follows people over a long period in order to identify which emerges first, ill health or downward social mobility, is needed to test this theory. Such research suggests a complex relationship between health and social mobility (Bartley et al., 1998; Bartley, 2004). Poor health can often serve to disadvantage people in employment and other areas. However, the selection explanation cannot account for the whole pattern of health inequality, and selection processes themselves may apply differently to different groups. People in more advantageous social positions, with more resources and support, seem to be better able to overcome the effects of early health problems than those in disadvantaged circumstances.

### *Cultural explanations*

Cultural explanations suggest that the social distribution of ill health is linked to differences in health behaviours, such as smoking and alcohol consumption, and different groups' attitudes to their health. These behaviours are complex and situated in particular circumstances. For example, cigarette smoking may be a response to specific needs arising from poverty and deprivation, as Hilary Graham's (1987, 1988) work with mothers caring for young children has shown. The authors of the Black Report did not accept cultural factors as an adequate explanation for health inequalities.

### *Materialist/structural explanations*

The authors of the Black Report favoured explanations of health inequalities that focused on the **material** causes of ill health, such as living and working conditions. This generated research on the impact of factors such as nutrition, housing, transport, environmental and occupational hazards on health. This research took as its starting point that these impacts are a product of the way society is organized, the result of material deprivation and structural inequality. Deprivation is absolute (the inability to obtain a defined level of resources necessary to sustain health) and relative (the inability to obtain socially valued resources and to participate in society), and both are important influences on health.

### *The debate since the 1990s*

Are there social inequalities in health?

The debate about the relative merits of these explanations, particularly between cultural and materialist explanations, became somewhat polarized during the 1990s. For many, the lifestyle explanations favoured by some politicians were seen as overemphasizing personal responsibility for health. This polarization was in part a response to the entrenched nature of politics in the years (1979–90) of the Thatcher government (Williams, 2003). By the late 1990s, a shift in public policy under the New Labour government of the time (1997–2010) heralded a greater willingness to recognize the impact of poverty and deprivation as well as lifestyle choices on health inequalities (DH, 1999). While the post-2010 Conservative/Liberal Democrat coalition government introduced health spending restrictions, there was broad acceptance of the findings of the independent Marmot Review (Marmot et al., 2010) on the case for tackling inequalities in health.

How important is social class in explaining differences in modern society?

Although there is now little doubt about the evidence of inequalities in health in all national contexts where data are available, there remains an ongoing debate about how to theorize health inequalities and address these in practice (WHO, 2010). This stems in part from different understandings of social inequality. While the notion of social class is central to the study of socioeconomic inequalities in health, there are diverse perspectives among sociologists about what class is and how it can be measured (Drever and Whitehead, 1997; Williams, 2003).

Marxist sociologists such as Navarro (2004) view class as a relational concept based on exploitation. However, in many empirical studies that shape policy, social class is loosely defined and is used as a summary indicator of a range of dimensions of inequality such as income, housing status and educational level.

How do inequalities impact on health?

The years after 1990 and Thatcher's retirement also saw a greater willingness among researchers to recognize the complex relationships between mate-

rial and cultural factors affecting health. For example, Wilkinson (1996) has offered a psychosocial explanation of health inequalities that identifies connections between stress, health and relative inequality. The data presented by Wilkinson mapped levels of life expectancy against the gross national product (GNP) of advanced capitalist societies, indicating that the rate of health improvement attained by a particular country is not determined simply by its level of development. Rather, health outcomes are influenced by the extent of income and status differentials in a particular country. More egalitarian societies characterized by a narrow income differential enjoy a greater improvement in overall life expectancy than more unequal societies at a comparable stage of economic development. This may be because unequal societies are characterized by chronic social stress, while societies with a narrow income differential are characterized by greater levels of social cohesion and community support. Subsequently, Wilson and Pickett (2009) extended the scope of this analysis to argue that per capita income can reach a threshold after which increased income does not lead to longer life or contribute to societal wellbeing.

#### What is the impact of social structures on health?

Other authors have also explored the influence of status, social cohesion and self-esteem on health outcomes (Marmot, 2004). These studies have opened the way for a neo-Durkheimian exploration of the role of social cohesion and the impact of social structures on patterns of health (Williams, 2003). One example of this is the increasing use of the concept of **social capital** in relation to health.

**thinking about** What do you understand by social capital and how important do you think this is in explaining differences in modern society?

The notion of social capital has its origins in Durkheim's (1952) findings that a lack of social integration was associated with an increased risk of suicide. Recent proponents of social capital include Coleman, Bourdieu and Putnam. Bourdieu defines social capital in terms of the actual or potential resources that are linked to membership of a group (Everingham, 2001). Putnam (1995, p. 66) defines social capital positively as 'features of social organization such as networks, norms and trust, that facilitate coordination and cooperation for mutual benefit'. Coleman's definition of social capital is anything that facilitates individual or collective action (in Portes, 1998). Authors therefore use different definitions, ranging from subjective perceptions of engagement to tangible economic resources. While most authors see social capital as a positive force, it is not inevitably so, and several authors call for caution in addressing the issue (Baum, 1999; Lynch et al., 2000). The Mafia and the 'old boys' network' are two examples of strongly cohesive groups with high social capital that are not necessarily beneficial for health and may actively operate to reduce the health status of others outside the network.



Kawachi et al. (1997) contend that it is social capital (in this case defined as levels of trust and networking) rather than income that is responsible for improved health status, or vice versa. Any positive effects of social capital on health are hard to demonstrate, given the dominance of the individual and the randomized controlled trial in medical trials and evidence bases. However, a growing body of research and evidence strongly indicates that social capital is linked to improved health, and that strategies to support social capital may be more cost-effective than the traditional manipulation of individual **lifestyles** and behaviours.

Do life events and social determinants have a longer term influence on health?

A further perspective has emphasized the importance of time and timing to understand the causal links between events and the individual life course. This life course explanation focuses on how the social determinants of health operate at every level of development – from infancy, childhood, adolescence, young adulthood and into older age (Ben-Shlomo and Kuh, 2002). These determinants have an immediate influence and longer term influences on health and provide the basis for illness – or wellness – later in life. Within this approach, the critical periods model has examined how a harmful exposure, such as poor nutrition, acts at a specific point in time, for example in infancy, to have lasting or lifelong effects. Meanwhile, the accumulation of risk model suggests that factors that raise disease risk or promote good health may accumulate gradually over the life course. These explanations have been underpinned by the availability of longitudinal and comprehensive data on birth cohorts from the 1930s in the UK (Davey Smith, 2003).

## Gender and health

**thinking about** How do you explain the apparent paradox that although women tend to live longer than men, they seem to experience higher levels of ill health?

Recent trends suggest that these patterns are not fixed and that the relationships between sex, gender and health are increasingly complex. Early research on gender and health also focused on women's health. The debate in the 1970s and 80s was largely driven by activism by women to improve their health and healthcare (Doyal, 2001). This approach was a response to long-standing imbalances that had led to male health concerns dominating research and policy interventions. There is evidence that gender bias continues to affect contemporary research and health policy. For example, conditions such as coronary heart disease and stroke are often assumed to be 'male' diseases, despite their significance for women in industrialized and developing countries (Doyal, 1995). More recently, men have begun to focus on the implications of masculinity and gender for their health.

### *Life expectancy*

In most countries, women's life expectancy exceeds that of men, although levels of socioeconomic development and the degree of discrimination against women also impact on this finding (Arber and Thomas, 2001). Statistics for 2011 show that in some countries, for example Sierra Leone, where life expectancy at birth is 47.5 years, there is very little difference in life expectancy at birth between males (46) and females (47); whereas in the Russian Federation, female life expectancy exceeds that of males by 12 years (WHO, 2014). In developed countries such as the UK, women's life expectancy exceeds that of men by about 3 years (WHO, 2014), and this pattern is now apparent in some developing countries.

**?** What might account for the narrowing of the gap in life expectancy of men and women in developed societies?

This may be as a consequence of changing patterns of employment as well as the increasing adoption by women of 'risk' behaviours such as smoking and alcohol consumption. In industrial countries like the UK, male deaths from circulatory diseases (including heart disease and stroke) have tended to exceed those of women, particularly between the 1950s and 1980s (Lawlor et al., 2001). However, circulatory diseases along with cancer are the commonest cause of death for both sexes (ONS, 2014a). Cancer death rates among females rose to a peak in the late 1980s, declining during the 1990s, while among males rates increased substantially to the late 1970s and then declined more rapidly from the 1990s (ONS, 2014a).

### *Differences in ill health*


The differences in ill health between men and women show complex interactions between sex, age and socioeconomic status (Bartley et al., 2004). In the 2011 census, males were somewhat more likely than females to report good health; however, self-reported rates of good health decrease steadily with age, with 40% of those identifying themselves as not in good health being aged 65 and over. The overall difference between the sexes was small once the age distribution of the population was taken into account. Similarly, up to age 59, there were few differences in the rates of LLSI between males and females. However, in the 60–74 age group, males had a higher prevalence of LLSI than females; while the situation was reversed for those aged 75 and over, with more females than males reporting an LLSI (ONS, 2013b). These data suggest that as a consequence of their greater life expectancy, women in developed countries are more likely than men to experience a range of conditions that lead to chronic impairment and disability. While ageing does not inevitably lead to ill health and a loss of independence, older women are more likely than older men to suffer from disabling conditions and need help in performing basic activities such as bathing and shopping (Arber, 1998).

### *Mental health*

Other areas where gender differences have been examined are mental health (Payne, 1998), the use of health services (Doyal, 1998) and patterns of health-related behaviour. In relation to mental health, the prevalence of the most common mental health conditions, neurotic disorders, are higher among women than men. On the other hand, suicide rates are higher among men (ONS, 2014b). In relation to use of health services, data from the 2009 General Lifestyle Survey on GP consultation rates show that consultations tend to be higher among women; around 1 in 16 females attended a GP consultation compared with 1 in 25 males in the 14 days prior to interview (ONS, 2011b). However, these differences disappear in the oldest age groups.

### *Health-related behaviour*

Data from the General Lifestyle Survey 2011 (ONS, 2013a) show that there is a convergence in some male and female health behaviour patterns. In 1974, there was a 10% difference between men and women – 51% of men smoked cigarettes compared with 41% of women – whereas in 2011, there was only a 2% difference between them – 21% of men compared with 19% of women.

 What do you think accounts for gender differences in health status and reported ill health?

## **Explaining gender inequalities in health**

As in the case of socioeconomic inequalities in health, a number of explanations for gender differences in health have been put forward. These include biological, materialist and structural, and cultural and social constructionist accounts.

### *Biological explanations*

Biological explanations focus on the different reproductive roles of men and women, which impact on health. Sociologists traditionally tended to reject biologically based notions of gender identity. More recently, however, they have begun to engage more critically with notions of the body, which has led to a more inclusive focus and an engagement with biological discourse. This shift is also reflected in feminist research, which has explored the interaction between biology and society and the influence of biological factors on male and female health (Doyal, 1995, 2001).

### *Materialist/structural explanations*

Materialist and structural explanations look at health outcomes for men and women, and how these may be determined by social factors. Researchers have

drawn attention to differences in the social roles of men and women as well as differences in their access to resources such as income, employment, housing and leisure. Such research has uncovered persistent inequalities that can influence health. For example, segregation in the labour market means that women continue to be concentrated in low-paid employment and roles such as caring and service work (Doyal, 1995; Arber and Khat, 2002). They also continue to bear the bulk of responsibility for unpaid caring and domestic work (Lloyd, 1999; Moss, 2002). This means not only that women have less access than men to health-promoting resources, but that women and men may face different hazards and risks in paid and unpaid work settings.

### *Cultural explanations and social constructionist accounts*

Cultural explanations focus on the way in which health outcomes are influenced by roles, relationships, norms and expectations at macro- and micro-levels (Moss, 2002). Social constructionist accounts of gender go further than this, implying that gender is not a fixed category and questioning the notion that traits associated with masculinity and femininity are *essential* characteristics inherited at birth. Instead, gender roles are seen as being continuously negotiated (Cameron and Bernades, 1998). Thus, creating and performing an appropriate gender identity is a continuous task, and masculinity and femininity may both be associated to a varying degree with individual men and women (Annandale and Hunt, 1990).

**thinking about** Can you think of an example where how you feel about your gender has impacted on your health or health-related behaviour?

Research has explored the impact on health of expectations, attitudes and behaviours concerning approved forms of gender identity. A key area is that of sexual health: expectations about gender clearly help shape interactions and the negotiation of sexual activity. The social construction of gender therefore provides the context for, and sometimes constrains, strategies to reduce a number of risks, for example unwanted pregnancy and sexually transmitted disease. For example, one study found that young men's conversations about sexual health focused primarily around their sexual encounters ('guy talk') or expressions of hypermasculine power ('manning up'), with the effect of shutting down communication about wider sexual health issues with peers and sex partners (Knight et al., 2012).

Earlier research explored the effects of stereotyping of female patients in healthcare services (Doyal, 1998; Payne, 1998). More recently, it is suggested that certain notions of masculinity may have a negative effect on men's health. This research distinguishes between different forms of masculinity. Traditional or hegemonic masculinity, with its emphasis on risk-taking, self-reliance and dominance, is viewed as potentially dangerous, for example it can discourage men from seeking help for health problems (Cameron and Bernades,

1998). These issues have been explored in studies of the relationship between masculine identities, risk-taking and health promotion (Courtenay, 2000; de Visser and Smith, 2006; Gough and Conner, 2006; Robertson, 2006). Finally, research has identified emerging trends in women's health that have arisen as a consequence of the adoption by women of traditional 'masculine' practices such as cigarette smoking (Graham, 1998) and alcohol consumption (Bloomfield et al., 2006; Wilsnack et al., 2006).

The different explanations of gender inequalities in health are not necessarily mutually exclusive, rather they focus on different aspects of gender, such as the impact of reproductive roles, psychosocial factors, occupational factors, cultural trends and social structuring (Arber and Thomas, 2001). Health outcomes are increasingly recognized as part of a complex relationship between macro- and micro-level social factors spanning the geopolitical environment and cultural norms that shape the distribution of risks and resources within households (Moss, 2002).

#### example 5.2

### Changing patterns of risk in HIV/AIDS

The impact of gender on HIV/AIDS risk is discussed by Türmen (2003). In the early stages of the pandemic, infection was predominantly among men but by the early years of the twenty-first century, women represented 48% of new infections and, in developing countries, 67% of newly infected individuals aged

15–24. This shift is attributed to a number of factors, including women's greater biological susceptibility to infection than that of men, as well as social and cultural factors that increase the risk of HIV infection among women. These include high levels of sexual violence against women, a lack of education and knowledge about risks, poverty and dependence on male partners, and a lack of negotiating power in relation to safe sexual behaviour.

## 'Race', ethnicity and health

**thinking about** What do you understand as the difference between the concepts of 'race' and 'ethnicity'?

Since the 1970s, a growing body of research has examined the patterning of health by 'race' and ethnicity. This debate is complicated by problems of terminology and measurement. Like the notion of gender, 'race' is often taken to stand for biological differences between people rather than being understood as a socially constructed notion. Medicine has played a key role in the establishment of 'racial' differences. Alongside its treatment and curative role, medicine contributes to processes of labelling, racialization and social exclusion. This can be clearly illustrated by examining the debate on ethnicity, racism and health. During the nineteenth century, 'scientific' support was provided for the belief that human beings could be categorized according to skin colour and

other physical characteristics. During slavery, medicine even provided labels such as ‘drapetomania’, the supposedly pathological desire of slaves to run away from their master (Ahmad, 1993).

While this notion of ‘race’ is now discredited in academic and scientific circles, the concept of race continues to influence the beliefs of ordinary people and has significant consequences, including social and economic discrimination and the stereotyping of black and minority ethnic patients by healthcare workers. Unsurprisingly, the quest to identify distinctive patterns of health and disease for different ethnic groups arouses scepticism among some critics.

In order to measure these effects without reinforcing racist discourse, some researchers adopt the notion of ethnicity. Ethnicity refers to shared experiences such as religion, language, history and culture. Ethnicity applies to white as well as black people, thereby avoiding the assumption that only the ethnicity of black people needs to be examined. In practice, however, the term ‘ethnicity’ is often used as a euphemism for ‘race’, and most studies of ethnicity and health focus only on ethnic minorities.

### example 5.3

#### ‘Race’, ethnicity and health

- The evidence linking ethnicity with health is complex and apparently contradictory, the picture being further limited by a number of methodological problems. UK studies have, however, shown excess mortality for men born in Bangladesh, Ireland, Scotland and West/South Africa (Davey Smith et al., 2002)
- An excess coronary heart disease mortality has been found in people born in the Indian subcontinent, and a relatively high mortality from stroke has been found among people of African-Caribbean origin. Research has examined ethnic differences in risk factors, especially in relation to alcohol use in the white population and weight in the black population (Dundas et al., 2001)
- The mortality rates of common types of cancer, such as breast and lung cancer, appear to be relatively low among people from the Caribbean and the Indian subcontinent (Harding and Rosato, 1999). A higher rate of infant mortality is found for most migrant groups, a particularly high level being seen among the babies of Pakistan-born mothers (Davey Smith et al., 2002)
- The members of most minority ethnic groups perceive their health in poorer terms than do the general population (ONS, 2013c). Middle-aged Irish and Pakistani men and older Indian and Pakistani women show significantly higher rates of common mental disorders than their white English counterparts (Weich et al., 2004)

A number of explanations for ethnic minority differences in health have been put forward. These include artefact, biological, and materialist and structural explanations.

#### *Artefact explanations*

The Black Report’s framework, developed by Davey Smith et al. (2002), has been used as a starting point to explain these data. As with social class, artefact

explanations focus on the problems caused by the use of particular measurement tools (Manly, 2006). Challenges in ethnicity and health research stem from the problematic use of country of birth as a measure of ethnicity, with half of the UK's ethnic minorities having been born in the UK. Other problems include treating ethnicity and class separately, and failing to recognize the heterogeneous nature of ethnic majority populations.

### *Biological explanations*

Biological explanations focus on factors such as genetic variations and the role of inherited conditions such as blood disorders in relation to conditions like thalassaemia. These explanations have been criticized for overestimating the impact of genetic factors on the causation of disease and reinforcing biological conceptualizations of 'race' (Frank, 2001). Cultural explanations tend to focus on particular lifestyles, behaviours, religious practices and beliefs associated with different ethnic groups. On the one hand, the increasing diversity of societies like the UK and the US has stimulated demands for 'culturally and linguistically competent healthcare' (Shaw-Taylor, 2002). On the other hand, the focus on cultural differences as a cause of health outcomes has been challenged. The cultural characteristics of minority ethnic groups are often portrayed in negative terms, and the positive influences of culture on health are sometimes overlooked.

### *Material and structural explanations*

Material and structural explanations emphasize the direct effects of socio-economic factors, such as poor housing and unemployment, on members of minority ethnic groups (Nazroo, 1997). Members of minority ethnic groups are disproportionately represented in lower socioeconomic groups. While material disadvantage impacts negatively on the health of minority ethnic groups, it is unlikely that social class alone can explain the excess mortality observed in minority ethnic groups (Nazroo, 2001).

Racism has been used to explain patterns of ethnicity and health. Racism can affect the health of minority ethnic groups through several pathways, including:

- restricted access to social resources, such as employment, housing, healthcare and education
- increased exposure to risk factors, such as unnecessary contact with the criminal justice system
- reduced uptake of healthy behaviours (e.g. exercise)
- increased adoption of unhealthy behaviours (e.g. substance misuse) either directly as stress-coping or indirectly via reduced self-regulation
- direct physical injury caused by racist violence (Priest et al., 2013).

Such impacts often start early in life. Priest et al. (2013) found that there were significant associations between racial discrimination and children's mental health in three-quarters of the 121 research studies they identified in a global systematic review.

## Part 2 Theoretical and research approaches

### example 5.4

#### Examples of research in sociology and health

- Social structural research exploring issues such as poverty and its impact on health, the social patterning of health and illness, and access to health services
- Research exploring the subjective lived experience of people with a particular condition, such as AIDS or sickle cell disease
- Studies of the role of volunteers and laypeople in providing social support networks for people with chronic illnesses
- Investigation of the role and status of healthcare professionals in managing the disruptive effects of illness as well as its clinical manifestations
- Exploration of the body as a field of discourse

Sociology – the study of human social life – involves a conscious distancing of the sociologist from the object of study, whether that involves personal emotions (e.g. bereavement or ill health), social institutions (e.g. the family or healthcare services) or group life (e.g. health professionals peer group norms and pressures). Sociological study often involves investigating what appears at first sight to be natural, universal or common sense, only to discover that such behaviours or practices are fundamentally affected by specific social factors and influences. Sociology offers a wide range of theoretical and methodological approaches for the study of health. This brief introduction presents an overview of selected issues in the sociology of health that illustrate key theoretical and methodological approaches.

These approaches begin with different starting points when considering issues such as the impact of health services. While health services seem self-evidently beneficial, some have questioned this, even arguing that the harm done by modern medicine outweighs the benefits. We can explore this debate by distinguishing between consensus and conflict approaches. Both acknowledge that health professionals, particularly doctors, enjoy a significant amount of power. They can sanction a number of benefits such as employees' sick leave, claimants' eligibility for welfare payments, and patients' entitlement to services. They also endorse controlling and restraining actions such as the incarceration of individuals defined as mentally ill.

Consensus approaches accept the necessity of these functions for the smooth running of modern societies. Furthermore, they suggest that because of their extensive training and commitment to ethical conduct, members of regulated



professions are well placed to carry them out. In contrast, conflict perspectives question professional power, highlighting issues of professional domination and social control, and the oppressive impact of some practices.

Recent developments, such as the advancement of nursing and other professions, increased managerialism in the NHS and the growth of complementary therapies, suggest that power, particularly medical power, is not exercised without challenge and resistance. Theorizing these trends, recent accounts suggest that traditional approaches may be limited by a rather narrow and mechanistic understanding of power. Rather than being delegated by society or imposed on individuals and groups, power is increasingly viewed as fluid and diffuse, capable of being mobilized in many ways and from a range of sources.

### The sociology of lay–professional relationships: functionalist approaches

The **functionalist** sociology of Parsons (1951, 1975) provides a well-known and influential example of a consensus model. Parsons was concerned to demonstrate the ways in which practices such as medicine contribute to the maintenance of the social order. Illness not only disturbs individual functioning, but is also socially dysfunctional, undermining the values, activities and roles that support productivity and social stability. In order to prevent such a disruption, mechanisms are needed that render illness an undesirable and temporary social state. Parsons identified such a mechanism in the form of the **sick role**, into which people ideally enter when they become ill. The sick role confers both rights and obligations. The rights are:

- an exemption from responsibilities such as work and social obligations, which needs to be legitimized by a physician in order to be valid
- the sick individual avoids any blame or responsibility for their condition.

The two obligations are:

- the sick person must want to get better
- the sick person must seek competent help, usually from a trained physician.

**?** How adequate is the sick role in accounting for:

- someone with food poisoning?
- someone with depression?
- someone with asthma?
- someone who is HIV positive?

Sociologists have debated the relevance of the concept of the sick role in relation to contemporary patterns of health and illness. One of the issues that arises is that access to the sick role may not be enjoyed equally by all. The sick

role concept may apply relatively closely to acute illnesses such as influenza, but even in these cases there are some social obligations (such as caring for others) from which exemption may be difficult to gain. In the case of chronic conditions, the rights associated with the sick role concept apply less clearly, and social obligations may be difficult to escape in the longer term. Furthermore, some conditions, for example HIV/AIDS, carry a stigma. This means that assumptions of responsibility and blame may influence how the person is seen and treated by others.

The obligations associated with the sick role concept are also more complex than at first appears. These obligations render the doctor much more powerful than the patient in professional–client interactions. Functionalists such as Parsons accept the asymmetrical nature of the doctor–patient relationship on the grounds that doctors, as modern professionals, are required to be altruistic and ethical practitioners as well as knowledgeable. These attributes are seen as ensuring that a doctor’s personal feelings towards a patient do not influence the consultation or treatment offered. The physician is expected to put the welfare of the patient above any personal interest.

#### connections

Chapter 12 discusses the ethical principles underlying professional practice and the layperson’s obligations.

The power imbalance between doctors and patients becomes more problematic if professionals are seen as a group seeking to influence the organization of services and rewards. Further, patients can often become experts in their condition and may feel frustrated if they are not listened to by doctors. A more critical perspective would suggest that professionals’ interests may conflict with those of service users, and would question the degree of trust that society grants to doctors – evidenced by their high degree of autonomy and the lack of external surveillance of many procedures.

Hence, Parsons’ concept of the sick role has been criticized as being naive in relation to issues of power, although the debate continues. The **empowerment** model (Crossley, 1998) has developed as an alternative way of conceptualizing professional–client relationships. This model suggests that doctors’ technical competence may be more limited than traditional beliefs concerning the efficacy of scientific medicine suggest. This can be seen in relation to conditions such as repetitive strain injury or ME for which there appears to be little medical consensus on the cause of the problem or appropriate treatment, or HIV, in which there is little possibility of a cure. The obligation to seek technically competent help from a physician makes little sense if technical competence is beyond the physician’s scope. Instead, the empowerment model seeks to enhance the status and authority of the experiential knowledge of the sufferer in the face of doctors’ limited capacity to respond to complex chronic conditions.

Crossley (1998) warns, however, that the ‘empowerment’ perspective underestimates the benefits of medicine. Whereas scientific medicine has not been

able to provide a cure for many conditions, the medical management of chronic illness is constantly developing. Furthermore, the empowerment model is seen as offering a weak basis for practice because it lacks any notion of duty or social obligation to accompany the 'rights' associated with chronic illness.

The sick role concept, although criticized, has provided useful insights into the experience of illness and the role of medicine, and has paved the way for a broader debate on the nature of medical authority and the relationship between medicine and social control.

Chapter 4 discusses individual adoption of the sick role in response to pain and health conditions.

connections

## Medicalization and social control

During the 1960s and 70s, a number of critical perspectives on medical power emerged. These often drew on the **medicalization** thesis, in which medicine is seen as expanding its social jurisdiction and replacing earlier mechanisms of social control such as religion. While Parson's functionalist model emphasized the benign and productive aspects of medical power, critical perspectives have identified some undesirable social costs of medical expansion.

The medicalization of society has been seen as taking place at a number of levels (Zola, 1972):

- Medicine has expanded its concerns to encompass areas of life not previously regarded as illness
- Medicalization has resulted in the concentration of control over technical procedures among doctors
- Doctors' authority has expanded to encompass areas of moral decision-making.

Medicalization involves the pursuit of medical, individual and technical solutions to an expanding range of problems. Where these problems are social in origin, medicalization can be seen as obscuring their social causes, inhibiting the development of alternative solutions.

### example 5.5

#### Medicine as a threat to health

In one well-known critique, Illich (1977) described medicalization as a major threat to health. Modern medicine was portrayed as generating iatrogenic disease, that is, illness that would not have come about without

medical intervention. It was also suggested that society would be better off without professions such as medicine, which encourage dependency rather than self-reliance.

During the 1990s, feminist researchers highlighted the negative impact of conventional healthcare on women,

suggesting that the benefits of modern medicine to women are oversold and its harmful effects understated (Foster, 1995). As patients, women are constrained in their ability to make rational choices, partly because doctors are themselves unaware of many of the risks attached to accepted forms of medical treatment. Furthermore, when doctors are aware of the risks, they may assume that female patients will not be able to

cope with the information, and therefore keep their knowledge to themselves.

The notion of medicine as a threat to health remains influential. Contemporary journalism often seeks to expose the 'dangers of modern medicine', while the increasing popularity of complementary therapies and self-help sources such as the internet reveals apparent widespread disillusionment with conventional medical approaches (McTaggart, 1996).

While it is important not to overstate the benefits of medical practice, these theories may understate medicine's benefits; empirical evidence is needed in order to evaluate the impact of different health interventions. Without such evidence, these theories could potentially undermine efforts to improve health and reduce health inequalities. Given that, for many people in the world, access to basic healthcare remains limited, it seems important to emphasize the widening access to beneficial practices and resources as well as re-examine questionable aspects of medical practice.

These theories do, however, highlight the impact of medical decision-making and point towards the need for a greater involvement of patients and laypeople in such activity. In the face of such challenging claims about medicine, it seems that consumers need to make more and more complex and difficult choices concerning their healthcare. This theme is explored in the following sections, which examine a number of different approaches to understanding the relationships between medicine, the health professions and society.

#### connections

Chapter 8 reviews policies designed to increase service user involvement in health and social care provision.

## Marxist and political economy perspectives

**Marxist and political economy perspectives** also highlight the negative impact of medical power. However, rather than seeing professionals as the main problem, Marxist theory suggests that professional power is a product of a deeper set of power relations. Political economy perspectives draw on Marxist theory to suggest that the structuring of society around the needs of capitalism as an economic system is the starting point of any analysis of health and healthcare. This theory suggests that capitalist societies are organized around the generation of profit, which is created by the exploitation of labour power.

Political economy writers such as Navarro (1979) drew broadly on this theory and applied it to health in a number of ways:

- The processes of industrial capitalism cause ill health directly, for example through occupational disease, industrial accidents and the manufacturing and marketing of harmful consumer products, such as tobacco
- This burden of disease is disproportionately felt by those in lower socioeconomic groups
- Society does not do enough to prevent these problems or promote health because society's resources are channelled towards the maintenance of production over and above the social goal of securing and improving public health.

? Consider the political economy of tobacco. How do you account for its continued manufacture and advertising?

Governments' reluctance to ban the manufacture and advertising of this dangerous product could be explained in terms of the dominance of the interests of tobacco producers over those of other groups and the economic benefits derived by governments from tobacco tax.

The political economy perspective also offers a critique of the role of medical and health services. According to Navarro (1979), doctors are often seen as serving the interests of the dominant class, because of their own class position and social role. Hence, the role of medicine is seen as helping minimize disruption to the economic functioning of society, even if this means supporting exploitative and oppressive economic and social relationships.

? How relevant is the view that capitalism is a major threat to population health?

The global nature of capitalism perhaps makes it impossible to identify examples of societies and cultures unaffected by it. However, critics have argued that other (non-economic) social processes are equally influential. These include the cultural discourse of ideas and concepts. Furthermore, critics have argued that Marxism places too much emphasis on class divisions as the driving force of social change, ignoring the independent impact of other social relations, including gender and ethnicity.

Chapter 7 discusses the cultural construction of concepts of health and illness.

connections

In response to these criticisms, political economy perspectives have taken a broader view than those of traditional Marxism, widening their scope to examine other aspects of power relationships such as gender and ethnicity. Political economy perspectives have exercised a strong influence over the sociology of health and illness, although this influence declined during the 1980s and 90s as new economic and social trends, such as changes in employment,

leisure and lifestyle, emerged to challenge core assumptions concerning identity and class. Political economy perspectives may still evolve to meet these challenges. In the meantime, however, their legacy can still be seen, for example in relation to the inequalities in health debate, where material and structural explanations continue to hold sway.

## Health professions and interprofessional relationships

Since the 1970s, a great deal of attention has been given to the role of health professions, with early discussions focusing on whether it is possible to identify core traits, such as knowledge, training, practices of regulation and autonomy, that set a 'profession' apart from other occupational groups (Freidson, 1970). Much of this research focused on the profession of medicine. Subsequently, the scope of the discussion has widened to include the roles and relationships between other groups including nurses (Davies, 1995; Porter, 1999).

Some of this writing has been influenced by neo-Weberian approaches, which focus on the characteristics of different professional groups in relation to social class and other hierarchies, as well as examining the strategies adopted by occupational groups to gain influence and control (Johnson, 1993). These professionalization projects involve professional groups in negotiating their relationship with the state as well as with other professional groups in situations where healthcare resources are increasingly limited (Witz, 1992; Johnson, 1993, 1995). Professionalization strategies have been identified such as that of 'dual closure' (Witz, 1992). This has two elements: usurpation to renegotiate role boundaries with more powerful groups; and demarcation to organize their relationships with less powerful groups. Foucauldian perspectives have also been brought to bear on this debate, identifying ways in which the discourses of health, illness and care are used to shape professional roles and interprofessional relationships (Foucault, 1976; Armstrong 1995; Lupton 1995; Martin et al., 2013).

### example 5.6

#### Professionalization in the NHS

These issues were explored in a study by Daykin and Clarke (2000) of interprofessional relationships between nurses and healthcare assistants in the NHS. A training programme sought to enhance the roles of healthcare assistants, providing them with the skills to undertake tasks previously undertaken by nurses such as bedside observations. At the same time, staffing ratios were to be changed to reduce the number of qualified nurses on the wards. The project was in part a response

by managers to ongoing difficulties of recruitment and retention of qualified nursing staff and an attempt to reduce the rising costs of employing agency nurses to cover the work of this group.

The nursing and care staff had mixed views about the project, with some welcoming the changes and others seeing them as a dilution and fragmentation of care. For these nurses, the training of healthcare assistants was a 'task-oriented' approach that undermined the more holistic 'nursing process' discourse (Porter, 1992), which was key to their

professional identity and job satisfaction. Others recognized the importance of the division of labour in healthcare and saw the changes as an opportunity for themselves and the healthcare assistants to enhance their roles (Witz, 1992). The research identified among nurses a dual closure strategy of usurption in relation to doctors

and demarcation in relation to healthcare assistants. Some participants saw managers as being able to bridge these differences and divisions in order to overcome resistance to the changes in care they proposed and avoid the challenge of providing adequate resources to support alternative solutions to the problems of care delivery.

## Interactionist perspectives and the experience of illness

The perspectives discussed so far concentrate on the impact of illness, health and healthcare on society as whole. Sociologists have also examined the nature and meanings of the illness experience at the individual level, analysing this experience in the context of the interaction between people and exploring its implication for notions of identity and self. This tradition draws on the work of Mead (1934), who saw human beings as distinctive, in that they are able to reflect on their own thoughts and actions. This approach, sometimes referred to as 'symbolic **interactionism**', emphasizes the ways in which people gain a shared understanding of the meanings attached to objects and phenomena. Meanings are not seen as pre-existing or intrinsic, but emerge from an interpretative process between people in which language is an important element. A nurse's uniform, for example, suggests femininity, caring, altruism and sacrifice – meanings reaffirmed by countless media portrayals.

Sociologists have applied these insights to the study of changes in identity, which occur when people become chronically ill or impaired. Goffman's work on stigma (1963) provides a well-known example of such an approach. According to Goffman, a person's sense of identity is formed in interaction with others and is reflected back to the individual through verbal and nonverbal communication. When someone possesses a distinguishing attribute that is perceived negatively by others, their identity is to some extent 'spoiled' or stigmatized. People attribute a range of negative characteristics, unrelated to the original attribute, to the individual. Wheelchair users, for example, are often assumed to be physically and intellectually dependent. Stigma may be attributed to people on the basis of physical attributes or personal and social characteristics, such as being gay or lesbian.

Goffman suggested that stigmatized individuals may react in a number of ways. They may attempt to 'pass', maintaining a performance of self in which the stigmatized attribute is disguised or hidden. They may also respond in ways that seem to confirm society's stereotyped views. Alternatively, they may create meanings that turn their experience into a positive one, for example reflecting on the lessons that their experiences have taught them. They may feel that they have grown in wisdom or sensitivity or somehow become a 'better person' because of their circumstances.

Goffman's theory was developed during the early 1960s and reflects the social values and norms of that time. In contemporary society, it seems that a wider range of options is available to stigmatized groups. These include activism and campaigning to transform social attitudes and end discrimination. Examples of this can be seen in the disability rights movement and the responses of the gay community, which have challenged negative social attitudes and found collective sources of solidarity.

Interactionist perspectives may be limited, in that they focus attention on the victim rather than examining the reasons for discrimination against particular groups. Nevertheless, they do draw attention to the stress that can accompany stigmatizing experiences, including illness and disability. They also highlight the need for coping strategies in response to the challenges to identity that these experiences may represent. As a consequence, interactionist perspectives have had a strong influence on research in medical sociology, much of which is focused on interactions between professionals and patients, and the experiences of people with particular conditions.

Questions of identity and illness are increasingly important in sociological research. Increasing life expectancy and technological advances mean that an increasing number of people are surviving for a longer period, and are more likely to be living with a chronic condition. This in turn means that an increasing number of people may find that they cannot sustain the values of independence and achievement that they assumed would carry them through adult life. The onset of chronic illness may represent a profound threat to personal identity. Bury (1982, 2001) illustrates this through the notion of illness as a 'biographical disruption', disrupting the patterns of daily life and social relationships, and generating a range of tasks. These tasks may relate to practical needs such as symptom management, but also to maintaining a sense of identity and preserving one's cultural competence in the eyes of others. This rethinking of biography following the onset of chronic illness can often be understood as an interactive or co-created process between individuals. For example, Radcliffe et al. (2013) explore the shared creation of meanings among older stroke survivors and their spouses and the implications for individual and couple identity.

## Sociology of the body

The intimate relationship between illness and identity has led to a rethink of the body from a sociological standpoint. Evidently, our bodies form the physical locus within which we experience and interpret health and illness. Sociology has traditionally been highly 'disembodied', seeing the body as a matter of intellectual concern for biology and biomedicine. At the same time, sociologists have also questioned whether there are any essential physical experiences that are not mediated by culture and social context. In this way, the body had almost become invisible within sociological discourse. Authors such as Frank (1991) have argued for a renewed focus on the body drawing on the concept



of 'embodiment' – the lived experience of our bodies in the world. A concern with embodiment provides a bridge between structure and agency, between macro-social processes and micro-personal experience. For example, tiredness is clearly a physical sensation of the body. From an embodied perspective, tiredness can be seen to encompass a temporary exit from a productive, socially structured role and a loss of willpower. While an episode of tiredness will hold specific personal biographical meaning, it is also the bodily expression of patterned and value-laden ideas current in society.

Chapter 1 focuses on the physical concepts of health and disease.

connections

Recent interest in the body is unsurprising in the context of modern consumer society. What we eat, what we wear and whether we are fit are all cultural markers, locating our identities. Frost (2003) suggests that the emphasis on individualistic models of health, for example the focus on personal responsibility for a healthy diet and fitness, has made the body the object of self-discipline. While this disciplining of the body may seem to imply a continuous round of self-denial in order to restrain any appetite for excess, it also opens the way for more tangible forms of consumption. The plethora of health and fitness magazines, slimming aids, sportswear and membership of gym clubs are but a few of the goods and services available to assist the quest for a managed body. Giddens (1991) argues that the pace of social change is such that people lack traditional reference points for identity within a fragmented and shifting social order. Instead, the self, or body, becomes a project, the seat of identity and a source of stability, albeit in an ever-changing and unfinished form.

## Social constructionist perspectives and beyond

So far, we have explored perspectives that examine the impact of social processes on the meanings of phenomena such as health and illness. These perspectives suggest that health and illness cannot be understood as fixed and unchanging entities. Instead, the meanings attributed to health and illness may differ at different historical periods and between different cultures. Within Western medicine, for example, homosexuality is no longer perceived as a disease. At the same time, new diseases and syndromes such as 'attention deficit disorder' and 'premenstrual syndrome' describe behaviour that would in previous decades have been understood in very different terms.

Sociologists have also explored the formation of ideas about health and illness, examining the role of different groups, such as professionals and scientists, in the production of discourses of health. These debates have implications for the study of lay perspectives, which may differ significantly from scientific and professional views. There has been a general shift away from approaches assuming that medical science is 'right' and other views 'wrong'.

Instead, there is a growing recognition that professional and lay views are both socially constructed, meaning that they cannot easily be categorized as 'right' or 'wrong' because they both arise from the experiences and circumstances of different groups within society.

The writings of Foucault (1976, 1979a) have been studied by sociologists seeking to explore further this process of the social construction of medical knowledge. The notion of the 'gaze' has been used to explain the processes that enabled a medical understanding of the body to emerge during the eighteenth century. This perspective draws attention to the surveillance and control that are exercised through medical practices. Today, the bodies of healthy as well as sick people are seen as being increasingly under surveillance. Medical practice is no longer concerned with just the treatment of disease but has been extended into new areas such as prevention and health promotion. These practices, while apparently beneficial, may have negative consequences. While apparently exercising care, health professionals may also be exercising power and control.

Sociologists of late modernity have focused on the ways in which social control and surveillance has spread throughout society. Beck (1992) first coined the term 'risk society' to describe the expansion of risk within modernized societies. Modernization is linked to particular risks as temporal and spatial limits no longer apply. Global climate change is a good example of the increased risks associated with modernization.

One response to the perception of increased risk is to try to control and avoid exposure to risk (Jones, 2004). The most effective strategy is to persuade people to practise risk avoidance voluntarily rather than try to enforce it. Foucault (1979b) used the notion of the gaze and surveillance to describe the modern trend for self-regulation and control. This has its origins in the panopticon, Bentham's late eighteenth-century prison design incorporating a central watchtower. The argument was that prisoners would not know if they were being watched, so would develop self-discipline. Today, modern society is increasingly under surveillance, with computerization opening up new avenues for monitoring and regulation. The increased use of CCTV is often cited as symptomatic of modern life. Increasingly, people have been persuaded that surveillance is a good thing, to the extent that they voluntarily take on the task, and self-surveillance and self-monitoring in all aspects of life is rapidly escalating. Examples of this include routine monitoring of blood pressure at home, self-monitoring regarding alcohol intake, and parental use of mobile phones to monitor the activities of children and young people. There is also general compliance with the increased levels of surveillance, evident in everything from the use of pin codes on bank cards to the routine recording and playing back of phone calls to businesses.

**thinking about** What examples of surveillance in professional life can you think of? Do you think this degree of surveillance is positive or negative? Why?

This degree of monitoring and self-regulation is often linked to the 'risk-averse' nature of society. It has been argued that this process is unhelpful and leads to negative outcomes. For example, risk aversion has been linked to professional defensiveness, as the fear of litigation in cases of negligence or unprofessional practice spurs greater professional closure. The result of this process is arguably greater social distance between practitioners and patients. It also leads to more resources being directed towards providing evidence of actions taken and consent procedures (the audit trail), at the expense of direct action undertaken to care for clients and patients.

### case study the social determinants and social construction of diet

There seems little doubt that diets and eating practices in the West are undergoing major transformations. Caraher and Coveney (2004, p. 592) suggest that 'we in the developed world can expect to eat a different and better diet than did our predecessors 100 years ago'. Dietary improvements have meant that we live longer, are taller and rarely suffer diseases of deprivation.

Furthermore, consumers live in an environment that appears to offer unprecedented food security. The major retail stores offer thousands of food lines, reliably sourced on the global market and with little seasonal variation. For those lacking time or inclination, there is an expanding market for eating out and eating in with ready-prepared foods. Average households have greater disposable incomes, and food expenditure in real terms accounts for a smaller slice of personal spending than it did two decades ago (Hitcham et al., 2002). Given these conditions, we examine how two perplexing issues have attracted sociological enquiry: why diet-related health inequalities continue to exist in the West; and what accounts for the high level of social anxieties surrounding food and eating practices.

These two areas can be used to illustrate different traditions of sociological thought:

1. The *social causation* perspective is drawn on to understand food insecurity and social inequalities in diets. This approach

is similar to the materialist/structural approach developed by the authors of the Black Report (Townsend and Davidson, 1982) and is adopted by researchers working within a Marxist or political economy perspective.

2. The *social constructionist* perspective is adopted to explore perceptions of risk, trust and anxiety in relation to food. This approach is concerned to explore the conditions under which ideas and meanings are generated. Social constructionism therefore builds on the interactionist tradition in sociology, and questions commonplace assumptions about the relationship between language and objective knowledge.

#### Social causation of food insecurity and dietary inequalities

Research from a variety of Western nations indicates that there are clear socioeconomic differences in diets and diet-related ill health. Lower income groups tend to eat less fruit, vegetables and food rich in dietary fibre, have a lower intake of foods containing antioxidants, some minerals and vitamins, and have higher salt intake. As part of a general social trend, lower income groups increasingly consume processed and energy-dense foods (high-sugar, high-fat foods). These dietary patterns are strongly linked to higher rates of obesity, increased risk of coronary heart disease and circulatory

problems, some diet-related cancers and dental decay (Acheson, 1998; Shaw et al., 2000; Cummins and Macintyre, 2006; Kamphuis et al., 2006). Social causation perspectives have sought to explain these patterns with reference to a variety of societal processes. These draw together the changing character of global and local economic systems and the material conditions of people on low incomes in industrialized countries.

Lang and colleagues (Lang and Heasman, 2004; Lang, 2005) hold that global transformations of the food industry account, in part, for contemporary inequalities in diets. Lang (2005) argues that there has been a revolution within the food system in all aspects, from production, processing, distribution and retail through to consumption. Within this system, leading retailers assume a pivotal position. For example, in 15 EU states, 3.2 million farmers feed 250 million consumers, but this supply and demand is funnelled through only 600 supermarket chains with 110 key buying desks (Lang, 2005).

Retailers, along with a small number of leading brand processing corporations, now exercise unprecedented leverage over consumer tastes. Investment in marketing and promotion by these organizations considerably outstrips the health promotion budgets of national governments (Lang, 2005). The two leading commercial ad-spend budgets of the world each amount to \$1.7 billion a year, which is vastly more than the entire health education budgets of governments (Lang, 2005).

According to Lang, weak government controls have allowed a largely unfettered promotion of highly processed and energy-dense foods. These changes have had greater impact on the diets of lower income groups. In part this is because high-fat, high-sugar and high-salt foods have been marketed at a lower cost than 'healthier alternatives'. But the effects are amplified for poorer groups because of links with other social processes. Since the 1970s, the retail geography

of industrialized countries has changed dramatically. The decline of high-street and neighbourhood food retailers has been mirrored by an expansion of large, often out-of-town supermarkets. These changes have left many low-income communities with a dearth of retail outlets (Caraher and Coveney, 2004). Given that low-income households are less likely to own a car, these groups may encounter additional difficulties accessing supermarkets with poor public transport links.

The decline of local retail outlets has given rise to the claim that many low-income neighbourhoods in industrialized countries have become 'food deserts'. Cummins and Macintyre's (2006) review of food availability and pricing studies found that American and Canadian 'healthier' foods were less available and more costly in low-income neighbourhoods. In the US, income inequalities also appear to coincide with racial divisions. One study found that supermarkets were on average 1.15 miles further away for residents in black compared to white neighbourhoods (Cummins and Macintyre, 2006). However, these associations are less clear in other industrialized countries such as the UK, Australia and the Netherlands. For example, a Glasgow study found that 57 foods representing 'a modest but adequate diet' were slightly more available in areas of deprivation and that prices varied little by area, but it was also notable that high-fat and high-sugar foods were cheaper in poorer areas of the city (Cummins and Macintyre, 2002).

While many low-income areas have seen a decline in retail grocery outlets, fast-food outlets appear to have become more prevalent and more accessible in comparison to affluent areas (Cummins and Macintyre, 2006). Fast food is becoming an increasingly important part of people's diets in industrialized countries (Millstone and Lang, 2003). This has dietary implications because these foods tend to be high in animal fats and are up to 65% more energy dense than the average diet. In England and Scotland, MacDonald's

restaurants are more likely to be located in areas of social deprivation (Cummins et al., 2005). There is some evidence to suggest that these associations may explain higher rates of obesity in these neighbourhoods.

Other studies emphasize how food accessibility is more than just a question of proximity to shops. Hitcham et al.'s (2002) London-based study found that people on low incomes in the same streets had very different levels of access and patterns of shopping. Older people's diets were particularly sensitive to local shop closures. Given the personal nature of local shops, their closure also represented the loss of a social resource, which in turn reduced their everyday support networks. Street crime, vandalism and personal threats deterred older people from using public transport and shopping further afield. Dietary inequalities therefore connect to wider social issues. Hitcham et al. (2002, p. 9) argue that 'the geography of food poverty cannot simply be drawn on a map'.

Poor diets and food insecurity also have a relationship to gender dynamics within low-income households. While women have increasingly become active in the labour market, gender roles around domestic work have been slower to change. British Social Attitudes surveys show that in 70% of households, women make the evening meal and continue to do the majority of routine shopping (Lupton, 2000).

The interviewees who took part in Hitcham et al.'s study (2002) often suggested that men were unskilled at shopping efficiently within a budget. Regular and often unsociable working hours for many working women on low incomes meant it was difficult to prepare and coordinate regular family meals. Participants also reported how these pressures combined with the demands of family members to meet individual taste preferences. Hitcham et al. (2002, p. 9) found that cooks (usually women) did not lack awareness of 'healthy diets', nor did they lack skills in food preparation, but that 'achieving a nutritious diet on a low income requires

extraordinary levels of persistence, flexibility and awareness'. The social causation perspective has therefore sought to identify the sum of social influences that determine poor diets in industrialized countries.

### **Social constructionist perspectives on food, risk and insecurity**

The second group of theoretical approaches has been concerned with the social meaning of diets and eating practices. Here, we consider how this approach has been used to explore perceptions of diet-related choice and food anxieties.

Giddens (1991) has noted how, for many people in the West, diets involve a bewildering array of choices of what and where to buy, how to cook and how to consume. Increasingly, these choices are not informed by tradition but are perceived to be 'expressions of identity': eating has become one very visible aspect of personal decision-making. While these choices appear to present unparalleled possibilities for self-expression, Giddens and, in a similar vein, Beck (1992) argue that they also entail new forms of insecurity. For example, eating disorders among young people could be seen to have their origins in the profound opportunities *and* strains of contemporary life. According to Frost (2003), eating practices, especially for young women, have become intimately associated with creating an ideal body image and moral strength of character. Yet, the very freedom to self-create the body – and by inference one's identity – carries a burden that propels some young people into dietary disorders and self-starvation.

Where established beliefs and practices are less salient, it also becomes less clear where we invest trust. For Beck and Giddens, individuals under conditions of late modernity have become increasingly conscious of food hazards produced by the technologies of the era. Food scares associated with, for example, BSE, genetically modified foods and salmonella mean that everyday foods are associated with health threats. Given

that many of these risks are not readily perceptible, our food decisions are reliant on expert – and often medical – advice. Lupton (2005, p. 449) suggests that food advice has become ‘deeply medicalized in its association with health, illness and disease’. However, this advice is often difficult to interpret or inconsistent in nature. For example, it may be difficult to make dietary choices based on complex information about ‘good’ and ‘bad’ fats, or the glycaemic index of carbohydrates.

Thus, our management of food hazards involves the individual in complex assessments and the balancing of diverse sets of ‘risks’ and benefits. We have to eat, but it can feel like a risky business. Clear decisions cannot readily be reached simply through the application of more knowledge or greater scientific awareness. Under these circumstances, social constructionists have sought to explore how people interpret food risks as part of everyday experience. Green et al. (2003) found that overt expressions of insecurity were exceptions rather than the norm. Everyday decision-making around food safety was presented as a routine endeavour, aided by a number of ‘short cuts’ or ‘rules of thumb’. Similarly, Shaw’s study (2004) of microbiological safety and BSE found that participants were able to locate their decisions in different contexts and, in so doing, brought competing logic to bear on risk decisions.

Discourse that surrounds food uncertainties can also be seen to serve ideological functions. Green et al. (2003) suggests that the language of safety was recurrently used by white study participants to explain reasons for avoiding ‘ethnic (that is, Indian and Chinese) restaurants’. The researchers suggest that this ‘risk speak’ provided an apparently neutral framework for expressing disparaging and often racialized judgements of other social groups.

Food risk discourses are therefore often based in what Bourdieu (1984) described as ‘processes of distinction’, that is, they act as vehicles for marking out and making judgements of group identity. Thus Green et

al. (2003, p. 50) found that older age groups expressed active unconcern about risks:

For older consumers, demonstrating their resistance to risk ... contributed to their rhetorical construction of ‘modernity’ as overly concerned and anxious about risk, and themselves as ‘survivors’ who were to some extent invulnerable to risk.

Although a lot of social constructionist work has concentrated on individual perceptions of food risks, more recent studies have explored interpersonal negotiations and, notably, family dynamics of dietary behaviours. Drawing on parental perceptions and understandings of ‘normal weight’ and ‘overweight’ young teenagers living in poorer socioeconomic circumstances, Backett-Milburn et al. (2006) explored the negotiations between parents and their children, arguing that parents lacked a discourse to talk about weight and overweight among their teenage children. Dietary issues were ‘a fairly low priority in the hierarchy of health-relevant and other risks facing their teenagers’ (Backett-Milburn et al., 2006, p. 624). Their study illustrates how social constructionist approaches can complement social causation theory. For many people on low incomes, weight-related issues have to be understood in the context of other risks that are perceived to be of greater importance.

## Conclusion

This case study has provided a discussion of the ways in which sociological perspectives might apply to the study of food and diets. Although there are considerable differences, social causation and social constructionist approaches share some concerns common to most sociological enquiry. Both have an interest in the socially patterned nature of food consumption and the socially embedded character of individual choice. While it is commonplace to believe that dietary beliefs and practices are essentially personal matters, sociological accounts have sought to locate them in a wider social context.

## Summary

- Sociology – the study of human social life – has addressed many issues concerning people’s experiences of health and illness, and the organization of healthcare services
- A key theme in this area is the social patterning of health, ill health and premature death. Groups with less access to money and other material resources experience poorer health and a higher premature death rate. Societies with more egalitarian structures enjoy better health than more unequal societies
- There are several different sociological perspectives, ranging from those such as functionalism, which emphasizes the value of social consensus and continuity, to those such as Marxism and political economy, which emphasize the sources of social conflict and change
- Sociologists have explored the links between medical power and other social stratification variables such as gender and ethnicity
- Sociology involves the critical examination of data, such as mortality rates, and the testing of theoretical frameworks and propositions

## Questions for further discussion

1. Analyse the emergence of HIV/AIDS as a health issue using social causation and social constructionist approaches.
2. Think back to recent encounters with the medical establishment. Critically analyse these encounters using sociological concepts.
3. To what extent are health-related behaviours socially determined? Illustrate your answer with reference to a specific behaviour, for example alcohol consumption or exercise patterns.

## Further reading

The sociology of health and illness is an extensive subject and this brief introduction can only indicate some of the central concerns, trends and debates in sociological research. The following list includes general texts on the sociology of health and illness as well as writings on specific topics that are well worth the effort of reading.

Annandale, E. (2014) *The Sociology of Health and Medicine* (2nd edn). Oxford: Polity. Excellent account of the relationship between critical social theory and medical sociology. Quite wide ranging, with particularly useful sections on health status, social stratification and health inequalities.

Bartley, M. (2004) *Health Inequality: An Introduction to Theories, Concepts and Methods*. Cambridge: Polity.

Useful resource for understanding key theories of health inequality and the methods employed by researchers in this field. Seeks to bridge some of the disciplinary divides between sociology, psychology and biology and show how all can contribute to the study of health inequalities.

Blaxter, M. (2004) *Health*. Cambridge: Polity.

Discusses how health is defined, constructed, experienced and acted out, drawing on a range of empirical data and theoretical approaches for Western countries.

Cockerham, W.C. (2013) *Social Causes of Health and Disease* (2nd edn). Cambridge: Polity.

Stimulating argument that social factors such as stress, poverty, unhealthy lifestyles and unpleasant living and work conditions have direct causal effects on health and many diseases.

Daykin, N. and Doyal, L. (eds) (1999) *Work and Health: Critical Perspectives*. Basingstoke: Macmillan.

Edited collection of articles that set out to redefine the traditional boundaries of occupational health and work. Shows how a sociological approach can broaden commonsense understandings of what we mean by 'work' and 'health'.

Doyal, L. (1995) *What Makes Women Sick? Gender and the Political Economy of Women's Health*. Basingstoke: Macmillan.

Key text devoted to sociology and gender issues. Explores the structuralist and materialist perspectives on gender inequalities in society, with a particular focus on why women report more ill health than men, despite their greater longevity.

Frank, A. (1995) *The Wounded Storyteller: Body, Illness and Ethics*. Chicago: University of Chicago Press.

Suggests that ill people are more than victims of disease or patients of medicine; they are wounded storytellers. Uses a biographical approach to show how people tell stories to make sense of their suffering and argues that, when they turn their diseases into stories, they find healing.

Gabe, J., Kelleher, D. and Williams, G. (eds) (2006) *Challenging Medicine* (2nd edn). London: Routledge.

Appraisal of changes to the health service and their effects on the status and practice of health professionals. Draws on debates around the expertise of medical professionals in the context of a rapidly changing social environment.

Lupton, D. and Tulloch, J. (2003) *Risk and Everyday Life*. London: Sage.

The study of risk has become closely connected to health studies. This book explores how people respond to, experience and think about risk as part of their everyday lives. Shows how sociological theory can provide a bridge between private and wider public concerns.

Nettleton, S. (2013) *The Sociology of Health and Illness* (2nd edn). Cambridge: Polity.

Accessible text providing a wide-ranging overview of the field. Gives clear explanations of concepts, theories and debates. Good use is made of contemporary research evidence.

Finally, it is important to remember that sociological research often appears in journals before it is described in books. Relevant journals include the *Sociology of Health and Illness*, *Social Science and Medicine*, *Women's Studies International Forum*, *Health Promotion International* and the *International Journal of Health Services*.

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Food for Life Partnership Evaluation

# Full Report

# Food for Life Partnership Evaluation

## Full Report

May 2011

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# 1. Introduction

## 1.1 Overview

The Food for Life Partnership is led by the Soil Association together with the Focus on Food Campaign, Garden Organic and the Health Education Trust. Initiated in 2007, it received initial funding for over five years from the Big Lottery Wellbeing Fund to deliver a programme of whole school food reform to schools across England. Alongside a focus on the promotion of healthy eating, the programme emphasises the value of sustainable food consumption for school communities.

In July 2007 the Soil Association commissioned the University of the West of England, Bristol and Cardiff University to provide an evaluation of the Food for Life Partnership programme. The evaluation focused on the following key programme goals:

- increasing school meal take-up,
- promoting healthier eating habits amongst pupils,
- improving pupil awareness of food sustainability issues,
- influencing food habits at home and parental engagement in school life,
- improving school performance, pupil attainment and behaviour,
- developing sustainable food sourcing and school meal provision.

## 1.2 Organisation of this report

The report starts with an account of research and policy context to whole school food programmes. It includes background on the central drivers to improve the health of children and young people and evidence of what works in school settings. It also draws upon an emerging field of research and policy that has sought to bring together issues of environmental sustainability and health. The function of this section of the report is to provide a back drop to the FFLP programme and to give a platform to the evaluation research questions in Section 4.

Section 3 provides an account the FFLP programme in terms of its underlying rationale, development and implementation to date. Section 5 introduces the framework to the evaluation and sets out to show how the study has sought to reflect the programme model in the adoption of a theory of change methodology.

Sections 6 to 13 present the findings and analysis for the areas of evaluation enquiry. Each section starts with an overview of the framework for analysis and the key findings. The final section of the report draws upon a range of data sources to revisit the central evaluation questions. It also seeks to give a synthesis of the study with respect to the FFLP's whole school food reform model.

For a briefing on the key findings from the research see Orme et al (2011) **Food for Life Evaluation Summary Report**, UWE Bristol & Cardiff University [www.uwe.ac.uk/ishe](http://www.uwe.ac.uk/ishe)

## 2. Context

### Key Points

Over the last ten years, there has been increasing concern over the health of English children particularly in relation to rising obesity rates. This is largely explained in relation to poor diets and lack of physical exercise. With most English children attending school daily, schools are in a unique position to influence and promote healthy eating amongst this age group.

Research drawing upon focused interventions in school settings indicates that practical food education, garden enhanced education and programmes that establish farm links are all promising strategies for promoting children's interest in healthier eating. Development of practical cooking skills has been shown to promote positive attitudes and to encourage children to try new foods; studies report that children involved in growing food for consumption are more positive about eating fruits and vegetables and tend to have higher fruit and vegetable consumption. Similarly, studies suggest that children in schools with strong farm links eat more fruit and vegetables.

There is a growing body of evidence on the benefits of promoting school meals. School meals have been found to have higher food and nutritional values in comparison to packed lunch alternatives. More generally, sensible eating habits formed at school are considered to have lasting significance into later life.

Research suggests that school health promotion initiatives can have a positive impact on children's health and behaviour but do not do so consistently. It would appear that most interventions are able to increase children's knowledge and attitudes but changing other factors which influence health, such as attitudes and behaviour, is much harder to achieve. Overall, a multifaceted approach is likely to be most effective, combining a classroom programme with changes to the school ethos and/or the environment and/ wider school community. This is consistent with the health promoting schools approach. Reviews have highlighted the importance of a shared vision at senior levels from the school, caterers, local government and health authorities.

The perspectives of children clearly have a central role in the reform of food in school. Yet, until recently, the voices of children have been marginalized in school meals reform even though, paradoxically, they are the central subjects. Children have had little involvement in the design and conduct of initiatives and their role as active agents has been confined to the "serving spoon end" of the decisions. Research reviews have therefore highlighted the need for programmes to create situations for children to have ownership over their food choices.

## 2.1 Introduction

Over the last ten years, there has been increasing concern over the health of English school children particularly in relation to rising obesity rates. This is largely explained in relation to poor diets and lack of physical exercise (National Statistics, 2009; Government Office for Science, 2007; Crowther et al., 2001). Research suggests that significant numbers of children consume sugar, salt and saturated fat that are far in excess of recommended amounts, while at the same time failing to consume the recommended five a day of fresh fruit and vegetables (DH & FSA, 2010). Children from lower socio-economic groups or disadvantaged communities are particularly vulnerable to obesity and more likely to experience poor diets (National Statistics, 2009; Currie et al., 2008). This focus on inequalities is central to the recent Department of Health White Paper '*Healthy Lives, Healthy people: Our strategy for public health in England*' (DH, 2010). Clearly the Government's commitment to building people's self-esteem, confidence and resilience through the life course is supported through the educational process. In addition, local government and local communities are considered to be at the heart of improving health and wellbeing.

Whilst policy reports over the last decade have emphasized the importance of healthy lifestyles, in January 2008 the previous Government published *Healthy Weight, Healthy Lives: A Cross-Government Strategy for England*, which focused on strategies for reversing levels of obesity within the population. Its priority was to tackle childhood obesity through a number of strategies including promoting healthier food choices. The Department of Health commissioned research by a number of organisations into families' attitudes and behaviours relating to diet and activity. In the final summary report (DH, 2008a) cooking is highlighted as playing a significant role in terms of family decision making. The report highlights a number of significant findings: a dramatic reduction in the amount of time families spend preparing food over recent years and parents' lack of knowledge, skills and confidence in the kitchen. Work undertaken by the Medical Research Council (2007) suggested that nearly half of all families believe food issues are a considerable source of family stress. These concerns were re-emphasized in Darzi's NHS Review, *High Quality Care For All* (DH, 2008b), where he argued for a NHS with a stronger focus on preventative healthcare and the commissioning of services on an 'industrial scale', on key public health challenges including obesity.

A diet high in fruit and vegetables is associated with a decreased risk of many chronic diseases including some cancers, heart disease, stroke, high blood pressure and diabetes (World Cancer Research Fund, 2007; Hu, 2003; He, Nowson & MacGregor, 2006; Fung et al., 2008; Montonen, 2004). Research also indicates that increased fruit and vegetable consumption can be one part of a weight management strategy (Rolls et al., 2004). However surveys show that only one in five boys and girls consume the recommended daily intake of five servings of fruit and vegetables (Health Survey for England 2009). This reflects wider concerns about the health of children and the steady increase in childhood obesity. Almost a third (30%) of children aged 2-15 years are overweight or obese and of these, nearly one in five is obese (ibid.). By 2020 the British Medical Association predicts that over one quarter of children will be obese and they will have a shorter life expectancy than their parents.

With most English children attending school daily, schools are in a unique position to influence and promote fruit and vegetable intake among students. Research drawing upon focused interventions in school settings indicates that practical food education, garden enhanced education and



programmes that establish farm links are all promising strategies for promoting children's interest in healthier eating. Garden enhanced education and farm links can contribute to environmental awareness and can form part of a school's approach to education for sustainability (Lautenschlager and Smith, 2007; Blair, 2009 and Sterling, 2005).

Furthermore, a growing body of evidence has emerged on the benefits of school meals. School meals have been found to have higher food and nutritional values in comparison to packed lunch alternatives (SFT, 2008, Evans *et al.*, 2010; Rees *et al.*, 2008). More generally, sensible eating habits formed at school are considered to have lasting significance into later life. School meals can be seen to have a wider role also when understood as an additional lesson in the day. The lunchtime can reinforce messages on the importance of a varied diet and willingness to try to new foods; green issues and food sustainability; cultural diversity, mutual respect and good conduct.

### 2.2 The whole school approach

The whole-school approach is central to the Food for Life Partnership initiative and aims to develop an ethos and environment in a school that supports learning and promotes the health and well-being of all. The whole school approach has been championed and developed over time within the National Healthy Schools Programme (NHSP) which is a scheme based on health and education partnerships across the country. The purpose of the NHSP is to ensure that health education becomes an integrated part of the school curriculum and that the wider community is involved in its planning, implementation, evaluation and celebration. The intended outcomes are that there will be measurable improvements in both health and education in the school and wider community. This can be achieved through a whole-school approach to ten over-arching areas of school improvement:

- leadership, management and managing change
- policy development, relevant to areas of focus
- curriculum planning and resourcing, including working with external agencies
- teaching and learning
- school culture and environment
- giving pupils a voice
- provision of pupils' support services
- staff professional development needs, health and welfare
- partnerships with parents/carers and local communities
- assessing, recording and reporting pupils' achievement

Social programmes are widely held to be more effective when the subjects of them are engaged as active participants in the process of change. Since the 1970s, health promotion programmes frequently refer back to the World Health Organization Ottawa convention on the importance of promoting community engagement. Similarly within the educational system, the voice of pupils, parents and wider stakeholders has been given considerable emphasis in measures to improve schools. This has been formalised for pupils through the requirement for schools to engage pupils through a school council. Parents are represented on the school governing body and since 2008 schools have had a duty to promote wider aspects of community cohesion.

Whilst it is widely held to be a good thing, the practice of involving participants in social programmes is nuanced and often complex. For example involvement can refer to everything from simple

accession or contact, to consultation and feedback, to a role in decisions and the setting of agendas. The means and ends of involvement are intrinsically coloured by the ideological underpinnings of the intervention. In this context, it is helpful to distinguish between ‘thin’ and ‘thick’ forms of involvement (Dean, 2010). ‘Thin’ forms of involvement are primarily directed at ensuring the compliance of participants to pre-defined programme aims. Here the emphasis is upon obtaining consumer feedback on the acceptability of the initiative and on the importance of tailoring actions to expressed needs. Participants are involved insofar that they express their preferences and, in some circumstances, can buy-in or opt-out of the programme.

By contrast ‘thick’ forms of involvement aspire to actively working with participants in the design and implementation of the programme. Here the focus is on enabling people to develop their perspectives on the issue at hand and to work with the solutions that they identify. ‘Thick involvement’ is therefore process-driven and places emphasis on debate, negotiation and collective decision making. Here then, this form of involvement can be characterised as a democratic model in contrast to the consumerist model exemplified in ‘thin involvement’. Yet, whilst this distinction helps us pick apart conflation in the language of involvement, in practice many policy initiatives combine these elements over time.

Whilst the value of participant involvement is complex to assess, it is widely accepted as an important element of successful school based health promotion programmes. Reviews of school-based intervention to promote healthy nutrition (de Sa & Lock, 2008; van Cauwenberghe et al 2010) have found evidence for the effectiveness of multicomponent programmes for self-reported dietary behaviour. De Sa and Lock’s review of 30 studies found that 22 reported a significant positive intervention effect on fruit and vegetable intake at follow up. Differences in intervention effect ranged from +0.14 servings to +0.99 servings per day. However comparisons of effect size or meta-analysis were difficult because studies do not report changes in similar ways. Van Cauwenberghe et al’s review found stronger evidence of the positive impact of multicomponent programmes with children aged 6-12 years old compared to adolescents (13-18 years old). This suggests that initiatives in secondary school settings are more challenging to implement compared to those in primary settings. More widely, van Cauwenberghe et al’s review questions the evidence of the longer term outcomes of school-based dietary interventions: “Whether fruit or vegetable promotion will meaningfully contribute to obesity prevention is rather doubtful, and more studies are needed that target a range of nutrition behaviours that contribute importantly to energy balance” (p.792)

### **2.3 School meal take up and the role of stakeholder involvement in school food policy**

School food can play an important part in promoting the health and development of children. In the UK, all grant maintained schools offer school meals, they are taken up by over one third of children and, as such, they form a clear route for promoting a healthier diet for children. This is particularly the case for children from lower income backgrounds who are eligible for free school meals. The relevance of policy interventions to reform food in school settings is all the more pertinent given that children do not have the same social and economic freedoms as adults to make decisions on the food they eat.

In 2005, in response to evidence of a growing range of health and nutritional problems among children and young people, the Government appointed the School Meals Review Panel (SMRP) to

recommend new standards for food in schools (DCSF, 2005; SMRP 2005). The panel proposed changes that were intended to help children enjoy balanced meals; reduce the consumption of less healthy food choices that are high in fat, salt and sugar; and increase the consumption of fruit and vegetables and food containing other essential nutrients.

The first stage of the reforms focused on identifying interim food-based standards for school lunches. These were introduced in September 2006 and were later extended to cover all other food provided to pupils. Since then, the interim standards have been replaced by the food-based and nutrient-based standards for school lunches (SFT, 2007). Primary schools were required to meet these standards by September 2008 and secondary, special schools and pupil referral units by September 2009.

In this context, there has been considerable attention paid to increasing the take up of school meals. Despite recent rises in take up, only a minority of children eat school foods. The take up of school meals for the 2009-10 financial year was 41.4% for English primary schools and 35.8% for secondary schools (SFT, 2010). There has been a small rise nationally on the previous year after a period of decline in recent years. Some of this increase is thought to be the result of recent policy attention and government investment (Statutory Instruments, 2000; 2006; 2007). However, there is considerable disquiet about the fragility of these short term increases given the marginalised position of the school meal service within the English educational system.

### ***Strategies to improve the take up of school meals***

There are a range of strategies available to improve the take up of school meals. Pricing is a clear influence on parents' and students' decisions to opt for either school meals or packed lunches (London Economics, 2009). State funding to subsidise the infrastructure and ingredient costs keep meal prices relatively low in comparison to market alternatives. However, school food campaigners have argued that in England the price of an average school lunch is excessive to parents.

Increased take up of school meals is most evident in cases where entitlement to free school meals has been extended. Led first in Scotland and then piloted in some English local authorities, the provision of universal free school meals has seen take-up increase dramatically. However, in England this approach is unlikely to be applied more widely given that the planned free school meal pilots are currently being withdrawn.

Nationally, the proportions of primary and secondary pupils known to be eligible for free school meals are 17.3% and 14.2%, respectively<sup>1,2</sup>. However, the proportions who take up

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<sup>1</sup> Data from DfE: *Schools, pupils and their characteristics: January 2010 (provisional)*; [www.dcsf.gov.uk/rsgateway/DB/SFR/s000925/index.shtml](http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000925/index.shtml).

<sup>2</sup> Parents do not have to pay for school lunches if they receive any of the following: Income Support; Income-based Jobseeker's Allowance; Income-related Employment and Support Allowance; Support under Part VI of the Immigration and Asylum Act 1999; The Guarantee element of State Pension Credit; Child Tax Credit, provided they are not entitled to Working Tax Credit and have an annual income (as assessed by HM Revenue & Customs) that does not exceed £16,040; Working Tax Credit during the four-week period immediately after their employment finishes or after they start to work fewer than 16 hours each week. Children who receive Income Support or Income-based Jobseeker's Allowance in their own right qualify as well. All pupils who do not qualify for free school lunches must be charged the same amount for the same quantity of the same item.

their entitlement are lower: 15.0% in primary schools (86.6% of those known to be eligible) and 11.1% at secondary level (78.3% of those known to be eligible). Some of the barriers that prevent families from taking up free school meals include: uncertainty about eligibility; a reluctance to be identified as needing support; fluctuations in family status which make it difficult for families to re-apply for support when necessary; and the complexity of the application process which some families find daunting.

Other measures to improve take up of free school meals include improved school and local authority publicity to all parents and targeted information, for example, for families living in social housing. In cases where supplementary funding has been available, direct advice through parent liaison officers based in schools and assistance to complete forms has been offered. Schools and caterers have also introduced strategies to reduce any stigma for children entitled to free school meals by, for example, introducing anonymous payments (smartcards/ fingerprint IDs) in secondary schools for all pupils, regardless of status. Schools and local authorities also improve their free school meal take up by setting targets to improve take-up and drawing up plans to meet them (Ofsted, 2010).

One challenging area for schools and authorities to tackle is the take up of school meals by families whose income is low but who are above the threshold for being entitled to free school meals. This is a particular issue for families with multiple children in school. Ofsted's inspection on food in schools (Ofsted, 2010) identified this as an area where strategies remain limited under current circumstances.

### ***Investment, meal quality, choice, service and dining room ambience***

The quality of school meals is an important influence on take up. Long term under investment in the school meals service and the culture of competitive tendering has had a harmful impact on the quality of school meals (Nicholas *et al.*, 2006). The school meal catering sector has been characterised by low pay, short hours and minimal staff development. Given that the provision of more meals means a higher workload, kitchen staff have not been incentivised to promote take up in this context. The drive to keep costs down has also led to under-investment in facilities, the use of low cost, highly processed ingredients and the introduction of bulk catering systems. Improvements to the quality of school meals have therefore sought to reverse these trends through renewed investment in the sector and revised contracts (POST, 2009; Statutory Instruments, 2000; 2006; 2007).

The contractual obligation of the school meals service to meet food and nutrient standards has been reported as a constraint to innovation or a restriction on offering popular and often unhealthy foods (Nicholas *et al.*, 2006). Nevertheless, schools have been supported to meet the meal standards and to improve the quality of preparation by a range of publications from the School Food Trust. They have also had access to resources such as the Real Meals cook book and the Licence to Cook programme.

From the perspective of students, a further set of issues include school meal choice, the quality of the meal service and wider aspects of the dining room ambience. Systems that help children select and guarantee their preferred meal options have proved popular. These include the setting of advance menus and meal choice booking at registration. Queuing and slow service is known to be unpopular amongst students (Food Standards Agency, 2003). Some solutions include improvements

to the dining hall layout, the use of more service points, a 'grab and go' style service, quick payment methods and staggered lunch breaks to increase eating time. The availability of food through a breakfast club and mid-morning service or tuck shop can also encourage students to take up healthier alternatives to high fat or sugary snacks.

Students also report that the ambience of the dining room makes a difference to their enjoyment of school lunches (Nicholas *et al.*, 2006). Changes to seating, tables, plates, cutlery and other aspects such as the use of music and displays are appreciated. In addition students value a dining environment that is well maintained, cleaned and supervised (Scottish Executive, 2003; HMIE, 2005).

### ***Coordination and stakeholder involvement***

Engaging stakeholders on the promotion of healthier foods in school can be considered not only as an ethical imperative but also critical in developing effective and acceptable interventions.

Reforms are felt to be more effective when implemented strategically across the whole school and at wider authority level rather than as stand alone, isolated measures. Reviews have highlighted the importance of a whole school approach (Scottish Government Executive, 2003; SMRP, 2005; Nicholas *et al.*, 2006; Ofsted, 2010) in which there is a shared vision at senior levels from the school, caterers, the local authority and primary care trust. The skills of kitchen and supervisory staff need to be valued, recognised and developed. Caterers need to be given license to be more entrepreneurial in their procurement. Where possible, work should also extend outside the school to include local food outlets retailing to children outside school hours or, to older children, at lunch break.

The perspectives of children clearly have a central role in the reform of school meals. Yet, until recently, Gustaffson (2003) argues, the voices of children have been marginalized in school meals reform even though, paradoxically, they are the central subjects. Children have had little involvement in the design and conduct of initiatives. Children's role as active agents has been confined to the "serving spoon end" of the decisions. The relationship between children and food at school has been limited to accepting or rejecting whatever is served up. A systematic review of eight evaluations of interventions promoting fruit and vegetables to children concluded that programmes should 'create situations for children to have ownership over their food choices' (Thomas *et al.*, 2003).

Feedback from caterers indicates that engagement with parents has been largely limited to marketing and periodic consultations (e.g. SFT, 2010). Parents are encouraged to opt for school meals through publicity, tasting events and occasionally, introductory offers to parents of children starting school. Parents are less likely to be engaged at more developmental or strategic levels, for example parent governors are rarely involved in monitoring standards or the effectiveness of strategies to reform food in schools (Ofsted, 2010).

Although many of the claims about the effectiveness of strategies appear plausible, they have not necessarily been subject to evaluation. It is notable that the role of stakeholders has, to date, been largely based on case study and anecdotal evidence.

## 2.4 Catering and school food procurement

The plight of school meal provision in the UK over recent decades can be reflected in the degradation of skills, status and work conditions for kitchen staff. The introduction of Compulsive Competitive Tendering in the 1980s is generally regarded as the key point when the value imperative started to dominate the broader social purpose of providing meals in schools. The increased primacy of the cost saving ethic in the service led, not only to less money being spent on food ingredients, but also a greater use of pre-prepared and processed food products. As well as impacting on the quality and health attributes of school meals, these developments also led to a reduced need for skilled kitchen staff and numbers of staff in general. By the start of the last decade, the role of kitchen staff had become largely about pack opening, re-heating and regenerating processed ingredients.

Over recent years, organisations including the Soil Association and School Food Trust have fought to raise the profile and working conditions of kitchen staff alongside Unions and Trade Bodies, such as LACA and Unison, as well as campaigning individuals such as Jeanette Orrey and Jamie Oliver.

Kitchen staff and the kitchen 'environment' in general, are regarded as vital by school food reform advocates as they are in many ways the central point of the school meal system. FFLP type approaches that centre on healthy and appealing school food require the skills and capacity to produce these meals and convey their qualities at point of consumption. Kitchen staff tend to directly come into contact with suppliers as well as deliver food direct to the pupil. In these respects they are also key in monitoring both consumer desires and habits and the quality of food that is used.

The difficulty of attracting skilled labour into the school kitchen is compounded by low pay and low working hours. Most school kitchen staff work less than full time, although unpaid overtime is common.

Academic enquiry into the status, role and function of institutional kitchens in general, is currently underdeveloped. The issue is often integrated into broader studies on sustainable food procurement and public service provision. Morgan and Sonnino (2008) for example, draw upon Joan Tronto's '*Ethics of Care*' concept to suggest that the low status of catering staff is a systemic effect within the school meals service resulting from a broader de-valuing of care roles in modern society.

Public Procurement has become one of the main battlefields for proponents of sustainable food as our understanding of the impact and potential benefits of purchasing policies has grown over recent years. In England alone, the public sector spends over £2 billion per annum on food and catering services, of which school meals form the majority. Advocates of sustainable food procurement argue that this money should be better used to encourage social, environmental and economic goals through the purchasing of appropriate food. It is increasingly being recognised that buying food from sustainable sources such as local or organic producers can directly help to shape markets both from the economic impact of buying the food and from facilitating its consumption by the general public. In addition, providing healthy food can impact directly on public health, which is a social aspect of sustainability, by improving dietary intake, particularly amongst vulnerable parts of society such as the young, old and infirm.

A renaissance of interest in school meal provision has evolved in the midst of, and largely as a result of, decades of increasing cost primacy in the sector. Compulsory Competitive Tendering and its replacement Best Value promoted an ethos of permanent cost reduction that has had a steady and profound impact on the quality of food sourced and the standards of meals produced in schools. This trend has lessened somewhat in recent years although there are still considerable cost pressures in the sector.

The key challenges for proponents of sustainable food have become to develop ways to understand and communicate the impacts of sustainable food procurement and find approaches that are fiscally acceptable to a broad range of stakeholders as well as sustainable in the long term.

FFLP is in many ways at the vanguard of the battle between these cost and sustainability pressures. Sustainable food sourcing is rightly placed at the heart of the whole school approach to food promoted by the programme.

## **2.5 The role of food education for health promotion and awareness of sustainability issues**

Recent evidence indicates health and wider social benefits associated with practical food education programmes that encompass cooking skills, growing skills and farm visits. Development of practical cooking skills has been shown to promote healthier eating and encourage children to try new foods; studies report that children involved in growing food for consumption are more positive about eating fruits and vegetables and tend to have higher fruit and vegetable consumption (Libman, 2007; McAleese & Rankin, 2007; Morris & Zidenberg-Cherr, 2002; Birch, 1999). Similarly, studies suggest that children in schools with strong farm links eat more fruit and vegetables (Joshi, Azuma & Feenstra 2008; Joshi & Azuma, 2009).

### ***Practical education in food preparation***

The cross governmental nature of the obesity problem and wider issue of poor diets has been consistently highlighted. Since September 2000 it has been a statutory requirement that primary school children in England experience the opportunity to prepare and make food at school. The British Nutrition Foundation, the Design and Technology Association and Focus on Food had previously produced comprehensive support materials and argued it was pertinent to bring these together with the National Curriculum schemes of work, into a coherent whole school approach support programme under a single (formerly) DfES scheme. Subsequently, the Government invited the three organizations to develop a partnership, to provide training for groups of primary teachers, working with expert secondary food technology teachers. Schools were encouraged to do more food education, particularly cooking, and were given support to work towards the National Healthy Schools Standard. This initiative was announced in April 2001 as part of a joint departmental Food in Schools Programme costing £2.2 million.

The aim of this programme was to provide consistent messages about healthy eating and provide education about food hygiene and food preparation (DfES, 2003). A plethora of documentation from a wide range of third sector, private sector and national bodies including Sainsburys, The Dairy Council, The Vegetarian Society, Food Standards Agency (FSA), DH, OFSTED, Health Education Trust was available to support the development of food culture within schools. Much of the material was

aimed at teachers to support the delivery of cooking and development of pupils' competencies in food and nutrition. Additional schemes have developed to enhance cooking in schools and their local communities, not least "Let's Get Cooking" an initiative led by the School Food Trust, which was funded by a £20 million grant from the Big Lottery. This aims to set up an initial network of 5,000 out-of-school cookery clubs by 2012, which will enable over one million children and family members to learn new cooking skills. It is anticipated that these clubs would be run by volunteers and have support to buy relevant equipment.

In addition, by 2008 the Government was suggesting that cookery lessons should to be compulsory in England's secondary schools for children aged 11 to 14 years. Again this was part of a broader strategy to tackle obesity. It was described as a ministerial expectation that pupils would learn to cook for an hour a week for one term and that for those children from poorer families, ingredients would be subsidised with the Minister for Education, Ed Balls, promising to give schools £2.5 million to support the initiative.

The Focus on Food Campaign is involved in delivering programmes commissioned by a number of organisations: the Food Standards Agency (England); the Welsh Assembly Government; Yorkshire Forward; the Big Lottery and Healthier Scotland. This includes the Cooking Bus which as a result has been subject to two previous evaluations.

The FSA examined the effectiveness of their sponsorship of the bus by undertaking field work in four schools across England. The bus was positively evaluated, with findings suggesting that the bus visit had improved pupils knowledge around food, cooking and diet. Staff input was generally evaluated as high quality, and that the key messages covered in the sessions were cascaded to other members of the school and community through school assemblies and sharing with family members. In terms of teachers and staff development, the Cooking Bus was perceived to be effective, even amongst teachers who were resistant. Recommendations for improvement identified by the evaluation focused on practical arrangements such as changing the pace of sessions for younger children or those with additional needs and developing sessions for parents (COI Communications on behalf of FSA, 2004).

A more comprehensive evaluation was funded by the Welsh Assembly Government in 2009. Researchers at Cardiff University undertook an evaluation which aimed to establish the degree to which the Cooking Bus met its own aims and those set out in a range of policy initiatives (Welsh Assembly Government 2006a; 2006b). The evaluation also explored whether any change had occurred in schools after the Cooking Bus visit and provided guidance for future policy. Data collection was multi-method and included a documentary analysis; interviews with key stakeholders and policy makers, staff teaching on the bus and a commissioner; five detailed case studies and a postal survey to all participating schools. Recommendations from the findings suggested that while programme delivery was of a high quality both to pupils and in terms of staff development, there were areas for improvement; not least that delivery should extend to all the children within a school setting. Some recommendations are specifically focused on linking the aims of the Cooking Bus to the distinct aims of Welsh policy, however, the authors also suggest, from their economic analysis, that given current public sector conditions schools should be targeted in areas of high deprivation, where the risks of poor diet are higher. The cost per visit was estimated to be £12,828. In terms of value for money thresholds set by NICE, the authors suggest that in a year a bus would have to



prevent 26 children from becoming obese across their lifetime to be considered cost effective. In addition, it was suggested that work should be undertaken to encourage more active community and parental participation and the development of a more robust follow up programme to make sure that schools sustain what had been learnt (Sergrott, *et al.* 2009).

### ***Making use of school gardens***

Whilst schools develop garden related activities for a wide range of reasons, in recent years a major driver has been increased interest in their perceived value in the promotion of healthier eating, in particular fruit and vegetables. Children's consumption behaviours are directly related to their opportunities for experiences of different foods (Blanchette and Brug, 2005) and gardens in school settings offer the chance for children to develop a personal connection with their food. Research suggests that education with primary-school aged children about diet and nutrition should focus on concrete experiences with food (Contento, 1981). Such participation is associated with: an increased ability to identify fruits and vegetables (Somerset and Markwell, 2009); a willingness to taste vegetables grown in the garden (Morris *et al.*, 2001); and a willingness to try vegetables in school meals (Morris and Zidenburg-Cherr, 2002).

Food preferences and peer influences have also been associated with fruit and vegetable consumption. Children participating in structured educational courses on growing express more positive preferences for fruit and vegetables (Libman, 2007; McAleese and Rankin, 2007; Morris and Zidenberg-Cherr, 2002; Birch, 1999). The school setting may also be important because it offers opportunities for positive peer influence and social support (Brug *et al.*, 2008). Through practical work, teachers can model healthy behaviours to reinforce nutrition and health messages. There is also the prospect of a positive take home influence. School-based hands-on experiences with fruits and vegetables can enable children to prepare these foods at home with their families and influence the quality of the food their families buy and prepare (Heim *et al.*, 2009; Demas, 1998).

Clearly school gardens can provide a wide range of benefits in addition to the promotion of healthier eating. Through creative outdoor learning, children have the opportunity to develop a wider range of practical life skills in addition to more generic social skills, such as teamwork. These broad opportunities for children's development have helped advocates align school gardens to the *Every Child Matters* agenda. Whilst proponents feel that outdoor learning has been marginalised within mainstream education, school gardens clearly have a wide range of applications to the curriculum. Gardening activities provide hands-on study of nutrition and science concepts as well as a range of other subjects such as literacy, mathematics, history and the arts. Hands-on experience of local food production can help build a mandate amongst both pupils and staff for local ecological improvements; thus contributing a wider agenda on well-being and sustainability in the school setting.

Finally, school gardens may contribute towards an agenda on community cohesion by offering opportunities for parent and the wider community involvement and the celebration of school life (Blair, 2009; Ozer, 2007). These effects can be longer term. Other studies have found an association between gardening and fruit and vegetable consumption, even when the gardening activity occurred in the past (Alaimo *et al.*, 2008; Devine *et al.*, 1999).

Whilst this research has considerable bearing on the role of garden enhanced education for public health and education for sustainability, it is not without limitations. Research conducted on school gardening programmes has focused on primary schools whereas secondary school settings remain under researched. The research is largely North American and may not be transferable to the UK setting. Studies also tend to focus on heavily structured, specialised and externally delivered interventions (CDC, 2010). Reports based upon these initiatives may not necessarily reflect their performance under 'ordinary' conditions (Nutbeam, 1998). Finally, other less research-based reports suffer from a surfeit of assertion over empirical evidence (See Scott *et al.*, 2003 for commentary).

Nevertheless, some research has started to examine the conditions under which garden enhanced education can become integrated into mainstream school practice. Some of the pre-requisites clearly include adequate space, facilities, equipment and partnerships to enable experiential lessons on fruit and vegetable production, preparation and storage. Other issues such as the threat of vandalism can be important considerations.

Others factors may be more critical for success. Whilst gardening remains a popular hobby, the effective management of growing projects over the course of a school year requires horticultural skill, enthusiasm and commitment. Previous research indicates that staff need professional development in this area, especially given that there is little place for this in contemporary teacher training. Whilst professionals from outside the school may play a part, in the longer term, schools need to develop in-house skills (Scott *et al.*, 2003) drawing upon either staff or adult volunteers. This in turn requires buy in from the school leadership team, administrators and others such as grounds maintenance staff.

School gardens are also likely to have greater impact as part of a combined effort across a number of dimensions of school life. Thus their links to school food policy, educational cooking, food preparation and tasting activities, lunchtime food provision, and reinforcement through visits to farms or allotments can all contribute to the synergy and integration of an initiative.

Other potential issues remain under explored when understanding how schools implement and embed garden enhanced education. Our earlier primary schools case study research (Jones *et al.*, 2010) suggests that children's regular and structured participation can be difficult to achieve particularly where there are practical obstacles to running group based outdoor learning and integration into schemes of work. Whilst there remain many attractions to school gardens, some of these obstacles may account for their patchy and uneven adoption in English schools.

### ***Farm visits as contributors to healthy eating and education for sustainability***

Programmes encouraging links between farms and schools have been studied less comprehensively than programmes focusing on practical food education and the use of school gardens as educational resources. Nevertheless, there is a small and growing body of literature that suggests that building links between schools and farms encourages healthy eating and facilitates education around food production and sourcing, including consideration of sustainable food production.

Research on the national Farm to School Program in the USA has found that students in schools with farm to school programmes eat more fruits and vegetables per day in the cafeteria, classroom and

home; make positive lifestyle changes and improve knowledge and attitudes about healthy eating and sustainable agriculture. Student participation in meal programmes in the USA increases in schools with farm to school programmes (for reviews see: Joshi, Azuma & Feenstra 2008; Joshi & Azuma, 2009). In the context of a highly industrialised and market driven food economy, these experiential opportunities may not be otherwise available to children: particularly for those living in lower income families and in urban settings.

Other US studies have also reported positive impacts for school staff. Teachers from schools participating in farm to school programmes find it 'easy' or 'very easy' to integrate nutrition education concepts into their regular curriculum (Joshi, Kalb & Beery, 2006). Farm visits associated with high quality support materials are reported to help teachers deliver health nutrition messages (Haase *et al.*, 2004). Qualitative research indicates that staff themselves feel that farm visits help improve their own awareness about farm and nutrition issues (Schmidt & Kolodinsky, 2006). This may in turn inform the quality of their teaching delivery and preparedness to incorporate food sustainability education into mainstream practice.

However, this research also indicates that farm link education is by no means integrated into primary or secondary education. Barriers and factors critical for the successful development of farm link education remain largely anecdotal knowledge within the educational community. Moreover, the research evidence is overwhelmingly based in the US educational and agricultural context.

## **2.6 Home influences and the role of parental/wider community involvement**

Children can and do play an active role in influencing and facilitating relationships between schools and their parents (Byron *et al.*, 2009; Crozier *et al.*, 2007). Research suggests that school health promotion initiatives can have a positive impact on children's health and behaviour but do not do so consistently. It would appear that most interventions are able to increase children's knowledge but changing other factors which influence health, such as attitudes and behaviour, is much harder to achieve, even in the short-term. Overall, a multifaceted approach is likely to be most effective, combining a classroom programme with changes to the school ethos and/or environment and/or with family/community involvement. This is consistent with the health promoting schools approach (Stewart-Brown, 2006).

In the case of take home messages around food culture it is important to recognise the complexity of the communication process involved in transferring information from one setting to another. Home is not only a physical construct but a social construct which encompasses family routines and structures. So communication between home and school is not just about transfer of information between one geographical setting and another but about negotiating the different social constructs of home and school.

The most frequent way for children to play a role in home-school relationships is as 'messengers' between school and home, often by delivering letters from the school to parents, and in telling parents about their experiences at school. However, letters are often not passed on and most parents report that they would like to know more about their children's school experiences than they hear from children themselves (Crozier *et al.*, 2007). Practical food experience in school has

already been noted as a mechanism to enable children to transfer this behavior to the home environment and influence family eating patterns (Heim *et al.*, 2009). It is seen as important however for children to talk about their school experiences for their own learning, as well as brokering the relationship between their parents and school. Guidance on overcoming this “crisis in communication” between children and parents, highlights that it is important to acknowledge the agency of children, emphasising that parents should try to find out what children are enthusiastic about, ask open questions and wait to be ‘invited in’ by children rather than demanding information in an interrogatory fashion (Byron, 2009).

Van Cauwenburghe *et al.*'s (2010) systematic review of school-based interventions addressing diet found widespread claims that parents play a direct role in children and young people's eating patterns. In the programmes reviewed, parental involvement tended to be limited to newsletters, homework assignments or at best family nights at school. In about half of these cases there was evidence of successful improvements to dietary behavior. The reviewers felt that the current evidence did not offer a strong conclusion on the role of parental involvement- and that there was an area for further research.

## **2.7 Wider programme impacts: school performance, student behaviour and attainment**

Children's diets are attracting considerable attention from the public health and education communities. What children eat in schools can have a profound effect on their health, but crucially recent research also suggests that diet can also play a role in school behaviour and educational attainment.

This outlook has been strongly reflected in English policy where, for example the *Every Child Matters* (DCFS, 2007) took the five objectives for young people: *to be healthy; stay safe; enjoy and achieve; make a positive contribution; and achieve economic wellbeing*. In addition young people are encouraged to be interdependent and supportive of one another (Brooks & Trough, 2006). Leading initiatives such as the National Healthy Schools Programme in England and similar programmes in other countries have emphasised the need to bring together the often disjointed, policy domains of improving health and raising educational attainment in school settings. In England, the Government highlight the link between ‘taking care of our children's health and development could improve educational attainment and reduce the risks of mental illness, unhealthy lifestyles, road deaths and hospital admissions due to tooth decay’(DH, 2010: 5).

In this context, interest is growing in the educational benefits of school food, in terms of pupil' readiness to learn, their mood and behaviour and ultimately their attainment. This interest reflects anecdotal reports from the school environment. Teachers and parents often report that improvements in breakfast and lunch time diets are associated with positive effects on concentration, conduct and learning in the classroom. Similarly educational case studies suggest that improvements to the school dining environment support children's behaviour, well being and learning (e.g. N.Yorks BEP, 2004, cit. SFT 2009).

Sorhaindo and Feinstein (2006) and Belot and James (2009) suggest that it is possible to identify distinct processes or causal chains that may lead to improved behavioural and educational

outcomes. Firstly, from a nutritional perspective, health outcomes that manifest as a result of nutrition may have an impact upon school life experiences and outcomes. A good diet provides the nutrients that play an important role in cognitive development, short term behavioural effects and longer terms behavioural problems.

Secondly there are health education perspectives. Here learning about food, whether formally in the classroom or informally during lunch and break times, is seen as a process through which children acquire wider learning outcomes. The case for practical food education (taken in the widest sense) is that it is exemplary as an experiential, creative and applied approach to learning. More generally the process of whole school food policy development and the enfranchisement of learners may set in train a broad set of benefits where, for example, children feel enabled to take a more active role in their learning. The pedagogical attraction is clearly reflected in recent recommendations for more cross curricular, thematic and integrated programmes of education in primary schools (Cambridge Primary Review, 2009; Rose Review, 2009).

However, whilst the associations between healthy eating, behaviour and attainment have been theorised, much research evidence in school settings gives a more opaque and nuanced picture. The systematic review undertaken by Ellis *et al.*, (2006) examined the effect of good nutrition on the behaviour, learning and performance of school-aged children (4-18 years). The study concluded that “there is insufficient evidence to identify any effect of nutrition, diet and dietary change on learning, education or performance of school aged children from the developed world” (2006:4). This was partly because they had difficulty interpreting results of studies in the context of many confounding factors, such as family and community context, wider socio-economic environment and rate of individual maturation. Notably, Ellis *et al.* found few studies undertaken with secondary school children and in special needs educational settings.

As Behrman (1996) puts it: “[these] associations do not necessarily indicate causality; estimates generally are likely to be biased in one direction or the other”. As a result analysts and policymakers should have much less confidence in findings about the effect of health on schooling success than has been claimed”. There is room for much caution when appraising wide-ranging claims that are sometimes made for educational initiatives given the wide array of factors that have an impact on learning, education and performance of children.

The research evidence, then, indicates that the links between school food programmes and educational outcomes are likely to be both complex and longer term in nature. Many studies, to date, have been conducted within a short report time (five days to six months) which does not measure long-term behavioural change. Longer term research is best undertaken with highly structured interventions or larger scale programmes that are of sufficient scale to allow experimental research designs. These are resource intensive, and their costs need to be warranted by the maturity and consolidation of the programme.

### ***Expert perspectives on school performance***

In the context of limited research evidence, professional views and informed opinion form an important resource for decision makers. Indeed the rigorous analysis of the experts in the field is

widely taken to hold considerable value in the evaluation of complex social programmes (Oliver, 2001; Oliver et al., 2001; Springett 2001, Nutbeam, 1998).

Houlihan and Waring's (2008:14) study is a case in point. They examined how educationalists interpreted the links between a sports partnership programme and educational outcomes. These experts considered that attainment "could not simply be measured by increased test scores or improved exam results as it was felt that in addition to tangible measures of academic success, attainment was also about improving the ability to learn." Their research highlighted how educationalists employ a layered nature of the concept of attainment. The first layer involves the development of pupils' confidence and communication skills; the second relates to an impact on generic skills including the ability to 'plan' projects; and the third layer concerns raising attainment in subject specific areas, but also across the curriculum.

## 2.8 Conclusion

From the literature it is clear that practical food education can have benefits in terms of enhancing knowledge and potentially increasing fruit and vegetable consumption. The majority of studies have focused on individual components of food in school health promotion: meal reform, practical cooking skills, gardening or developing links with farms. Few studies have explored the potential impact of combining these areas to help young people develop knowledge and skills related to food production and healthy eating.

Many questions remain regarding the impact of practical food education in schools on pupils, staff and parents. Furthermore, questions remain about how such a programme should and could be supported and which factors, both intrinsic to the programme and intrinsic to the schools participating, facilitate embedding the programme within the school and ensuring sustainability after the initial start up phases.

## 3. The Food for Life Partnership Programme

### Key Points

The Food for Life Partnership (FFLP), led by the Soil Association together with the Focus on Food Campaign, Garden Organic and the Health Education Trust, is funded over five years from the BIG Lottery Wellbeing Fund. In addition to the promotion of healthy eating, the programme has an emphasis on outcomes related to sustainable food consumption (defined as seasonal, unprocessed, local and organic) in school settings.

FFLP is an initiative that works on multiple levels out to promote change for pupils and parents, school staff, school communities and local food networks utilising a whole school approach. Its aim is to support schools and caterers to provide healthier, tastier and more sustainable school food. Pupils are also taught about where their food comes from, how to grow their own food and essential cooking skills.

The Partnership has recruited and worked closely with 180 diverse 'Flagship' schools and communities, 20 in each region in England, based on their commitment and enthusiasm to transform food culture in the school and wider community and act as best practice exemplars to inspire other schools and communities.

Key programme goals for FFLP are to:

- promote healthier eating habits amongst pupils
- improve pupil awareness of food sustainability issues
- influence food habits at home & in the wider community
- improve pupil attainment and behaviour
- increase school meal take-up
- build the market for local & organic food producers

These areas form the focus for the evaluation.

### 3.1 Introduction

The Food for Life Partnership, led by the Soil Association together with the Focus on Food Campaign, Garden Organic and the Health Education Trust, is funded over five years from the Big Lottery Wellbeing Fund ('healthy eating' strand). The emphasis is on outcomes related to sustainable food consumption (defined as seasonal, unprocessed, local and organic) throughout, *alongside* healthy eating.

The mission of Food for Life Partnership is:

*“to reach out through schools to give communities access to quality local and organic food, and to the skills they need to cook and grow fresh food for themselves. We want all young people and their families to rediscover the pleasure of taking time out to enjoy good food that makes them feel healthy and connected to the changing seasons.”<sup>3</sup>*

Food for Life Partnership (FFLP) is an ambitious and multiple level initiative that sets out to promote change for pupils and parents, school staff, school communities and local food networks. Its aim is to support schools and caterers to provide healthier, tastier and more sustainable school food. Pupils are also taught about where their food comes from, how to grow their own food and essential cooking skills.

The Partnership has recruited and worked closely with 180 diverse ‘Flagship’ schools and communities, 20 in each region in England, based on their commitment and enthusiasm to transform food culture in the school and wider community and act as best practice exemplars to inspire other schools and communities.

Evaluation of this complex community initiative aims to understand how and to what extent the FFLP is achieving a transformation of food culture in whole school communities. In addition to the mission statement, FFLP have set out delivery outcome commitments, wider programme aims<sup>4</sup> and has developed logic models to articulate the processes by which programme outcomes are sought. Figure 3.1 summarises key elements of the programme model. A more in depth version of this model can be found in the Appendix. The UWE/Cardiff evaluation has drawn upon this model in order to create a framework for the evaluation. In order to provide further focus for key processes of change, the UWE/Cardiff evaluation examines a specific set of propositions for the programme. To summarise, these are that the FFLP approach:

promotes healthier eating habits amongst pupils,  
improves pupil awareness of food sustainability issues,  
influences food habits at home & in the wider community,  
pupil attainment and behaviour,  
increases school meal take-up,  
builds the market for local & organic food producers.

### ***Delivery outcome commitments***

FFLP has a set of central delivery outcomes associated with the BIG Lottery funding. These are:

1. Within the life-span of the project (5 years) 180 schools and their communities with **increased knowledge of healthy and sustainable food and its origins** and a further 3,600 schools and their communities given access to sourcing and developing this knowledge;
2. Within the life-span of the project (5 years) 180 schools and their communities with **increased skills relating to the growing, buying and cooking of healthy and sustainable food** and a

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<sup>3</sup> FFLP Evaluation Specification 22<sup>nd</sup> May 2007

<sup>4</sup> Ibid



further 3,600 schools and their communities given access to sourcing and developing these skills;

3. Within the life-span of the project (5 years) 180 schools and their communities with **increased access to and consumption of healthy and sustainable food** and a further 3,600 schools and their communities provided with examples of how to do this for themselves.

The wider programme aims are to:

1. **To inspire and educate young people and their families and communities to cook with fresh, seasonal, local and organic ingredients, and to grow food and visit farms** in order to understand and experience how their food choices can impact on their health, society, the environment and animal welfare.
2. **To encourage communities to build vibrant food cultures** where the pleasure and importance of good food is truly valued.
3. **To build demand for fresh, seasonal, local and organic food** in schools and communities by promoting closer connections with small local and organic farms and support the development of sustainable local food systems.
4. **To encourage a new emphasis in education policy on the value of practical cooking skills and food literacy in schools**, so that young people and their families are better able to eat intelligently and well.
5. **To demonstrate the benefits of sustained investment in improving school food service and delivering a whole school approach to food** in terms of improved take-up of schools meals and better educational attainment and behaviour in schools.

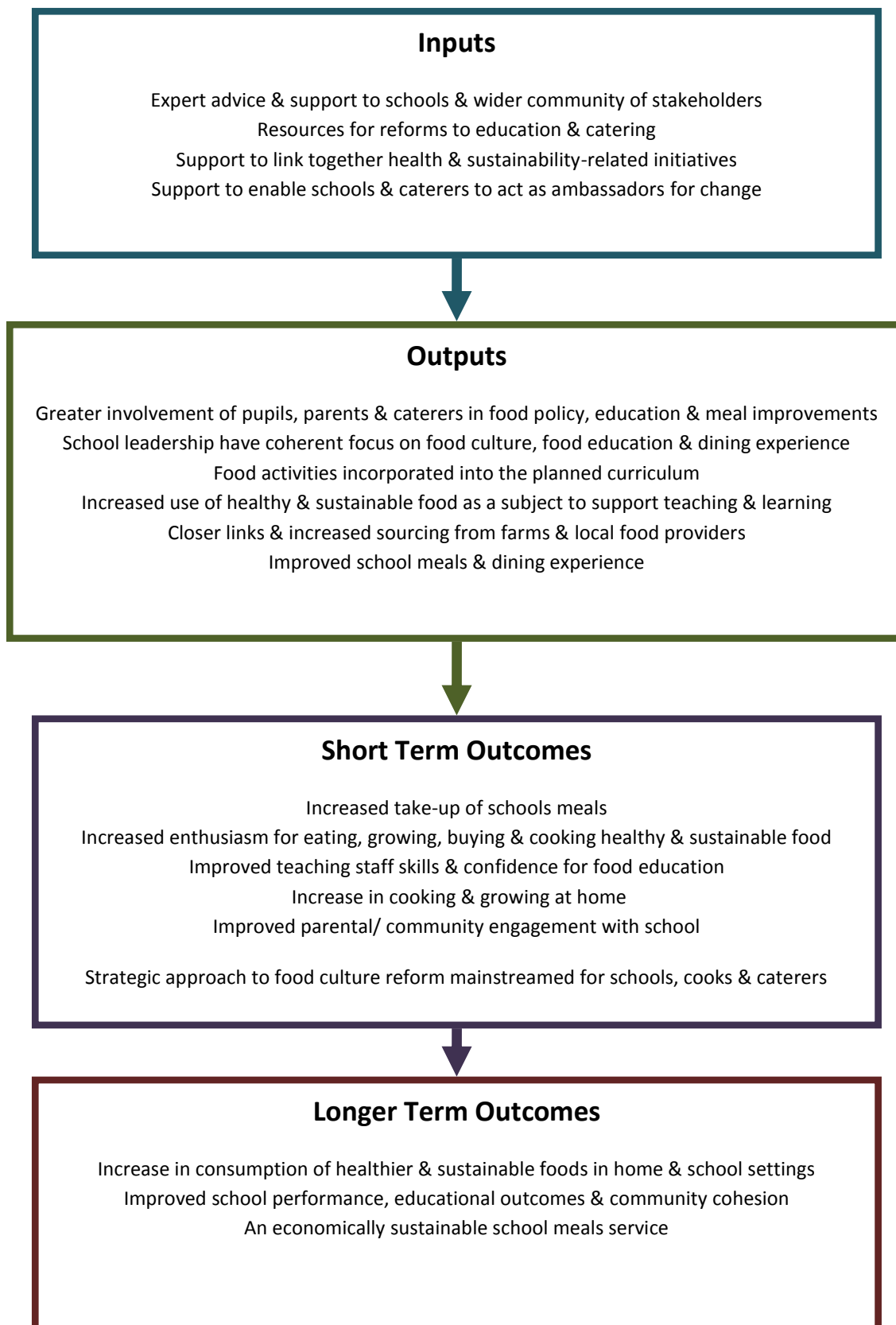
### 3.2 FFLP programme – rationale

Food for Life Partnership evolved out of a growing concern that individuals and communities are getting more and more detached from how food is produced, and losing the skills and knowledge needed to take active control over what we eat. The Food for Life Partnership has a vision of healthy and climate-friendly school meals for all, using seasonal, fresh, local and organic ingredients. It aims to inspire young people and their families to make food a priority by giving them the chance to visit farms and to cook and grow their own food.

The Food for Life Partnership has developed into a network of schools and communities across England committed to transforming food culture. But more importantly, it seeks to empower innovative schools, teachers, caterers, food producers, pupils and health professionals to work together to create a better food culture for young people and to involve their local communities all across England. This means a school meal service serving healthy and sustainable food, practical food education and engaged pupils. Schools joining the FFLP programme commit to transform food culture by:

- Revolutionising school meals to be fresh, seasonal, local and organic
- Reconnecting young people with where their food comes from
- Inspiring families and communities to grow and cook food

Figure 3.1 FFLP's Whole School Food Reform: key elements of the programme model



### 3.3 FFLP Flagship, Mark and Partnership scheme

Any school in England can join the Food for Life Partnership which offers an action framework and award scheme to support the transition to healthier food culture and recognise schools for their achievements.

Through the Food for Life Partnership Award Scheme, schools and their communities can turn their existing food culture into one that focuses on health, sustainability and enjoyment. All schools (and their communities) are encouraged to work towards Bronze, Silver and Gold of the Food for Life Mark Scheme launched in September 2007. Enrolled schools record their progress online against criteria in 4 strands: 1) food leadership, 2) food quality & provenance, 3) food education and 4) food culture & community involvement. In addition the Soil Association has developed a Catering Mark scheme available for school caterers seeking to make greater use of fresh, seasonal, local and organic ingredients, high welfare meat and sustainable fish.

By 2012, the programme aims to recruit 3600 *Partnership* schools. Central to the programme, FFLP have selected 180 *Flagship* Schools based on their commitment and enthusiasm to improve food culture in the school and in the wider community. This selection was completed in 2010. Flagship Schools should be willing to take the fast track towards the FFLP Gold Mark award and ideally achieve the Bronze Mark award within two years. FFLP select a wide range of schools for the Flagship scheme including those with little previous track record in practical food education.

The partnership initiative consists of a number of integrated elements each delivered by specialist teams. These are outlined below.

### 3.4 School food policy development

The Health Education Trust (HET) is a UK registered charity, dedicated to initiating and supporting work with children and young adults to encourage the growth of healthy lifestyles. Operated by independent professionals with expertise in health education, education, public health nutrition and dietetics, the HET aims to deliver practical, accurate and realistic advice and solutions on topical food, health and education issues. HET pioneered the whole school approach and has lead the way on healthier approaches to school vending over the last 5 years and have become the lead experts in the fast evolving field of 'healthy school vending'.

As an integral part of the FFLP initiative, the Food Policy and Nutrition programme, led by HET, aims to ensure that all aspects of food in school promote the health and wellbeing of pupils, staff and the wider Flagship community. This approach seeks to engage with and act upon the perspectives of the whole school community to encourage the growth of healthy and sustainable lifestyles.

The role of the FFLP HET staff has been to:

- 1) Establish or develop a School Nutrition Action Group consisting of range of stakeholders.
- 2) Enable a process of consultation with pupils, parents/guardians, staff and the wider community.
- 3) Support the active participation of pupils and other stakeholders in identifying improvements in all aspects of food in school.

- 4) Support a whole school review of Flagship school and community's current level of relevant activities and potential for change.
- 5) Complement and build upon National Healthy School Food Policy approach to include an emphasis on sustainable foods and wider engagement with producers and the local community.
- 6) Establish a whole school food policy that enables schools to develop and maintain a shared philosophy on all aspects of food and drink.
- 7) Support the delivery activities and information needs of all FFLP agencies working with Flagship schools and communities
- 8) Act as an information and advice resource for Flagship schools and communities.
- 9) Support Flagship schools and communities to achieve the FFLP delivery outcomes and the FFLP outreach role.
- 10) Support a review of the progress and achievements of Flagship schools.

The Flagship School Nutrition Action Programme has been designed to support schools through an action planning process involving consultation and the development of a School food Policy. The Health Education Trust School Food Policy Officer will work intensively with the Flagship School over the first term.

The first step is for the School Food Policy Officer and FFLP lead person in school to look at what the school is already doing around food in school. This will be in the form of fact finders and consultation with pupils, parents, teaching, and catering and support staff, to collect information about your school and community's present food culture. This helps to ensure a healthy and more positive food culture in the flagship school and the local community becomes embedded and part of the school ethos.

The School Food Policy Officer will attend a planning meeting and run four School Nutrition Action Group (SNAG) meetings in a flagship school. A SNAG is a school based alliance, in which teaching staff, pupils and caterers, supported, where appropriate by health and education professionals, and the local community, work together to review and improve the school meals service, and adopt a truly whole school approach to food education and culture. Contents of SNAGs are flexible and tailored to the needs of the school. Food for Life Partnership Staff (Farm Links Officer, Garden Education Officer, Food sourcing Co-ordinator and Regional Co-ordinator) will be asked to join the SNAG Process at certain points.

The consultation and action planning process involves the whole school community so that they are empowered to make their own decisions around transforming food culture.

### **3.5 School food sourcing**

The potential benefits of sustainable food procurement by public institutions in general has become increasingly of interest in recent years. There is a growing recognition of the impact food purchasing policies can have on local and sustainable food production, public health, social justice and the environment. In a school context, how and what food is purchased and consumed can be used as a way of teaching pupils about the positive aspects of food as well as having a direct impact on dietary intake. As such, food sourcing is a key aspect of the FFLP approach.

In many ways, the FFLP programme was designed with sourcing issues at its core. Schools, and their caterers, have to meet increasingly challenging food sourcing related criteria at each award level. The overarching priority is to promote the sourcing of fresh, seasonal, local, organic and Marine Stewardship Council (MSC) certified food. The specific goals of the programme relate to the attainment of the relevant award criteria at each level. These are summarised as follows:

At Bronze level, schools must:

- Ensure that at least 75% of dishes they serve are freshly prepared.
- Use seasonal menus and highlight in-season produce.
- Use farm assured meat and eggs from cage-free hens.

To progress to Silver level, the following have to be met:

- The provision of a range of both locally sourced and organic (or MSC) items.
- Either the use of only RSPCA Freedom Food (or equivalent) poultry, eggs and pork or a minimum 10% level of organic food across the menus.
- The absence of fish from the Marine Conservation Society 'Fish to Avoid' list.
- The display of information about the origins of all fresh produce used.

A Gold level standard for schools (and caterers) includes the following sourcing requirements:

- At least 30% of ingredients from organic (or MSC) sources.
- At least 50% of ingredients from local suppliers.

The Soil Association leads this element of the programme. Schools, caterers and suppliers are supported by a team of regional Food Sourcing Coordinators who provide advice, encouragement and assistance to help schools progress. Their programme has included regional seminars as well as fact finding visits and individual meetings with caterers and suppliers.

### 3.6 School meals and catering programme

Since the launch of the Food for Life report in 2003, there has been a huge rise in awareness and interest in school meals. The progress of Food for Life was hugely amplified by Jamie Oliver's Feed Me Better campaign. The combination of both programmes has resulted in dramatic changes in Government policy, including the formation of the School Food Trust and the food based and nutritional standards for school meals.

Following from this work and to ensure that the Food for Life Partnership programme was successful and had outcomes that left a legacy for future generations, engagement of the school catering teams was considered to be key to a successful outcome for all concerned. Two clear simple and interconnected approaches were adopted. The first was training, making sure they received maximum benefit and developed the confidence to deliver improvements effectively when they returned home to their schools; the second was inclusion of the school catering teams within the school. The Food for Life Partnership Catering training aimed to:

- Create an understanding of food and nutrition.
- Create an understanding of local/organic food.
- Support catering staff to feel part of the school.
- Engage catering staff in the programme.
- Help spread the work of the partnership.
- Begin developing a network amongst cooks, for mutual support, exchange of ideas, information and advice.

Overall objectives of the school meals and catering programme have been to:

1. Support catering staff in flagship schools to engage with the whole school (and with the community when appropriate).
2. Equip catering staff with the skills and knowledge that they need to achieve the Food for Life Partnership mark (e.g. cooking with fresh, seasonal food).
3. Support the catering staff raise the take up of school meals.
4. Develop school catering staff networks locally and regionally and develop this network to support catering staff beyond flagship schools.
5. Ensure all flagship schools operate with menus that meet or exceed the Government School Food Standards.

### 3.7 Growing skills programme

FFLP's growing skills programme is led by the Garden Organic's team of Garden Education Officers (GEOs) with the active support from partner staff in the Health Education Trust, the Soil Association's Regional team and the Focus on Food Campaign. Whilst FFLP staff offered a menu of support that can be tailored to individual schools, all flagship schools were likely to participate in a process with common elements for the growing skills programme:

1. *Building a shared vision with the school.* FFLP officers learn about the school's priorities, interests and capacity for change.
2. *Developing clarity and realism of purpose.* GEOs help make an assessment of needs, consult with stakeholders and develop a garden plan as part of the wider whole school policy.
3. *Developing clear & robust working arrangements.* Working with an action group (pupil representatives, staff, parents, community volunteers), FFLP officers help to embed planned changes within the whole school.
4. *Training and development to inspire and build confidence.* GEOs provide training to staff and volunteers in areas such as organic horticultural skills, project development, curriculum links, safety and risk management.
5. *Assistance to achieve agreed inputs.* GEOs help deliver specific projects. GEOs largely offer specialist support time and dedicated educational resources. Some grant funding is available to improve growing facilities.
6. *Making links.* GEOs help connect garden activities with experiential learning from farms, use of produce in food in classroom activities, school meals, and wider -for example - environmental- learning.
7. *Celebrating achievements.* GEOs encourage schools to value their achievements through celebrations – and also to monitor progress and link changes to the FFLP Award framework.

8. *Sustaining and consolidating work.* GEOs help plan for the future through networking with like minded schools, advice on further funding opportunities, community engagement, voluntary support and the active participation of students.

Typically the HET policy officers worked with a new flagship school over the course of the first term to develop a whole school food policy and an action plan. Meanwhile, with a focus on school gardening, GEOs work with their lead contacts to link in with the action planning. GEOs may have up to ten planned visits with each school over the period of eighteen months. At the end of this period GEOs draw up a hand over plan with the school and the FFLP Regional Coordinator. This marks the close of the main support period, although GEOs will continue to advise individual schools on an ad hoc basis. In this process GEOs do work directly with children, but largely in the role of modelling best practice with school staff – or as part of a consultation and celebration event.

### 3.8 Cooking skills programme

Established in 1998, the Focus on Food Campaign is the leading practical food education and outreach programme in the UK. It was set up against a background of a national decline in cooking ability and teaching coupled with rising health problems caused by poor diet and lack of food knowledge and skills. The Campaign inspires and enables young people and the wider community to cook and trains teachers, youth and community group leaders and health professionals to teach young people and adults how to select, prepare and cook healthy food.

With increasing obesity among young people and the emphasis on healthy eating and whole-school approaches to food in schools, Focus on Food maintains that the diet and health of the nation will not change significantly unless people are taught the basic skills to cook tasty meals from fresh ingredients and can make a connection between health messages, where food comes from and what they are eating.

The Focus on Food Campaign aims to raise the profile and importance of food education and to help secure, sustain and strengthen the status of food in primary and secondary schools nationally. The Campaign focuses on the making and cooking of food as the key experience in learning about the social importance of food.

At the core of the Campaign is the drive to:

- Ensure cooking is at the core of food education
- Improve food teacher recruitment and training
- Improve food teaching facilities in schools
- Implement a whole-school approach to food in all school
- Make food education compulsory in all primary and secondary schools

The Focus on Food Campaign (FOFC)'s Cooking Bus is one element of the FFLP's work to reform school food culture in participating flagship schools. Cooking buses are large articulated lorries that contain a purpose built kitchen, in which cooking classes can be delivered for up to 16 people. They are mobile classrooms, staffed by qualified food teachers who deliver practical lessons to school pupils, teachers, members of the community and a range of professionals who work directly with children and young people.

In the lead up to a Cooking Bus visit, FFLP staff, notably the Health Education Trust policy officers, work with school action groups to understand the needs and aspirations of the school with regard to educational cooking. The Cooking Bus visit builds upon this action planning. Its focus on food preparation and cooking from scratch intends to promote cookery skills and also to model the importance of food as a social activity.

The Cooking Bus visit usually takes place over the course of four days at a school. This includes three days of teaching sessions for pupils and staff. The Cooking Bus aims to extend teachers work through the use of resources and teaching materials. Sessions are also run with teachers to improve their skills and to enhance the sustainability of cooking in the curriculum after the Cooking Bus has completed its visit. Ethical and sustainable foods are included as part of the training sessions.

Following the visit, schools are issued a COOKIT. This is a kit of essential cooking equipment and utensils suitable for teaching cooking to children in primary schools. Subsequently, FOFC staff and the FFLP Regional Coordinator maintain contact with the school to support staff to further integrate their learning into both classroom and extra-curricular education.

### **3.9 Farm links and sustainable food education programme**

Inspired by famous dinner lady Jeanette Orrey, the Soil Association founded Food for Life in 2003 to help schools source fresh, local and organic produce and give pupils the chance to visit farms to see how their food is produced.

The FFLP farm links programme has been developed for all schools participating in the Flagship scheme. On enrolment, Health Education Trust policy officers work with a school food action group to review the school's previous work with farms and food producers. The group develop a plan to extend the school's educational contacts with farms and to make connections with wider aspects of school food culture.

Schools are supported by specialist farm link staff from the Soil Association to identify appropriate local farms to visit. Much of this has involved developmental work to encourage new farms to become actively involved in education. The programme provides pupils with an opportunity to visit working farms and to learn about sustainable food production first hand. Pupils are encouraged to take their learning back their school environment, through gardening activities, recycling, composting and wider work to procure sustainable school food.

The farm links programme connects to other aspects of FFLP. For example, some schools are encouraged to consolidate their learning on farm visits by practising organic horticultural techniques in their school garden. Schools may also procure food directly from the farms that they have links with for use as school meal ingredients or food for celebrations. This synergy of different programme components is an essential feature of the overall FFLP approach.



### **3.10 Parental and community engagement**

The importance of the engaging parents and wider communities in building vibrant food cultures is central to the aims of the FFLP programme. This involved encouraging a wide range of people to participate in school based activities; delivering practical food education which travels home with pupils to influence parents' food knowledge and food habits; promoting closer connections between schools and communities and their local farms; and supporting the development of sustainable local food systems.

One of the targets of FFLP was to demonstrate to the Big Lottery Fund that a minimum of 150,000 people have benefitted from the programme. A beneficiary is someone who has attended an activity, event or meeting which increases their knowledge of or access to healthy and sustainable food and/or develops their skills in one or more of the following areas: growing, buying and/or cooking healthy and sustainable food. The involvement of parents, community group members, allotment societies, local producers amongst others are all important in terms of the beneficiaries of the programme.

### **3.11 Regional strategic development: school and catering development clusters**

For all of the elements outlined above, FFLP's Regional Coordinators play a central role in developing the programme in each of the nine England regions. Regional Coordinators form the main link with all Flagship schools and play a mentoring and supportive role to those schools. Part of this process consists of actively developing clusters of schools and clusters of caterers to work together to support each other developing and sharing good practice.

### **3.12 Big Lottery Well-being programme**

FFLP sits within the Big Lottery Well-being programme. The Big Lottery Fund launched its £160 million Well-being programme in April 2006. The Well-being programme has three outcomes:

- People and communities having improved mental well-being
- People being more physically active
- Children, parents and the wider community eating more healthily

Funding was awarded to 17 lead organisations, all of whom co-ordinate and manage a portfolio of projects, that operate on both a national and regional level. Two awards from the Changing Spaces programme are also included in the evaluation as they are working towards the Well-being outcomes.

The national evaluation is designed to capture behaviour change for those who engage with services funded by the Well-being programme, and other funded activities that will contribute to the Well-being programme outcomes. The New Economics Foundation (NEF) were commissioned by the Big Lottery Fund to develop a bespoke set of questionnaires or tools designed to measure change over time in terms of well-being. Some portfolio level evaluators have adapted these questionnaires for their own use across Well-being funded portfolios and Changing Spaces Award Partners. UWE and

Cardiff Universities have conducted a portfolio level evaluation of the FFLP programme, using their amended version of the national evaluation tools.

### 3.13 Conclusion: the whole school approach

A Whole School Approach is a process which identifies needs, develops actions and implements changes, ensuring they are relevant and grounded in the ethos of the school and the needs of the local community (DH and DCSF, 2007). It is a holistic approach which involves children and young people, together with their parents and carers in the planning and delivery of health promoting policy and activity.

Figure 3.2 FFLP's Whole School Approach



By developing a whole school food policy and action plan for each school, the FFLP programme aims to influence and improve the health of students and the whole school community. It is envisaged that schools can play a key role in equipping young people and their families with the skills and knowledge they need to maintain lifelong healthy and climate-friendly eating habits. The school environment provides an excellent opportunity to help establish these good habits from a young age. In order to develop an effective school food policy, each school is encouraged to involve representatives of the whole school community in a food action group - or School Nutrition Action Group (SNAG).

## 4. Research Questions

With regard to schools selected for FFLP flagship status, the evaluation addresses the following research questions:

1. Are schools adopting the FFLP approach associated with increases school meal take up?
2. Are schools adopting the FFLP approach associated with increases in the healthier eating amongst pupils?
3. Are schools adopting the FFLP approach associated with increases in pupil awareness of food sustainability issues?
4. Do schools adopting the FFLP approach influence parental behaviours towards healthier & sustainable foods<sup>5</sup>?
5. Are schools adopting the FFLP approach associated with improvements in pupil behaviour & attainment?
6. Do FFLP-led school meal improvements provide new markets for local, organic and MSC producers?

There are clear connections between these questions. For example, the issues of increased school meal take up and influences on parents can be understood as an interim step towards promoting healthier eating amongst pupils. Some of the main links are brought together in the final section of the report where FFLP's role in whole school food reform is used to integrate the research questions raised for the evaluation.

## 5. Evaluation Framework & Methodology

### 5.1 Rationale

Complex community based initiatives such as FFLP present some widely reported challenges for evaluation (Connell & Kubisch, 1998; MacKenzie & Blamey, 2005; Nutbeam, 1998; Tones and Green, 2004; Weiss, 1995). Some of these challenges include:

- Multiple levels of change - at individual, group, organisational and policy levels,
- Longer term outcomes that may be achieved at a point beyond the lifetime of the programme,
- Emergent programmes of delivery and goals that develop in response to changing circumstances,
- Multiple and diverse goals that reflect the range of stakeholders involved in the programme,
- 'Open systems' that promote active partnership and engagement with other initiatives in relate fields of activity.

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<sup>5</sup> Sustainable food is used to refer to sustainable and ethical foods

In recent years ‘theory of change’ (Connell & Kubisch, 1998) and related approaches such as ‘realistic evaluation’ (Pawson & Tilley, 1997) have been widely adopted by evaluation researchers seeking to work with these challenges. The theory of change approach can address the need to estimate a programme’s effects on interim and longer-term outcomes. In addition it can provide audiences with information on how and why a programme produces outcomes.

Connell & Kubisch (1998; ix) define a theory of change approach as “systematic and cumulative study of the links between activities, outcomes and the contexts of the initiative”. It proposes that a central task of an evaluation is to test theoretical linkages between programme inputs, interim outcomes, context and longer term outcomes. For the FFLP evaluation this approach has translated into a strategy to surface ‘theories of change’. Put more straightforwardly, this means building the evaluation plan around how the programme is thought to work. Arriving at an outline on these key change mechanisms for change involves an analysis of programme documentation and delivery processes. Section 3 of this report outlined the central elements of the programme model. This model is used in the study to inform the data collection and the pathways for analysis. Drawing upon this programme model the evaluation identified the theoretical links between short term inputs, outcomes and contextual conditions.

This strategy reflects two central measurement issues in theory of change evaluation. Firstly, the measurement of FFLP’s activities is as important as measurement of its outcomes. This enables a clear account of the relationships between the programme and the changes sought. Secondly, the measurements in place are intended to test the plausibility of the changes theorised. Where it may not be feasible to demonstrate causal attribution, this approach can yield ‘good enough’ evidence to meet the needs of a wider audience.

The framework set out below illustrates how each area of the evaluation research is structured in relation a number of key elements for a theory of change. This framework is used to inform the analysis for each section of the evaluation findings.

## 5.2 Research design

The theory of change is a methodological ‘approach’ but does not specify research methods as such. For the FFLP evaluation, central elements of the research design consist of:

- Pre and post cross sectional study of flagship schools,
- Process evaluation studies.

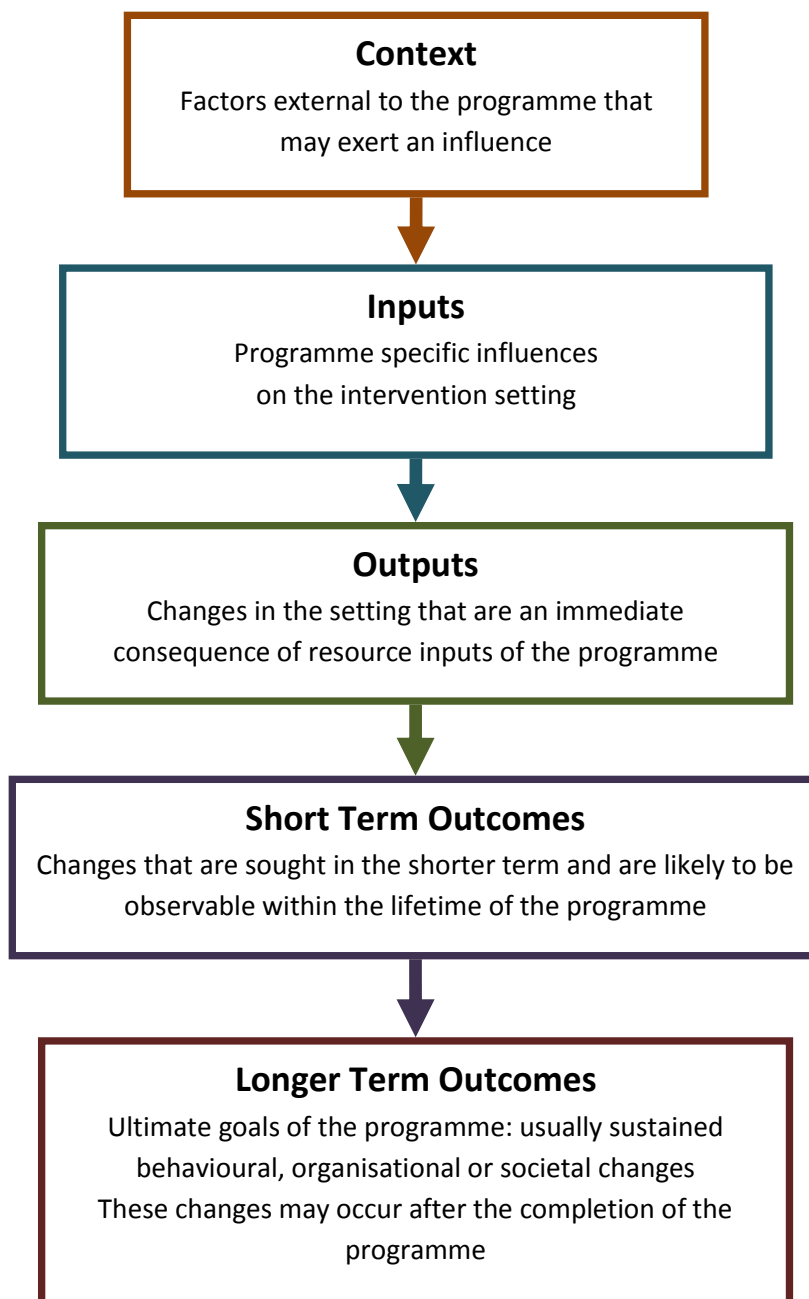
### *Pre and post cross sectional study of flagship schools*

The study has focused on the progress of the first 111 schools enrolled with the FFLP Flagship programme. The position of all of these schools was assessed at the point of enrolment (‘baseline’) and again after approximately 18-24 months (‘follow up’). The perspectives of sub-samples of pupils and other participants were used to provide direct evidence of outcomes for beneficiaries.

### *Process evaluation studies*

The process evaluation consisted of programme delivery analysis and case study work. The case studies took place with selected schools, caterers and their associated communities.

Figure 5.1: Evaluation Framework for Data Collection and Analysis



### 5.3 Sampling and data sources

In all 111 schools, the lead teacher contact, usually a member of the senior management team was asked to complete a comprehensive questionnaire on FFLP-related activities at baseline and follow up. Other lead staff were also asked to complete questionnaires at baseline, follow up and, with respect to some elements during the course of the programme. These staff included: cooks; caterers; and lead teachers for garden, farm link and cooking activities. The evaluation team were engaged with numerous site visits and communications with schools over the course of the research.

Through these contacts school leads were asked to supplement their written responses through semi-structured interviews.

For the 111 schools, programme documentation and official data sources were also analysed. These data sources included the FFLP website activity log, FFLP Mark applications, DfE School Census, and Ofsted reports.

A subsample of the 111 schools was asked to participate in pupil and parent questionnaire surveys. These schools were selected randomly from the FFLP recruitment list as the schools enrolled with the programme. These schools consisted of:

- 33 out of the 75 flagship primary schools
- 22 out of the 31 flagship secondary schools
- 0 out of the 5 special schools

In these schools over 4600 pupils in randomly selected mixed ability classes completed questionnaires. At follow up, approximately 4700 pupils from the same schools in matched Year groups completed questionnaires. Also at follow up, 1080 parents with children in Years 1-6, 7-10 were surveyed from the same sub-sample of flagship schools.

Further details on sampling and measures are set out in the sections on each area of data collection<sup>6</sup>.

### 5.4 Data analysis methods and strategy

Text and transcribed qualitative data were either analysed thematically (see for example, Mason, 1996) or through the application of content analysis methods (see, for example, Krippendorff, 2004). Quantitative data was entered into SPSS – a statistical software package. Whilst descriptive statistics were used to analyse most data, statistical tests were used to examine strengths of association between key variables. Regression analysis was also employed to assess the relationship between outcome and predictive variables with the pupil questionnaire data.

This combined application qualitative and quantitative data sources reflects an established strategy within the field of theory of change analysis (MacKenzie & Blamey, 2005; Stame, 2004; Tilley, 2004). The data analysis pursues theory driven lines of enquiry informed by a theory of change for each evaluation question. This helps assess, for example, whether a higher level of stakeholder involvement in FFLP related activities is associated with increased take up food served in schools. These associations are examined quantitatively where it has been possible to obtain measurable indicators. This is not the case for many of the more complex processes of change. Here qualitative data and process records are employed to explore the theorised links with outcomes.

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<sup>6</sup> Full copies of the research tools are available on request. See front section of the report for UWE contact details

## 5.5 Ethical issues

All empirical aspects of the UWE, Bristol and Cardiff University evaluation have been approved by the UWE Research Ethics Committee. Advice and guidance has been provided by the evaluation team to FFLP throughout the evaluation with regard to data collection with schools and caterers. The evaluation ensured that the data collection and management procedures were in accordance with the Data Protection Act 1998.

School Heads were asked for written agreement for their school to take part in the study. This consent was based upon written and verbal information provided by the researchers. Schools provided parents with written information produced by the researchers on the study, data protection protocols and the procedure for requesting withdrawal of personal information. Pupils were informed of the purpose of the study. The evaluators adhered to each school's policy on the right of pupils to opt out of participation in research.

Questionnaires to parents were accompanied with written information about the study and they posted their responses directly to the University rather than via schools. Respondents were offered the opportunity to enter a prize draw for a gift voucher. Parents attending interviews were advised verbally and in writing about the purpose of the study and right of withdrawal of data. Parents making special arrangements to attend the interview at school were given a gift voucher as a token of appreciation. All participants were informed of anonymity, confidentiality and the child protection conditions. Overall the evaluation adhered to key codes of conduct such as the British Sociological Association's Code of Professional Conduct and Statement of Ethical Practice.

## 6. Characteristics of FFLP Flagship Schools

### Phases 1-6

#### Key Points

The demographic and organisational characteristics of the 111 FFLP flagship schools participating in the evaluation show considerable diversity.

These schools reflect a spread of school types (primary, secondary and special), regional location, catering sector, pupil roll, urban and rural catchment areas and school performance indicators.

Indicators of social deprivation suggest that the sample has an above average national representation of schools in catchment areas with high child poverty. 19% (n=14) of the primary schools and 12% (n=4) of the secondary schools are in the top quintile for free school meal entitlement. Whilst there are gaps in reporting, the data suggest that the schools have a similar proportion of pupils from Black or Minority Ethnic backgrounds as the national picture for England schools.

#### 6.1 Introduction

This section of the report provides a profile of the schools participating in the evaluation in terms of their organisational and demographic characteristics. It also outlines the progress the schools have made in relation to the FFLP Mark Award. It is intended to provide context information on the types of schools participating in the programme.

#### 6.2 Organisational and demographic characteristics

There were 111 FFLP flagship schools inducted on to the programme during phases 1 to 6. There are between 11 and 13 schools from each of the nine regions. 75 of the schools are primary, 31 are secondary and there were 5 special schools. They were drawn from 62 of the 150 LEAs in England. Table 6.1 shows that the schools were of varying types.

**Table 6.1: FFLP programme Phase 1-6 flagship school types** (DfE “Form 7 Type” Description) Source: School Census January 2009

Type	Number of Schools
Community Special	3
Comprehensive 2 tier Junior 11-14	1
Comprehensive all through 11-16	15
Comprehensive all through 11-18	13
Comprehensive all through 13-18	1
First School 5-10	1
First School 5-8	1
First School 5-9	4
Grammar	2



Infant and Junior 5-11	55
Infant and Junior 5-7 or 5-8	1
Infant 5-7 or 5-8	3
Junior 7-11 or 8-11	10
Maintained School	1
Total	111

The pupil size of FFLP schools vary from English averages with FFLP primary schools being bigger than the English average and the secondary schools slightly smaller. There is considerable variation in size with primary schools ranging from 48 to 671 pupils (sd=136.21) and in secondary schools from 201 to 1809 pupils (sd=322.94).

**Table 6.2 Pupil size of FFLP Flagship schools** \*figures calculated from School census January 2009

	Average pupil size in FFLP schools	Average pupil size (England)*	Smallest pupil size school	Smallest pupil size school (England)*	Largest pupil size school	Largest pupil size school (England)*
<b>FFLP Secondary</b>	978	1016	201	69	1809	2573
<b>FFLP Primary</b>	285	238	48	8	671	972

On the whole gender splits were fairly similar in primary schools however the involvement of two all girl secondary schools meant more females in this group of schools (54.1%).

Free school meal (FSM) eligibility is one measure of deprivation. It is clear from the data below that FFLP flagship schools have a slightly different range of schools to the national spread. In both primary and secondary schools there is a slight over representation of schools with average FSM eligibility and fewer schools with low and high rates of eligibility. Highest FSM eligibility for a primary school was 52% and the lowest was 2% for secondary schools it was 55% and 2%.

**Table 6.4 Free school meal entitlement quintiles of participating FFLP Flagship schools** Source: School Census January 2009

	Percentage of schools in highest quintile rank for FSM	Percentage of schools in the 2nd quintile rank for FSM	Percentage of schools 3 <sup>rd</sup> quintile rank for FSM	Percentage of schools in the 4 <sup>th</sup> quintile rank for FSM	Percentage of schools in 5 <sup>th</sup> quintile rank for FSM
<b>FFLP Secondary</b>	12%	20%	24%	24%	12%
<b>FFLP Primary</b>	19%	12%	24%	23%	16%

FSM eligibility is not the only measure of deprivation. School postcodes were used to explore area data on child poverty levels. Using these data a different pattern emerges suggesting that FFLP schools tended to be situated in areas with high levels of deprivation. In particular almost half the FFLP Flagship primary schools were in wards in the top two quintiles for deprivation. All the primary schools in the North East and Yorkshire and Humberside are in the top two quintiles. Primary schools are likely to attract local neighbourhood children. Secondary schools are likely to draw on a larger catchment area so care is needed in assuming that secondary schools attract greater numbers of children in deprivation.

Getting accurate information of the racial or ethnic background of pupils in schools is difficult using national data sources. During the FFLP programme we have analysed three School Census data sets

for: January 2007, 2008 and 2009. In all of the data sets there are considerable gaps in information particularly in the recording of Black Minority Ethnic Group (BMEG) categories. Therefore care has to be taken in interpreting these data. The table below compares school census data on the number of pupils who are recorded as White British ethnic origin in FFLP Flagship schools to the rest of the school population as a whole. However, schools are not always efficient at collecting data on BMEG origin.

**Table 6.5 Child Poverty Quintiles for participating FFLP Flagship schools** Source: IDACI (Income Deprivation Affecting Children Index) part of the Index of Multiple Deprivation 2001

	Percentage of schools in highest quintile rank for child poverty	Percentage of schools in the 2nd quintile rank for child poverty	Percentage of schools 3 <sup>rd</sup> quintile rank for child poverty	Percentage of schools in the 4 <sup>th</sup> quintile rank for child poverty	Percentage of schools in 5 <sup>th</sup> quintile rank for child poverty
<b>FFLP Secondary</b>	46%	19%	27%	4%	4%
<b>FFLP Primary</b>	21%	26%	17%	23%	13%

**Table 6.6 Pupil Ethnic background for participating FFLP Flagship schools** Source: School Census January 2009

	FFLP schools "White British" origin Census category	England School Census "White British" origin Census category
<b>Secondary schools</b>	88%	86%
<b>Primary schools</b>	64%	59%

Drawing upon the Census data it appears that overall the FFLPP schools had more children recorded as White British origin. However gaps in the data mean that the safest estimate is that the FFLP study schools are approaching England averages for children of BMEG origin.

Table 6.7 sets out the ward morphology data for school catchments. This shows the extent to which FFLP flagship schools were located in urban and rural locations.

**Table 6.7 Ward morphology of participating FFLP Flagship schools** Source: DEFRA (2007)

Region	Urban <10k	Town and fringe	Village and isolated hamlet
<b>East of England</b>	62%	23%	15%
<b>East Midlands</b>	83%	8%	8%
<b>London</b>	100%	0%	0%
<b>North East</b>	92%	8%	0%
<b>North West</b>	82%	9%	9%
<b>South East</b>	50%	17%	33%
<b>South West</b>	58%	25%	17%
<b>West Midlands</b>	67%	25%	8%
<b>Yorks' &amp; Humberside</b>	67%	33%	0%
<b>All FFLP Ph1-6 Schools</b>	72%	17%	11%

**Table 6.8 Average overall absence in FFLP Flagship primary schools** Source: DfE Attainment and Achievement tables

	2007	2008	2009
<b>FFLP Primary</b>	5.1% (sd 1.23)	5.1% (sd 1.17)	5.2% (sd 1.19)
<b>England Primary</b>	5.3% (sd 2.25)	5.3% (sd 1.56)	5.5% (sd 1.47)

The table above suggests that the majority of schools were in an urban area. Schools in the South East and East of England regions were the least urban based and those London and the North East regions were in the most urban areas.

Overall absence rates in FFLP primary flagship schools remained slightly below the English average and the slight increase in 2009 is slightly less than the increase in England. In FFLP secondary flagship schools the overall absence in secondary flagship schools matches the decline in English school. Over the last three years it has been within 0.1% of the English average.

**Table 6.9 Average overall absence in FFLP Flagship secondary schools** Source: DfE Attainment and Achievement tables

	2007	2008	2009
<b>FFLP Secondary</b>	7.9%	7.5%	7.2%
<b>England Secondary</b>	7.8%	7.4%	7.3%

### 6.3 Characteristics related to FFLP activities

The base line Catering Factfinders completed by catering leads reveal that 45% of the flagship school meal provision came from the local authority, 37% was in-house, 17% was private contractor and 1% were from another source. 91% of school food was cooked on-site, 5% were transported and 4% used a combination of both.

Some of the schools were participating in health and/or environmental school initiatives at the time of their enrolment onto the programme. The table below shows the extent of their involvement in parallel initiatives.

**Table 6.10 Participation of FFLPP Flagship schools in parallel initiatives on enrolment** Source: Baseline lead Factfinder

	National Healthy School status	Eco School Flag status
<b>Primary School</b>	82%	53%
<b>Secondary School</b>	76%	48%

At the start of school's induction onto the FFLP programme the extent to which they matched mark criteria was assessed. The following tables indicate that most schools were engaged in at least some FFLP-related activities before they enrolled with the FFLP programme. There were 55 mark criteria to achieve (22 Bronze, 22 Silver and 15 Gold). The minimum achieved was 3 criteria and the maximum was 20 illustrating that some schools came from a very low starting point; while others were quite advanced. At the beginning of the programme, participating schools tended to be less advanced in their food sourcing and catering related work compared to food policy and food education related activities.

**Table 6.11 Mark criteria achieved at enrolment with FFLPP** Source: FFLPP Fact Finder. <sup>1</sup>Multiple modes exist

	Modal average of mark criteria achieved	Average of mark criteria achieved
<b>FFLPP Secondary</b>	14 <sup>1</sup>	21.76
<b>FFLPP Primary</b>	11	15.39

**Table 6.12 Progress against the mark** Source: FFLP website. As of 12<sup>th</sup> November 2010. <sup>2</sup> Multi modal.

	Baseline modal average of mark criteria achieved	Baseline average of mark criteria achieved	Modal average of mark criteria achieved <sup>1</sup>	Baseline average of mark criteria achieved <sup>1</sup>
FFLP Secondary	14 <sup>2</sup>	21.76	53	40.77
FFLP Primary	11	15.39	48	46.11

In the context of the wider FFLP programme, the schools participating in the evaluation represent a significant proportion of those that have achieved Award status. For the whole programme, as of October 2010, 7 schools had achieved the Gold FFLP Mark award, 53 the Silver Mark and 132 the Bronze Mark. A further 2797 schools were registered with FFLP but had no current Award. On average, primary schools have travelled further against the mark criteria than secondary schools. This means they are also more likely to have achieved Gold and Silver awards.

**Table 6.13 Award status of FFLP Phase 1-6 flagship schools.** N=111. Source: FFLP Activity Log 18/9/ 2010. Percentage figures rounded.

	Gold School (%)	Silver School (%)	Bronze School (%)	No current Award School (%)
Flagship Primary	4 (5%)	25 (33%)	35 (46%)	11 (15%)
Flagship Secondary	1 (3%)	4 (13%)	11 (35%)	15 (48%)
Flagship Special	2	0	3	0
All	7(6%)	29(26%)	49(44%)	26(23%)

During the data collection period, the Mark status of schools was changing, such that by October 2010 several schools had been awarded a higher Mark than is reflected in the table. Performance against these criteria varies across regions with Yorkshire and Humberside, South West, South East, North West and London having more schools with awards. Not surprisingly schools enrolled in earlier phases of the programme are more likely to have achieved higher awards than later phase schools.

## 6.4 Conclusions

As part of the programme business plan and Big Lottery grant conditions, FFLP sought to work with a wide range of schools as part of the Flagship programme. The schools outlined in this section represent 111 (up to phases 1-6) of the total 180 recruited for the programme. The data suggest that the 111 flagship programme schools represent a diverse selection in terms of region, sector of education, catering sector of provision, pupil roll, overall absence rates, deprivation indicators, urban-rural catchment, and pupil racial/ethnic backgrounds. Indicators of FFLP-related activities similarly suggest that schools started their engagement with the programme from a diverse array of starting points. This data is revisited in subsequent sections of the report to inform an analysis of the factors that are associated with programme impact.

## 7. Sourcing Sustainable Food

### Key Points

In a sample of 38 flagship schools, the number of local suppliers involved in school procurement rose by 73% during the evaluation period while organic suppliers increased by over 50%.

The average ingredient spend per meal reported by primary schools in the sample rose from 70.1p to 78.8p during FFLP, representing an increase of 12.4%. This can be contrasted with the latest national average of school meal ingredient costs at primary level of 68p.

A key barrier to this part of the evaluation has been the lack of availability of quantitative food sourcing data through the programme. This has implications for the ability of programmes such as FFLP and caterers themselves to demonstrate the benefits of sustainable sourcing.

The data was not robust enough, in terms of numbers of adequate responses, to provide reliable figures concerning values / volumes of additional local, organic and MSC food sourced during the evaluation period.

### 7.1 Introduction

This section of the report addresses the food sourcing component of the Food for Life Partnership programme. It is a summary and analysis of data collected by FFLP and the Evaluators using questionnaires conducted at the beginning of flagship school enrolment and then repeated after at least 18 months of programme involvement. The analysis and findings are further developed in conjunction with the food sourcing case study report.

[See Section 2.4  
for research & policy context](#)

### 7.2 Methods

Drawing upon programme documentation, delivery staff feedback and external research we plotted out a framework for interpreting the links between programme context, inputs, outputs, short term and longer term outcomes. The FFLP Mark food sourcing criteria were used to structure the evaluation. Details of these criteria are set out in Table 1. A simplified representation is set out in Figure 7.1.

**Table 7.1 Food Sourcing Related FFLP Award Criteria and Guidance**

<b>FFLP Award Level</b>	<b>Published Guidance for Meeting Criteria</b>
<b>Bronze</b>	
We make sure that at least 75% of dishes on our menu are freshly prepared.	At least 75% of the dishes on your menu should be freshly prepared from unprocessed ingredients in your school kitchen <sup>7</sup> .
Our menus are seasonal and we highlight in-season produce.	Use and highlight a number of in season fruit and vegetables in your menus. Alternatively, your menus can feature a generic specification such as 'seasonal vegetables' or state clearly that fruit and vegetables are subject to seasonal variation.
We use meat that is farm assured as a welfare minimum. We use eggs from cage-free hens.	If food is 'farm assured' it means it was produced on farms that are inspected to ensure that they meet the assurance scheme standards. These standards cover issues such as food safety, traceability, production methods, environmental protection and animal welfare. Farm assurance is not a guarantee that eggs are from cage free hens. Your caterer must therefore specify cage-free eggs in addition to farm assurance.
<b>Silver</b>	
We include a range of locally sourced items on our menu.	Your caterer should serve items produced (or made with ingredients produced) in the region or adjacent county from at least two of the following categories each week at any one time: Fruit; Vegetables; Dairy and eggs; Meat (sausages and burgers can be counted if the meat comes from named farms in the region or adjacent county); Fish (fish can be counted if it comes from day boats based in the region or adjacent county); Bread (bread can be counted if it is baked in the region or adjacent county).
We include a range of certified organic or MSC-certified items on our menu.	Your caterer should serve certified organic (or Marine Stewardship Council certified in the case of fish) items from at least two of the following categories on the menu each week at any one time: fruit; vegetables; dairy and eggs; meat; fish (fish can be counted if it is organically farmed or MSC-certified wild fish); bread; dry goods
We use poultry, eggs and pork that are produced in line with standards set for the Freedom Food scheme as a welfare minimum or we make sure that at least 10% of our ingredients	Your caterer may source chicken or eggs from free range producers without Freedom Food certification and still comply with this requirement. They may also source pork, bacon, ham and sausages from outdoor-reared or outdoor-bred pigs without Freedom Food certification. Alternatively you may opt to spend 10% of your ingredient spend

<sup>7</sup> "The Food for Life Partnership uses a common sense definition of 'unprocessed ingredients' to include raw basic ingredients such as fresh/frozen fruit and vegetables, fresh/frozen meat or fish, pasta, rice, flours, pulses and beans. Unprocessed foods are fresh, homemade and natural, as defined by the Food Standards Agency. Some other foods that have been subject to primary processing are included in our definition of unprocessed, such as pasta, milk, good quality cheese and sausages and wholegrain bread."

are from a certified organic source, including organic animal products, and we will reduce the amount of poultry and pork we serve.	over a menu rotation on certified organic ingredients. To comply, you will need to be serving certified organic meat, eggs or dairy products and an item from another of the following categories on the menu each week: fruit, vegetables, fish, bread or dry goods. If you select this alternative option then you must also produce and implement an action plan to reduce the amount of poultry and pork you serve.
We don't serve fish that is on the Marine Conservation Society 'Fish to Avoid' list.	
<b>Gold</b>	
We make sure at least 30% of the ingredients we use are from a certified organic or MSC-certified source.	Aim to spend at least 30% of your ingredient spend over a menu rotation on certified organic or MSC-certified ingredients. Fish can be counted towards the 30% target if it is organically farmed or MSC-certified wild fish.
We source at least 50% of our ingredients locally.	Aim to spend at least 50% of your total ingredient budget over a menu rotation on locally sourced ingredients. To count as locally sourced, ingredients should be bought and produced within your region or any adjacent county/ local authority that falls outside your region.

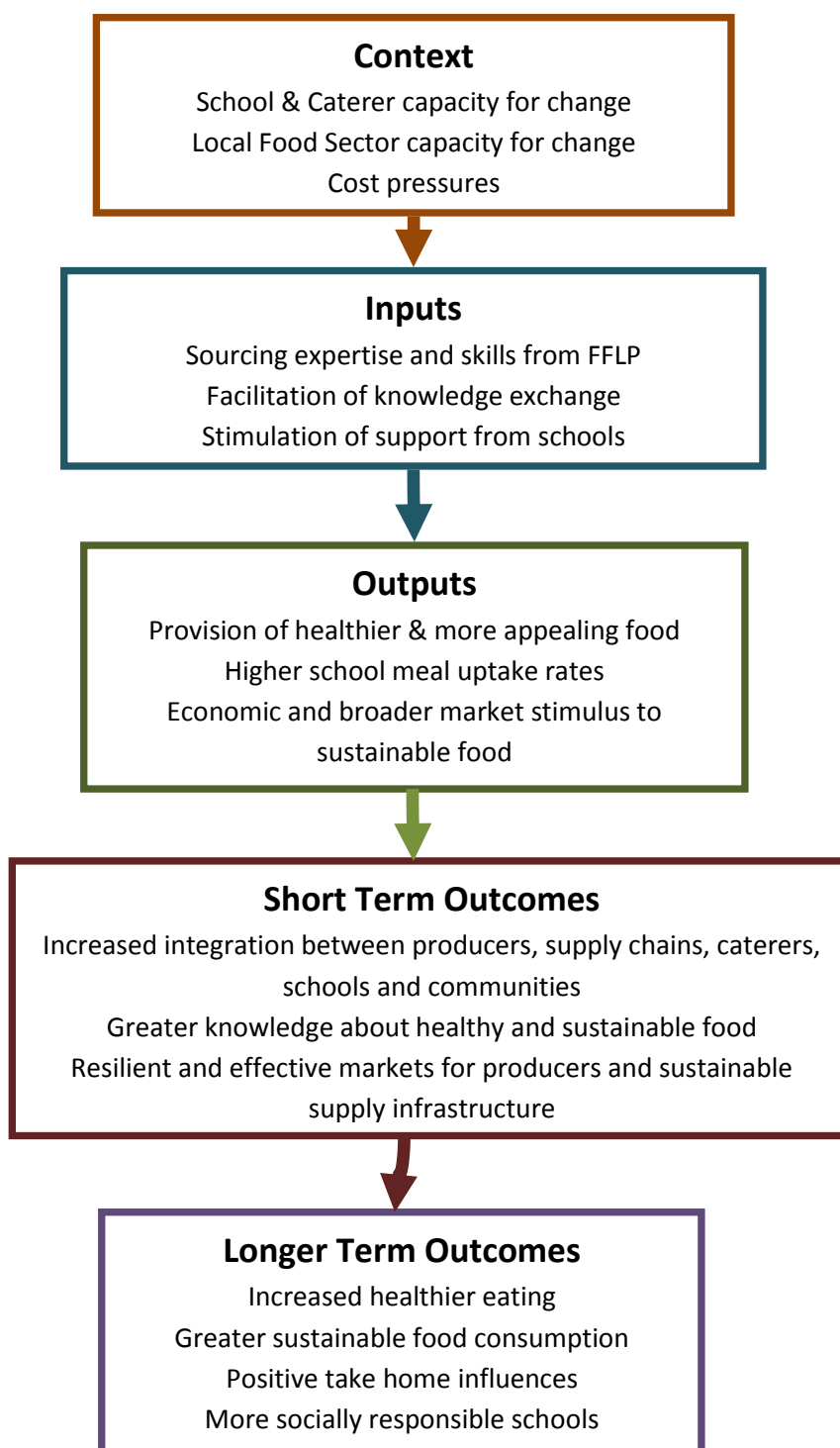
***Procedure, sample, tools and data analysis***

In common with other elements of the programme, all flagship schools undertook a 'baseline' fact finder for this area. The fact finder was designed both to gain sourcing and supply chain information for this study and to inform FFLP personnel to assist with identifying support needs. The form of the baseline fact finder evolved a number of times both to try to overcome completion issues and to adapt to changing needs and priorities among the FFLP support team. A follow up 'review' fact finder was developed to capture change among schools and caterers after an 18 month minimum period. It also aimed to collect data missing from the original baseline fact finder process.

Fact finders were administered by FFLP personnel (both Regional Coordinators & members of the Food Sourcing Team), Evaluators and, in the case of the review process, electronically by schools and caterers themselves. They were designed to elicit largely objective data from respondents, predominantly concerning supplier details, ingredient provenance and sourcing values.

The usable returns were entered and analysed in both Microsoft Excel and SPSS software packages. These findings were complemented by preliminary findings from the in depth case study element of the evaluation along with insights gained from general programme interaction and secondary programme data analysis.

Figure 7. 1 The Food Sourcing Component of FFLP: key elements in the theory of change





## Findings & Analysis

### 7.3 Profile of the sample

Food sourcing data was received for 38 schools from a total sample of 106 Phase 1 – 6 schools. This included data from 8 FFLP Gold schools whose award submission data was transposed to the appropriate form by evaluation researchers. In total, this represents a response rate of 36%. Of the 38 schools, 5 were unable to provide any financial information. All of these schools were at FFLP Bronze level.

Table 7.2 presents a comparison of the level of FFLP food sourcing attainment (as of November 2010) amongst the respondent sample compared with the total population of Phase 1 – 6 FFLP schools. It shows a general decreasing percentage of representativeness with attainment level.

**Table 7.2 A Comparison of Sample and Population in terms of FFLP Level Attainment**

FFLP Level	Number of Phase 1 – 6 Schools	Food Sourcing Sample	Percentage
Bronze	48	12	25%
Silver	50	13	26%
Gold	8	8	100%

It should be noted that the FFLP Level indicated refers to the food sourcing element only, not general FFLP status. It therefore includes some school caterers who have achieved a higher award level (i.e. through the catering mark) than the school in general. This figure illustrates that the sample is weighted towards schools who have achieved greater levels of FFLP sourcing. Table 7.3 illustrates that the sample is dominated by primary level schools.

**Table 7.3 A Summary of School Level among the Food Sourcing Sample**

School Level	Number
Primary	26
Secondary	11
Special	1
Total	38

**Chart 7.1 A Breakdown of Phase Membership among the Food Sourcing Sample**

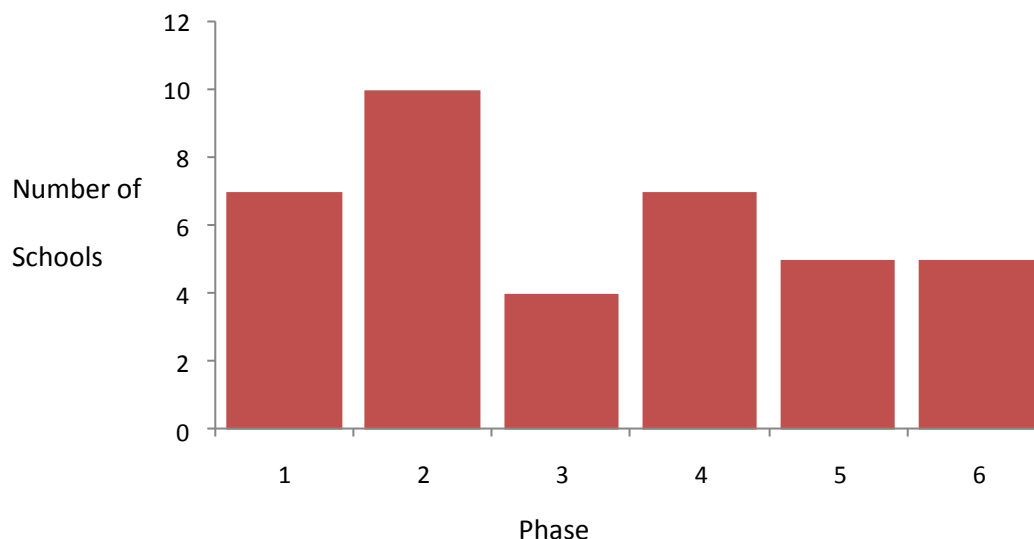


Chart 7.1 above shows that respondent sample is spread fairly evenly across phases 1 – 6. It follows that schools from the earlier phases will have been involved in FFLP longer. All schools included in the study have been enrolled in FFLP for at least 18 months. For the purposes of this analysis, therefore, we are making the assumption that all significant progress regarding food sourcing takes place during the first 18 months of FFLP involvement and that no significant regression occurs subsequently.

Table 7.4 shows an even spread of respondent schools across the FFLP regions except for London and the North West.

**Table 7.4 Geographical Spread of Food Sourcing Sample**

Region	Number
South West	5
South East	4
London	0
West Midlands	6
East Midlands	6
East England	5
Yorkshire and Humber	4
North West	2
North East	7

Unfortunately, however, the low number of food sourcing returns make it impossible to assume any degree of representativeness for the data used in this study. The factors behind the low response rate are outlined in the concluding section. The proceeding analysis should therefore be interpreted with caution and not be viewed as anything other than potentially indicative of the situation across the programme.

## 7.4 Ingredient Spend

### *Total Ingredient Spend*

24 schools gave robust enough data to calculate their total ingredient spend. Between them, they spent just over £1,050,000 per annum, averaging out at £43,700 per school.

### *Submitted Ingredient Spend per Meal*

Respondents were asked to give figures for average per meal spend both pre-FFLP and at review stage. 22 schools provided figures pre-FFLP and 23 at review stage. 16 schools provided robust data for both stages. Using this sub-sample, we calculate that the average meal spend rose from 70.1p to 78.8p. Of this group, only 2 schools reported ingredient spend decreasing.

### *Calculated Ingredient Spend per Meal*

In order to calculate per meal ingredient spend using the sourcing data submitted, it is necessary to remove the 6 secondary schools from this sample plus a further 3 who didn't submit average daily meal numbers. The remaining 15 schools give an average ingredient spend per meal of £1.22. This is significantly higher than the submitted per meal ingredient spends for primaries in this survey which average at £0.77 (N=18). This may indicate one or more of the following:

- Systematic over estimation of contract values
- Systematic under estimation of daily school meal numbers
- The existence of significant additional ingredient use, for example, staff meals, parent meals and breakfast clubs.

## 7.5 Sustainable Food Sourcing

### *Local Food Sourcing*

31 schools provided details of 78 individual local suppliers. 25 schools provided financial data for their local suppliers showing total procurement spends of £269,500 on local suppliers.

33 of the local suppliers in the sample were introduced during the FFLP period, representing an increase in over 73% in local suppliers between pre-FFLP and review stages.

### *Organic Food Sourcing*

Of the 31 schools who provided full and robust supplier details, only 12 purchased from organic suppliers. Between them, they used 20 suppliers. 10 of these schools provided adequate financial data showing total procurement spends of £70,300 on organic suppliers. 11 of the organic suppliers in the sample were introduced during the FFLP period, representing an increase in over 50% in organic suppliers between pre-FFLP and review stage.

### *MSC Food Sourcing*

13 schools submitted details of Marine Stewardship Council certified fish suppliers. Each school used only 1 supplier. 10 of these schools provided adequate financial data showing total procurement spends of £26,200 on MSC certified fish products.

Only 2 of the respondent schools stated that these MSC suppliers were introduced as a result of FFLP participation. It is believed that most MSC sourcing was enabled through existing suppliers (e.g. Brake Bros) rather than having to introduce new suppliers.

The total spend according to each food type can be further broken down according to FFLP status, as given in Table 7.5 below.

**Table 7.5 Breakdown of Local, Organic & MSC Sourcing spend among respondent schools according to FFLP Status**

Sourcing Type	Local	Organic	MSC
Gold	83,800	58,000	7,700
Silver	98,300	7,300	13,700
Bronze	87,400	5,000	4,800
Total	269,500	70,300	26,200

### *Estimating Total Sustainable Sourcing Across Phase 1 – 6 Schools*

The low number of responses along with a cautious assessment of data reliability dictates that any extrapolation of respondent data should be treated with care and should not be viewed as anything other than indicative. With this proviso stated, however, the data below (see Table 7.6) presents an estimate of the total annual spend broken down according to FFLP sourcing status. This has been calculated by extrapolating according to a ratio of total population (as set out in Table 7.2) divided by respondent sample.

**Table 7.6 Breakdown of Indicative Estimate of Local, Organic & MSC spend among all Phase 1 – 6 schools according to FFLP Status**

Sourcing Type	Local	Organic	MSC
Gold	111,700	77,700	10,300
Silver	409,600	30,400	57,100
Bronze	419,500	24,000	23,000
Total	940,800	132,100	90,400

This provides an estimated total for all three forms of sustainable sourcing of £1,163,300 per annum among Phase 1 – 6 schools.

## **7.6 Food Miles and Delivery**

The data submitted for this study was not of sufficient quality to be able to used for robust analysis of food miles or delivery frequencies. In particular, an insufficient number of respondents gave baseline information on the number of deliveries. A superficial look at the figures collected indicates that although the numbers of individual suppliers generally increased, they were more likely to be

FFLP defined local. The overall impact in terms of food miles is likely to have been a reasonable reduction although we would suggest that number of deliveries would actually rise due to the greater number of suppliers. Methodologically, it is difficult to measure food miles in systems that include multiple delivery sites such as schools.

## 7.7 Discussion and Conclusions

This report represents a best attempt at using the data returned by the programme using the food sourcing fact finder process. As mentioned above, the data should be used with extreme caution, both due to the low number of adequate responses and the lack of representativeness of the sample compared to the overall population. In fact, the reasons why we had such a poor response to this data collection exercise can probably tell us more about school food sourcing than the data itself.

Both the evaluation team and the various FFLP personnel who administered the fact finder questionnaires had consistent difficulty gaining supply chain data from caterers, particularly in terms of financial information. Although various techniques were attempted, most caterers were either unwilling or unable to provide this information. This appears to be partially a reflection of the data retention systems typically used by caterers. It is also partially an indication of a lack of importance given to gathering evidence of impact by both caterers and FFLP as a whole.

In-house and private single site caterers can be characterised as being too small to need systemised sourcing data collection systems while large Local Authority or National Contract Caterers are so big that they agglomerate their sourcing data. In both cases, it is difficult for caterers to provide this information unless they are given the impetus to do so. Broadly speaking, this situation also reflects attitudes both to provenance among large parts of the UK food system and to the needs to provide hard evidence among sustainable food advocates.

Headline figures that can be drawn from the analysis above are as follows:

### *Average Ingredient Spend*

The reported average ingredient spend indicates that Flagship schools are spending significantly more on food ingredients as a result of FFLP involvement. The rise from 70.1p to 78.8p represents a 12.4% increase in food spend. Moreover, the consistency of the rise across the sample suggests a degree of robustness in this figure. This change can be contrasted with the latest national average of school meal ingredient costs at primary level of 68p as reported by the School Food Trust<sup>8</sup>.

A higher level of food spend can, of course, be interpreted both as a positive impact of FFLP in terms of greater investment in quality and support for sustainable food producers, but also as a threat to the overall affordability of FFLP participation for schools. The issue of cost, both for ingredients and more generally, had become even more central to many caterers by the follow up stage. This was due to both the greater demands of FFLP participation and wider funding threats.

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<sup>8</sup> SFT / LACA 5<sup>th</sup> Annual Survey of take up of school lunches in England. July 2010. Page 38. (using figures based on sample of 65 primary schools).

The sample is not strong enough to provide analysis of any subgroups that appeared able to progress through FFLP without increasing food costs. Some caterers were clearly able to achieve this through diligence. Organic products in particular tended to be significantly more expensive for all but a few ingredient types. It should be born in mind, however, that ‘significantly more expensive’ in the school meals context is often a matter of a few pence. The negotiation of priorities between cost, the use of FFLP sustainable ingredients and menu development are analysed in the food sourcing case study report.

#### *Value of Sustainable Sourcing*

The figures provided in this section give an indicative account of the degree and financial impact of FFLP sourcing on producers. We can estimate that over £1.1 million is spent on Organic, Local and MSC sourcing by Phase 1 – 6 FFLP schools per year. A breakdown of the data by FFLP Status indicates that the overall impact of Silver and Bronze schools significantly exceed those of Gold for both Local & MSC sourcing. These findings have implications in terms of how the food sourcing programme as a whole may target its assistance in order to maximise its direct impact for producers and supply chains more broadly.

#### *Number of Sustainable Suppliers*

Although the absolute figures for increases in value for sustainable food purchasing presented above should be treated with caution, we can see clearly that there is a significant rise in the number of sustainable producers who supply FFLP flagship schools. The number of local food suppliers increased by 73% and organic suppliers by over 50% as a result of the school’s 18 month involvement in FFLP.

Unfortunately we are unable to draw any clearer conclusions from this data due to the reasons outlined above. A greater depth of analysis is provided by the accompanying food sourcing case study report which looks at a the broad impact of FFLP on individual producers and caterers and attempts to draw broader conclusions about the FFLP food sourcing model in general.

An analysis of the attainability of food sourcing related criteria based on programme interaction through the fact finder process and preliminary case study work is presented in table 7.6 below. The table lists the FFLP Award Criteria directly related to food sourcing, in terms of having a conceivable influence on the provenance and quantities of food procured, along with comments on the typical implications of meeting each criterion in existing supply chain structures.

**Table 7.6 FFLP Food Sourcing Award Criteria**

<b>FFLP Award Level</b>	<b>Implications for Food Sourcing</b>
<b>Bronze</b>	
We make sure that at least 75% of dishes on our menu are freshly prepared.	Unlikely to lead to much change as common supplier types are able to source FFLP ‘unprocessed’. Significant cost implications are occasionally experienced although on the whole were surmountable

Our menus are seasonal and we highlight in-season produce.	Unlikely to impact on cost or structure as seasonality is UK in scale, therefore within most typical sourcing arrangements.
We use meat that is farm assured as a welfare minimum. We use eggs from cage-free hens.	As been a common issue that often requires a change in suppliers, particularly for eggs. Traceability problems of meat supplies has been a problem for some caterers.
<b>Silver</b>	
We include a range of locally sourced items on our menu.	Typically a change in suppliers is needed. In terms of cost, the volumes required are not necessarily significant compared with overall budget.
We include a range of certified organic or MSC-certified items on our menu.	Change in suppliers usually needed. Again, in cost terms, the volumes required not necessarily significant compared with overall budget.
We use poultry, eggs and pork that are produced in line with standards set for the Freedom Food scheme as a welfare minimum or we make sure that at least 10% of our ingredients are from a certified organic source, including organic animal products, and we will reduce the amount of poultry and pork we serve.	Normally a change in suppliers is needed. Volumes required can impact on overall budget and availability can be an issue.
We don't serve fish that is on the Marine Conservation Society 'Fish to Avoid' list.	Existing conventional suppliers can typically adapt to this requirement.
<b>Gold</b>	
We make sure at least 30% of the ingredients we use are from a certified organic or MSC-certified source.	This criterion almost certainly requires changing suppliers and has a significant impact on overall food costs.
We source at least 50% of our ingredients locally.	This criterion almost certainly requires changing suppliers and typically has a significant impact on overall food costs, although usually less than the organic requirement above.

As this section indicates, the food sourcing element has been a key challenge for the programme as a whole and one that impinges on its overall success, both in terms of Mark attainment and stakeholder acceptance. Sustainable food sourcing within a relatively 'low cost' sector such as school meal provision has a high degree of complexity encompassing the issues of cost, food availability, expertise and culture. Moreover, these factors are strongly interrelated and predominantly problematic. In spite of this we can clearly identify positive progress in terms of sustainability, as a result of FFLP which will be explored in greater depth in the food sourcing case study element of the evaluation.

## 8. School Cooks & the Kitchen Environment

### Key Points

Significant investment was made in the kitchen environment by FFLP schools during the evaluation period in terms of introducing new equipment and improving facilities in general. Mean satisfaction ratings, out of 10, grew from 6.6 to 6.84 (N=62).

Numbers of kitchen staff grew slightly during the evaluation period, as did total numbers of hours worked. The sample, however, showed strong variance within these figures.

Professional development opportunities were stimulated by FFLP, with the proportion of kitchens with CPD programmes rising from 60% to 65%. Satisfaction ratings for available training opportunities grew from 6.24 to 6.47 out of 10. The number of formal qualifications among staff also increased.

Overall job satisfaction, remained similar (from 7.45 to 7.25, scored out of 10) among respondents. We would suggest, however, that the broader economic conditions effecting the service at the time of the follow up study has probably effected this figure.

Kitchen staff consistently report that they have a greater degree of involvement and broader integration with the rest of the school as a result of FFLP involvement.

### 8.1 Introduction

This section of the reports examines the impact of the Food for Life Partnership programme on school cooks and the kitchen environment. It is an analysis of data collected by FFLP and the evaluators using 'factfinder' questionnaires conducted at the beginning of flagship school enrolment and then repeated after at least 15 months of programme involvement.

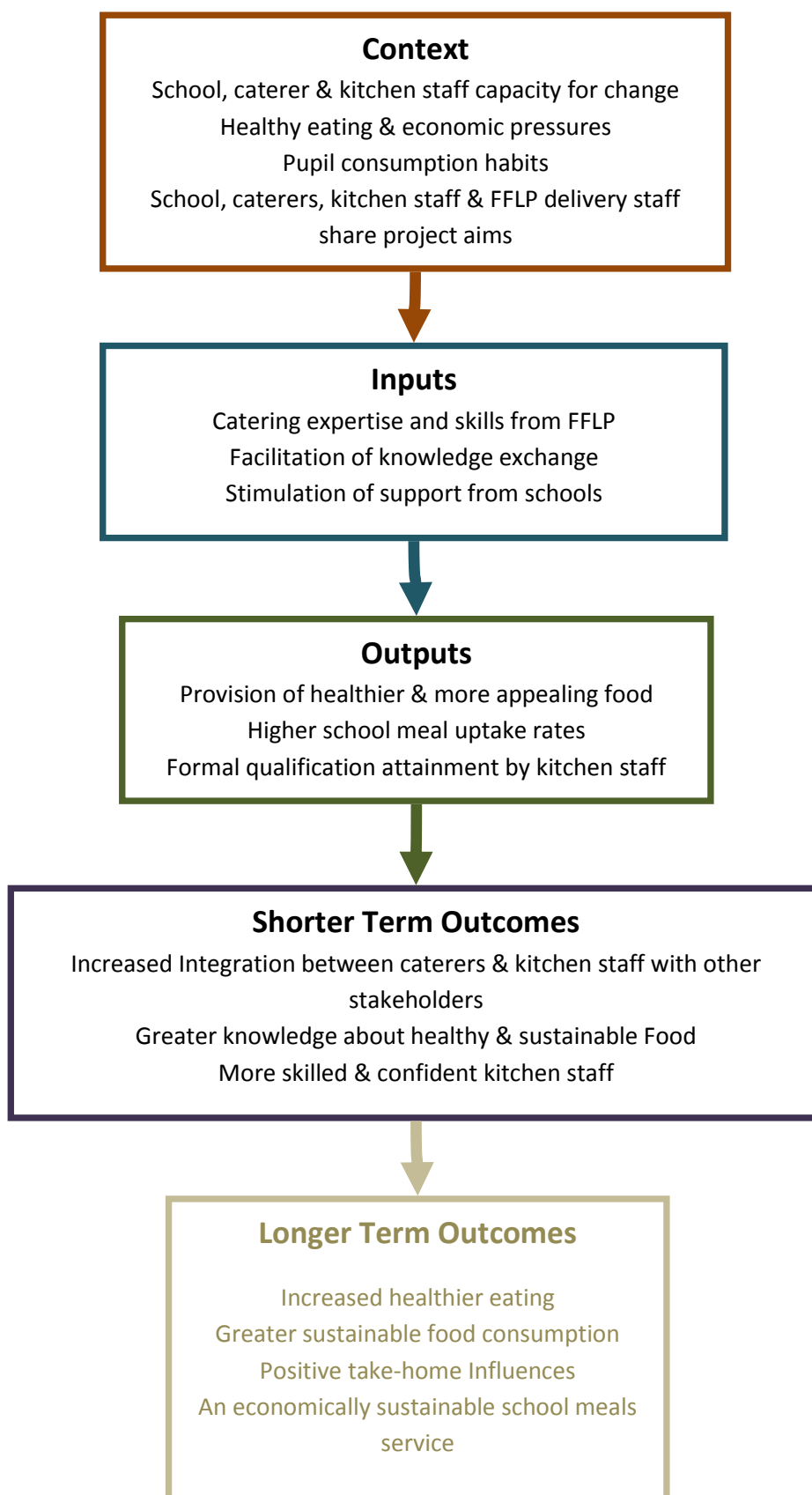
[See Section 2.3 & 2.4  
for research & policy context](#)

### 8.2 Methods

Drawing upon programme documentation, delivery staff feedback and external research we plotted out a framework for interpreting the links between programme context, inputs, outputs, short term and longer term outcomes. A simplified representation is set out in Figure 8.1.



Figure 8.1 The School Catering Component of FFLP: key elements in the theory of change



### ***Procedure, sample, tools and data analysis***

As part of the broader programme, all schools who have Flagship status received an initial catering fact finding visit from Jeanette Orrey, the School Meals Policy Advisor to the Soil Association. As well as providing targeted advice and support to catering teams early in the FFLP process, the visits were also used to complete an initial ‘fact finding’ questionnaire process (referred to as the ‘baseline’ fact finder). A similar ‘fact finding’ process was carried out after an approximate period of 18 months involvement by schools in FFLP (referred to as the ‘review’ or ‘follow up’ fact finder). This was typically carried out by other members of the FFLP team or Evaluation staff. The same school-based respondents were sought where ever possible, however. These two data collection exercises form the analytical basis of this section.

In common with the other programme evaluations, only flagship schools from Phases 1 – 6 were sampled and used in analysis. This ensured that all schools included had been part of the programme for a minimum of 18 months, which has been deemed long enough for the programme to generate perceivable impacts.

The baseline and review catering fact finders were designed to elicit a mixture of quantitative and qualitative data from respondents, some of which were based on opinion and perception. All the data was entered and analysed using SPSS Version 17, a statistical software package adept at handling both qualitative and quantitative data.

## **Findings & Analysis**

### **8.3 Profile of the sample**

Only schools that adequately completed both fact finder processes have been included in the analysis. 107 schools completed the baseline fact finder, of which 77 also completed the follow up review fact finder. A further three schools were excluded from analysis because the time between baseline and review fact finders was deemed too short. The total number of schools analysed in this sample, unless otherwise stated, is therefore 74.

As Table 8.1 illustrates, the schools were evenly distributed across the nine FFLP regions, with only the South West and East Midlands showing a slight over representation. Table 8.2 sets out school inclusion according to phase. It indicates a significant under representation from phase 6 schools. It would appear that this maybe due to the short time between baseline and review fact finder administration for these schools, leading to a lack of enthusiasm for repeating the process.

**Table 8.1 Regional distribution of schools included in the analysis**

<b>FFLP Region</b>	<b>Number</b>
West Midlands	8
South West	12
North East	7
East England	8
East Midlands	10
South East	7
London	6

Yorkshire & Humber	8
North West	8
Total	74

**Table 8.2 Phase distribution of schools included in the analysis**

Phase	Number
1	13
2	14
3	15
4	13
5	13
6	6

The sample contained 51 primary schools, 23 secondary schools and 1 special school. In terms of catering models, the split was: 35 LEA, 33 In-house and 6 Private Contractors.

The average length between baseline and review fact finder completion was 20 months, with a standard deviation of 4.18, a maximum of 29 months and minimum of 14 months. For the purposes of this analysis it is assumed that these periods are long enough for the research subjects to have experienced the full impact of FFLP participation.

The average number of children attending school dinners was 236 for the total sample (SD = 238). This can be broken down to 144 among primary schools (SD = 95) and 443 for secondary schools (SD = 319). As the standard deviations indicate however, there is considerable variation in numbers of children attending school dinners and therefore catering capacity among the sample. The lowest number of children was 25 whilst the highest was 1100.

Of the 57 kitchens that provided the respondent names for both stages, 72% indicated that the same person completed both forms. This figure is significant due to the subjective nature of a small number of questions. Allowances have been made during analysis to account for these other cases.

#### 8.4 School meal take up

Only 29 respondents at review gave an opinion about whether meal uptake has changed since being involved in FFLP. Of these 13 stated that uptake had increase (45%), 4 observed a decrease (14%) with the remainder feeling levels were more or less the same.

##### *Steps taken to increase uptake*

Respondents were asked to qualitatively describe the key steps the catering team initiated in order to increase take up of their meals. The responses varied considerably among the returns, however a number of key types of initiatives dominated:

- Improving the dinning environment
- Changing the menus
- Increasing marketing and promotion of catering services
- Organising tasting sessions for parents and / or pupils
- Other types of direct consultation with parents and / or pupils

A second tier of stated initiatives in terms of frequency of reference included promoting free school meal uptake, introducing cashless / band ordering systems and organising cooking lessons. Interestingly, increasing the quality of the food was only explicitly mentioned by four respondents, although the notion was probably also within general statements about changing the menus. Similarly, there were five records that included increasing the use of fresh food, which again could be deemed synonymous with quality food.

It should be remembered that these examples given were the initiatives most frequently noted and on the whole do not provide an indication of their success. Nevertheless, in terms of meal numbers the perception of the caterers is that the number of meals they serve on average has increased from 204 meals per sitting to 245 meals per sitting an increase of 22%. The increases were bigger amongst schools in phases 1, 4, 5 and 6. Also the caterers reported quite a high level of interaction between their staff and the pupils (84%, n=61) which continued to increase at follow up (95%, n=69).

### **8.5 Kitchen Environment & Equipment**

When asked to rate the standard of kitchen equipment and facilities on a scale from 0 – 10 (where 0 = very poor, 5 = average, 10 = exceptional), the mean rating increased from 6.6 to 6.84 during FFLP participation (N=62). Both figures represent an above average perception of the standard of kitchen equipment and facilities, with a perceivable increase in perceived standards being recorded.

#### *Improvements Needed at Baseline Stage*

Respondents were asked during the baseline fact finder what improvements do they think are needed with regard to their kitchen environment and available equipment. 93 of the 107 sampled kitchens responded to this question. Of these 68 (73%) identified improvements needed whilst the remaining 25 (27%) stated were happy with current provision.

Among the kitchens needing improvement, space related issues were the most frequent identifiable category with 22 kitchens stating a need (32%). New flooring and ventilation featured also featured (16% and 13% respectively).

When asked specifically about pieces of equipment that need to be purchased or upgraded, 29 schools (31%) stated that they had no need for anything else. The kitchens that did state a need for new equipment gave a wide range of items from which no discernable trends can be identified.

#### *Improvements Made During FFLP*

The follow up fact finder asked respondents to detail improvements made during FFLP. Of the 74 kitchen respondents that completed both baseline and review stages, 77% gave details of improvements to the kitchen environment / equipment since they enrolled in FFLP (N=57). The improvements made ranged from the purchase of small pieces of equipment to new work surfaces and complete refurbishments. No trends in terms of specific types of equipment purchased can be conclusively identified in the data.

#### *Improvements Still Needed*

47 review stage respondents gave details of future improvements to either the kitchen environment or equipment that they would like to see. Of these 47 kitchens, 12 (26%) had not experienced any perceived improvements during their FFLP involvement.

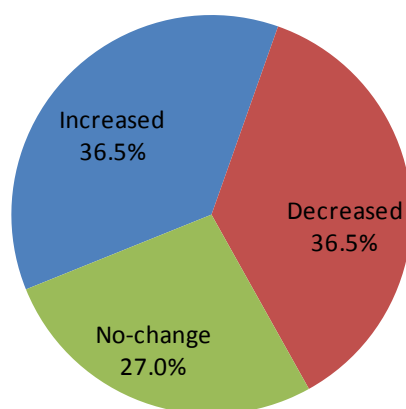
The clearest theme among those still in need of improvement specifically regarding kitchen environment was the desire for more space. 19 of the 47 respondents in this category mentioned space issues (40%). Absolute kitchen space was most common among these, followed by the need for more storage space and lastly more dining space. It is apparent that space issues are largely school infrastructure related and therefore typically outside the realistic influence of FFLP.

## 8.6 Labour

### *Number of Employees*

The total number of kitchen employees across the sample (N=63) rose from 356 to 377 during the evaluation study period. This equates to 21 new employees in total, an average increase of 0.34 employees per school, with a standard deviation of 3.64. As Figure 8.2 (below) illustrates, as many caterers experienced decreases in kitchen staff numbers as experienced increases.

**Figure 8.2 Change in number of kitchen employees per school.**



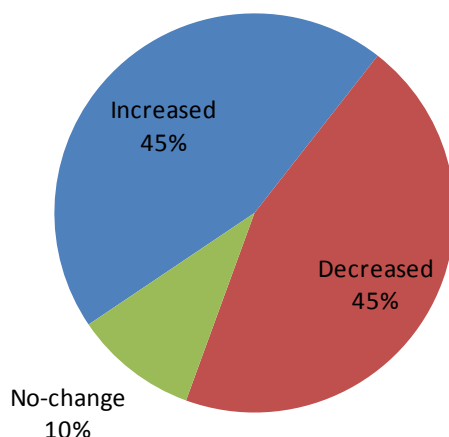
### *Number of Hours Worked*

The total number of hours worked per week by catering staff (N=59) rose from 6631 to 7032 during the study period. This equates to 401 extra hours, an average increase of 6.8 hours per school, with a large standard deviation of 63.12.

It should be noted that the data submitted for this question corresponds to official paid hours per week rather than actual hours. A number of fact finders recorded that kitchen staff frequently work longer than their paid hours. The average number of paid hours per employee changed only slightly from 18.63 to 18.65 hours per week.

In common with data for number of kitchen employees in individual schools, the total number of hours worked actually decreased in as many schools as it increased. This is highlighted in Figure 8.3 below.

**Figure 8.3 Change in total number of hours worked by catering staff per school.**



## 8.7 Professional skills

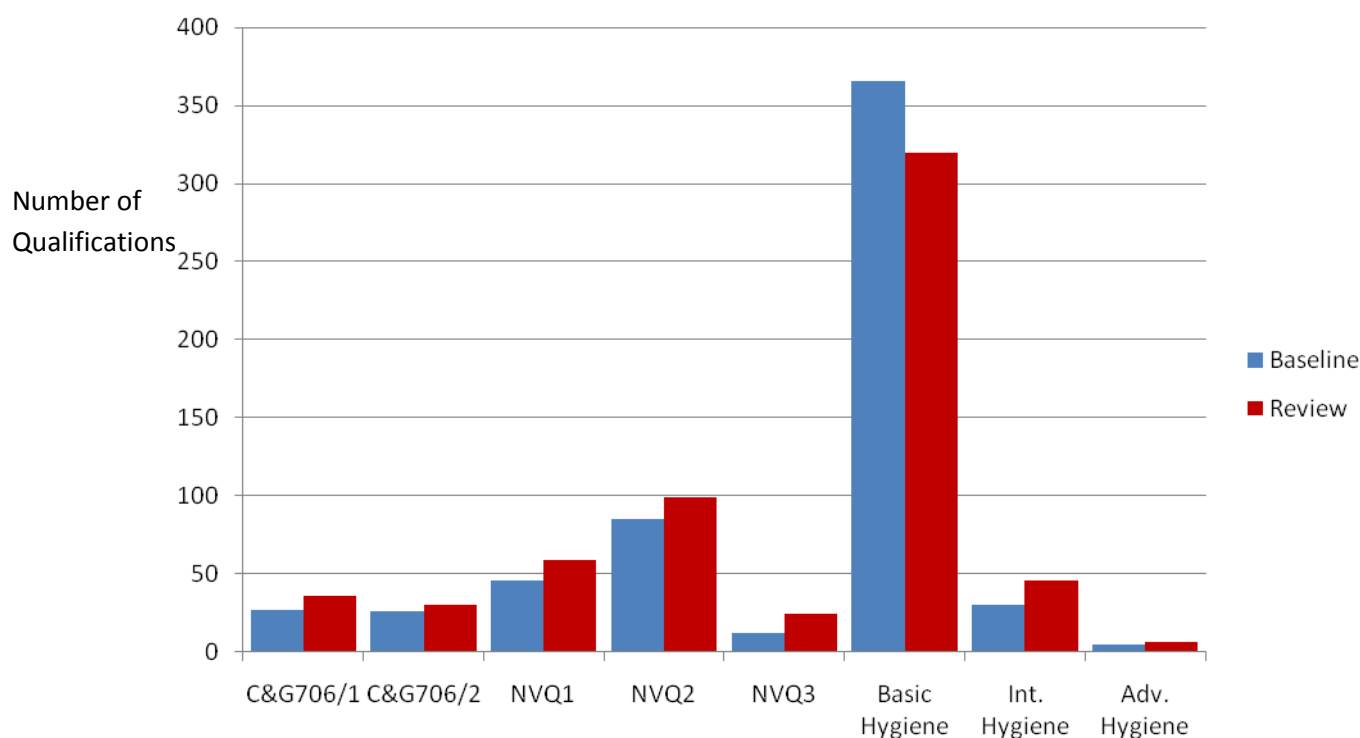
### *Continuous Professional Development*

The percentage of kitchens whose staff have access to a formal programme of continuous professional development rose from 60% at baseline to 65% at review stage. During the same period, respondents rating of uptake of training opportunities among staff increased from 6.24 to 6.47 out of 10. Of the respondents who completed both fact finder stages, 46.2% recorded an increase in perceived take-up rates while 40.4% showed a decrease. The remaining 13.5% recorded no change.

### *Formal Qualifications*

The number of formal qualifications among staff in the sample grew from 597 to 620 from baseline to review. Figure 8.4 below breaks this down by qualification type. All qualification types increased except for Basic Food Hygiene which decreased in number by 46 (12.5%) and Advanced Food Hygiene, which has only one less.

**Figure 8.4 Number of Formal Qualifications among Kitchen Staff**



The reason for this fall in numbers of employees with basic hygiene qualifications is unclear.

### 8.8 Food Waste

Of the 62 kitchens that completed this question for both baseline and follow up stages, 30 had food waste targets at baseline, whilst an additional 2 kitchens introduced targets during FFLP. Table 8.4 summarises the main food waste themes from comments given at review stage (N=53).

**Table 8.4 Summary of Comments and Measures Regarding Food Waste Activities**

Not Much Waste Observed	25%
Compost / Animal Feed	21%
Use Band system (or equivalent)	9%
Altered Portion Sizes	8%
Encourage Pupils to Finish	6%

As this table illustrates, the most common food waste measure reported on was the use of composting or using waste as feed for school based animals. In addition to the comments above, a further two respondents stated that they regularly weigh food waste to monitor progress.

### 8.9 Job Satisfaction

Overall rating on job satisfaction remained high and largely unaffected over the duration of the programme. Catering leads were asked to rate their staff's job satisfaction where 0 = *very poor*, 5 = *average* and 10 = *exceptional*. At baseline the mean satisfaction score was 7.45 (SD=1.93) and at follow up it slightly lower at 7.25 (SD =2.03). Generally most staff who were positive about their

staff's satisfaction at the start of the programme remained positive at the end and those who rated it negatively at the start remained negative at the end of the programme ( $r=1.86$ ,  $n=60$ ).

Caterers were asked to recall what they did to enhance job satisfaction. 67% ( $n=49$ ) could identify a reason for improved staff satisfaction. Two schools specifically cited the FFLP programme.

*Doing Food For Life has my made job more interesting. (School 18)*

*Food for life recognition has made us feel very successful. (School 82)*

However, it is individual aspects of FFLP that were more frequently identified as being important for enhancing staff satisfaction. Most importantly 1 in 5 schools cited involving staff in decision making or giving staff more control as the main change introduced to enhance satisfaction.

**Table 8.5 Aspects of FFLP that Contributed towards Catering Staff Satisfaction**

	Percentage of schools	Number of schools
<b>Greater control/decision making involvement</b>	20%	11
<b>Promoting/encouraging team spirit/work</b>	17%	9
<b>Increased or new training</b>	15%	8
<b>Working with fresh ingredients</b>	13%	7
<b>Working with new menus</b>	7%	4
<b>New kitchen/ equipment</b>	7%	4
<b>The FFLP experience</b>	4%	2
<b>More/new staff</b>	4%	2
<b>Increased pay</b>	2%	1
<b>Seeing happier children</b>	2%	1

Using better ingredients and improved menus clearly has made an important contribution to staff satisfaction in some schools:

*Happy to be serving better ingredients and better quality food. Glad not to be using frozen food. Nice to use fresh food. Nice to see enthusiasm from children when bringing veg in from the garden (School 49)*

Very few schools cited negative changes as contributing to deteriorating staff satisfaction, however 8.2% ( $n=6$ ) cited different reasons including: difficulties in recruiting, increased workload, redundancy, reluctance to train and an increase in time.

*School tries hard to integrate the dinner ladies but it doesn't seem to make any difference and the dinner ladies don't seem very committed to the role. (School 40)*

*Workload has increased due to extra time for preparation. (School 18)*



## 8.10 Catering Integration

**Table 8.6 Frequency of Formal Discussions between Kitchen Staff and Other Stakeholders about School Related Food or Catering Issues**

Discussed with	Baseline		Follow up		Difference
	Often	Regular	Often	Regular	
Senior Management	13%	30%	32%	45%	19%/15%
Teachers	3%	18%	21%	46%	18%/28%
Mid-day supervisor	7%	13%	32%	15%	25%/2%
Pupils	2%	60%	58%	18%	56%/-42%
Parents	2%	13%	10%	22%	8%/9%
LA Contact	43%	14%	25%	32%	-18%/18%
Suppliers	4%	23%	19%	24%	15%/1%
Other schools	11%	56%	11%	35%	0/-21%

The above data suggests there have been some significant changes in the formal contacts kitchen staff have with other people on catering issues. Overall the catering lead reports that they are talking more to senior managers, teachers, parents. However with the LA there was a small decline in contact and also in conversations with other schools. They also report speaking to their suppliers more often. There were no significant differences between types of school however at baseline caterer leads in secondary schools are more likely to talk to mid-day supervisors than primary schools ( $\chi^2$  7.63, p0.05, n68).

The growth in contact with pupils has also increased on an informal basis, as the following figure shows.

**Table 8.7 Are kitchen staff encouraged to informally interact with pupils during meal times?**

	Baseline	Follow up
<b>Yes</b>	84%	95%
<b>No</b>	16%	5%

It is also clear that the form of interaction can take many forms.

*The school encourages a friendly atmosphere in the dining hall and the pupils know that the kitchen staff are approachable. (School 3)*

*We don't stop! Talking about what is for dinner, encouraging them to try new things, offering seconds, helping the lunch buddies carry out their duties. (School 27)*

*We tell them to sell, smile and welcome. (School 28)*

*We talk about combinations of food on their plate. (School 71)*

Catering staff have also been able to discuss with pupils the values that are at the heart of FFLP, with the proportion of kitchens with staff who feel able to talk to pupils about what food is seasonal, local or organic rising from 77% to 93%.

These positive attitudes are reinforced by catering leads understanding of the importance of staff involvement in active discussion around food and catering policy discussions. Catering leads were asked to rate their feelings on two questions giving a 0 if they strongly disagree, 5= neither agree nor disagree, 10= strongly agree with the statements.

**Table 8.8 Catering staff involvement in school discussions about catering and school food policy**

	<i>Catering staff are fully involved in school discussions about catering and school food policy</i>	<i>Catering staff feel confident about expressing their views about catering issues and school food policy</i>
<b>Baseline</b>	5.41 (n=69, SD=3.7)	8.30 (n=66, SD=2.19)
<b>Follow up</b>	7.53 (n=59, SD=2.5)	8.10 (n=63, SD=2.13)
<b>Difference</b>	+2.12	-0.2

This data suggest that levels of staff confidence to be able to express their views about catering issues and school food policy remains about the same, however catering staff now feel significantly more involved in school discussions (  $p=0.002$ ,  $t=3.43$ ,  $df=53$ ). Several leads report that there were none or very little discussion prior to FFLP but now there is more discussion not just within the SNAG but also with other members of staff. It is also clear that, as the programme has gone, on more Heads have been supportive of the catering staff or lead getting involved with the delivery of food education beyond the dining hall.

Perceived support levels from head teachers and catering management (if applicable) for staff to get involved in food education activities beyond the dining hall rose significantly from 51% at baseline to 77% at follow up.

Catering staff have been involved in delivering assemblies, helping out with cooking clubs, delivering cookery within the classroom, helping in the community garden, developing matched menus for themed days and various catering activities around out of school clubs and events. They have also been present at premier external events like the Ludlow Food Festival the best-known annual food festival of its kind in Britain (<http://www.foodfestival.co.uk/>, accessed 2010).

### 8.11 Challenges for the future

Catering leads were asked whether they anticipated any problems that might affect the success of any changes introduced by FFLP within their school. 44% of respondents identified issues at baseline while 57% articulated problems at follow up. It is clear that despite the genuine broad consensus on the enjoyment of the programme and the extent to which FFLP has enhanced job satisfaction and contributed to job enlargement the challenges faced in the future are still considerable and some are different to the challenges faced at the start of the programme.

**Table 8.8 Summary of perceived future challenges for kitchen staff respondents**

	<b>Baseline (n=33)</b>	<b>Follow-up (n=35)</b>
<b>Costs</b>	42%	51%
<b>Cuts, Redundancies and Local Authority policies</b>	0%	17%
<b>Attitudes, Education and Training issues</b>	21%	14%
<b>Sourcing</b>	12%	6%
<b>Equipment or building issues</b>	9%	6%
<b>Non-economic Sustainability issues</b>	3%	3%
<b>Non- cost Staffing issues</b>	9%	3%
<b>Time involved in Delivery or Training</b>	3%	0%

At the start of the programme those people who had concerns were mainly concerned with the costs involved in pursuing the programme.

*Finance because of the cost of organic, and they question if there is any benefit to organic food. (School 36)*

*The financial cost could be a problem as we are only a small school. (School 78)*

*I think parents need educating. (School 40)*

*Parents would be the major obstacle as they would be very hard to convince and would tell the children to go to the chip shop. (School 51)*

There were some concerns about food sourcing and in particular finding organic vegetables and meat and some anxiety about the equipment and perhaps their kitchen e.g. appropriate plates or the size of the kitchen to deliver. And almost 1 in 10 catering leads had a concern around their staff cited issues around keeping them involved:

*Keeping the momentum for both kitchen and teaching staff. (School 1)*

However as the programme has gone on these fears appear to have got less. Reported anxieties about food sourcing, equipment and buildings, attitudes and training have reduced. However they have been superseded by fears concerning costs, the threat of cuts, redundancies and local authority policy.

*Financial constraints and lack of support from LA catering team. (School 87)*

*Budget cuts (School 88)*

*Cuts to budget could see quality drop (School 85)*

These concerns were outside the continued anxieties around the costs of organic food and staffing costs to deliver freshly cooked products. These existed at the start of the programme and continued to exist at follow up.

*More paid hours need to be allocated to kitchen staff. (School 2)*

*Cost - many parents are not well off and can't afford to pay for a hot lunch. (School 3)*

*Costs of food sourcing. The catering providers need to keep an eye on the costs of organic food. (School 52)*

Despite the concerns about costs and cuts catering leads were able to report that they had got a lot of things out of their experience with FFLP.

**Table 8.10 Personal benefits from involvement in the FFLP for respondents**

	<b>Baseline (n=66)</b>	<b>Follow-up (n=43)</b>
<b>Training/education or new knowledge</b>	18%	30%
<b>Job and/or individual satisfaction.</b>	9%	26%
<b>Partnership working, networking, linking into SMT</b>	0%	14%
<b>Individual or personal benefits and or achievement</b>	9%	9%
<b>Improved quality of food including health</b>	14%	6%
<b>Increased take-up of school meals</b>	11%	5%
<b>Don't know / other</b>	12%	5%
<b>Benefits specifically for children</b>	26%	2%
<b>Being part of the FFLP</b>	8%	2%
<b>Using local and/ or garden sourced food</b>	3%	0%
<b>New equipment or buildings</b>	2%	0%

At the start of the programme catering leads reported that the top three things they would personally like to get out of their involvement in the FFLP were: specific benefits for the children, some new training, education or increased knowledge and an improvement in the quality of food; primarily that it was more healthy or enjoyable. At follow up, although new training, education or increased knowledge was one of the top three things they said they had personally got out of their involvement on the programme the other two were absent. Instead catering leads reported that they got improved job and/or individual satisfaction and an opportunity for increased partnership working, networking and/or linking into the senior management team (SMT). The latter was not anticipated at the start of the programme and the personal benefits for children like the quotes below were virtually absent at follow up.

*See the benefits to the children and the impact it will make on their lives. (School 3)*

*To see the children happy with what they are getting on their plate. (School 15)*

*To improve the nutrition and health of children at our schools and develop the staff cooking skills and catering. (School 36)*

Clearly job and or individual satisfaction was important at the start of the programme:

*She would get satisfaction from cooking good food from the children and to break the circle for the next generation. (School 24)*

*Satisfaction that I helped achieve the award and that we are appreciated. (School 103)*

These sentiments appear to have increased over the course of FFLP involvement, with over twice as many catering leads reporting this theme. In addition, closer cooperation with other school stakeholders was also reported. Many feel that this in particular has raised their profile:

*Helped to motivate the management team to the agenda (School 6)*

*Being more involved in the school. More job satisfaction (School 30)*

*Networking (School 20).*

Clearly training, education and the gaining of new knowledge was seen as being a potential benefit at the start of the project and also an acknowledged benefit at the end. There were several citations of new skills learnt and specific benefits gained from things like the Cooking Bus visit, Ashlyn’s training and Jeanette Orrey’s recipes. A lot of the things learnt are now embedded in caterer delivery in the kitchen and clearly acknowledged as bringing added value to their work.

*A lot of enjoyment and a good learning curve with food sourcing and visits to producers....very interesting. Now do talks and presentations. (School 12)*

*Become a lot more confident in what I do, I understand it more, it taught me a lot more about food. (School 26)*

*I enjoyed cooking things from scratch introducing new foods to children (School 90)*

The issue of increased take up of meals became less important personally to the catering leads as the programme progressed. Table 8.11 below summarises the key themes around perceived personal benefit from FFLP at baseline and follow up for catering staff respondents.

**Table 8.11 Common themes for personal benefit from involvement in FFLP Catering Programme**

	<b>Baseline (n=66)</b>	<b>Follow-up (n=43)</b>
<b>Training/education or new knowledge</b>	18%	30%
<b>Job and/or individual satisfaction.</b>	9%	26%
<b>Partnership working, networking, linking into SMT</b>	0%	14%
<b>Individual or personal benefits and or achievement</b>	9%	9%
<b>Improved quality of food, including healthier food</b>	14%	6%
<b>Increased take-up of school meals</b>	11%	5%
<b>Don't know / other</b>	12%	5%
<b>Benefits specifically for children</b>	26%	2%

<b>Being part of FFLP</b>	8%	2%
<b>Using local and/ or garden sourced food</b>	3%	0%
<b>New equipment or buildings</b>	2%	0%

## 8.12 Conclusions

This report provides a snapshot of the challenges faced by kitchen staff in FFLP flagship schools and the impact of programme participation on them. There are, however, some weaknesses to the data and its analysis that should be raised before considering the wider conclusions. These include:

- The inherent subjectivity of respondents, particularly with regard to opinion based questions.
- The possibility that respondent answers may be influenced by perceived pressures from other stakeholders (including FFLP) to attribute positive impacts to the programme.
- The minority of cases where the respondent completing the fact finders changed from baseline to review stage.
- The influence of external factors outside the influence of FFLP on school meal provision and the catering environment.

Overall however, this analysis highlights a number of perceivable improvements to the school catering function in flagship schools with respect to the FFLP approach. The headline impacts from this study may be summarised as follows:

### *Meal Uptake*

Schools consistently worked with their catering teams to develop measures to increase school meal uptake rates. Together these measures were concerned with developing a more attractive food offer and marketing it more effectively to their customers. This ‘market reorientation’ within the catering and kitchen environment was tied to measures that promote the integration of kitchen staff and the catering function in general to the wider school and its stakeholders (e.g. parents sampling meals).

The low level of reporting about actual change in meal uptake along with only 45% of these actually observing an increase could indicate either a knowledge deficit among respondents or the influence of broader factors outside of FFLP influence on school meal uptake. These issues are explored further in the next section of the report.

### *Kitchen Environment & Equipment*

On the whole this study reports both a general satisfaction among respondents regarding the standard of their kitchen environment & equipment and progress during the involvement of FFLP in making improvements in this regard.

It appears that the schools and caterers among the respondent sample did invest in improving the kitchens as part of FFLP. Physical space and other costly improvements such as new floors and ventilation systems remain commonly desired by kitchen staff. Whilst not unanimous, we can report improvements on the whole to kitchen environments as a result of FFLP participation.

### *Labour*

The impact of FFLP in issues concerning numbers of staff and hours worked, however, appear mixed. Both numbers of employees and hours worked showed relatively modest increases. Within these

figures, however, there were as many kitchens whose staff numbers and hours worked decreased as increased during the study period. Again, it could be hypothesised that this was due to broader issues outside of FFLP such as core funding factors or increasing costs associated with employment. There is also the possibility, however, that funds diverted towards other aspects such as ingredient costs may have had a negative influence on labour levels. We stress, however, that there is no hard evidence in this particular study to back this up.

#### *Professional Skills*

Both provision of Continuous Professional Development schemes and uptake of formal training opportunities for kitchen staff rose during the study period. Again, however, a significant proportion of respondents reported decreases in training uptake. Similarly, the number of staff with formal qualifications rose during this study. A clear concern, however, is the reported decrease in numbers with basic hygiene qualifications. The reason for this is unclear, though it could be due to high staff turnover coupled with delays in providing training due to the other developments regarding the kitchen environment reported in this study.

#### *Food Waste*

Only 30 kitchens reported formal food waste targets although a significant number stated that perceived wastage was low or insignificant. Composting related activities connected with other elements of the FFLP approach appear to be a significant and effective way of reducing waste levels.

#### *Job Satisfaction*

Overall job satisfaction was high at the start of the programme and remained high at follow up. Most importantly 1 in 5 schools catering staff cited getting involved in decision making or giving staff more control as the main change introduced that has enhanced their satisfaction. Most catering staff report getting involved a broader range of activities both in and outside of the school since their profile has been raised in the school.

#### *Catering Integration*

Catering staff confidence in being able to express their views remains high. However what they do report is that they now feel significantly more involved in school discussions than before. Several leads report that there were none or very little discussion before the FFLP but now there is more discussion not just within the SNAG but also with other members of staff and the SMT.

#### *Challenges for the future*

The last part of both fact finders reported on anticipated problems regarding the success and long term sustainability of FFLP related kitchen improvements. Unsurprisingly cost issues dominated concerns. This reflects both the long term cost pressures on the service reported in the context section of this report along with current issues around cuts in public service budgets and wider economic issues. These responses should serve to remind us of the importance of sufficient funding both to maintain an effective and efficient, both in their broadest sense, school meal service.

## 9. Developing Sustainable Food Education

### Key Findings

This section of the report examines the school programme 'outputs' with regard to the development of sustainable food education and food policy. It draws largely on teacher reports at enrolment, review and during the course of the programme.

Overall the results show that FFLP led a rapid, intensive programme of school reform. For some primary schools, in particular, these developments transformed the scale and nature of activities.

While many schools (73%) had a school food policy prior to enrolment, pupils had been involved in the development of less than half of them. SNAGs were established from the outset in all schools and at the point of review these continued to act as a sustained forum for pupil involvement: 83% of primary schools continued to hold regular meetings.

Before enrolment schools reported few staff with specific training in applied food education. At review, in over three quarters of schools, staff reported new training in horticultural and cooking education. Most participating staff rated the training very positively.

Prior to enrolment, the majority of schools lacked facilities needed to deliver an effective course of garden or cookery enhanced education. For example, only one in five primary schools reported that they had sufficient facilities to deliver cooking classes to larger groups. Fewer than half the schools had conducted a farm visit in the last year.

Facilities and links to resources improved considerably in most cases over the course of the programme. For example, schools developed new areas for growing, on average, equivalent to the size of one third of a full size allotment plot. There was a considerable rise in the diversity of fruit and vegetable crops grown in schools.

Pupil's exposure to experiential food education has increased. In primary schools, reported participation in growing activities rose 45%, from 29% to 74% of pupils. Cookery and food preparation is already part of the curriculum. Schools extended this work within and outside school hours, such that nearly all were running a skills based cookery club that, for half of primary schools, were available to all students. 24% of schools reported using sustainably sourced ingredients on a regular basis.

Visits to farms and food production related businesses increased over the course of the programme. For 31 secondary schools, the overall percentage of pupils making visits rose from 8.2% in the year prior to enrolment to 15.8% in the year prior to review. For 72 primary schools, the overall percentage of pupils making visits rose from 18.2% to 26.7%.

In secondary schools, student exposure to programme related activities developed from a very low baseline for growing activities. For example, students involved in growing activities rose from an average of 1% to 12.3% in the schools sampled.

After 18-24 months, teachers reported that farm link and growing activities helped them communicate complex, age appropriate issues on food production and sustainability. Staff reported that the Cooking Bus visit, in particular had acted as a catalyst for change within schools.

At an organisational level FFLP-led work helped legitimate skills based food education as an integrated element of the school development plan.



## 9.1 Introduction

This section focuses on the ways that the FFLP has supported schools to develop their cooking, gardening and farm link programmes. It also considers the central role of SNAGs in this process. The evaluation has focused on how these aspects of the FFLP programme have supported schools to develop learning around sustainable food production and healthy eating, and specifically explored aspects of the programme which have contributed to learning about organic and sustainable food systems and the development of cooking skills and education. Using Figure 9.1 as a point of reference, this section is primarily concerned with the links between programme inputs and outputs. It provides a basis for the analysis of outcomes in subsequent sections.

Further details for the evaluation of sustainable food education impacts of the programme are available in the interim evaluation reports on growing skills, cooking skills and farm links elements of the programme (July, 2010) and the Primary Schools Case Study Report (January, 2010).

**See Section 2.5  
for research & policy context**

## 9.2 Methods

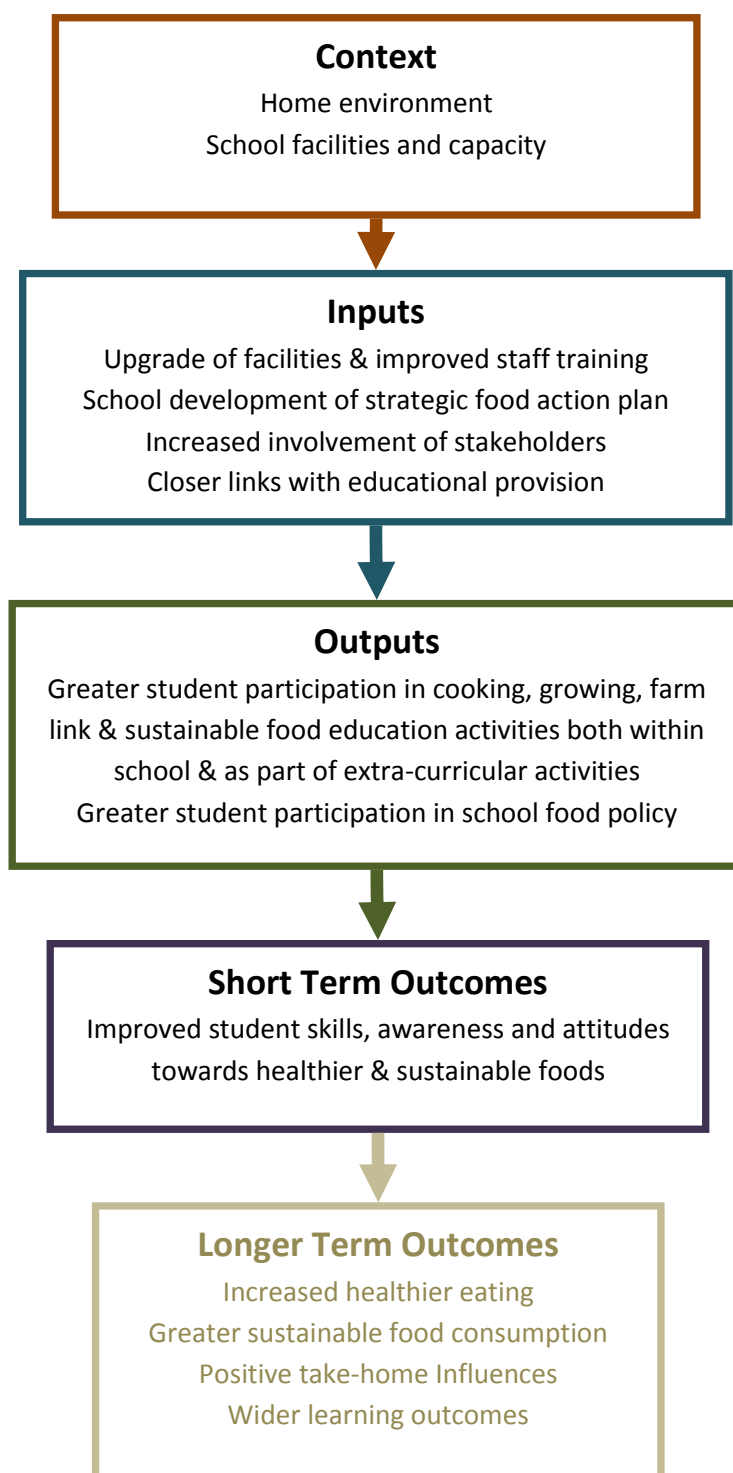
Data for this section are drawn from structured questionnaires given to lead staff in each school on enrolment with the programme and after 18-24 months of participation. Staff also completed evaluation questionnaires during the course of the programme with respect to specific elements of the programme. The questionnaire measures covered programme related activities, patterns of student – and other stakeholder - engagement, and respondent ratings of the programme inputs. Where possible these were referenced to FFLP Mark criteria.

Out of the 111 schools studied:

- 95 completed both baseline and follow up questionnaires on a range of programme elements
- 32 completed questionnaires on specific aspects of the cooking skills programme
- 76 completed questionnaires on specific aspects of the growing skills programme
- 48 completed questionnaires on specific aspects of the farm visits and sustainable food education programme

Student participation in food policy was covered in all of the above data sources. The model below outlines how the FFLP programme could engage students in sustainable food education.

**Figure 9.1 Student engagement in sustainable food education & school food reform: key elements in the theory of change**



### 9.3 Food action planning and the pupil voice

#### ***School goals and aspirations***

At the outset of the programme, school leads were asked to set out their vision for their school food policy development and educational activities. This was part of a structured process led by HET and supported in specific areas, for example, by Garden Education Officers. It was notable that many schools set high ambitions for this area of work. For example with regard to staff leads engaged in developing growing activities, 85% (n=65/76) included reference to the following in their vision statements:

- Making the link between growing and healthier eating
- Promoting learning about food and environmental sustainability
- Promoting active child learning and high levels of engagement and fun
- Promoting greater community engagement and parental interest in the school

These ideals were, on the whole, clearly congruent with the overall mission statement of the FFLP. This is not surprising since schools had to demonstrate a commitment to the programme goals as part of the selection and enrolment process. Nevertheless, the interest and motivation of staff and the wider school community is a strong prerequisite for successful project delivery. For example, one primary school had almost no track record in garden education before enrolment. Their initial vision was certainly ambitious:

*We'd like to see a growing area that is run by children and supported by parents. We'd like a school where the produce is being used in the kitchen. Growing-related events would be planned and run by the children – and parents are working with the children to produce the food. [#7]*

This type of vision can produce sound results. Over the course of eighteen months, this school transformed the garden area, established a volunteer led garden group and increased tenfold the involvement of pupils in this area of school life. The school also made connections between the garden and cookery in the classroom.

#### ***Promoting Student Voice***

Engagement with pupils has been a central element to the FFLP approach. This area is not fully examined here but is raised across a range of specific contexts in this report. The qualitative perspectives of students themselves are also reported in the UWE-led Primary Schools Case Study. The results presented in this part summarise some central aspects of pupil engagement with food action planning.

Out of 111 schools, 108 provided data on the character and extent of their involvement of pupils in school food decision making in the year before programme enrolment. Overall the picture was one of quite limited involvement, although there were notable exceptions with individual schools.

Whilst 73% had a school food policy, pupils had been involved in its development in less than half of the cases. 22% already had a SNAG or equivalent group, although 80% reported that they had

consulted students on food improvements via consultation boxes, group exercises or similar processes.

At the point of review, the majority (83%, 62/75) of primary schools were continuing to maintain regular SNAG meetings. These meetings included pupils and would normally include a caterer or cook along with the school staff lead. Parents (72%, 54/75) were somewhat less likely to attend regularly. 69% (52/75) were continuing to maintain a food action plan. One school lead explained the ongoing role of the group:

*The SNAG group continues to be instrumental in making decisions and planning action, for example working with the Eco-Council, tasting our new hot dinners to give the chef feedback, visiting local farmers' markets to buy and prepare food to share with the rest of the school. The children are involved in encouraging others to have or new hot meals next half term. The SNAG group will need to continue meeting to monitor the new meals, the dining hall environment and to continue taking suggestions and views from the rest of the children so that we can constantly improve. The action plan that we developed early on in our first year with FFLP has been a useful working document that we have referred to and used in all of our SNAG meetings. It has helped us to prioritise actions and to make changes in school. School lead #100*

Of those schools that had did not hold SNAGs or maintain an action plan, those that provided further information tended to report that the format had either been indefinitely suspended or subsumed under a wider group such as the student council, healthy schools group or eco-schools group. These schools often adapted the format over time:

*SNAG meetings have helped to involve children and parents in thinking about our food culture. They have been very successful in this. However, we have found that it is best to see SNAG meetings as exploratory (e.g. collecting ideas, comparing organic and non-organic produce etc) rather than focusing on strategic planning or policy development directly. School lead #92*

Data on SNAGs were available for 27 of the 31 secondary schools at review. This showed that the majority (20/27) of the schools were continuing to maintain regular meetings in which pupils and caterers participated. Parents were less likely to be involved (12/27) and these schools were less likely to maintain a current food action plan (14/27).

*We don't particularly follow an action plan, but would aim to. SNAG could benefit from running with children in the initial part of the meeting for ideas, info & activities and then adults continue alone for 'business'. School lead #83*

## 9.4 Cooking Skills Education

### **School infrastructure for educational cooking**

At enrolment schools were asked to assess the extent of cookery education activities in the year prior to enrolment with the programme. 108 out 111 provided overall data. Cooking activities were available in the majority of schools: 78% reported that all pupils would have the opportunity to take part in cooking activities during their time at school. However, fewer schools (35%)

reported that these activities were regular and showed progression in learning. Extended school opportunities were also somewhat less available: 50% of schools reported that they had run an extracurricular cooking club in the last year. As the section on growing skills highlights, there were few occurrences where cookery was connected to gardening and wider sustainability issues.

Focusing on the 32 primary schools that completed questionnaires at the time of a Cooking Bus visit it is clear from the table below that less than 1 in 5 FFLP schools felt that they had sufficient facilities to deliver cooking experiences to groups of 20 or more young people. Over half of the schools had either no or inadequate hobs and ovens. So it is perhaps unsurprising to discover that 59% of schools rated their cooking facilities as either very/poor or fair; with only 16% rating them as excellent.

**Table 9.1: Cooking facilities at a sample of 32 primary schools visited by the Cooking Bus**

	Well resourced for groups of 20+	Well resourced for groups of less than 20	Present but not well resourced for groups	No resource present
Hob	13%	22%	35%	16%
Oven	13%	24%	34%	16%
Fridge	16%	31%	22%	19%
Sink	19%	28%	22%	13%
Sets of cooking pans, chopping boards etc	13%	28%	31%	16%
Dedicated hand washing facilities	16%	19%	16%	32%

In terms of the extent to which schools took the opportunities to explore the links between cooking activities and the curriculum, 31% reported that they did this routinely as part of a whole school strategy. However, the majority, 63%, only occasionally explored the links between cooking activities and the curriculum and this was not undertaken as part of a whole school strategy. Only 25% reported that all of their pupils had an opportunity to take part in regular cooking activities and that show progression in learning. However almost half of the schools (47%) had run a cooking club in the last year; however, only six schools reported that their cooking clubs used seasonal, local and organic ingredients routinely. Only 9% reported that they used healthy and sustainable food as a theme for assemblies or as part of a series of assemblies.

***School staff training through to the Cooking Bus visit***

375 questionnaires were received from school staff. Most of the staff were teachers (54%). There were also teaching assistants (26%), school cooks (6%) and lunch time supervisors (3%). However, there were 41 (11%) other professionals who had a variety of roles. The majority (65%) of those visiting the Cooking Bus had actually ran cooking sessions in school, but a considerable number (26%) said they had never delivered a cooking sessions. Few teachers gave an explanation as to

why they did not deliver cooking lessons. However where an explanation was offered it was usually because the school lacked resources or there was insufficient space in the curriculum.

Reflecting on their experience of the Cooking Bus, 72% of participants suggested that the session had fully met their own needs and 74% reported that the session had helped improve their knowledge of how to teach cooking to children. A notable feature of the training was the inclusion of sustainable food issues, which was highlighted by 46% of respondents.

Supplementary evidence of the knowledge and skills emphasis of the initiative comes from 930 pupils who completed questionnaires on their experiences of the Cooking Bus. In response to a closed question, 90% stated they learned how to cook new foods, 87% how to use a knife safely and 80% learn about healthy eating.

Teaching staff were invited to reflect on what skills they had learned on the bus that they might use in future practice. A large majority of participants (93%) gave responses that included increasing the frequency of skills based cookery sessions and incorporating the topics of local, organic and seasonal food into their work. This reflects the specific messages on food sustainability issues within the FFLP programme.

A range of qualitative comments were received that illustrated a number of themes, many of these could be connected to the quality of the staff and the teaching experienced provided by the Cooking Bus. It was clear that the training had acted as a catalyst for change within some schools. This appears to be a consequence of a variety of factors including: high levels of pupil enthusiasm, staff team building and enthusiasm, greater parent and community interest and preparedness to support the school, and a clear mandate for the SMT to prioritise educational cooking within school planning and schemes of work. As one teacher commented:

*It was thoroughly enjoyable as well as extremely valuable time for me personally. We are just beginning to raise the profile of cookery in school. There's lots of planning and organisation to do but the cook-it team have provided the motivation and enthusiasm. All I have to do is get on with it. Thank you. (PC #106)*

### **Longer term impacts of the FFLP cooking skills programme**

At review the evaluation team asked schools to report on the longer term impact of the Cooking Bus visit and the extent to which there had been lasting effects. School leads were asked what, if anything, has been the impact of the FFFC Cooking Bus on your school's educational cooking? Seventy five schools responded out of 111, these included 28 of the schools reported on in the above section. School leads identified the following key themes:

- General stimulus: created enthusiasm throughout the school community that then unlocked further action
- SLT buy in to development of the area as a school improvement priority: license for staff time and investment of resources
- Staff confidence
- Cook It resources
- Curriculum focus on skills and skills progression

- Greater use of healthier ingredients
- Post visit review to consolidate actions

One respondent explained this longer term impact:

*The Cooking Bus visit helped us to understand more about skills progression in cooking and food preparation and has made our cooking clubs more focused on skills. We are also cooking less cakes/biscuits/pizzas and making healthier foods, including trying to use our own produce from our raised beds when possible. It encouraged the staff to add more cooking into their curriculum plans. We are now planning to change the way that we teach cooking so that each child has a unit of work dedicated to cooking, in the new kitchen. We will also be able to increase our cooking clubs and use of cooking in cross-curricular work as we will have a much bigger cooking area. XX from Focus on Food has already given us some materials to help us plan this in more detail. The cook-it has obviously helped resource our kitchen and given us a better idea of equipment we need. Cooking clubs are now more organised to be more like the sessions on the bus where children work in groups. (#100)*

The majority (71%; 61/75) of primary schools reported that their facilities, procedures, training and support resources for delivering educational cooking had improved or greatly improved. All schools report that the lessons had become skills based and a majority were starting to use seasonal, local or organic ingredients. A small number (18/75) of schools were using seasonal, local or organic ingredients a regular basis.

Nearly all schools were running a cookery club and for half of the schools these were available to all students in the last academic year. The majority of cooking clubs were skills based and use seasonal local and organic ingredients. Three quarters of the clubs were run with the assistance of parents or other community members. Some of them involve quite a large number of parents (up to 22 individuals in the last year). The extent of the impact in secondary schools was less straightforward to estimate. It appears that the greatest effects at the school level came about through large year group and other one-off events

A significant number of schools did not respond to the evaluation questions about the longer term impact of the Cooking Bus (36/111). Nevertheless the data from those responding suggest that the visit did have a lasting impact up to approximately 14 months after the visit.

## 9.5 Garden-based Education in Schools

### ***School gardening infrastructure***

Of the 76 schools providing data, 76% of schools had some form of school garden before they enrolled with the programme. Secondary schools were less likely to have a garden: with only 57% having some form of garden before enrolment.

Whilst most schools appear to rely upon relatively small areas of land, the schools have considerably expanded the plot areas of their school gardens over the first eighteen months of participation in the FFLP flagship programme. For the 76 schools as a whole, we estimate that this

is the equivalent to the creation of 27 full size allotments. However, this may be a cautious figure given that orchard and supporting wildlife areas are excluded in this estimate.

Schools generally had good access to basic facilities such as changing rooms, hand washing, toilets and accessible paths. However at the point of enrolment the majority of schools lacked a full array of specific facilities to deliver a whole school programme of garden based education. On enrolment, the majority of schools had strategies for conserving or attracting wildlife. It was noteworthy that a significant fraction, almost a third, lacked green space features on site such as hedges, trees, shrubs and wild flower or rough grass areas.

At review, the majority of school leads reported improvements in their gardening facilities (at least 66% across a range of measures). Basic improvements to the growing area, new tools and equipment and composting facilities stand out as areas that have seen the greatest levels of improvement.

### ***Staff professional development and educational delivery***

At the outset, school leads were asked to rate the significance of a list of issues that might affect the sustainable delivery of the growing skills programme in their school. Areas that were rated as most problematic (a major or significant issue) were: freeing up staff time to dedicate to growing projects (60%), lack of equipment (38%), parent and community support (38%), and running costs (32%). Other issues were rated as significantly less important. These included a suitable space within the school, links to the curriculum, parental consent and support from the SMT and governing body.

At the outset the majority (57%) of school leads reported that their school staff had had no specific skills in growing or the use of produce in educational cooking. Similarly no members of staff in the majority (55%) of schools had undertaken any specific training in a formal course of horticultural education. Only 11% of schools closely followed guidelines and principles for organic gardening practice, although 32% felt that they adopted some elements of organic gardening practice. Schools were not likely (17% or lower) to have policies in place to support more growing specific aspects of work such as use of garden tools, risk assessments for use of garden produce in school meals or activities by ponds or making compost. At review this picture had changed quite significantly in terms of skills development:

- 76% of schools had arranged for staff to undertake new training in horticultural education.
- 84% of school had adopted new principles and systems for organic gardening.
- 55% of schools had adopted new policies and risk assessment procedures for working in the garden, using tools and so forth.

### ***Fruit and vegetable production in schools***

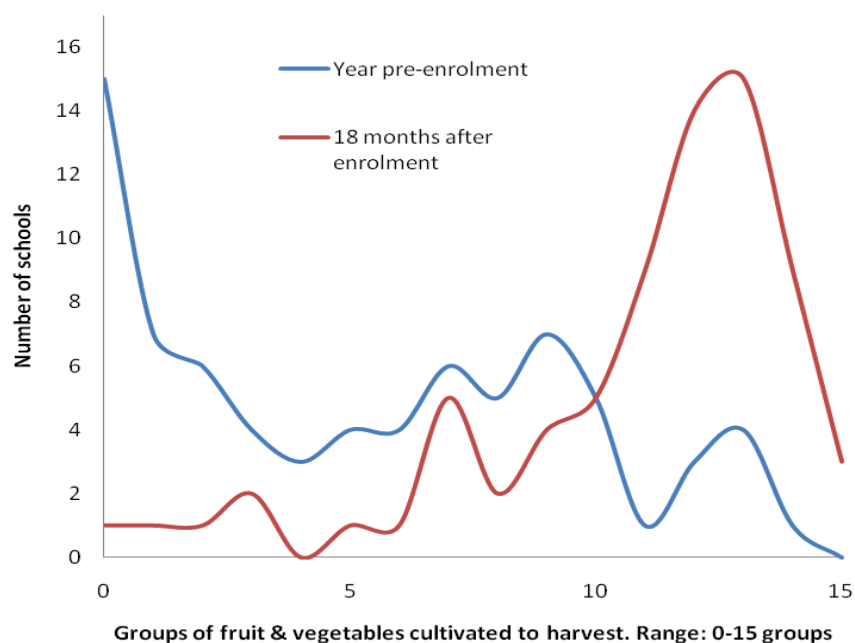
Leads were asked what fruit and vegetables their school had grown in the last twelve months. The questionnaire gave options organised into fifteen groups of crops. Before enrolling with the FFLP flagship programme, the majority (55%) of schools had only grown five vegetables or fruit from five groups. This very restricted range included the usual plants commonly employed in curricular study, for example, in primary schools these tended to be broad beans or cress (as part



of KS1 science). Many schools lacked evidence to show that these were actually grown to the point of harvest.

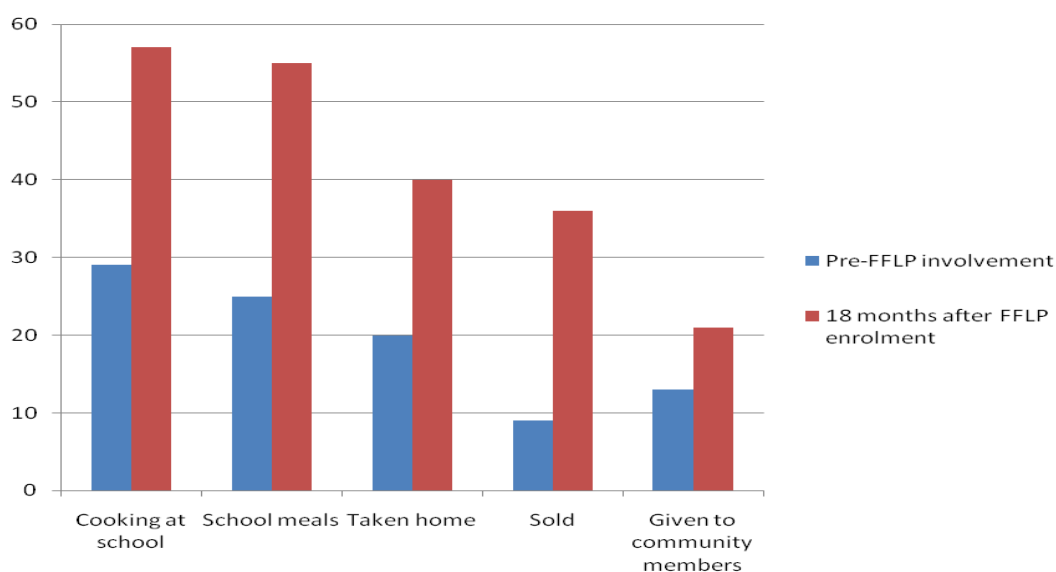
The position had changed considerably at the point of review (see Figure 4). Three quarters of schools were growing fruit and vegetables from over ten groups. This diversity included many unusual types of garden crops such as mushrooms, callaloo, chilli, squash, traditional English apple varieties, heritage plants (as part of the Garden Organic scheme for promoting older vegetable varieties).

**Chart 9.1 Groups of fruit & vegetables grown by the school, from baseline to review. N=76**



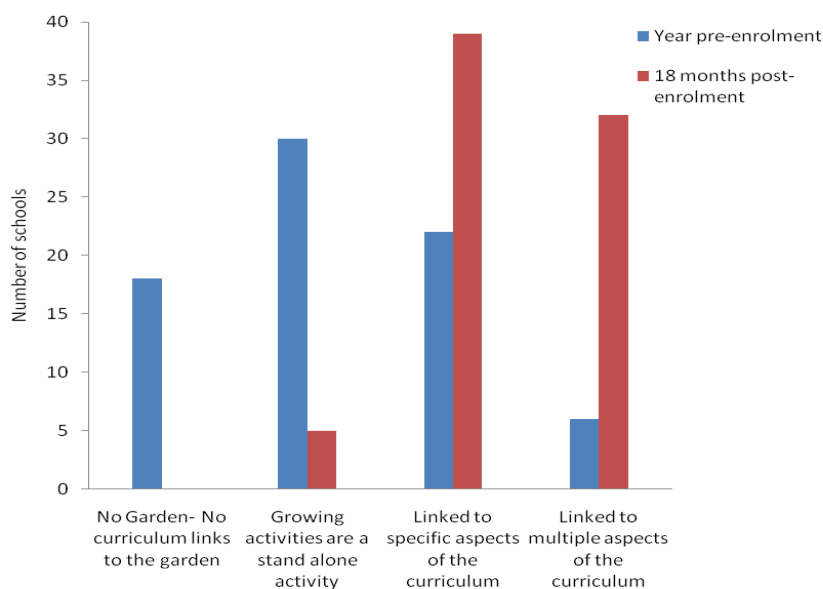
The use of garden produce is an indicator of how growing work is integrated into wider aspects of school life. Chart 9.2 shows a considerable shift towards actively making use of crops in school meals and classroom activities, as well as other socially useful ends in the extended school community.

**Chart 9.2 How produce from the school garden area is used: from baseline to review N=76**



Integration into curricular schemes of work is likely to be an important factor in the longer term sustainability of garden enhanced project work. School leads were asked to categorise the status of their curriculum links at baseline and review. They were also asked to provide supplementary evidence in terms of a summary statement, schemes of work and school improvement plans. At review a majority of schools had improved their links at either specific or multiple levels within the curriculum (Chart 9.3).

**Chart 9.3 How growing activities are linked to the curriculum**



For many schools at review the emphasis had shifted to integrated and holistic links between the garden area and many aspects of school life. Staff employed topic webs, thematic planning, focus weeks, the creative curriculum and whole school topics to realise this goal. GEOs played an important part in developing these schemes of work, working alongside the teaching staff.

### ***Pupil engagement***

At baseline and review, school leads were asked to report the number of pupils taking part in a growing activity in the past twelve months. Here growing activities were defined as the school based cultivation of fruit and/or vegetables with the aim of producing a harvestable crop. School leads were encouraged not to include science based projects that did not have this aim – although in practice a ‘fruit and vegetable growing activity’ is not necessarily simple to define. The following figures include some cases where school leads have made best estimates. These are interpreted with caution, for example, where school leads reported the involvement of all pupils, a figure of no higher than 95% was recorded to allow for absences and pupil turnover.

In the primary schools, an average of 28.6% of pupils took part in some form of growing activity in the twelve months before enrolment. In the twelve month period before the review this figure rose to 74.4%. In these schools this is the equivalent of an additional 6,701 children participating in growing activities per annum. These overall averages disguise wide variations. At baseline, pupils in smaller schools (i.e. those in the lowest national quartile for pupil roll) were significantly more likely to be involved in growing activities. Children in schools with lower quintile of FSM entitlement were also more likely to participate in growing activities at baseline.

Patterns of participation are considerably lower for secondary schools. In the year before enrolment an average of less than 1% of pupils in participating secondary schools had taken part in any form of growing activity in the last twelve months. At review this average rose to 12.3%. In these schools this equates to an additional 1,960 participating in growing activities per annum.

Overall, school size is clearly a significant factor in predicting participation in growing activities. This reflects wider research that shows that smaller school size – at least in the secondary school sector – is associated with more opportunities for flexible and personalised learning.

School leads were asked to assess the level and character of pupil involvement. At baseline only 16% of school leads reported that children were actively involved in most aspects of food growing including planning and maintenance of the garden area. At review 65% of school leads reported that pupils had taken on this more active form of engagement.

At baseline 12% of school leads reported that children in their school were able to actively make use of garden produce in school or extra-curricular activities, for example, cooking activities. At review 52% of school leads reported that children had this opportunity.

### ***Progress and effectiveness of FFLP Flagship programme***

With regard to the growing skills component of the FFLP Flagship scheme, the schools in this study were very diverse at the point of enrolment. Whilst GEOs rated over 68% to be below the FFLP Bronze Mark for their growing skills, over 30% were already achieving quite a high level of performance. The picture is very different at review. The majority (84%) of schools were scoring highly for growing skills criteria and only a minority were under the FFLP Bronze Mark. The considerable progress made by schools against the growing skills criteria reflect FFLP staff reports that growing skills were some of the more achievable criteria in the FFLP Award scheme.

As a later addition to the review questionnaire, a new set of measures asked a sub-sample of 40 school leads to rate the overall effectiveness of FFLP in addressing a number of areas for reform. Each rating was also matched against a school priority rating. Overall the effectiveness ratings are positive or very strongly positive and lend support to the empirical evidence of change set out in the earlier sections. Some ratings clarify areas that fell largely outside the remit of GEOs, for example in the assignment of school staff to project work. The ratings also highlight some areas that were clearly more challenging. These include engagement from parents, community volunteers and external organisations.

**Table 9.2 With regard to the following areas (1) how effective has FFLP been in assisting your school? (2) how important has this area been as a priority for your school?**

N=40. Note: percentages have been rounded to the nearest whole number, therefore percentages may not total to 100%.

	Perceived effectiveness of FFLP in assisting the school				Level of priority for the school			
	Very effective	Effective	Neutral	Ineffective	Very Important	Important	Neutral	Unimportant
Identifying or developing suitable sites for growing activities	60	20	10	10	53	25	15	7
Organic horticulture training and advice	70	28	-	2	70	20	5	5
Health, safety and practical advice on management of growing areas	38	35	20	7	37	43	10	10
Linking growing projects to the curriculum and wider educational goals	34	37	27	2	53	30	8	9
Running costs for projects and activities	73	20	7	-	63	17	13	6
Freeing up staff to dedicate to growing projects	15	13	25	45	53	22	8	17
Leadership support for growing activities from SMT, Governors & Council	40	20	28	12	55	28	5	12
Actively involving pupils in decisions	50	25	13	10	65	20	10	5
Actively involving parents of wider community	30	37	25	9	53	33	8	7
Support from other organisations and school networking	28	37	17	18	35	45	8	5

## 9.6 Farm links and sustainable education programme

### ***Farm visits and sustainable food education activities***

At enrolment, schools in the FFLP flagship programme did not have extensive links with farms. For the 108 schools that provided information, 49% of schools had not conducted a farm visit in the year before enrolment, 33% of schools had taken one year group on a farm visit, whilst only 19% of schools had taken multiple year groups to a farm.

Drawing upon the data supplied by school leads and from teachers participating in student questionnaires, visits to farms and food production related businesses rose over the course of the programme, albeit from low baselines. For 31 secondary schools, we estimate that the overall percentage of pupils making visits rose from 8.2% (2452/29912) in the year prior to enrolment to 15.8% (4773/30210) in the year prior to review. For 72 primary schools, we estimate this percentage rose from 18.2% (37668/20697) to 26.7% (5598/20967).

At baseline, school leads were asked to report barriers to developing farm links using a set of options and ratings on a scale. The cost of transport and other visit costs were the main barriers (key issues for 24% of 108 schools). Safety concerns, parental consent, school management approval, availability of suitable farms and the educational value of visits were considerably less significant (major barriers for less 8% of respondents).

It is not straightforward to gauge the extent to which schools deliver education around sustainable food issues. One indicator is the extent to which schools had assemblies that covered issues such as animal welfare, food miles and so forth. Out of 108 schools, 55% of school leads judged that this had been an assembly focus in the year before enrolment. Such assemblies became more regular events in all schools over the first 18 months. FFLP offered a range of training and resources for all schools in this area. These resources have become more refined over the course of the programme to link into the curriculum. Although an evaluation data collection framework was offered to FFLP, this was not implemented and there is no comprehensive data on the reception and implementation of these resources.

### ***Farm visit teacher evaluations***

At the point of collecting data for evaluation, a total of 78 farm link questionnaires were received from 48 different schools. This comprises 39 primary schools (a total of 58 questionnaires received), seven secondary schools (13 questionnaires received) and 2 special schools (2 questionnaires received). The questionnaires reflect one period of farm visits between the winter of 2008 and the end of summer 2010. Most of the questionnaires were completed fully with few omissions. Unless otherwise stated the results are reported on the 78 questionnaires returned.

A total of 2537 children participated in farm visits subject to the questionnaires, of which 14% were from secondary schools and 86% from primaries. Of those surveyed, for 40% of pupils the visit was the first occasion on which they had visited a farm.

Overall teachers rated the experience highly and believed that the children had learned a lot, with 96% maintaining the visit was good or excellent. Encouragingly, no teachers rated the farm visit

as unsatisfactory. In addition, 96% of teachers said that they would definitely recommend the visit to other teachers. Comments included:

*An extremely well organised & smoothly run day for such a large group (R15Q9).*

*Excellent visit – children were kept busy and involved the whole time. It was all very interesting and in a wonderful setting (R24Q9).*

Teachers were asked to list the main activities undertaken by pupils on the farm. These were grouped into categories that showed a spread of activities from practical farm tasks to tours and display based activities and games (see Table 9.3).

**Table 9.3 The main activities teachers’ reported on farm visits.**

<b>Q 2. Please list the main activities that the pupils did on the farm.</b>	<b>Occurrences</b>	<b>% of total</b>
Nothing written	0	0%
Free range poultry welfare: egg collection, feeding, handling poultry and moving animals, egg hatching	13	6%
Other farm animal care/welfare [pigs, cows, goats etc] grooming, cleaning stalls, maintenance of health, feeding, identifying different breeds, care of young animals, herding animals, feeding	60	27%
Farm and natural environment. Experienced through farm and nature walks	28	12%
Farming sustainability. Introduction and tour from farm worker	40	18%
Practical arable - horticultural activities: Planting/gardening/harvesting	36	16%
Handling farm tools, riding on farm machinery	6	3%
Making things. General craft and practical activities	4	2%
Using farm produce. Cooking/eating/tasting	11	5%
Assisting in production. Making farm produce. Example: grain processing	17	7%
Games	4	2%
Assisting in farm produce retail. For example Farm shop work	5	2%
Totals	224	100%

In addition teachers were asked what learning had taken place. As demonstrated below almost all of the teachers (99%) did respond positively to this question. There were overlapping categories for example while animal welfare and farming production may have included discussion about organic food production; this was not always made explicit in the teacher responses. The most dominant areas of learning focused around 'Farming Processes' and 'Food Origins and Production':

**Table 9.4 Teachers opinions of what children learned on farm visits.**

<b>Q3. Main student learning outcomes (teachers perspective)</b>	<b>Occurrences</b>	<b>% of total</b>
Nothing written	1	1%
Animal Life Cycles	15	8%
Wildlife & human interactions	13	7%
Care of the land	11	6%
Farming Practices and Systems (general)	41	23%
Farming practices and systems (specifically organic)	32	18%
Animal welfare	15	8%
Vocabulary/terminology	4	2%
Food origins and production	34	19%
Business and diversification	7	4%
Plants / gardening	7	4%
	180	99%

Although the overall patterns of the responses were the same for primary and secondary school respondents, there were subtle differences. Secondary school respondents, for example, highlighted learning about farming practices and systems, particularly in relation to organic and sustainable food, more often than primary school respondents (27% vs. 15%). Similarly, secondary school respondents were more likely to highlight learning related to food origins and production (24%) compared with primary school respondents (17%). In contrast, primary school respondents were more likely to highlight learning about farming practices and systems in general (24%) than secondary school respondents (19%). This may reflect the significantly more complex understanding of the world of secondary school pupils.

Overall feedback indicates that the visits included a significant element of educational activities with definite learning outcomes. Teachers also suggested that pupils would remember very specific aspects of the visits such as the slaughterhouse, the humane methods for slaughtering chickens and the differences between these methods and differences between free range and intensively farmed birds. Teachers suggested that pupils learned about the vegetable plots being like large allotments and the nature of successive sowing. Some learned about the longest day; that chickens were originally forest birds; the ages at which young chickens are slaughtered. Some were taught about the different pests in the countryside and methods for their management. The children fed back what they had learned and teachers suggested that there was a great range of new knowledge that had registered with them collectively and individually.

40% of responses to the question 'what in your opinion were the main things they learnt about farming and/or organic farming' referred to or mentioned organic processes or knowledge. The following quotes demonstrate some of the responses:

*The children in their food lessons can describe organic farming, egg production, chicken meat production and discuss the advantages and disadvantages of various methods of production (R46).*

*Different animals and how they are looked after, why etc, including how this impacts on methods of farming and weather organic or not e.g. Free range/ Barn/ Caged/ Battery eggs (R50).*

### **Effective learning about food production**

Teachers were asked to rank the most effective way of teaching children about food origins. 92% rated a visit to a farm as the most effective way of teaching children about where food comes from. While, 86% rated a farmer visiting to give a whole school talk as the second most effective way. 71% rated a list of websites as the least effective way to teach children where food comes from.

Teachers recognised that pupils needed to share their learning on return to school and articulated a wide range of ways this may happen. This included the use of photographs (14%), assemblies (19%), the school website (8%), recounting the visit to the class (8%), reporting the visit in the school newsletter (4%), school displays (23%), presentations (8%), creating DVDs (3%), art and creative writing (1%), formal learning (10%).

55% of teachers strongly agreed with the statement 'I can see clear links between visits to farms and aspects of the curriculum' and a further 40% agreed with the statement. Supplementary feedback explained some connections:

*A fantastic experience that has had a brilliant knock on learning effect. The children in their food lessons can now describe organic farming, egg production, chicken meat production and discuss the advantages and disadvantages of various methods of production. This learning is invaluable as they learn from experience rather than teacher saying so. We are so grateful to the farm and for the contacts made. (R17)*

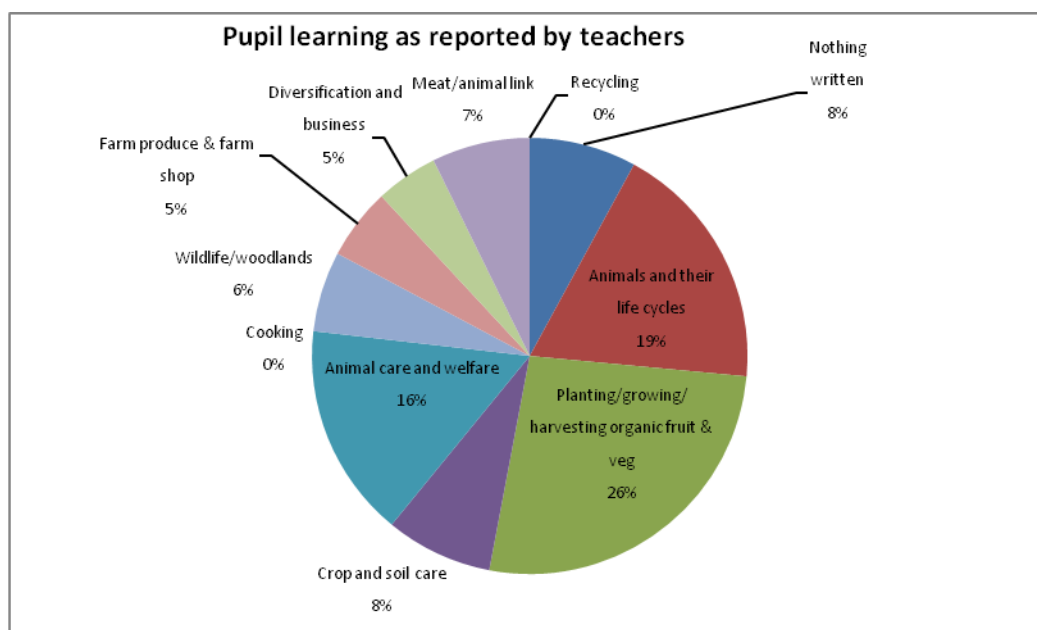
*A really wonderful day, the pupils have not stopped talking about it and as their Geography teacher I feel that this visit will help them remember their farming case study much more effectively than trying to teach them in a classroom. (R47)*

### **Reported impact of farm visits on pupils**

In the second section of the survey teachers were asked to gather pupil's verbal feedback. This focused on views about their learning, enjoyment and understanding of food and environmental issues. Initially pupils were asked what new things they had learnt on the visit to the farm, the most dominant answers were connected to: animals and their life cycles; planting/ growing/ harvesting organic fruit & vegetables and animal care and welfare (see Chart 9.4).



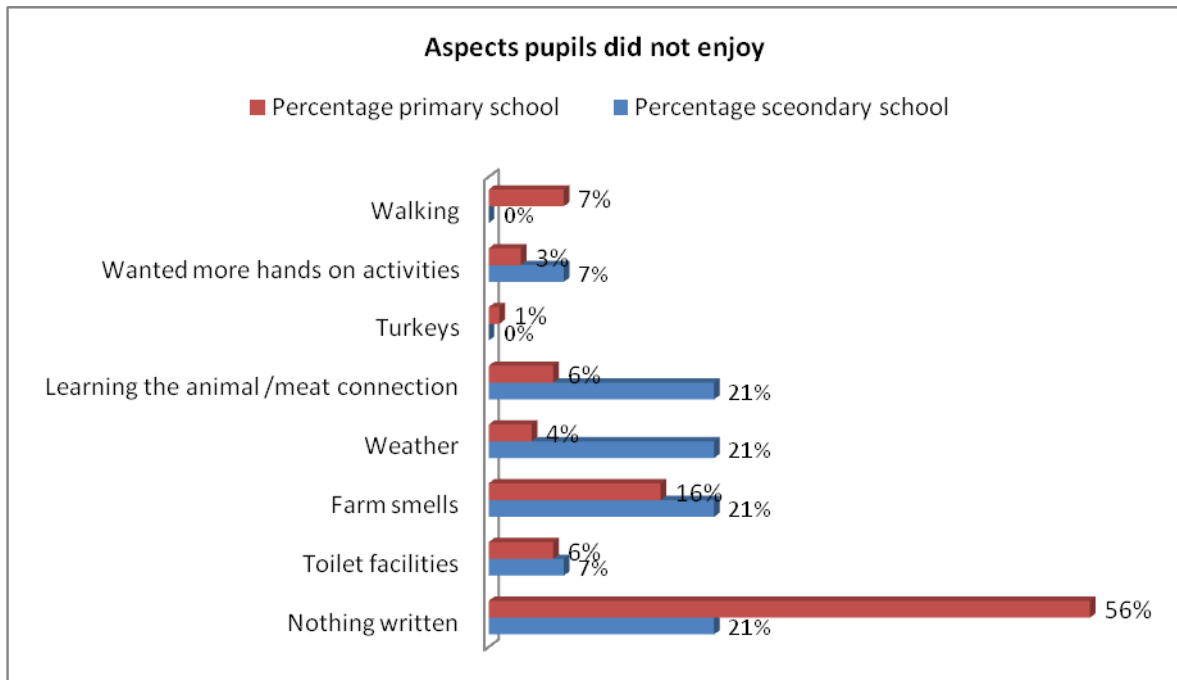
**Chart 9.4 Pupil learning on the farm visit as reported by their teachers**



When asked about aspects of the visit pupils enjoyed a wide range of responses was gathered. It was clear that animals and the care of animals stood out as particularly enjoyable.

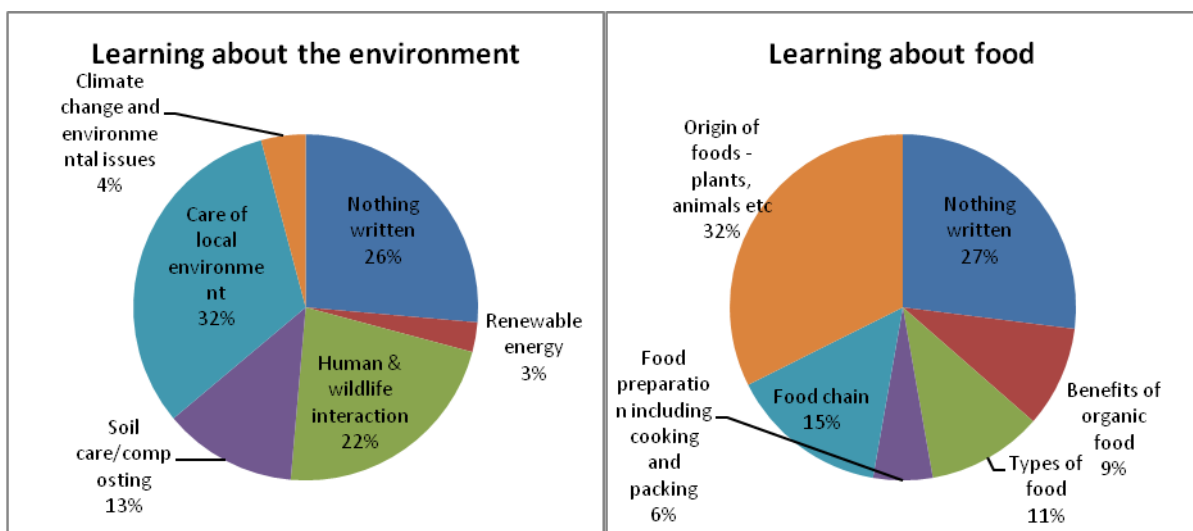
Figure 9.5 summarises themes in relation to aspects of the visit that children did not like. This confirms wider research that highlights the sensory and emotive aspects of farm visits. Negative perceptions of farm smells, for example, illustrate that the experiential aspects of farm visits are not necessarily valued by all children. The relatively high number of questionnaires returned with no answer to this question should be interpreted with care. For example, pupils may not feel enabled to criticise an activity organised in school.

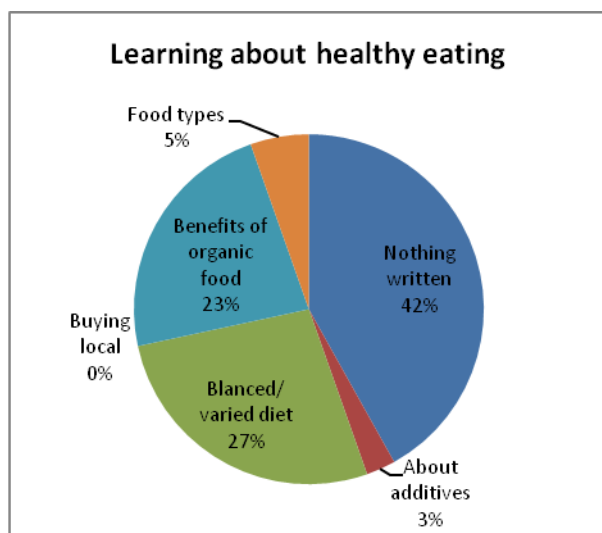
**Chart 9.5 Aspects of farm visits that pupils did not enjoy, as reported by teachers**



Charts 9.6 summarise teacher perceptions about pupil learning with regard to the environment, food knowledge and healthy eating. They indicate learning in relation to a considerable range of topics. An overarching theme indicates that children took away messages in relation to the value of organic systems of food production.

**Charts 9.6 Pupil learning about the environment, food and healthy eating as reported by teachers**





There were some notable differences in the types of learning identified by primary and secondary teachers. In relation to the environment, all secondary teachers identified some learning as a result of the farm visit. In relation to the environment, care of the local environment (46%) and human/wildlife interactions (31%) were the most frequent learning areas identified by secondary school teachers, while primary teachers were more likely to record nothing (32%), followed by care of the local environment (29%) and human/wildlife interactions (20%). In relation to the food, learning identified by secondary school teachers focused on the food chain, benefits of organic farming (both identified by 31% of secondary respondents) and types of food (23% of secondary respondents).

In contrast, primary teachers recorded learning about the food chain (36%) or left the question blank (33%). Results were more similar for healthy eating, though secondary school teachers were more likely to record learning about the benefits of organic food (46% compared with 18% of primary school teachers). A high percentage of both groups left this question blank (31% of secondary teachers, 44% of primary teachers). The differences in reported learning are likely to reflect the difficulties of teaching about these complex subjects in primary schools and the more sophisticated understanding that can be achieved by secondary school pupils.

## 9.7 Conclusion

Data suggest that the FFLP programme stimulates cooking activities in the school and gives teachers greater confidence to undertake practical cooking lessons. Similarly, joining the FFLP programme was clearly a stimulus for many schools to develop more extensive gardening resources and to secure appropriate gardening and horticultural training for teachers to enable them to make effective use of the resources. Teachers are overwhelmingly positive about the farm links aspect of the programme and it clearly provides many children with a unique opportunity to learn about food production systems.

Key achievements of the FFLP programme include:

- Supporting schools to undertake more cooking activities
- Enabling teachers to develop their food education skills and confidence

- Helping schools to make links between food production and sustainability issues and the national curriculum
- Encouraging teachers to embed cooking within their teaching practice
- Helping to improve facilities in participating schools
- Stimulating schools to grow and use a wider range of fruits and vegetables
- Encouraging an integrated approach to food preparation education, garden-enhanced education and farm link activities

This section of the evaluation report therefore finds that schools clearly can play an important role in delivering activities that seek to connect children with food and food production issues, whether in terms of developing practical food production skills, gardening skills and enjoyment or learning about food production on the farm. This provides a plausible basis for tracking through the impact of programme related activities on pupil behaviours. The FFLP programme has clearly acted as a stimulus for participating schools to undertake these activities throughout the school.

## 10. School Meal Take Up

### Key Findings

After two years of the FFLP flagship programme, take up for primary schools rose by 3.8%, from 45.4% to 49.2% (n=71). During the same period take up for secondary schools increased by 5.7%, from 50.3% to 56.0% (n=22). Some secondary schools supplied 'old' method calculations that give a raised take up figure overall.

For all schools achieving a Bronze, Silver or Gold FFLP Mark (n=80) take up increased by 5.0%, from 47.4% to 52.4%. The increase was greater for those schools achieving either the Silver or Gold Award (+6.1%, n=35). However even those flagship schools that have no current FFLP award have, on average, increased their take up above the national trend.

With an average increase of 13% after two years, free school meal take up has markedly increased for FFLP Flagship schools. This is reflected in primary schools with high free school meal eligibility (top FSM quintile, n=8) where overall take up increased by 6.6%, from 49.5% to 56.1%. These trends suggest that participation in the FFLP Flagship programme has been effective for schools with in areas of high social deprivation.

Schools adopted a number of strategies to increase take up. The participation of parents, children, cooks and other stakeholders has been a consistently central element in this process.

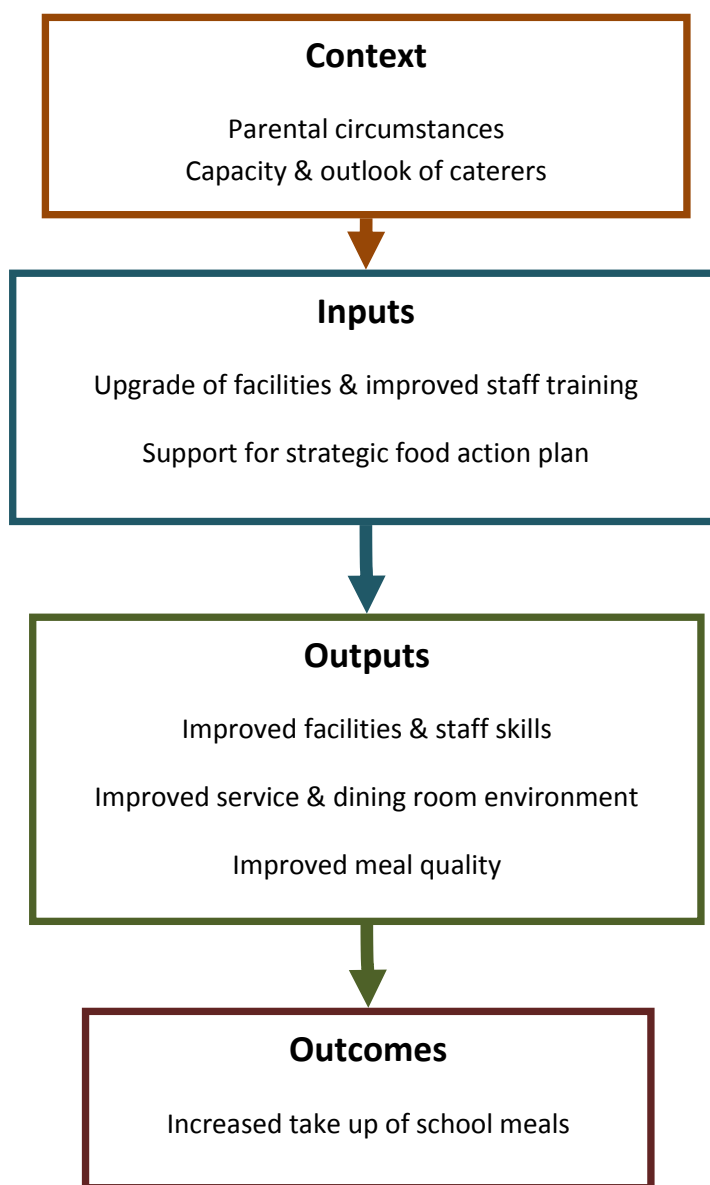
### 10.1 Introduction

School food can play an important part in promoting the health and development of children. In the UK, all grant maintained schools offer school meals. They are taken up by of over one third of children and, as such, they form a clear route for promoting a healthier diet for children. Increasing school meal take up has been an important objective for the FFLP programme. This section of the report examines school meal take up growth among FFLP Flagship schools and considers the factors that influence it. The framework for exploring this area is set out in Figure 10.1. After giving an account of the methods used the section goes on to:

- present the school meal take up results,
- examine the links between take up and indicators of stakeholder of involvement,
- report the perspectives of lead staff on facilitators and barriers to school meal take up and relate these back to the school cook perceptions outlined in the previous section.

[See Section 2.3  
for research & policy context](#)

**Figure 10.1 School Meal Take Up: key elements in the theory of change**



The study sought to examine the connections between meal take up and stakeholder involvement in a sample of 111 schools participating in the FFLP Flagship programme. This involved the use of a validated approach towards measuring school meal take up, a set of measures for assessing stakeholder involvement and supplementary qualitative reports from leading stakeholders.

## 10.2 Calculating school meal take up

School meal data were sought for all schools enrolling in the first six phases of FFLP's flagship programme. The sample consisted of:

- 75 primary schools (including infant, junior and middle schools)
- 31 secondary schools
- 5 special schools

These schools are located across all nine England regions; reflect a range of types of catering provision, pupil rolls sizes, FSM take up and other variables such as student attainment.

### **Measures**

School meal take up figures were calculated for three data periods defined as:

**T<sub>0</sub>: 12 month period prior to FFLP Flagship enrolment**

**T<sub>1</sub>: 12 month period covering the first year of the programme**

**T<sub>2</sub>: 12 month period covering the second year of the programme**

Calculations were made using NI52 formulas for primary and secondary schools. NI52s are the nationally agreed formulas recommended by the School Food Trust and the Local Authority Caterers Association. Full details on the methods for calculation followed are available at the SFT website ([www.schoolfoodtrust.org.uk](http://www.schoolfoodtrust.org.uk)).

We provided respondents with templates, short guidance and links to SFT toolkits to ensure that appropriate data was supplied. For each school the source of the data depended upon the type of catering provision, thus local authorities or caterers supplied data for schools participating in larger local authority contracts, school officers supplied the data where catering was in-house.

### **Data checking and triangulation**

Whilst respondents supplied their school roll number, these data were also collected through the annual England school census.

To reduce the scope for error T<sub>0</sub> and T<sub>1</sub> or T<sub>2</sub> take up figures were also collected from the school office and the FFLP programme lead teacher in the school. Respondents were asked to report the 12 month average number of pupils taking up school meals using in-house records. In addition, school cooks were asked to approximate numbers of children attending school dinners at both T<sub>0</sub> and T<sub>2</sub>. These formed a basis for checking in cases of ambiguity in the data, for example where national school pupil roll census data has not been published, or where caterers had not disaggregated nursery provision.

All schools making applications to the FFLP Mark awards are also asked to report the number of pupils eating school meals, the pupil roll, FSM entitlement and FSM take up. These data were also used for the purposes of triangulation.

Finally school offices or caterers were contacted in approximately one third of cases to check the accuracy of the take up calculations – particularly in cases where there were discrepancies between data sources.

### **Data handling and analysis**

Whilst local authority datasets are increasingly compliant with the NI52 formula for secondary school take up calculations, at the individual school level many secondary schools and their caterers continue to employ the transaction system for calculations. This approach results in higher take up

figures, although it does not significantly affect the calculation of take up change providing the approach is consistent at data collection points.

Using a universal template for Phase 1 to 6 schools, data were entered into SPSS, a statistical software package. This also included a commentary on data analysis decisions and a classification of the take up figures for each school in terms of:

- **Higher quality:** take up tracker completed, raw data supplied, auditable data
- **Medium quality:** summary data supplied; consistent school, caterer, cook and/or Mark application reports
- **Medium-lower quality:** summary supplied, small inconsistencies across data sources
- **Ungraded:** incomplete or un-auditable summary data, major inconsistencies across data sources

### ***Developing indicators of stakeholder involvement***

At enrolment and at 18-24 month review school teacher leads and cooks were asked to supply school level data on a range of indicators concerned with stakeholder involvement. These included:

- Formal forums for pupils, cooks and other stakeholders to determine school meal policy and action plans,
- School meal consultation methods used in the last year,
- Pupil involvement in food education activities,
- Wider structures to support engagement, for example National Healthy Schools membership.

FFLP's Mark awards and criteria were also employed to examine whether these acted as reliable proxy indicators of the role of stakeholders. For example, we considered whether schools that met Gold and Silver Mark award criteria were associated with increased or high school meal take up.

### ***Lead staff perspectives***

In order to gain additional insight, school teacher leads were asked to produce written responses to open questions that covered perceptions of the role of students and others on school meal strategies and extraneous factors that influenced take up.

Pupils and parents in a subsample of schools were also asked to rate their perceptions of school meals, consultations and school meal changes at enrolment and at review. These data are examined more fully in later sections the evaluation report.

As summarised in Section 8.6, school cooks were also asked about the steps they took to try to increase meal take up and the problems they encountered. Their responses are included in the findings and analysis section below where a contrast is apparent.



## Findings and Analysis

### 10.3 School Profile and Responses

Ninety eight of the 111 schools supplied pre and post enrolment school meal data. School meal data from the other 13 schools either had major gaps or had inconsistencies that could not be resolved. These schools were therefore excluded from the analysis.

Of the 98 schools with acceptable (higher, medium or medium-lower quality) school meal data, the responses rates by type of school were:

Primary schools	76%	n=71/ 75
Secondary schools	52%	n=22/ 31
Special schools	75%	n=4/5

Schools where the school meal data was not accepted for analysis included two schools that had formally withdrawn from the programme, two that were in the process of doing so and two that were intermitting from engagement in the school meal aspect of the programme. Reports from programme staff indicate that these schools had not increased their school meal take up.

Free school meal data were less available than overall take up data: 77 out of 111 schools (58 primaries, 14 secondaries and 5 special schools) supplied acceptable data for T<sub>0</sub> and T<sub>2</sub> periods.

Lead teaching and cooking staff for all of the 98 schools had completed questionnaires at enrolment on stakeholder involvement. At review 95 lead school teachers and 29 cooks completed questionnaires that covered these issues. FFLP Mark criteria and award status were available for all 98 schools.

### 10.4 School Meal Take Up

Tables 10.1 and 10.2 summarise school take up and changes in provision after one and two years of participation in the programme. In each case the results are presented for a number of categories of school. FFLP has worked with schools that had higher than national average school meal take up for the period prior to enrolment. The tables show that schools across a range of categories increased their take up in the first year of the programme and that increases have been sustained into the second programme year.

It should be noted that the secondary school calculations include schools provided data using the transaction method rather than the NI52 formula. This means method results in a higher take up figure, therefore the data cannot be directly put in the context of SFT/LACA annual take up surveys.

Differences in the pupil rolls amongst the sample also mean that that means have large standard deviations.

**Table 10.1 After one year: school meal take up and changes in provision for phase 1-6 FFLP Flagship schools.** Percentages rounded to one decimal place.

	Schools providing data N	T <sub>0</sub> 1-12 months pre-enrolment			T <sub>1</sub> 1-12 months post-enrolment			Change in provision %
		Pupil Meals N	Pupil Roll N	Take up %	Pupil Meals N	Pupil Roll N	Take up %	
All Phase 1-6 schools	52	10519	21555	48.8	11298	21898	51.6	<b>+2.7</b>
All Ph1-6 Mark schools (Bronze, Silver, Gold)	45	8262	17011	48.6	9111	17432	52.3	<b>+3.7</b>
Ph1-6 Silver & Gold Mark schools	23	3794	7394	51.3	4082	7422	55.0	<b>+3.7</b>
All Ph1-6 primary schools	38	5117	11285	45.3	5522	11289	48.9	<b>+3.6</b>
All Ph1-6 secondary schools	10	5198	9984	52.1	5571	10328	53.9	<b>+1.8</b>
Ph1-6 Gold Mark schools	2	347	667	52.0	369	676	54.6	<b>+2.6</b>
Ph1-6 Silver & Gold Mark primary schools	20	2724	5650	48.2	2910	5591	52.1	<b>+3.9</b>
All primary schools supplying higher quality data	27	3081	8163	46.6	4085	8080	50.5	<b>+3.9</b>

**Table 10.2 After two years: school meal take up and changes in provision for phase 1-6 FFLP Flagship schools.** Percentages rounded to one decimal place.

	Schools providing data N	T <sub>0</sub> 1-12 months pre-enrolment			T <sub>2</sub> 13-24 months post-enrolment			Change in provision %
		Pupil Meals N	Pupil Roll N	Take up %	Pupil Meals N	Pupil Roll N	Take up %	
All Phase 1-6 schools	98	20649	42765	48.3	22845	43048	53.1	<b>+4.8</b>
All Ph1-6 Mark awarded schools (Bronze, Silver, Gold)	80	14996	31650	47.4	16941	32301	52.4	<b>+5.0</b>
Ph1-6 Silver & Gold Mark schools	35	6738	12719	53.0	7633	12920	59.1	<b>+6.1</b>
All Ph1-6 primary schools	71	8981	19775	45.4	9857	20019	49.2	<b>+3.8</b>

All Ph1-6 secondary schools	22	11357	22557	50.3	12665	22606	56.0	<b>+5.7</b>
Ph1-6 Gold Mark schools	4	532	1105	48.1	599	1109	54.1	<b>+6.0</b>
Ph1-6 Silver and Gold Mark primary schools	29	3720	7618	48.8	4230	7823	54.1	<b>+5.3</b>
All Ph 1-6 special schools	5	310	433	71.6	322	423	76.1	<b>+4.5</b>
All top quintile FSM schools (inc special)	18	5118	9192	55.7	5661	9014	62.8	<b>+7.1</b>
Primary top quintile FSM schools	8	1286	2596	49.5	1447	2576	56.1	<b>+6.6</b>
Secondary top quintile FSM schools	7	3627	6308	57.5	3993	6158	64.8	<b>+7.3</b>
All primary schools supplying higher quality data	34	4628	10200	45.4	5036	10026	50.0	<b>+4.6</b>

Since 2008/9 national SFT/LACA figures shows that take up has increased by 2.1 % in primary schools (including special schools) and 0.8% in secondary schools. Changes to the collection and calculation of take up figures do not make direct comparisons straightforward. However, national annual surveys suggest that take up has increased in primary schools since 2007 and in secondary schools since 2008.

Comparing the FFLP trends for a range of types of schools, the data suggest that FFLP Flagship schools have increased their average take up at a rate above the national trends.

### 10.5 Free school meal take up

Table 10.3 shows a marked increase in take up of free school meals for all categories of school. The primary school average of 91.2% exceeds the latest national figure of 86.6%.

With an average increase of 21%, schools with Silver or Gold FFLP Mark awards achieved the highest take up for the sample. This suggests that the intensive adoption of FFLP strategies are associated with improved outcomes for free school meal take up. It also indicates that the FFLP approach can be successful in contexts of higher social deprivation.

**Table 10.3 After two years: Free school Meal Take Up and Change in Provision for Phase 1-6 FFLP Flagship Schools.** Percentages rounded to one decimal place

	Schools providing data N	T <sub>0</sub> 1-12 months pre-enrolment			T <sub>2</sub> 13-24 months post-enrolment			Change in provision
		FSM meals N	FSM registr'ns N	Take up %	FSM meals N	FSM registr'ns N	Take up %	
All Phase 1-6 schools	77	3757	5319	70.6	4667	5581	83.6	<b>+13.0</b>
All Ph1-6 Mark awarded schools (Bronze, Silver, Gold)	67	3203	4558	76.4	4144	4825	91.3	<b>+14.9</b>
Ph1-6 Silver & Gold Mark awarded schools	30	970	137	65.0	1215	1333	78.5	<b>+13.5</b>
All Ph1-6 primary schools	58	1927	2521	70.3	2359	2585	85.9	<b>+15.6</b>
All Ph1-6 secondary schools	14	1741	2676	70.4	2244	2859	91.3	<b>+20.9</b>
All special schools	5	89	122	73.0	125	137	91.2	<b>+18.2</b>

Some schools had had a notable increase in free school meal entitlements during the course of the programme. This was reported to be a consequence of economic recession and rising numbers of parents claiming unemployment benefits. In these schools, the rise in free school meal entitlements therefore accounted for some of the rise in take up.

### 10.6 School meal take up and FFLP Mark Status

Table 10.1 above shows that Mark award schools have greater increase in take up compared to those that have not achieved an award. If the FFLP Mark Award status is taken as a proxy measure for stakeholder involvement in school meal reform, it could be anticipated that higher award status is associated with higher increases in school meal take up. After categorising different levels of take up, the association with Mark award status was cross tabulated, overall there was no significant association between the two variables (Chi 4.383, Df4, p=0.357). Using the same cross tabulation test no clear association was found when primary and secondary schools were examined separately. This suggests that school meal take up rates are stimulated at all levels of FFLP flagship involvement. The following sections present the various factors suggested by the analysis that appear to influence school meal uptake within the FFLP model.

### 10.7 Lead staff perceptions on positive factors that promote school meal take up

At the point of programme review, 59 out of 95 (62%) of teaching school leads felt that participation in the FFLP programme had played an effective role in helping to increase school meal take up (See also Section 14 of this report). Twenty nine out of 95 school leads supplemented this view with written comments on a range of positive changes that had taken place in relation to school meal reforms. By contrast 15 out of 95 provided written comments on the challenges associated with school meal reforms.

In addition, as outlined in Section 8, 29 cooks gave an opinion about whether meal uptake has changed since being involved in FFLP. Of these 13 stated that uptake had increase 4 observed a decrease with the remainder feeling levels were more or less the same. As with the lead teaching staff, cooks provided a range of feedback on the reasons for trends in take up.

Not all of the comments from teachers addressed the specific issue of increasing school meal take up. Nevertheless there were a number of general themes that are summarised here. The first set of themes is concerned with successful measures to promote take up.

### **General programme stimulus**

Evidence suggests that FFLP enrolment alone acts as a general stimulus for meal take up by raising the issue of school food across school stakeholders. As one teacher put it:

*Jeanette Orrey's visit was a turning point. Her honest appraisal of our school kitchen made us realise that we could aim higher, that what we were hoping for was achievable. School lead #101*

*The additional support provided by FFLP has enabled our school meal provision to become really excellent. School lead #5*

More specifically aspects of the FFLP programme intervention design were identified as having an effective role. Some elements included the SNAG food action planning process; the introduction of band systems, queuing systems and other arrangements; and the cooks training process.

*We found that the SNAG has helped us to work more closely with caterers. School lead #108*

The importance of bringing caterers and educationalists together was widely referred to by teachers. Whilst this was not necessarily straightforward, the overall message was of the value added or synergy resulting from mutual learning and combined efforts.

### **Service and meal quality**

Improvements to school meal quality were widely put forward by school leads as a key factor in their strategy to increase school meal take up.

*The food used in the school kitchen has improved so much and children have noticed this. The uptake has been very marked. School lead #1*

This includes specific strategies, for example, promoting the service in the lead up to the summer period in order to avoid a seasonal drop in take up as well as general menu improvements.

*Have had a huge increase in the amount of children having school dinners. Quality has improved, as well as environment. School lead #93*

School cook responses were, understandably, also focused on the impact of food and service quality on the success of school meal take up.

### **Engaging children**

Processes for formally consulting children, appointing roles to children and putting in place feedback systems were widely commented on by school leads. However it was not always clear how this engagement specifically connected to increasing take up as opposed to promoting retention and consumer satisfaction.

*The school meal take up has increased again this year with a larger choice, including a range of baguettes during the spring and summer. School lead #1*

This contrasts with the cook's responses which tended to focus on very specific measures based on marketing the food offer.

### **Engaging parents**

Effective parental engagement was sometimes reported by school leads to be as much a matter of building trust and open dialogue – as of communicating menu changes or promotions. Some schools felt that measures to promote underlying awareness and confidence in provision led to longer term dividends. For example, one school [#38] introduced promotional themed meals that led to a short term increase in take up on the specific event days. The school meal records also show that after the events some children switched to school meals on a more permanent basis.

Again, this contrasts with school cook perceptions which were clearly more oriented towards direct initiatives such as tasting sessions, which were generally deemed successful.

## **10.8 Lead staff perceptions of barriers to increasing school meal take up**

School leads reported a wide range of circumstances that had made it difficult for schools to increase school meal take up.

### **Cost & Affordability**

Issues around school meal cost and general affordability dominated perceptions in this area. The current economic context was reported by school leads and cooks to have either led to a drop in demand for paid school meals, or to have held back parents/carers from taking up the service. This particularly applied to schools in catchment areas with high numbers of children from lower income families and larger families- and who were not eligible for free school meals.

*We have a lot of large families in our school that just can't afford the [meal] costs – but they aren't able to claim school meals. School lead #74*

Additional costs associated with the programme such as additional food preparation time or sourcing sustainable food product lines also made it difficult to hold down costs for some cases.

*It [sustainable food] has pushed up the price of the meal which means that poorer parents will not be able to afford it lessening our ability to inc SM. School Lead #36*

*The food quality and provenance changes come at a cost in practice for our caterer. In the midst of a recession, we have had no desire to incur costs that then make school meals more*

*costly and thus less attractive to our students. Change in this area has consequently been at a slower pace than we would like. School lead #58*

There are cases where caterers and local authorities have introduced measures that make increased take up more challenging. Some of the issues here include price rises, reduced scope for local flexibility and scaling back on quality.

*Sourcing food for school meals is getting worse. Current economic climate and redundancies have led to increased food costs. But we can't increase school meal costs: XX caterers need more support. School lead #64*

These concerns were also reflected by the school cooks, particularly with regard to future perspectives for the school meals service.

### **Starting Levels**

Some Flagship schools already had relatively high school meal take up before they enrolled with FFLP. In these contexts schools experienced the problem of diminishing return on the efforts expended to improve take up further. The settings in which this was reported to be a challenge were small primary schools and special schools with under 100 students on the roll. These were cases where nearly all parents who had contemplated paying for meals had already been personally approached by school staff.

*Nearly every child has school meals. We're a very small school and I think that any parent who goes with packed lunches will have pretty much their mind by now! School lead #43*

*Increasing our school meal provision [had been a challenge]. As a small school we have to carefully balance increased provision with parents keeping the same numbers of days but spread across the week. However we are also cooking for another small school in the area (c32 children) School lead #61*

Some schools reported that they had achieved a significant increase in take up prior to enrolment with the programme.

*Take up for school lunches has increased to a current total of 147 pupils compared to 95 prior to working with FFLP. We have 308 pupils in school. Prior to starting the FFLP we had worked hard to increase the number of children choosing a school lunch, so these figures don't truly reflect how far we have come. School lead 52#*

At a national level there have been a number of parallel initiatives to fund upgrades to kitchens, retrain kitchen staff and promote the school food cause. These initiatives are also likely to have assisted the programme.

In contrast, some schools, have relatively low take up rates that appear to have led to a negative institutional culture with regard to school meals. A variety of factors, many associated with the long term degradation of the service, appear to account for this. These schools are faced with considerable challenges in terms of both turning the service around and in promoting school meals to a school community that had grown accustomed to pack lunch provision. In these circumstances school leads could encounter considerable inertia to change. Examples where this type of issue was

reported notably included schools in local authorities in the south west, the south east and the east of England: three regions where school meal take up is under the national average.

### ***Internal resources, priorities and competencies***

FFLP is a programme that works across multiple domains of action, addresses a range of issues and involves whole-system change. Whilst all these aspects were reported to hold considerable appeal to lead staff, the complexity of the programme meant that the meal take up objective could be diluted alongside a range of other objectives. Some of objectives, for example the promotion of healthier packed lunches and cooking from scratch at home, were reported to not to align easily with the take up objective. Furthermore, the focus on processes to do with outputs and short term outcomes (for example reducing food waste) were reported to connect tangentially to take up outcomes. Many elements of the school food reform process have also been focused on improving standards of service for children who already have school meals, rather than on attracting new custom.

Some respondents felt that they had not had sufficient engagement from either the caterers or the school SLT.

*We're working with XX commercial catering services - slow, not responsive. I don't think the head office are that interested. School lead #77*

This led to a range of difficulties such as weak promotion to parents, lack of clear monitoring and weak commitment from other teaching or kitchen staff. One school lead reported that they had encountered considerable 'system barriers' to change:

*Staff burnout [has been an issue] – the programme is very time intensive to do properly, and concerns that XX caterer cannot get Freedom Foods for the schools which would limit us moving to Silver Award. School lead #45*

### ***Extraneous factors***

Finally, some schools and caterers encountered external difficulties that they felt were outside their influence. These included changes of local authority catering suppliers, kitchen staff sickness and school relocation or building work. For example, in one primary school a kitchen refurbishment project had over-run its schedule:

*Uptake on school meals went up from when we started with FFLP at Easter 2009 until December 2009. But then a kitchen rebuild shut everything down except the packed lunches. It's meant that we've been halted in our tracks and I'm having to explain the delays to parents. School lead. #100*

One secondary school was unable to make any changes to the dining area because, as a PFI building, they found that the owning company would only make changes at a prohibitively high cost.



## 10.9 Discussion & Conclusions

The school meal take up data presented in this section indicates that FFLP has been relatively successful in this element. If the data are regarded as the best available evidence for the sample of phase 1 to 6 schools to date, the findings show that school meal take up has increased ahead of national trends. These increases are on average greater for the Mark awarded schools.

There are a number of limitations that need to be recognised in this analysis, particularly regarding the data supplied for calculating school meal take up. While a range of safeguards were put in place to cross check the data, there was scope for error arising from differences in local recording systems, incomplete records and inaccurate reports. This is a feature of school meal data at a national level also (SFT, 2009) and particularly applies to the retrospective collection of data.

The size of the sample also needs to be recognised given that, in national context, these are a small group of schools. The findings show considerable heterogeneity both in terms of patterns of take up and other school characteristics. They might best be understood as types of examples – or trajectories – for primary, secondary and special schools that have sought to employ the FFLP model for increasing school meal take up.

Reports from lead staff participating in the programme illustrate a diverse array of processes that both promote and constrain take up. Many of these have been external to the programme. Others are generic to any school or catering organisation seeking to improve its school meal service and, therefore, reflect learning from other initiatives such as SFT's Million Meals campaign. Nevertheless these reports also suggest clear circumstances where the FFLP programme model has considerably facilitated positive change in uptake.

Some of these are connected to the programme focus on engaging stakeholders that have been marginal or disconnected from school meal reform in the past. Furthermore, reports from school staff also go beyond the purely instrumental role for involving and bringing together stakeholders. They also highlight the wider social value of creating opportunities for children, parents, cooks and others to have influence over the environment in which children eat their food.

On the whole, the opinions of school leads regarding uptake factors reflect those of the school cooks in the preceding section. Although there are some understandable differences in emphasis resulting from both their professional perspectives and the manner in which the issues were raised, it does appear to show minimal disconnect between the two groups of FFLP stakeholders.

# 11. Students & Food Related Behaviour: Questionnaire Results

## Key findings

The evaluation team conducted two surveys with primary and secondary school students: at enrolment (baseline) and after 18-24 months (follow up) of the programme. For matched school and Year groups, over 2500 primary and 2000 secondary school students took part.

Analyses of student characteristics show statistically significant associations between healthy eating and FFLP related behaviours - such as participation in cooking and growing at school or at home; participation in farm and sustainable food learning; and attitudes to school food. This suggests that the FFLP model for changing behaviour has an empirical evidence base.

The primary school baseline and follow up surveys both included approximately 1500 Year 5 and 6 students matched by school. Compared to the point at which schools enrolled with FFLP:

- The number of children reporting growing fruit and vegetables at school in the last year rose by 28.1%, from 54.4% to 82.5%.
- The number of children helping to grow fruit and vegetables at home in the last year rose by 9.2%, from 26.0% to 35.2%.
- The number of children reporting that they practised food preparation skills in school in the last month rose by 20.2%, from 17.3% to 37.5%.
- Children reporting eating an average of 4 or more portions of fruit and vegetables a day increased by 11.9%, from 37% to 48.9%.
- For Year 5 children only, those reporting eating an average of 5 or more portions a day increased from 16.3% to 20.9%.

The analysis for Years 5 and 6 shows that the follow up respondents reported eating an average an increase of 0.31 more portions fruit and vegetables per day compared to the baseline respondents (3.11 to 3.42; SEMs: 0.03). The self reported consumption of both fruit and vegetables were higher in the follow up survey. Vegetable consumption increased slightly more than fruit consumption, but the difference was not statistically significant.

Other measures of behaviour change showed positive trends including: confidence and enjoyment of cooking and growing, and cooking activities at home. There was no significant trend for participation in farm based activities, possibly owing to the selective aspect of this element of the programme.

Year 5 and 6 children who have taken part in FFLP-related education on sustainability were more than twice as likely to hold positive attitudes towards organic, local, free range and fair trade foods,

compared to children who had had no such education in the last year (21.8% compared to 10.7%).

Year 1 to 4 groups reflected these trends, although issues with the reliability of self reports from this younger age group need to be taken into account. At follow up for all primary school year groups over 17% more children rated school meals positively, and over 24% more children rated their dining room positively.

Over half of children thought that school meals had improved in the last year. Responding to an open question, over one third of children wrote that they thought the meals had become healthier and over 30% wrote that there had been improvement to their dining room (Years4-6, n=1998).

The secondary school surveys with Years 7 to 10 produced less conclusive results. At follow up there were positive trends for increased fruit and vegetable intake, and attitudes towards: the school meal service, cooking, growing, food sustainability and healthier eating. However none of these positive trends were statistically significant. This means that the differences between baseline and follow up groups may be linked to the size of the sample and / or external social trends. It could also mean that a longer time period is needed for observable changes to occur.

Nevertheless the secondary surveys provide valuable insight for health and sustainability programmes in schools. The findings suggest that action to promote practical food skills and interest in environmental sustainability is needed to address deficits in the learning experiences of young teenagers.

## 11.1 Introduction

Previous sections in the study suggest that, in comparison the period prior to FFLP enrolment, schools are more likely to engage students in sustainable food education, school food policy and meal improvements. The findings also show that more children are eating school meals – which have a greater element of sustainably sourced ingredients – compared to the period before FFLP enrolment. In this next part of the analysis, we draw upon the primary and secondary school student questionnaire surveys to conduct three types of analysis:

1. A test of the theorised links between FFLP activities and student food related behaviour. This assesses whether there are associations between healthy eating and growing, cooking, farm and sustainable food related behaviours.
2. A comparative analysis of the baseline and follow up results to assess whether there is evidence of population level changes in behaviour over time.
3. A comparative analysis of students who have, and who have not, participated in FFLP related activities – and the relationship to sustainable food attitudes.

For this section, Figure 11.1 provides an overall framework for the analysis.

[See Section 2.5  
for research & policy context](#)

The section first presents results for the primary schools and then gives the results for the secondary schools surveys.

## **11.2 Methods**

Student questionnaires were administered on two occasions: shortly after the schools enrolled onto the programme (baseline) and a second time between 18 to 24 months after enrolment (follow up). Students completing the follow up questionnaire were of a similar Year group to those undertaking the baseline questionnaire. However it should be noted that they were not the same individuals.

The questionnaires covered the following areas:

- Average fruit and vegetable portions consumed
- Favourite foods and food preferences
- Experiences of and attitudes towards cooking at home and school
- Experiences of and attitudes towards growing at home and school
- Experiences of and attitudes towards farm activities and food sustainability
- Experiences of and attitudes towards school meals

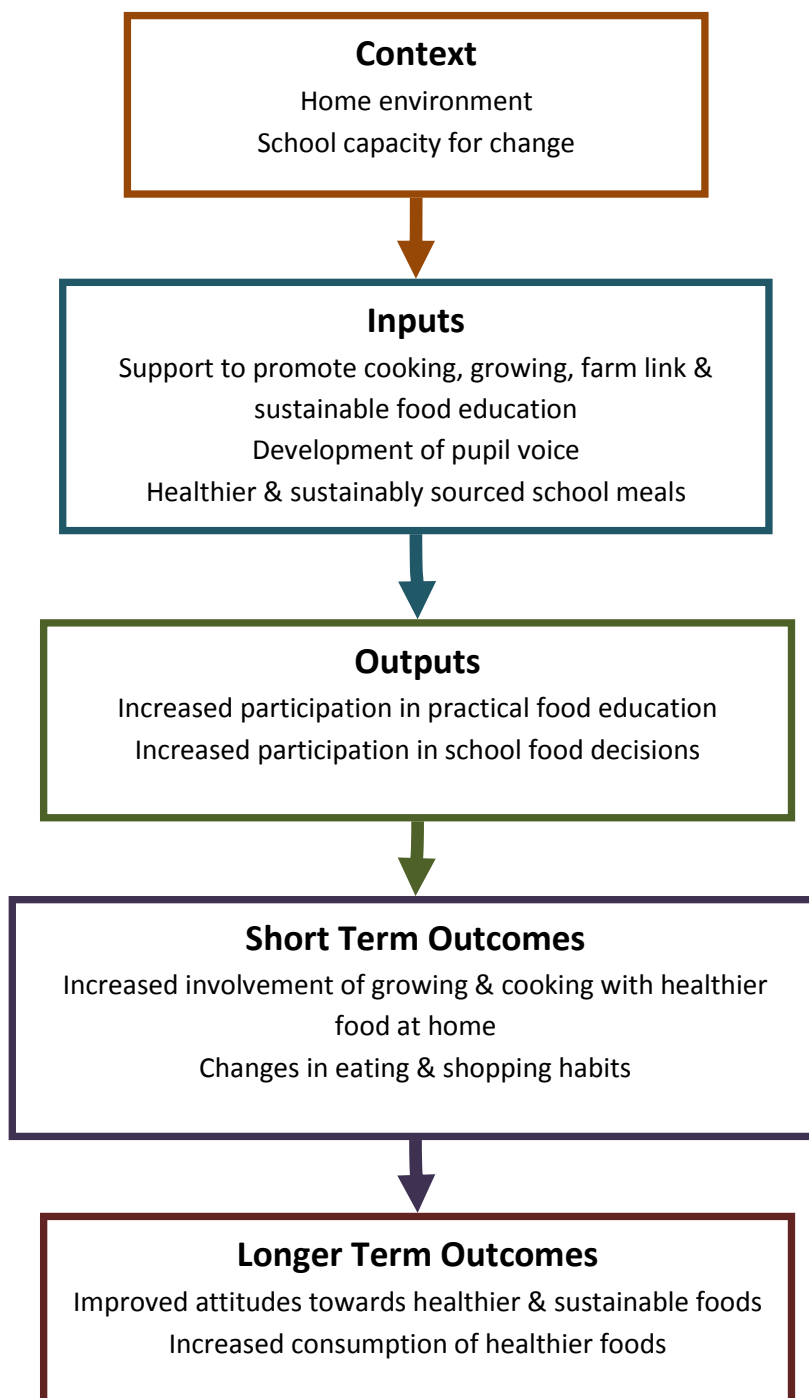
The secondary school questionnaire also included measures of involvement in school food consultations. Further details on the development and implementation of the questionnaires are provided in the Appendix.

## **11.3 Primary school children: testing the theorised linkages between FFLP-related activities and behavioural outcomes**

This section examines the associations between behavioural measures. As a basis for testing FFLP's model for change, the questionnaires used self reported fruit and vegetable consumption as an indicator of healthy eating. In addition the questionnaires recorded student's food preferences: which are themselves established predictors for healthier eating.

Drawing upon the responses of 1750 Year 4-6 students in the follow up survey, the findings show statistically significant associations between higher participation in cooking, growing, sustainable food education and farm based activities – and positive healthy eating behaviours. The test results are summarised in Table 11.1. These results show strength of association only and they do not show causal relationships. However the results show that the FFLP behavioural model is credible: the promotion of practical food education and take up of healthier schools meals can promote healthier eating and positive attitudes towards environmental sustainability.

**Figure 11.1 Promoting Student Healthier Eating and Attitudes Towards Sustainable Food Issues: key elements in the theory of change**



**Table 11.1 Tests of association between variables.** Follow up dataset. Years 4-6 N=1750

\* No significant association

#	Cross tabulation		$\chi^2$ value	P value	
1	Fruit & veg intake	X	Fruit & veg preferences	159.374	<0.001
2	Fruit & veg intake	X	Sustainable food attitudes	63.692	<0.001
3	Sustainable food attitudes	X	Fruit & veg preferences	43.886	0.002

#	Cross tabulation		$\chi^2$ value	P value	
4	Fruit & veg intake	X	Chopping fruit & veg at home	189.614	<0.001
5		X	Participation in farm activities	90.774	<0.001
6		X	Rating of school meals	72.323	<0.001
7		X	Growing fruit & veg at home	64.456	<0.001
8		X	Chopping fruit & veg at school	63.293	<0.001
9		X	Growing fruit & veg at school	39.444	<0.001
10		X	Sustainable food ed. at school	27.914	0.032

#	Cross tabulation		$\chi^2$ value	P value	
11	Fruit & veg preferences	X	Chopping fruit & veg at home	113.488	<0.001
12		X	Participation in farm activities	53.308	<0.001
13		X	Rating of school meals	73.828	<0.001
14		X	Growing fruit & veg at home	79.333	<0.001
15		X	Chopping fruit & veg at school	69.801	<0.001
16		X	Growing fruit & veg at school	31.981	<0.001
17		X	Sustainable food ed. at school	27.715	0.058*

#	Cross tabulation		$\chi^2$ value	P value	
12	Sustainable food attitudes	X	Chopping fruit & veg at home	75.459	<0.001
13		X	Participation in farm activities	73.914	<0.001
14		X	Rating of school meals	51.034	0.002
15		X	Growing fruit & veg at home	49.091	<0.001
16		X	Chopping fruit & veg at school	61.001	0.001
17		X	Growing fruit & veg at school	36.361	<0.001
18		X	Sustainable food ed. at school	66.157	<0.001

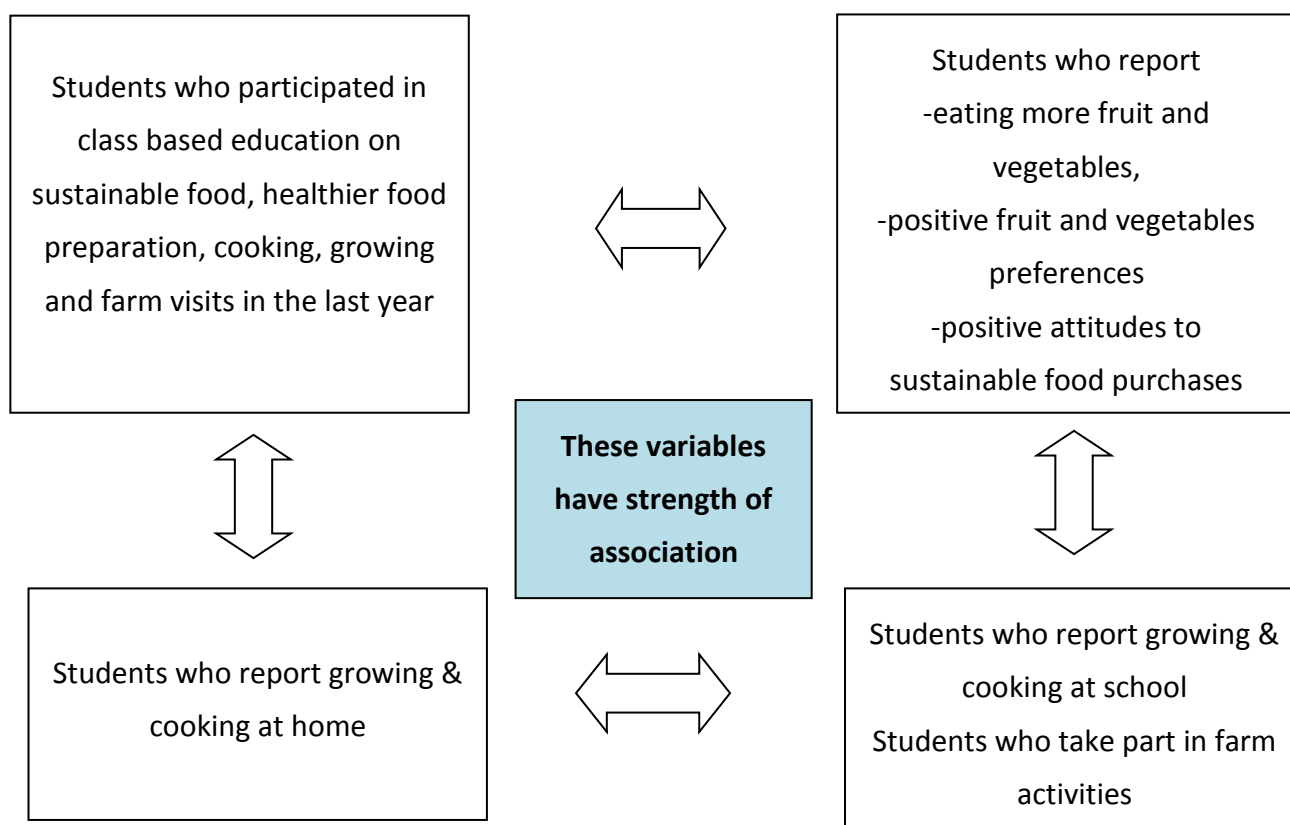
### 11.4 Ordinal regression analysis

In order to test these associations further, we used the ordinal regression method to model the relationship between the ordinal outcome variable - fruit and vegetable intake - and the explanatory variables relating to FFLP activities. The method was therefore adopted in order to assess the influential factors for healthy eating. The outcome variable for children's fruit and vegetable intake was measured on an ordered, categorical, and five-point Likert scale--'lowest', 'low', 'middle', 'higher', and 'highest'. Explanatory variables included questionnaire items related to the student behaviours, educational inputs and FFLP related activities in school. The major decisions involved in the model building for ordinal regression were deciding which explanatory variables should be included in the model and choosing the link function (e.g. logit link or complementary link) that demonstrated the model appropriateness. In addition, the model fitting statistics, the accuracy

of the classification results, and the validity of the model assumption were essentially assessed for selecting the best model. R-square gives the information about how much variance is explained by the independent variable. However, in ordinal regression variance is split into categories. Hence Cox and Snell's, Nagelkerke's and McFadden's pseudo-R<sup>2</sup> statistics were used here to estimate the variance explained by the independent variable.

The model shows an excellent agreement between observed and predicted fruit and vegetable combined intake and the explanatory variables discussed above. The chi-square goodness-of-fit value is  $p = 0.757$ , and the Cox and Snell test shows good predictive ability (pseudo R<sup>2</sup>= 0.141). The analysis findings suggest that explanatory variables such as enjoyment of growing and cooking and participation in farm activities were significantly associated with the fruit and vegetable intake. These associations are illustrated in Figure 11.2

**Figure 11.2 Testing the FFLP model: linkages between programme inputs and student behaviours**



### 11.5 Primary schools: matched analysis of baseline and follow up findings

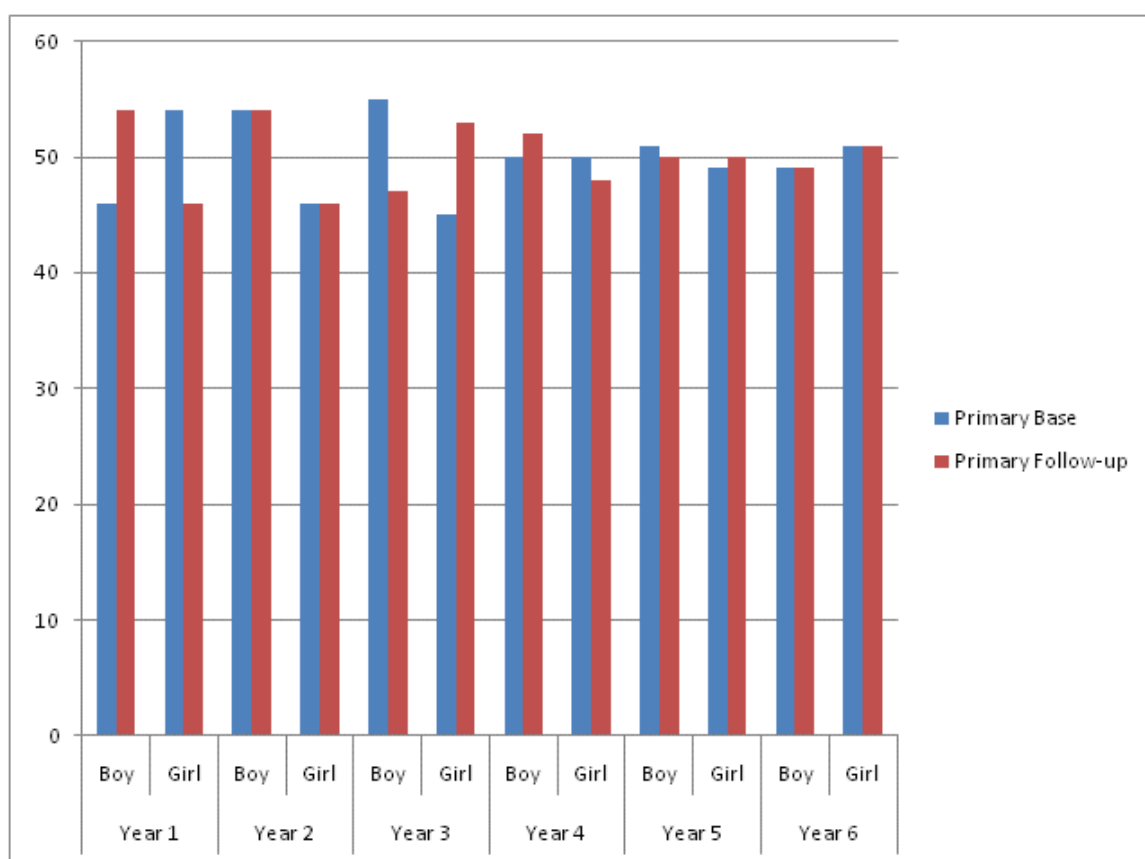
Having tested the theorised linkages the analysis moves on to examine whether there are observable changes in the responses of the two populations of students matched by age, gender and schools at baseline and follow up.

Thirty three out of 35 primary schools completed both the baseline and follow up surveys. Of the two missing schools, one completed the follow up questionnaires too late to be included in the data analysis presented here. The other school formally withdraw from the programme and did not consent in completing the follow up part of the study.

The overall number of respondents was 2534 at baseline and 2826 at follow up. Whole classes were asked to complete the questionnaires and any absences were recorded. This showed less than a 2% absenteeism rate. Chart 11.1x [Appendix] shows the breakdown of student respondents by school. Relatively high respondent numbers for some schools reflect cases where schools requested for additional classes to complete the questionnaire. Lower respondent numbers usually reflect the small size of the pupil roll and thus the number of eligible respondents. Schools #61, #100, #101 had missing classes at follow up due to school trip absences or other commitments.

Chart 11.1 shows a close similarity in the gender of respondents for the baseline and follow up surveys. Table 11.2 shows that, at both baseline and follow up, the majority of respondents were in Years 5 and 6. These respondents completed the questionnaire designed for the older primary school age group. For the following analysis the Year 5 and 6 age groups were found to have similar characteristics in terms of school, gender and number of respondents. These groups form the focus for the comparative analysis unless otherwise stated.

**Chart 11.1 Percentages of respondents by Year group**



**Table 11.2 Primary school respondents by Year group at baseline and follow up.** No missing data

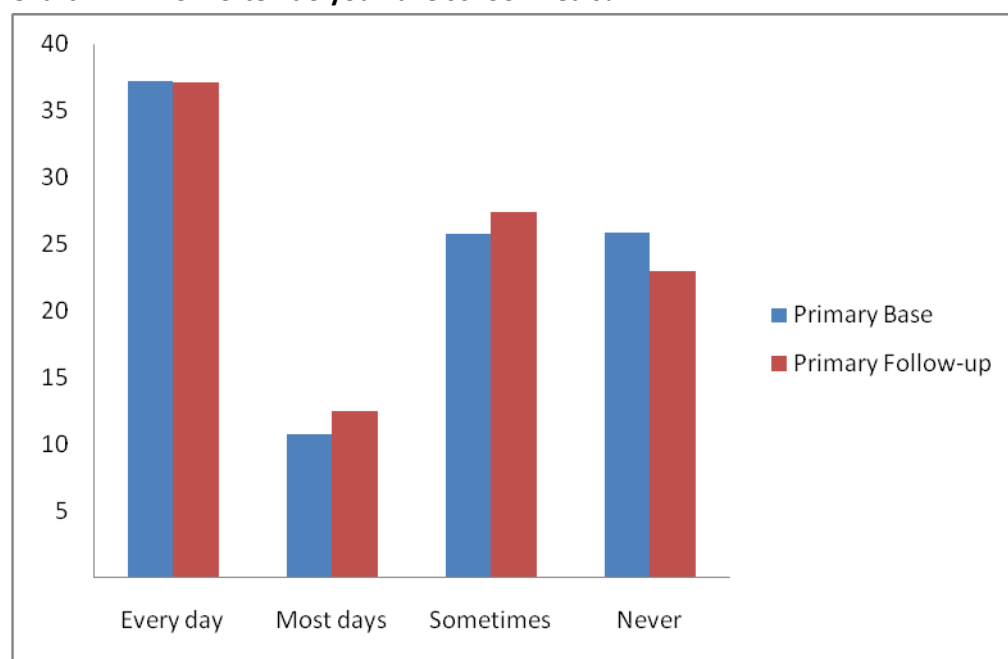
	Baseline		Follow up	
	Frequency	Percent	Frequency	Percent
<b>Year 1</b>	201	7.9	154	5.4



<b>Year 2</b>	209	8.2	361	12.8
<b>Year 3</b>	258	10.2	414	14.6
<b>Year 4</b>	364	14.4	414	14.6
<b>Year 5</b>	774	30.5	778	27.5
<b>Year 6</b>	728	28.7	698	24.7
<b>Total</b>	2534	100.0	2826	100.0

Chart 11.2 shows that a somewhat smaller percentage of respondents at follow up never had school meals, although the percentage for those taking school meals on a daily basis was the same for the two data collection points.

**Chart 11.2 “How often do you have school meals?”**



### 11.6 Student self reported fruit and vegetable consumption

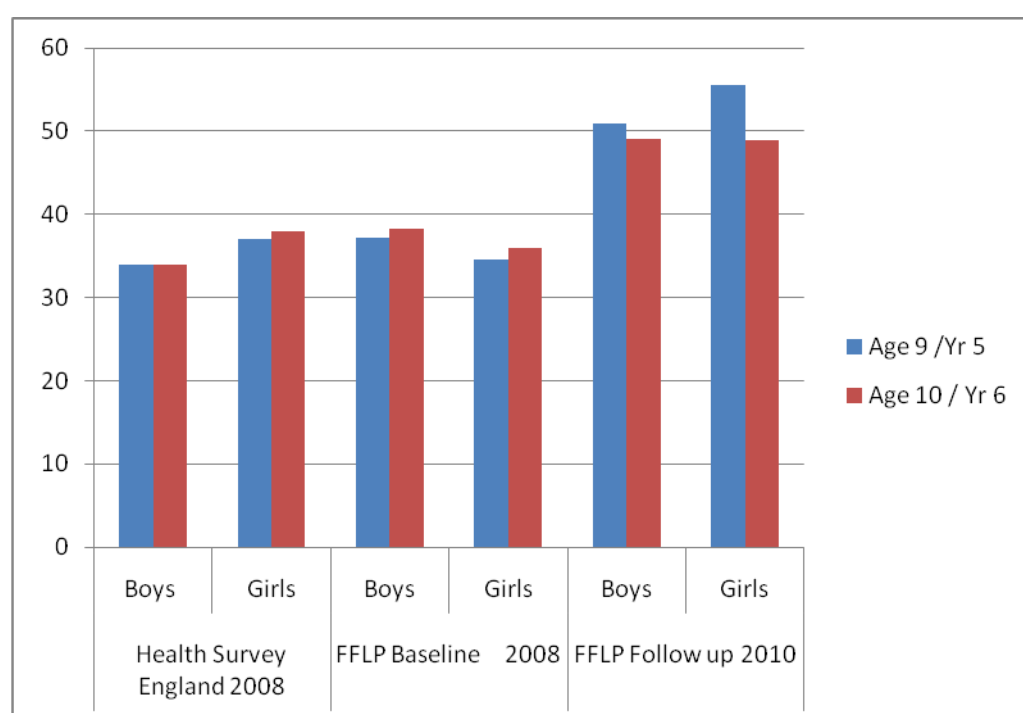
Students self reported fruit and vegetable consumption showed a positive trend. This was the case for all primary school year groups, but is most clearly in evidence for the older children. At baseline, the percentage of Year 5 and 6 respondents who reported eating 4 or more portions a day was similar to the national picture (Health Survey for England , 2008). Chart 11.3 shows that at follow up, reported fruit and vegetable consumption had risen significantly: 30% more Year 5 and 6s reported eating more than 4 a day in the FFLP follow up survey (baseline=37%, follow up=48.9% = a difference of 11.9%). For Year 5s, 28% more children reported eating 5 or more a day in the follow up survey.

The analysis Years 5 and 6 in Table 11.4 shows that the follow up respondents reported on average an increase of 0.31 more portions fruit and vegetables per day compared to the baseline respondents (3.11 to 3.42; SEMs: 0.03). Whilst the limitations of the study design need to be taken

into account, this compares favourably to other school-based healthy nutrition programmes that have shown a positive intervention effect ranging from +0.14 to +0.99 servings per day (de Sa & Lock, 2008). The self reported consumption of both fruit and vegetables were higher in the follow up survey. Vegetable consumption increased slightly more than fruit consumption, but the difference was not statistically significant.

The validity of self report measures with this age group need to be taken into account when interpreting these findings. Further details on the analysis of this data can be found in the appendix.

**Chart 11.3 Fruit and vegetable consumption: Year 5 and 6 FFLP respondents reporting eating 4 or more portions a day at baseline and follow up, in the context of Health Survey for England data (percentages). See table 12.2 for data sources.**



**Table: 11.3 Year 5 and 6 FFLP respondent self reported average daily fruit and vegetable consumption, in the context of Health Survey for England data**

	Less than 2 portions	2 portions or more but less than 3	3 portions or more but less than 4	4 portions or more but less than 5	5 portions or more	Total bases
<b>FFLP Baseline 2008 Year 5 (age 8-9)</b>						
Boys	10.1%	24.2%	24.5%	21.5%	15.7%	
Girls	10.6%	24.1%	25.7%	17.5%	17.0%	
All	10.3%	24.2%	25.1%	19.5%	16.3%	
<b>Base</b>	<b>80</b>	<b>187</b>	<b>194</b>	<b>151</b>	<b>126</b>	<b>738</b>

<b>FFLP Follow Up 2010 Year 5 (age 8-9)</b>					
Boys	8.3%	15.1%	25.7%	29.9%	21.0%

<b>Girls</b>	3.9%	16.6%	23.9%	34.8%	20.8%	
<b>All</b>	6.2%	15.8%	24.8%	32.3%	20.9%	
<b>Base</b>	48	122	191	249	161	731

**FFLP Baseline 2008 Year 6 (age 10-11)**

<b>Boys</b>	7.8%	24.0%	25.6%	22.6%	15.6%	
<b>Girls</b>	6.8%	28.3%	25.3%	20.1%	15.8%	
<b>All</b>	7.3%	26.1%	25.4%	21.3%	15.7%	
<b>Base</b>	53	190	185	155	114	697

**FFLP Follow Up 2010 Year 6 (age 10-11)**

<b>Boys</b>	7.4%	14.3%	28.6%	31.3%	18.5%	
<b>Girls</b>	5.1%	17.7%	29.2%	32.9%	15.2%	
<b>All</b>	6.2%	16.0%	28.9%	32.1%	16.8%	
<b>Base</b>	43	111	200	222	116	692

**Health Survey for England 2008 Age 9**

<b>Boys</b>	28%	19%	19%	16%	18%	
<b>Girls</b>	17%	24%	21%	12%	25%	
<b>All</b>	24%	22%	19%	16%	22%	
<b>Base</b>	-	-	-	-	-	463

**Health Survey for England 2008 Age 10**

<b>Boys</b>	28%	19%	19	16	18	
<b>Girls</b>	21%	22%	18	16	22	
<b>All</b>	24%	22%	18	16	20	
<b>Base</b>	-	-	-	-	-	487

FFLP Baseline missing data = 32. Follow up missing data=1

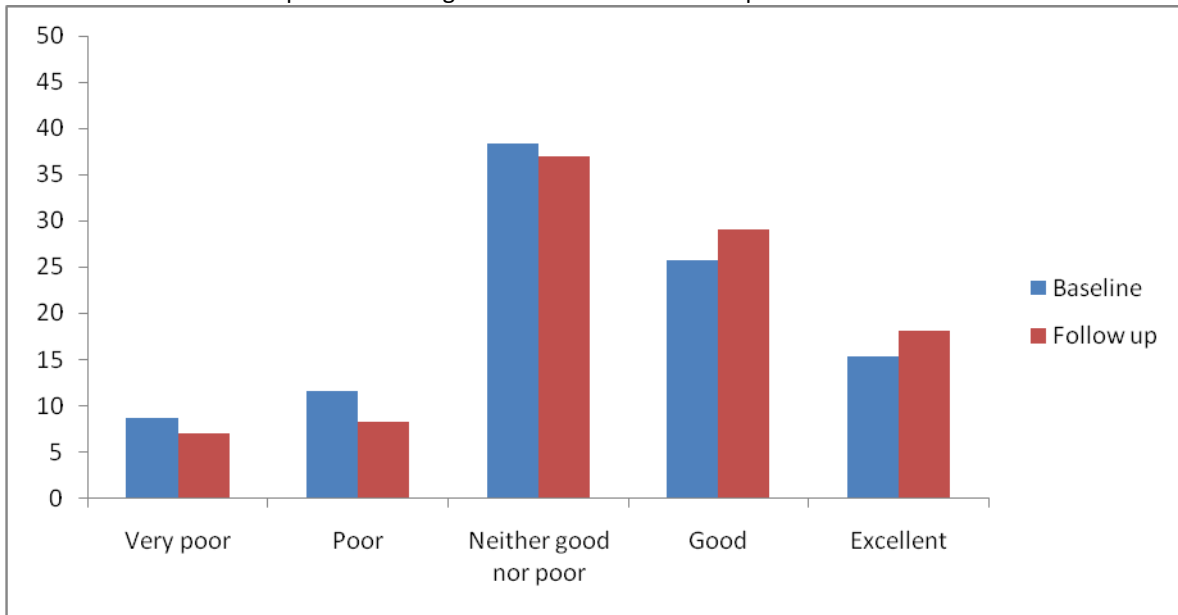
**Table 11.4: Self reported fruit and vegetable consumption. Comparison of Year 5 and 6 respondents at baseline and follow up**

	<b>Mean Baseline</b>	<b>Mean Follow up</b>	<b>Mean Change</b>	<b>Median Baseline</b>	<b>Median Follow up</b>	<b>SE Mean Baseline</b>	<b>SE Mean Follow up</b>	<b>Count Baseline</b>	<b>Count Follow up</b>
Year 5	3.1	3.46	+0.36	3.0	4.0	0.046	0.042	738	731
Year 6	3.13	3.37	+0.24	3.0	3.0	0.046	0.043	697	692
Year 5 & 6 combined	3.11	3.42	+0.31	3.0	4.0	0.032	0.030	1435	1423

### 11.7 Perceptions of school meals and the dining hall

This section reports on students’ perceptions of school meals and the dining hall. Charts 11.4 and 11.5 show that, at follow up, a higher percentage of students rated the school meals and the dining hall positively. This reflects the trend for all Year groups, where 17.5% more students rate school meals positively (from 45.6% to 53.7%, a rise of 8.1%) and 24.4% more students rate their school dining positively (from 40.5% to 50.4%, a rise of 9.9%).

**Chart 11.4: Student responses to: “Do you think school meals are..?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data baseline =29 follow up=8



**Chart 11.5 Student responses to: “What do you think about the school dining area?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data baseline=7 follow up=25.

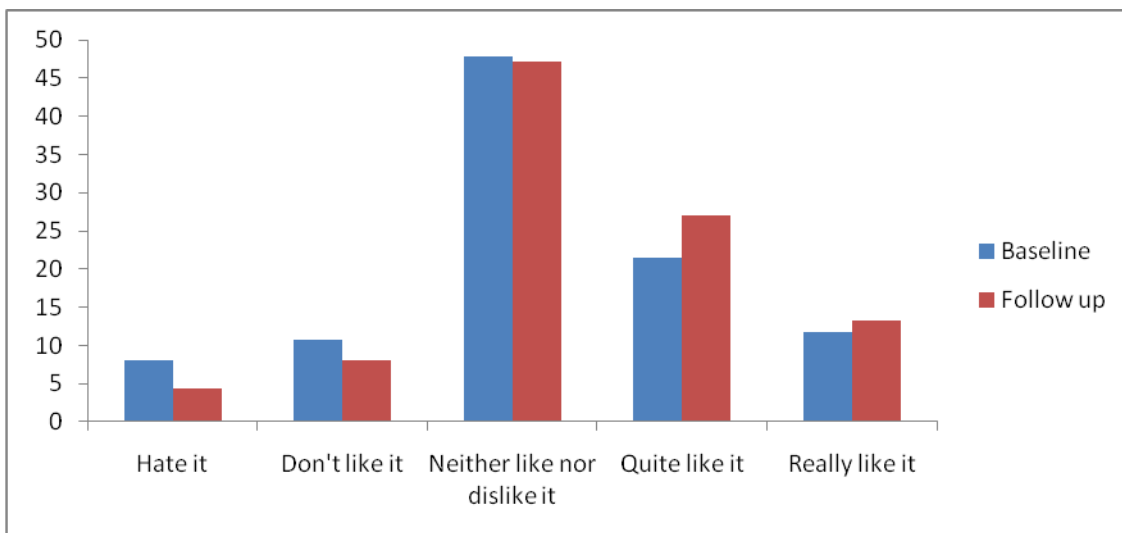
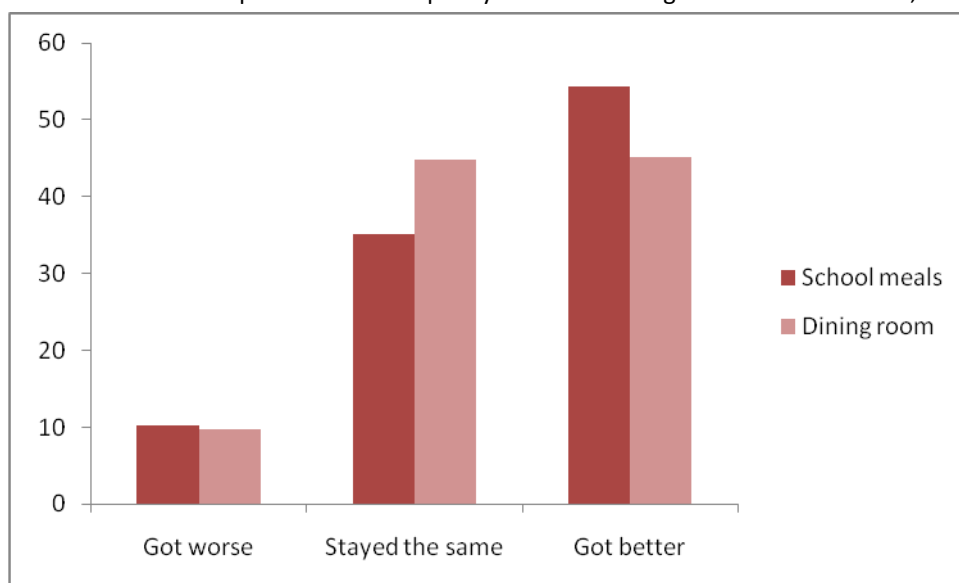


Chart 11.6 shows that, at follow up, the majority of students felt that school meals had got better. Almost half the respondents also felt that the dining room had improved in the last year.

**Chart 11.6 Student responses to “In the last year, do you think that (a) school meals (b) dining room has...?”** Valid percent. Follow up only n=1898. Missing data: school meals=6; dining room=7



For the follow up questionnaire only, Year 4-6 students were asked to write down any changes they had noticed in the school meals or the dining room over the last year. Table 11.5 shows that students reported a wide range of positive changes: several of which are similar to food actions advised by FFLP to SNAGs and to the Mark scheme criteria. Over a third (35.9%) wrote that they thought school meals had become healthier. Small numbers of students reported negative changes such as poorer or more expensive meals.

**Table 11.5 Student responses to the open question: “In the last year, what changes have you noticed (a) in the school meals (b) in the school dining hall?”** Years 4-6 Follow up only n= 1998

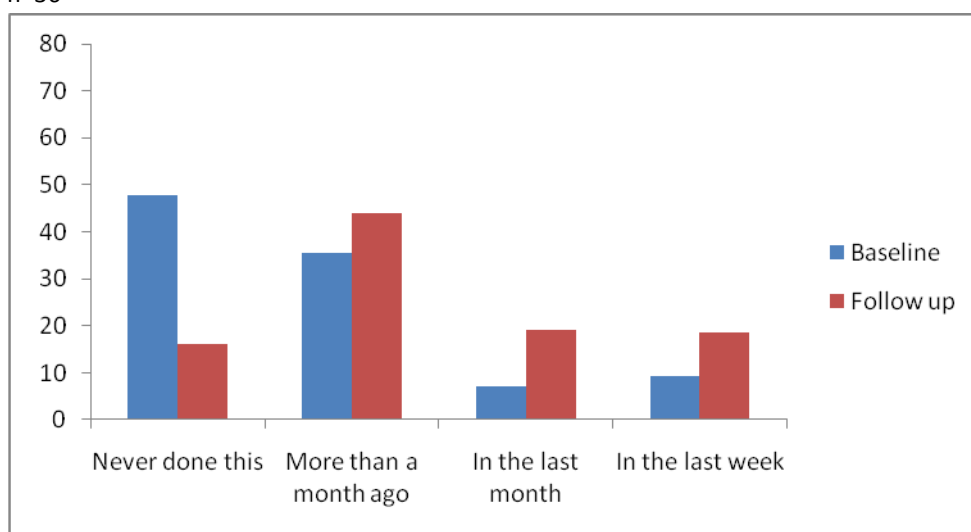
Code for written comment	Frequency
Healthier meals/ healthier options	713
Improved dining room facilities (e.g. room decor, tables, chairs, waste disposal facilities)	605
Tastier/better prepared meals	325
More varied meals	235
New plates/cutlery/table clothes etc	226
Improved arrangements for choosing and serving meal options/faster service	199
Improved behaviour/better table manners/more peaceful dining room	154
More displays about food & healthier eating	133
No changes in either school meals or dining room	128
More sustainable foods available (fair trade, higher animal welfare, organic, sourced from school garden)	79
Better information on menus	62

Less good school meals	61
Less good dining room environment/any other negative change	57
Other positive change - non specific or no code	54
Better value meals	23
Price increase/less good value	15
Illegible	7
Other change - neither positive or negative	225
Nothing written	395

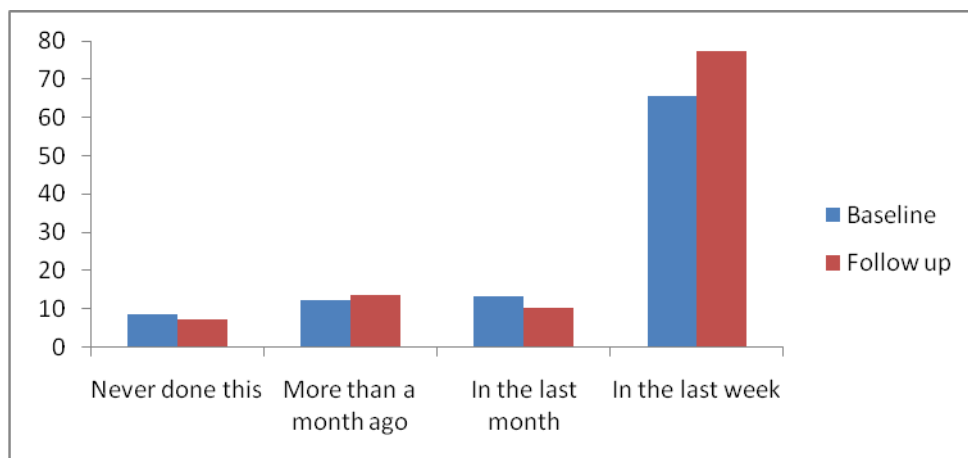
### 11.9 Cooking and food preparation at school and home

The following charts illustrate the differences between the baseline and follow up responses to cooking and food preparation related behaviours. At follow up, double the amount of Year 5 and 6 children reported practising food preparation skills in school in the last month (from 17.3% to 37.5%: a rise of 20.2%). This trend is also reflected in practising these skills at home. However, no significant changes were found for assisting to cook at home and cooking with basic ingredients at home.

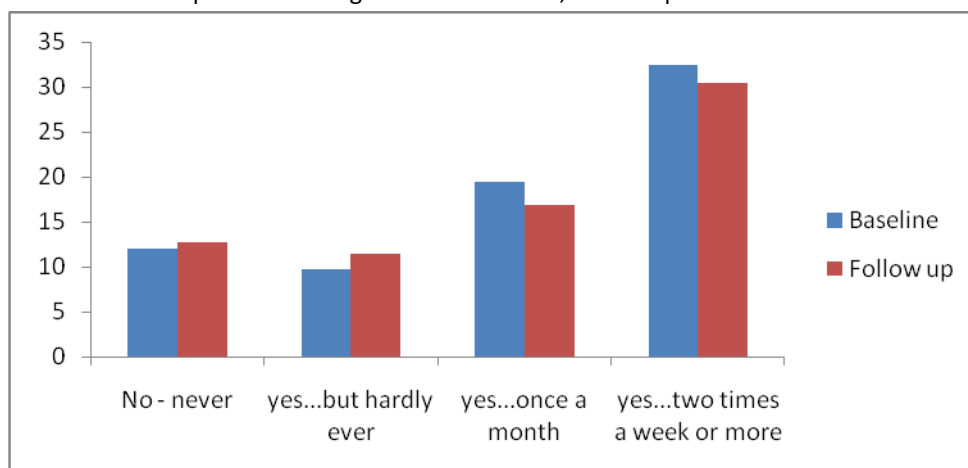
**Chart 11.7: Student responses to: “When was the last time you chopped a vegetable or fruit AT SCHOOL?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data Baseline =33; Follow up n=36



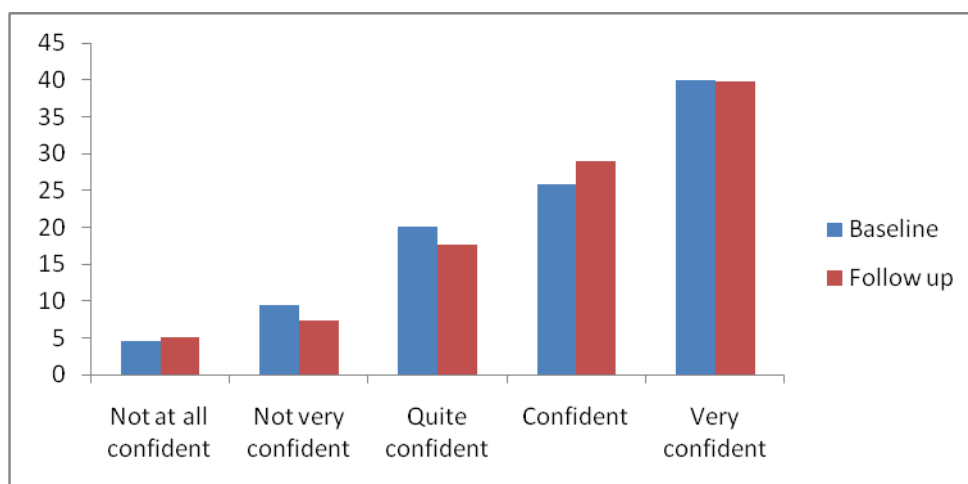
**Chart 11.8: Student responses to: “When was the last time you chopped a vegetable or fruit AT HOME?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data Baseline =22; Follow up n=32



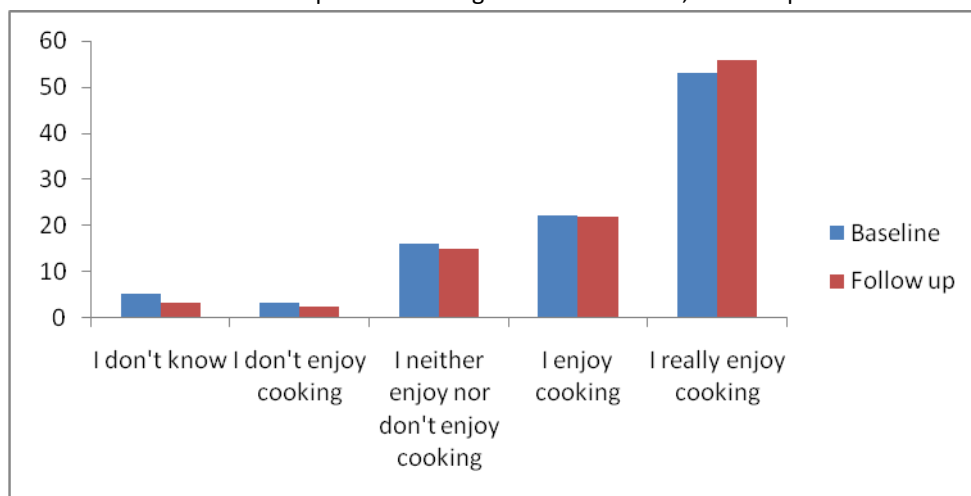
**Chart 11.9 Student responses to: “Do you help cook at home?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data Baseline =26; Follow up n=12



**Chart 11.10: Student responses to: “At HOME would you feel confident cooking with basic ingredients like rice, pasta or fresh vegetables?”** Valid percent. Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data Baseline =22; Follow up n=14



**Chart 11.11. Student responses to: “What do you think about cooking...?”** (valid percent) Years 5 & 6. Baseline n=1501. Follow up 1483. Missing data Baseline =24; Follow up n=19



### 11.9 Growing fruit and vegetables at school and home

At follow up, over 50% more Year 5 and 6s reported helping to grow fruit and vegetables school (from 54.4% to 82.5%, a rise of 28.1%) (Chart 11.12). Fewer respondents at follow up report having never helped to grow fruit and vegetables at school.

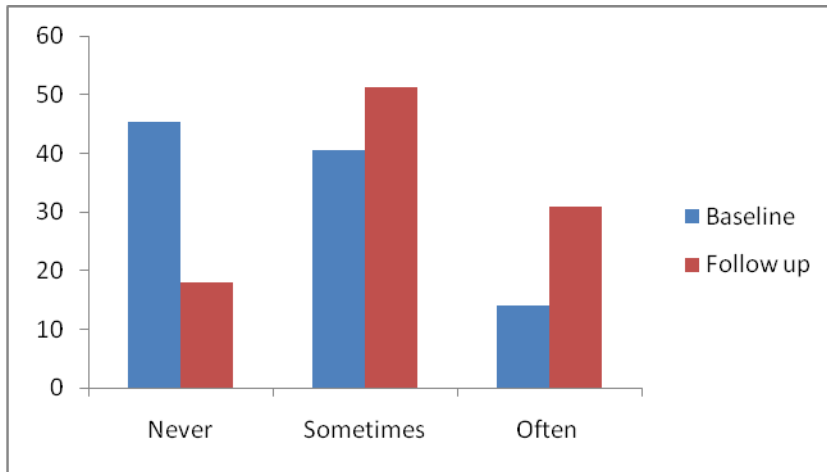
This trend is reflected in behaviour at home. Chart 11.13 shows that a higher percentage of follow up respondents report having helped grow fruit and vegetables at home compared to the baseline group. There are also fewer respondents at follow up who report having never helped to grow fruit and vegetables at home.

The pattern for Year 5 and 6 is reflected more widely. For all year groups, 35.3% more children reported often helping to grow fruit and vegetables at home (from 26.0% to 35.2%: a rise of 9.2%).

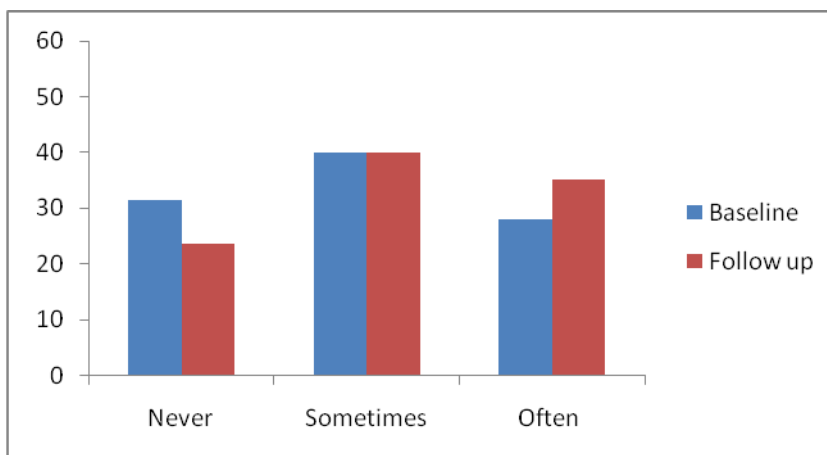
Overall, respondents hold very positive attitudes towards growing fruit and vegetables. Chart 11.14 shows that higher percentages of Year 5 and 6 students reported enjoying growing fruit and vegetables at follow up compared to baseline students.



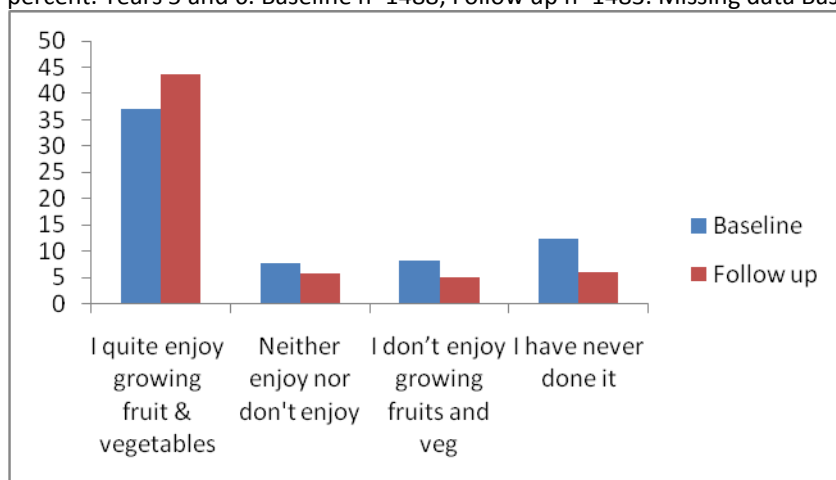
**Chart 11.12 Students responses to: “In the last year at SCHOOL, have you ever helped to grow food e.g. sowing, watering or picking fruit & vegetables?”** Valid percent. Year 5 and 6. Baseline n=1490  
Follow up=1483 Baseline Missing data baseline =44, Follow up=24



**Chart 11.13 Students responses to: “In the last year at HOME, have you ever helped to grow food e.g. sowing, watering or picking fruit & vegetables?”** Valid percent. Year 5 and 6. Baseline n=1490  
Follow up=1483 Baseline Missing data baseline =12, Follow up=15



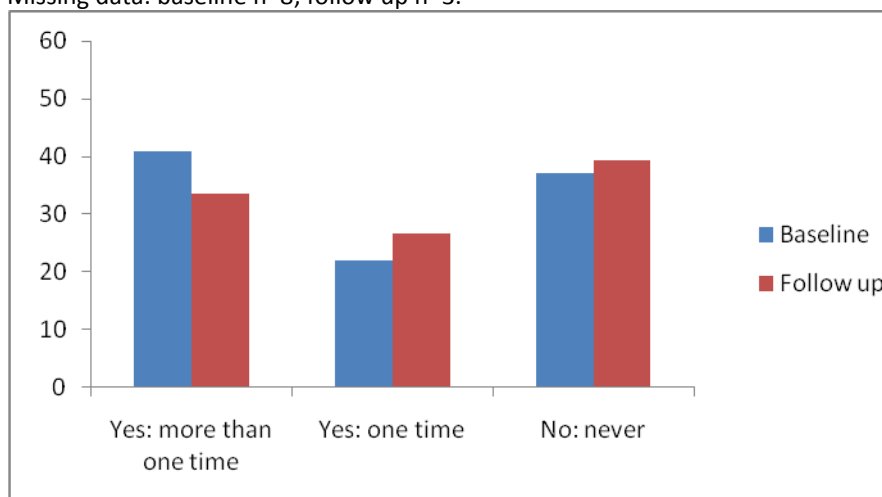
**Chart 11.14 Student responses to: “What do you think about growing fruit and vegetables?”** Valid percent. Years 5 and 6. Baseline n=1488; Follow up n=1483. Missing data Baseline n=14 Follow up n=4



### 11.10 Participation in farm-based activities

Children were asked “In the last year, have you ever done a job or activity on a farm?” with examples provided such as ‘collect eggs’, ‘feed animals’, ‘pick fruit’ and so forth. This was a question introduced for later phases of the baseline study only. Therefore the baseline follow up comparison is between matched 13 schools at baseline (n=1112) and follow up (n=971) with balanced Year groups.

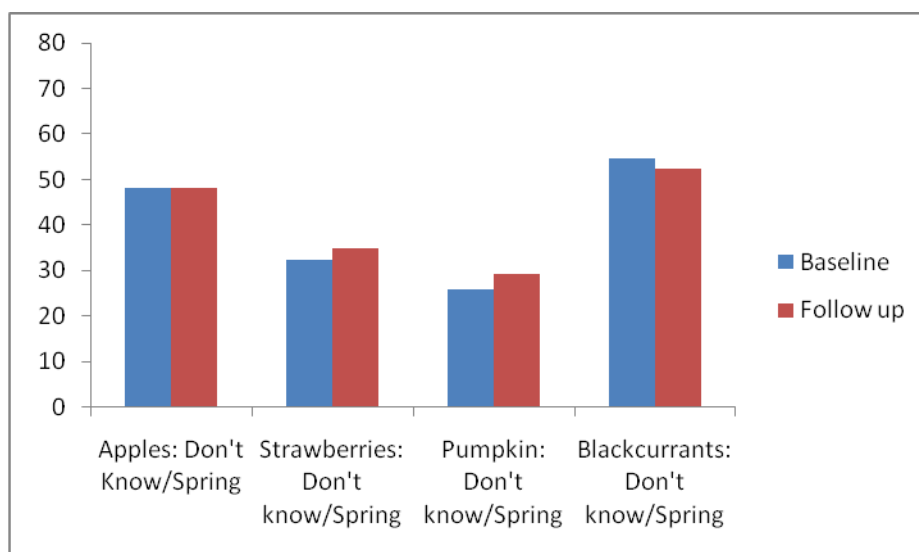
**Chart 11.15 Student responses: “Have you ever helped do jobs on a farm...like get fresh eggs, milk a cow, feed farm animals, pick fruit...?” (Percentages)** Bases: Baseline n=1112; Follow up n=971. Year group comparisons for baseline to follow up respectively: Yr1-2: 130v129; Yr3-4: 352v320; Yr5-6: 627v521. Missing data: baseline n=8; follow up n=3.



Overall the responses show that the percentages of children reporting having ever taken part in a farm based activity is somewhat less in the follow up (60.3%) compared to the baseline (62.8%) samples for the 13 schools reported on here.

Children in Years 5 and 6 were asked “What is the MAIN season for harvesting these fruit or vegetables?” The items were apples, strawberries, pumpkin and blackcurrants. The results show only small differences between the two groups.

**Chart 11.16 Children’s awareness of seasonality.** Valid percent. Baseline N=1502; Follow up 1477.  
 Note: Although strawberries and blackcurrants can be harvested in spring, this was not categorised as the ‘main season’.



These findings were similar for the younger year groups (Years 1-4) who were only asked “What time of the year do farmers pick apples?” Respondents opting for ‘Don’t know’ or ‘Spring’ were 70.8% at baseline and 68.7% at follow up (Bases: 675 & 828 respectively).

### 11.11 FFLP educational activities and student attitudes towards sustainable foods

The original evaluation plan was to track student attitudes towards food sustainability issues in the context of focused FFLP activities in schools. However, the programme design meant that it was not possible to identify which class groups would be participating in sustainable food education activities. The following analysis therefore undertook a *post hoc* test of the relationship between educational inputs and student attitudes. Teachers were asked to report whether their class groups had participated up to four sustainable food education activities (covering fair trade, organic food, animal welfare and local food) in the last year. Students were then asked to express their choices between sustainable (fair trade, organic, free range, ‘British local’) or ‘non-sustainable’ foods based upon a price comparison. Full details on the measures used and the construction of scales are reported in the Appendix.

There was a strong association between educational input and student’s attitudes (McNemar test:  $p=0.003$ ). Compared to students who had no educational exposure, the results show that children who participated in FFLP-related activities were over twice as likely to have strong preferences for organic, local, free range and fair trade foods (21.8% compared to 10.7%).

The analysis therefore suggests that FFLP-related educational inputs on sustainability are associated with improved attitudes towards food sustainability issues amongst Year 4 to 6 primary school children.

## Secondary School Students: Questionnaire Results

### 11.12 Secondary schools: testing the theorised links between FFLP activities and behavioural outcomes

This section presents the results from a student questionnaire administered in FFLP Flagship secondary schools. It first examines links between healthy eating and FFLP-related behaviours and then goes on to analyse the baseline and follow up data.

For the follow up survey we analysed the associations between a number of key variables. Table 11.6 shows the variables that have a statistically significant association with self reported fruit and vegetable intake. Higher reported consumption of fruit and vegetables is associated with positive attitudes towards healthier foods (+whole meal bread; -high fat foods), sustainable foods and fast foods (-microwave meals).

The Spearman's correlation coefficients were measured between the fruit & vegetable intake and most of the other variables to establish the statistically significant results to allow the ordinal regression modelling. As with the primary schools survey again the variables such as preparing meals from basic ingredients, and enjoy growing are predictors of the fruit and vegetable consumption. The analysis therefore demonstrates that FFLP programme model has a basis in empirical validity.

**Table 11.6 Secondary school associations between fruit and vegetable consumption and FFLP related behaviours.**

Cross tabulation			d.f	$\chi^2$ value	P- value
Fruit & veg intake	X	Attitude towards high fat food	16	62.0	<0.001
	X	Attitude towards organic food	16	36.9	0.002
	X	Attitude towards fair trade food	16	43.9	<0.001
	X	Attitude towards whole meal bread	16	32.5	0.008
	X	Attitude towards locally produced food	16	39.9	0.001
	X	Attitude towards microwave meals	16	53.2	<0.001
	X	Attitude towards home grown food	16	47.2	<0.001

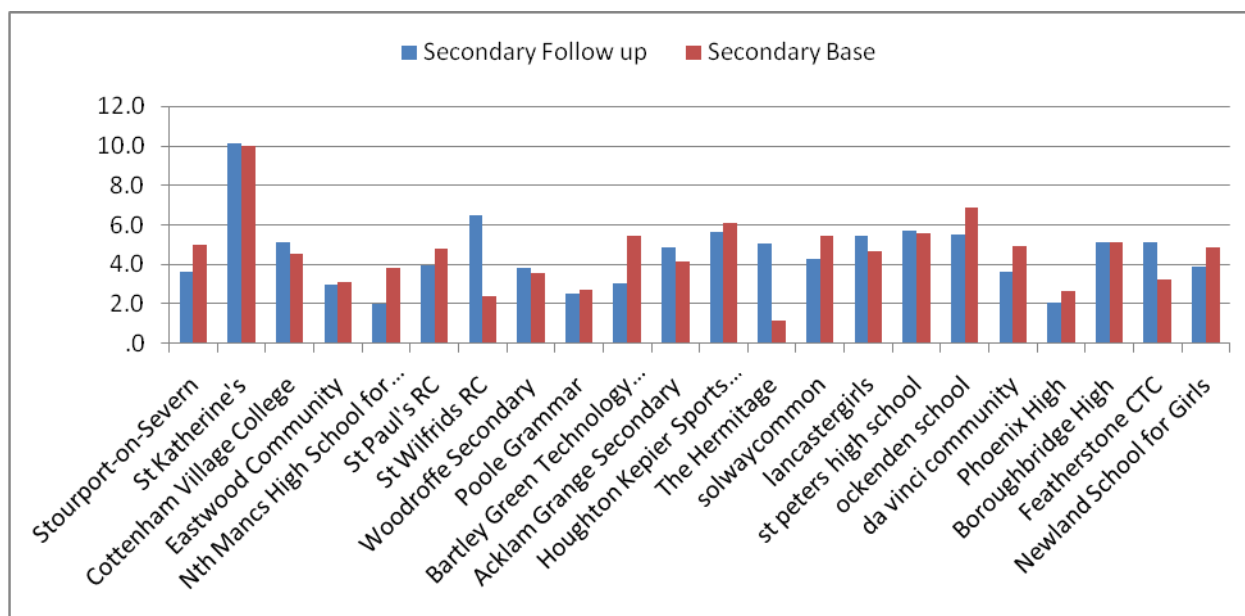
Cross tabulation			d.f	$\chi^2$ value	P- value
Fruit & veg intake	X	Attitude towards growing healthy food	16	54.8	<0.001
	X	Attitude towards eating healthy food	24	108.2	<0.001
	X	Attitude towards helping to cook	20	59.6	<0.001
	X	Attitude towards growing fruit/veg. allotment	12	47.0	<0.001

	X	Attitude towards grow potatoes	4	17.9	0.001
	X	Attitude towards grow other vegetable	4	24.3	<0.001
	X	Attitude towards grow herbs	4	29.5	<0.001
	X	Attitude towards grow food at school	8	15.0	0.059*

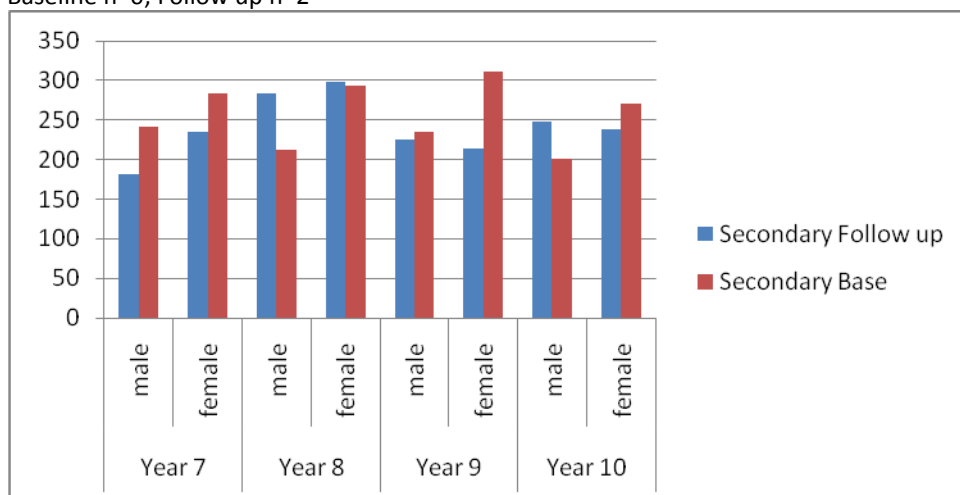
### 11.15 Profile of school and student respondents

The overall number of respondents was 2054 at baseline and 1926 at follow up. Chart 11.17 shows the breakdown of student respondents by school. It shows correspondence between Year groups and gender for respondents at baseline and follow up. Chart 11.18 shows little difference between the pre and post groups in terms of school meal take up.

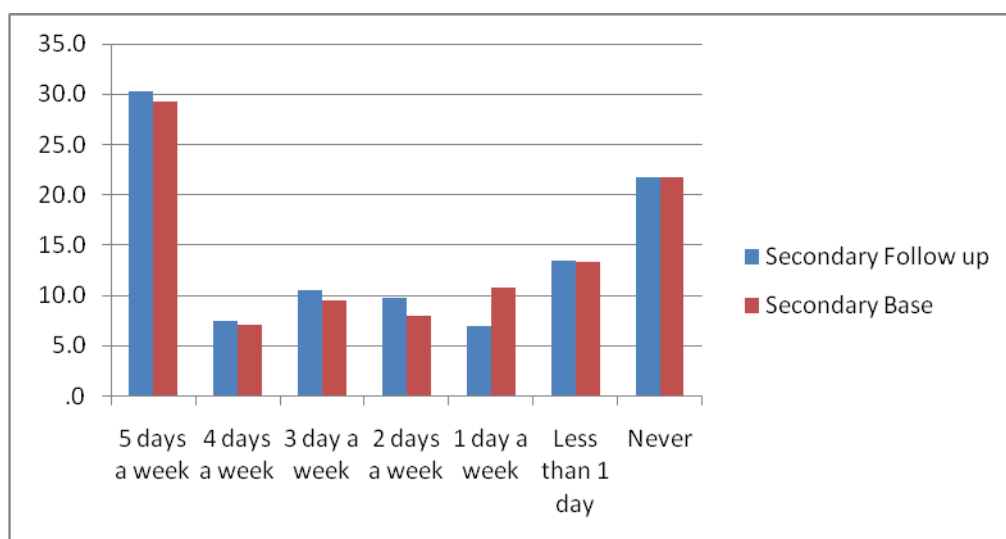
**Chart 11.17 Distribution of respondents in percentage for the secondary schools. Percentage**



**Chart 11.18 Distribution of respondents by gender and Year groups.** Frequency. Missing data: Baseline n=0; Follow up n=2

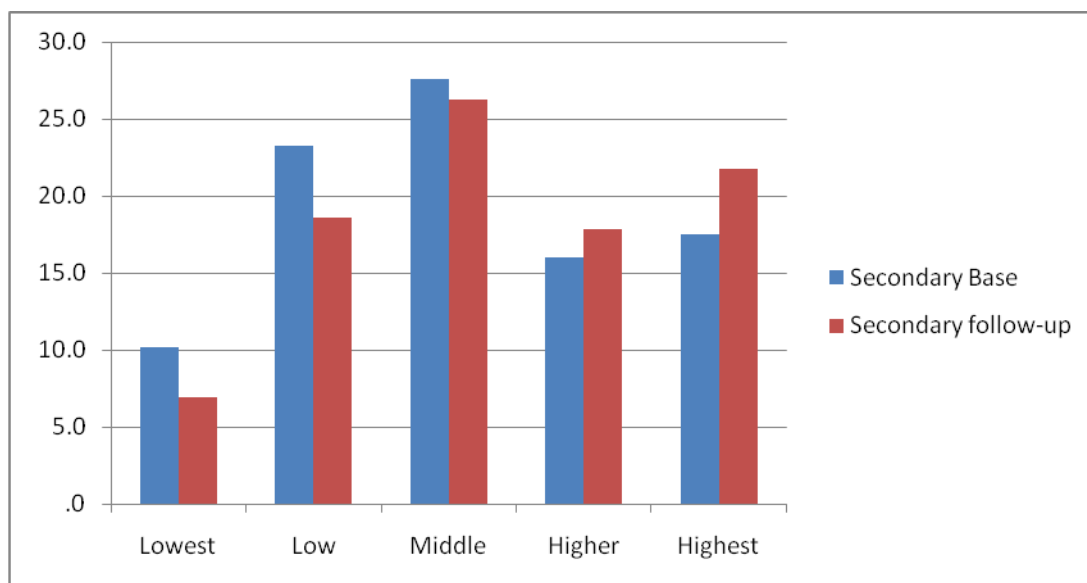


**Chart 11.19 Student take up of meals from the school canteen.** Percentage.



There were no differences for self reported fruit and vegetable consumption at baseline and follow up. The mean for the baseline was 3.06, and 3.32 for the follow up survey. This is higher but not statistically significant. The median in both cases are 3. This matches the pattern for the Health Survey for England 2008. Analysis by gender showed a positive, but not statistically significant, positive trend for both girls and boys.

**Chart 11.20 Self reported fruit and vegetable consumption for Year 7 to 10 respondents.**  
 Percentage. Lowest = under 2 portions. Highest =5 or more portions. Baseline n=2054. Follow up n=1926.



### 11.14 Perceptions of school meals and the dining hall

Charts 11.21 and 11.22 show student response to open questions about the changes they have noticed to school food and the dining room in the last year.

**Chart 11.21 Student perceptions of changes to school meals in the last year.** Percentage. Follow up only n=1926.

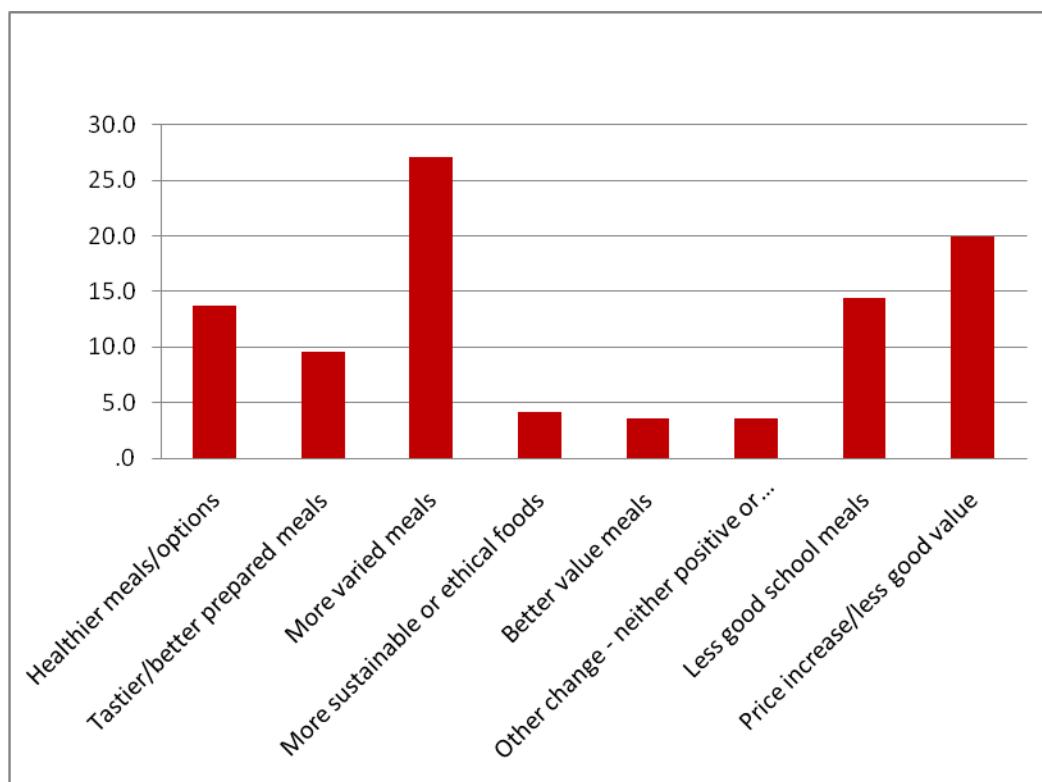


Chart 11.21 shows that students have noticed a number of positive changes to the dining environments of the study schools. The main themes are concerned with improved information about school food and improvements to the organisation of the service. A notable percentage (12.8) gave feedback on negative changes. There was a high frequency of non responses to the questions about meals and the dining room which suggests that many students had observed no changes.

**Chart 11.22 Student perceptions of changes to the school dining area in the last year.** Percentage. Follow up only n=1926

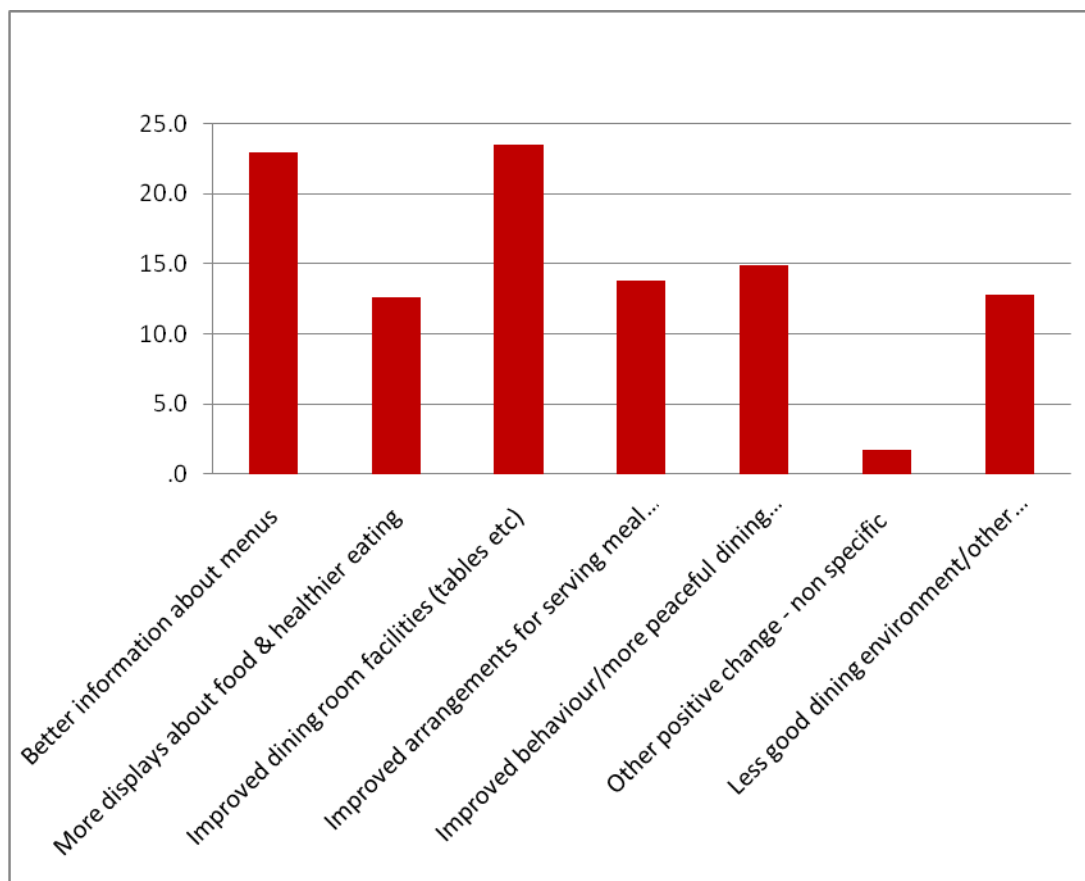
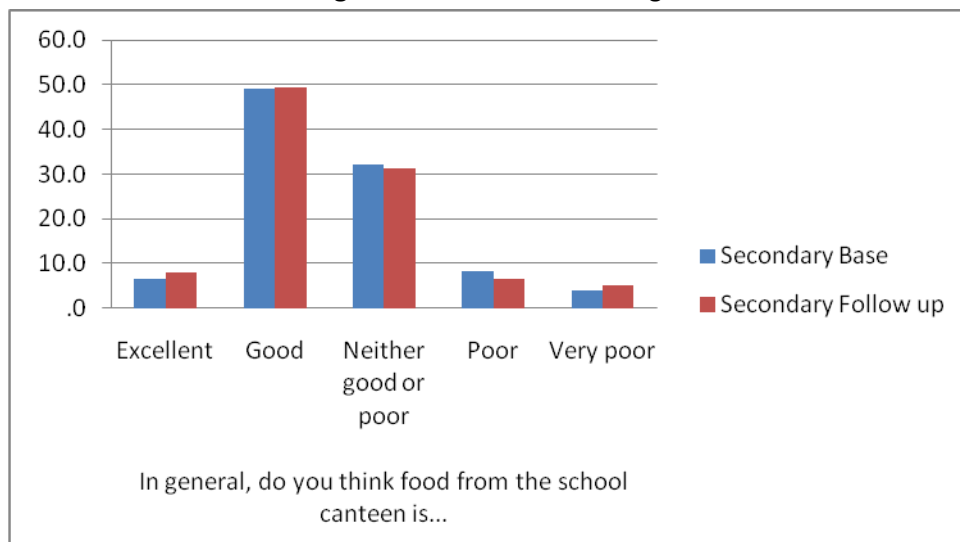


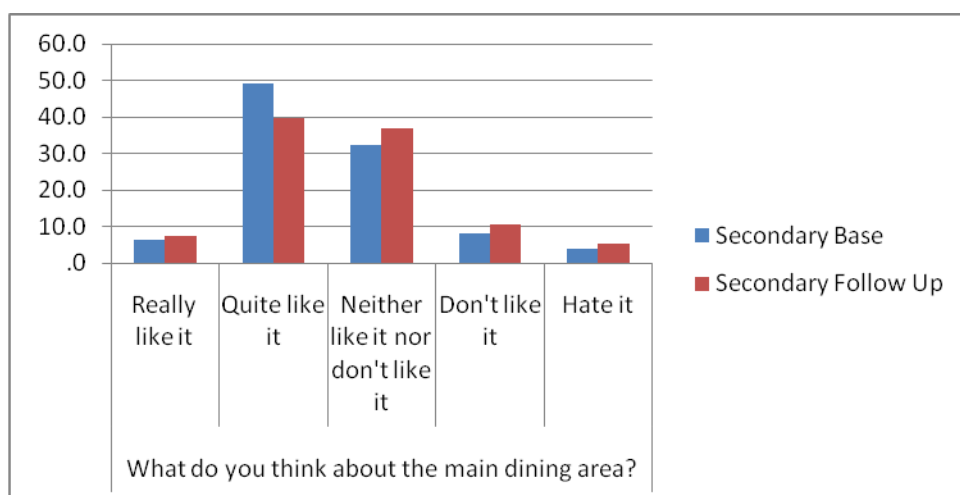
Chart 11.23 suggests that attitudes towards the school dining have not improved over the course of the programme. There were no significant differences in the ratings of school food. This might reflect some of the mixed responses to changes observed at follow up (see above).



**Chart 11.23 Student's rating of school food.** Percentage. Baseline n=2054. Follow up n=1926

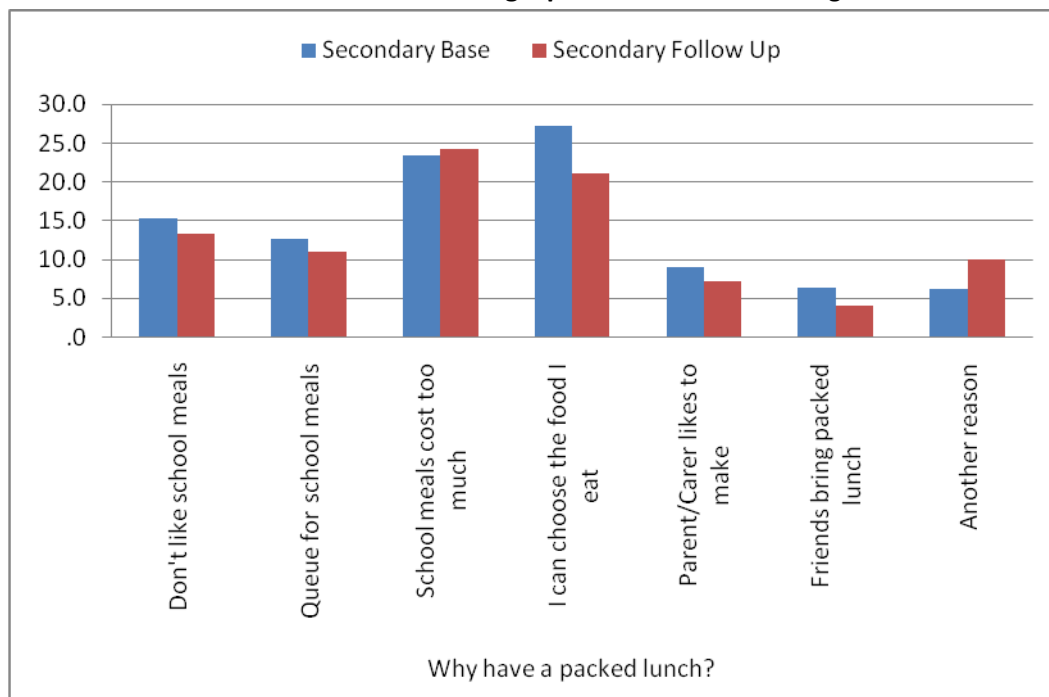


**Chart 11.24 Student ratings of the main dining area.** Percentage. Baseline n=2054. Follow up n=1926



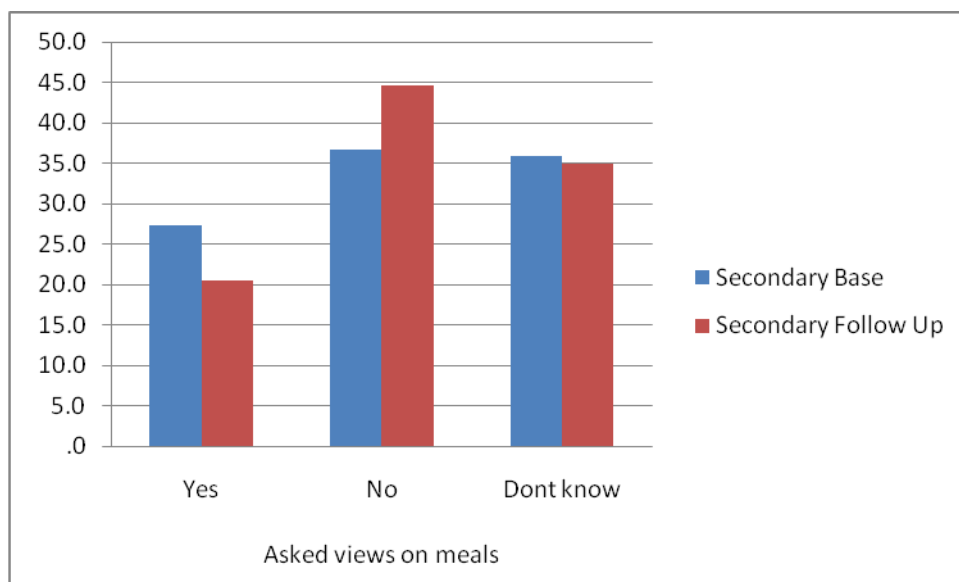
Whilst there was very little change in the number of students reporting having a packed lunch (Appendix), Chart 11.25 indicates that student's motives have shifted away from negative perceptions of schools meals and queues. The percentage of students reporting that the school cost is a factor in decisions to have a packed lunch has increased.

**Chart 11.25. Student motives for choosing a packed lunch. Percentage.**

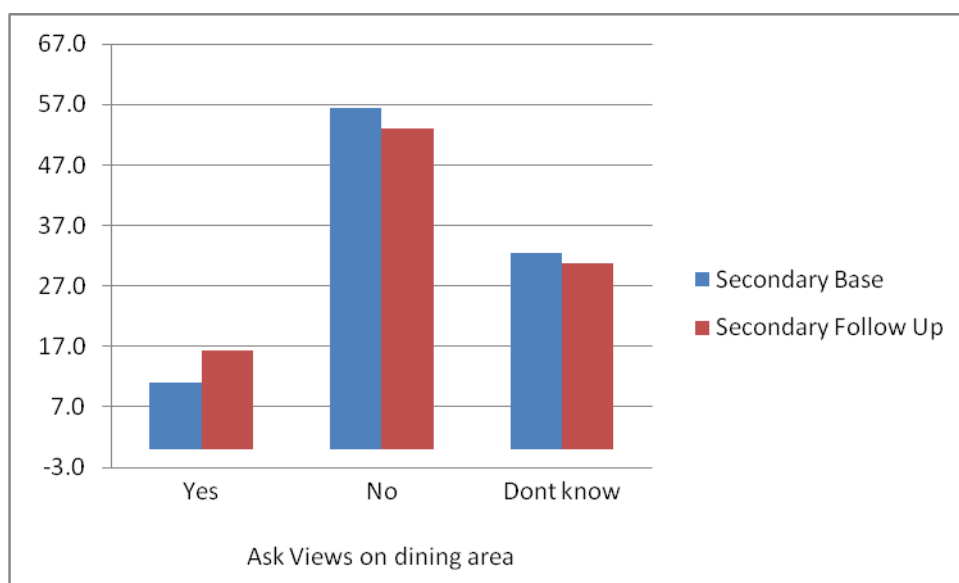


Students were asked whether they recalled being asked for their views about school meals by the school: for example through a questionnaire. Chart 11.26 and 11.27 show no statistically significant difference between the baseline and follow up respondents.

**Chart 11.26 Student perceptions of whether they have been consulted on school meals. Percentage**

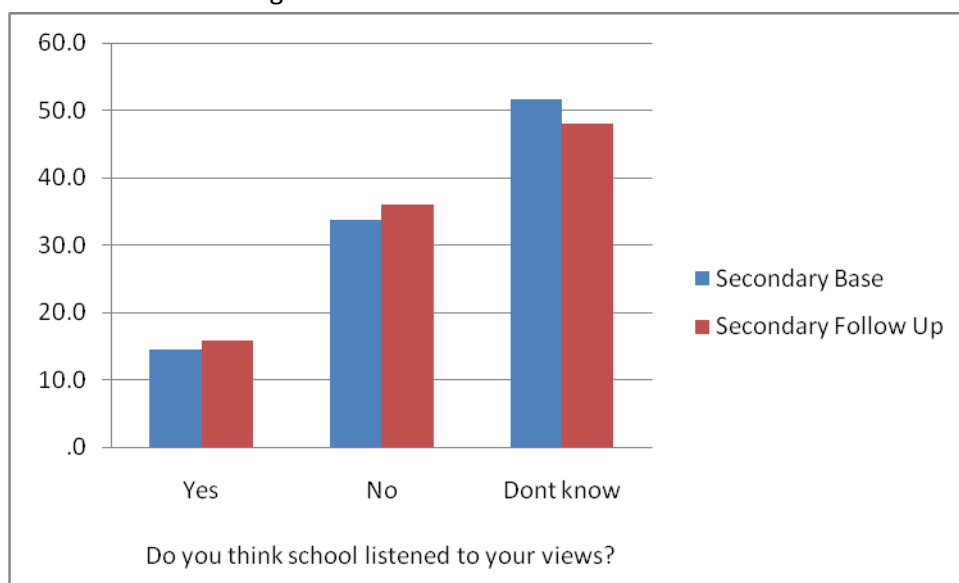


**Chart 11.27 Student perceptions of whether they have been consulted on the dining area.** Percentage.



Similarly Chart 11.28 indicates that almost half of students- both at baseline and follow up- were unsure about whether their views on food in school had been listened to by the school.

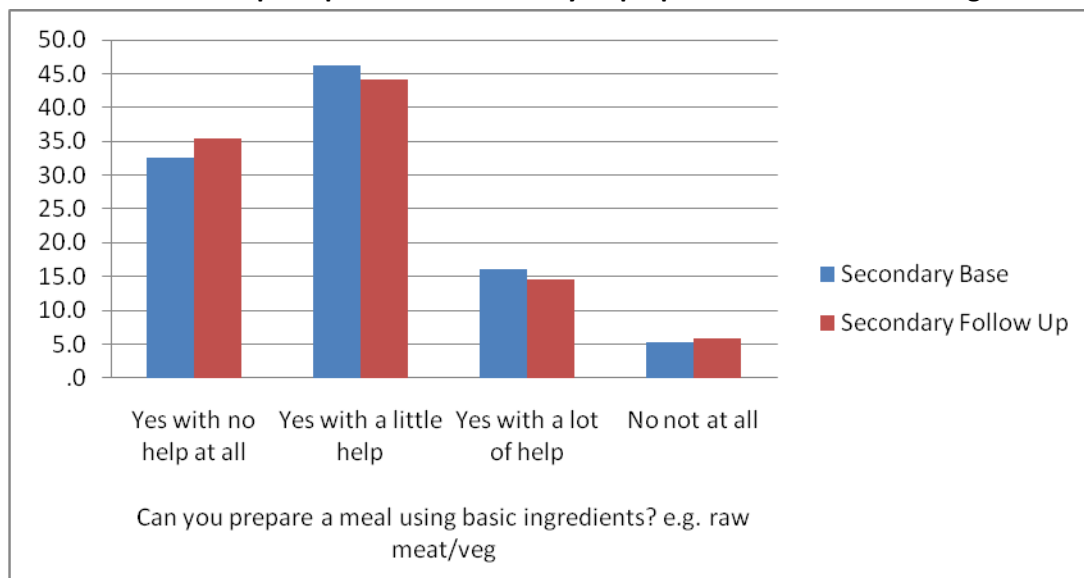
**Chart 11.28 Student perceptions on whether they felt the school had listened to their views on school food.** Percentage.



### 11.15 Cooking, food preparation and eating at home

Students were asked to report on their cooking, food preparation and eating behaviours at home both in the baseline and follow up questionnaires. No significant differences were found for these behaviours.

**Chart 11.29 Student perceptions of their ability to prepare a meal from basic ingredients.** Percentage.



**Chart 11.30. Student responses to the question: “How often do you sit and eat in front of the TV?”.**

Percentage.

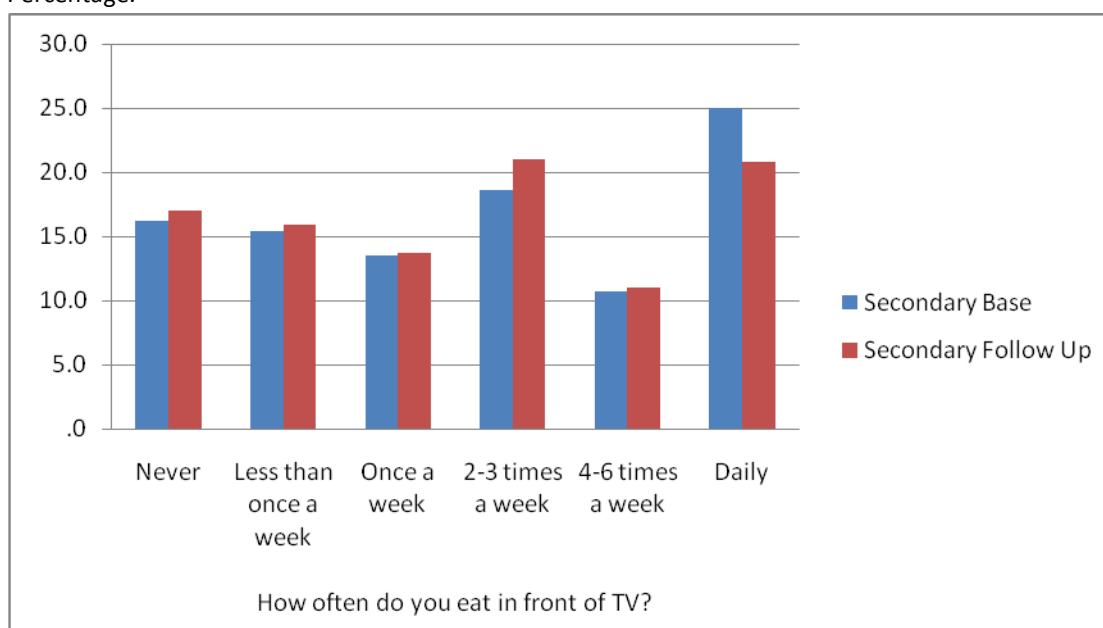


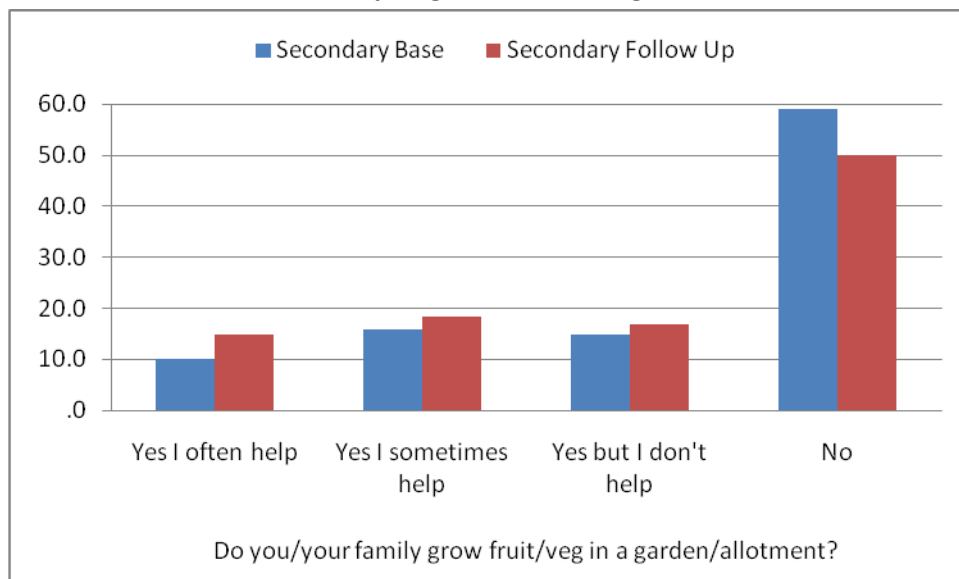
Chart 11.30 suggests a positive improvement at the follow up in the percentage of students who never eat in front of the TV. Whilst this trend is positive, there is no statistically significant difference between baseline and follow up groups.

### 11.16 Participation in Growing Fruit and Vegetables at Home and School

Student reports of helping to grow fruit and vegetables at home showed no statistically significant differences – although the trend is towards increased engagement. With regard to specific gardening activities, the differences are more marked, for example, the percentage of students who reported

helping to grow potatoes has increased by nearly 8% in the follow up survey. Overall, however, gardening is a minority activity for this age group.

**Chart 11.31. Students who help to grow fruits or vegetables at home.** Percentage.



### 11.17 Attitudes towards eating healthy and sustainable foods

Students were asked to give their views about eating healthier food, helping to cook and helping to grow fruit and vegetables. The results showed no statistically significant differences between the two groups.

Students were asked to give their views on eating a range of types of food. The range included sustainable foods, energy dense (high fat, high sugars foods), and processed or ‘fast foods’. The following charts suggest overall positive attitudes towards sustainable foods for both survey groups. This suggests that a majority of students held favourable views towards the increased availability of such foods in the school environment.

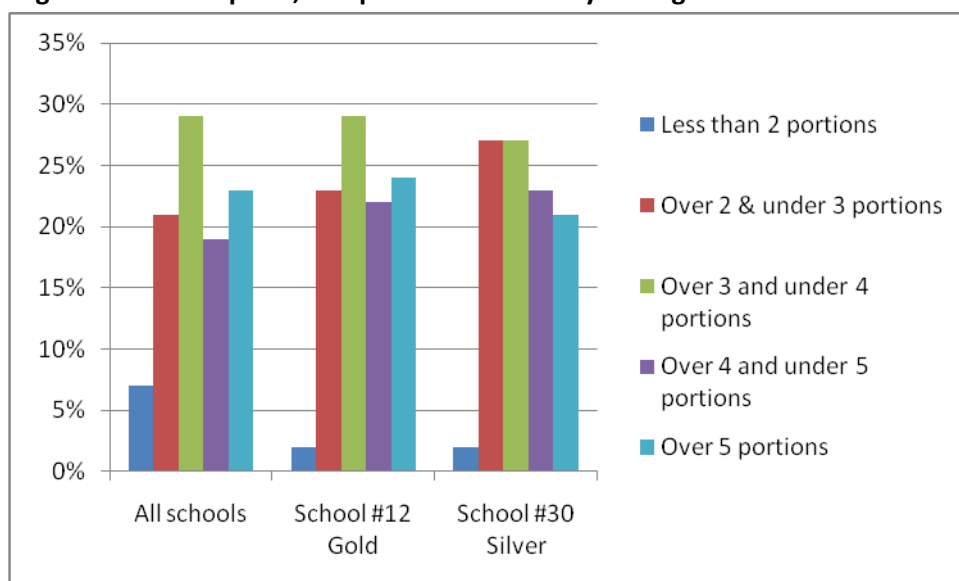
No statistically significant differences were found for any of these variables (applying t-test with unequal variances) between the baseline and follow up profile of responses. However there is a clear pattern of an increased trend in more positive attitudes towards sustainable foods. This trend is more pronounced for positive attitudes towards fair trade food, home grown food and free range eggs. Further details on the results are recorded in the appendix.

### 11.18 Gold and Silver Mark Schools

Schools based analysis found that patterns of fruit and vegetable consumption were quite varied. Although the number of schools sampled mean that a formal analysis cannot be undertaken, it appears that schools with lower FSM entitlement and in the south of England were more likely to have children reporting eating more fruit and vegetables. It was also clear that students in some (but not all) Silver and the one Gold secondary schools report eating more than the average across the whole survey (see chart 11.32). However, there was no statistically significant association between

healthier eating indicators and FFLP Mark status for secondary schools (See Correspondence analysis in the Appendix).

**Chart 11.32 Two FFLP high performing schools and student self reported average fruit and vegetable consumption, compared to the survey average.**



### 11.19 Conclusions

There are a number of limitations to the study that need to be taken into account when interpreting the findings, particularly with regard to the characteristics of the baseline and follow up respondents. The questionnaire was administered on two cross sectional occasions to similar Year groups in the same schools. This means that the study is not tracking longitudinal change in individual student behaviour. For primary schools self reported fruit and vegetable consumption is higher in the follow up population. Whilst the validity of the measure with this age group needs to be take into account, changes in students' favourite food reports lends support to the case that follow up group report healthier eating behaviour.

Whilst the research design does not control for external factors, improved measures associated with FFLP related activities –notably in food preparation skills and growing activities – lend support to the theory of change that the programme has had an impact on healthy eating outcomes. Some of the results also show a positive trend at follow up. These include: perceptions of school meal dining hall ratings, food preparation at home and school, enjoyment of cooking and growing, helping to grow fruit and vegetables at home and school.

Other results for both primary and secondary surveys show little or no difference in the response profiles between the two survey points. These include: experience of farm activities, awareness of seasonality, helping to cook at home, and confidence to cook with basic ingredients. In the follow up survey, students report very positively on changes to school meals and the dining area in the year before the follow up survey. The content of the written feedback corresponds well with the programme planned inputs. This lends plausibility to some of the other changes observed at follow up.

## 12. Programme Influences on the Home Environment: parent perspectives

### Key points

1083 parents from 52 FFLP Flagship schools completed an evaluation survey on the programme between May and September 2010

The results show high levels of awareness amongst parents of the FFLP programme combined with strong take home messages from children had important impacts at home.

For those surveyed these impacts were connected to changes in buying and consumption particularly around increases in fair-trade, local and seasonal foods.

Parents identified that children wanted to translate their learning at school into activities at home, cooking, growing and shopping. In some cases this had resulted in increased participation by parent's changes to a more healthy diet.

The degree to which parents responded to food messages from the FFLP was related to their own beliefs and values, their financial situation and general engagement with the school.

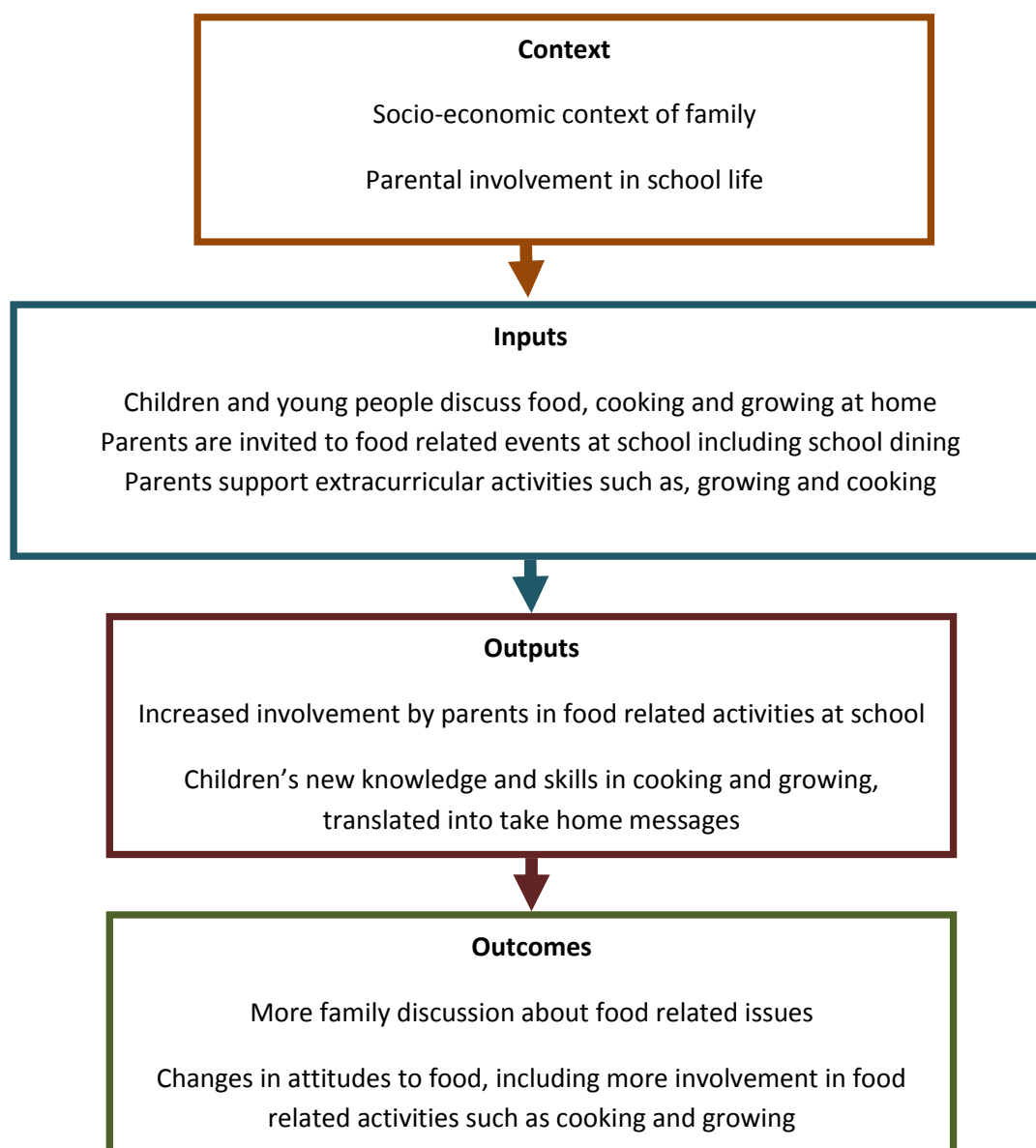
Evidence from school teacher questionnaires and monitoring records provide supplementary evidence that schools considerably expanded the scope of their parental and community engagement with regard to food issues over the evaluation period

### 12.1 Introduction

This section of the report is concerned with the influence of FFLP on the home environment of students – particularly from the perspective of parents. It draws upon a survey of parents from a sample of Flagship primary and secondary schools conducted 18 to 24 months after enrolment with the programme. It should be noted that other findings relevant to the question of take home influences are reported on elsewhere in the report. These include the perceptions of students themselves (Section 11) and lead teaching staff (Section 13).

**See Section 2.6  
for research & policy context**

Figure 12.1 Take Home Message Component of FFLP: Key elements in the theory of change



## 12.2 Methods

A sample of 35 out of 75 primary and 22 out of 31 secondary schools from phase 1 to 6 were asked to complete the survey as part of the follow up review. For all schools records were collected from lead teachers on the nature and extent of parental and community involvement before and during the programme period. In primary schools children who had undertaken the ‘What’s on your Plate’ survey were asked to take home a sealed questionnaire to their parents or carers. On average 75 questionnaires were distributed through three classes – although this number varied according to the class size. In secondary schools the school office was asked to post the parent questionnaire to the home addresses of a random sample of 120 parents of children in Years 7-10. All questionnaires were returned via a stamped addressed envelope directly to the University. Questions focused on a number of areas: perceptions of school food improvement, children’s involvement in FFLP activities,



the impact of FFLP on discussions at home and subsequent food choices and shopping behaviours. In total 52 schools completed the survey, representing 1083 parents.

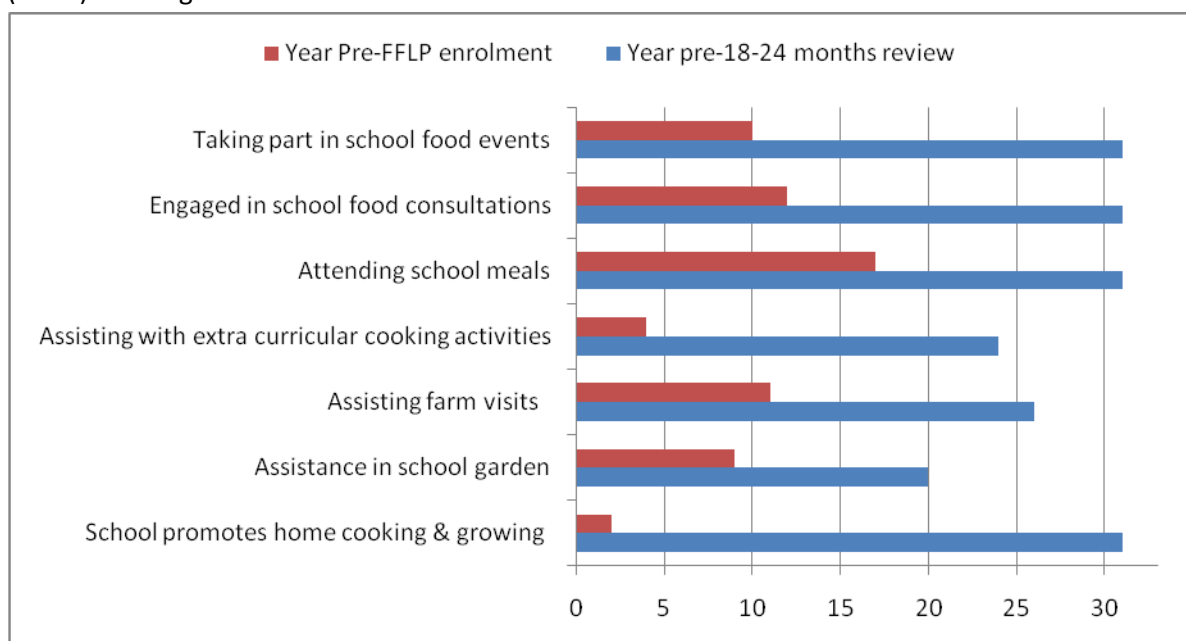
The aim was to establish a purposive sample of parents across schools. This was a pragmatic decision, it was not possible to establish with any certainty response bias which means findings must be interpreted with caution and not generalised to whole school populations. Thirty-three of the schools were primary schools and the target number of completed questionnaires for each school was 24. The range of completions across the sample was between 10 and 38, however 19 schools (58%) did reach the target. The low number of returns for four of the primary schools reflected the small pupil roll (under 100). Reasons for low response rates from some school settings could also have been connected to more general feelings about responding to school requests. Data from OFSTED suggests that survey responses rates from parents are consistently low in schools (see Appendix), so this is not an issue specific to this study.

In total across all primary schools, parents completed 740 questionnaires. Parents reported the ages of their children; these data established that those who responded represented parents who had children across all Year groups. To establish the ages of children represented by survey participants, parents were asked to state the ages of their first, second and third children. The Summary statistics for the ages of the first child are as follows: reception (2%), Years one (7%), two (10%), three (13%), four (17%), five (27%) six (22%), and the final 2% were missing data or reports of older first children at secondary school. In terms of gender, 47.7% of the first children were boys and 51.2% were girls with missing data on the remaining 1.1%. Of the 740 parents, who completed the survey 81% said they had heard of the Food for Life Programme prior to the questionnaire, 19% said they had not and data were missing from 1%. This indicates a strong awareness and coverage of the programme across parents and year groups.

### **12.3 School engagement with parents**

All lead teachers were asked to complete a questionnaire on a number of aspects of parent and carer involvement in their schools. This information was collected on enrolment with the FFLP programme and at the point of the parent survey. On both occasions, lead teachers were asked to provide supporting evidence. At review this took the form of documentary evidence based upon their programme monitoring file. Table 12.1 shows that the primary schools participating in the parental survey had considerably increased their engagement with parents across a number of indicators.

**Chart 12.1 School reports on parental engagement.** Primary schools participating in parental survey (N=33). Missing data N=1



Supplementary data indicates the nature and extent of this engagement. At review schools reported holding an average of 5 whole school events over the previous year. Respondents estimated that – on average - 7 out of 10 children had at least one parent who had attended one of these events.

Ten schools reported that, for each food education activity (cooking, growing, farm visits) at least 8 parents had taken part. On average, 29% of children had one parent or carer who had tried a school meal in the previous year, although evidence of parental school meal tasting varied considerably between schools.

The pattern for 22 secondary schools participating in the parental survey is similar in terms of overall increased reports of engagement over the course of the programme. However, the exposure of FFLP type activities to parents is on a considerably smaller scale and, aside from whole school event and consultations, was reported to be focused on specific year groups for a shorter duration compared to primary schools.

### ***Parents' involvement in school food activities***

Within the survey parents described a number of different types of involvement in school life particularly related to the aims of the programme. These included harvest celebrations (42%), cooking events such as barbecues (37%), food festivals (14%) and food related activities such as events with homemade food (33%). Often events were connected to growing, with 32% of parents' surveyed attending school gardening sessions, or evening taster sessions where school produce and school meal menus were the focus. This may suggest that, for the respondents, food-related activities constituted a significant route for involvement. However, it must be noted that 77.5% of primary and 56.6% of secondary said that they had also been involved in non-school related activities such as sports day or drama performances in the last year.

## 12.4 Perceptions of school meals

A central objective of the Food for Life Partnership (FFLP) is to increase school meal take up through the improvement of school meals. Parents were therefore asked about the levels of school meal uptake. In total 364 parents were asked 'over the last year, has your child had school meals'? All parents responded to this with 44% of the sample reporting that their child had school dinners every day, or nearly every day, an additional 41 % reported their child had dinners on some days of the week or sometimes, only 15% reported that their child never had school dinners. All parents (n=740) reported on the level of free school meal take up, 11% said their child had free school meals, 74.5% did not. There were missing data from 14.7% of the sample. Parents were asked questions about the level of consultation they had received both in relation to school meals and food issues across the school more generally. The majority of parents (61%) reported that they had been consulted about school dinners, 27% said they had not, 11% could not remember or did not know and non-responses was very low at less than 1%. Most parents also felt they had been consulted more generally (67%), 24% said they had not, 8% did not know and non-response were 1%.

Parents were also asked to assess the quality of school meals and the degree to which they had improved over the previous twelve months resulting in 637 parental responses to these questions. The results are illustrated in the following tables:

**Table 12.1 Assessment of school meals**

Quality of meals	Frequency of response	Percentage of total sample
Excellent	220	29.7
Good	389	52.6
Neither good or bad	93	12.6
Poor	21	2.8
Very poor	6	0.8
No response	11	1.5
Total	740	100%

**Table 12.2 Assessment of levels of improvement**

Level of improvement	Frequency of response	Percentage of total sample
Improved enormously	96	13
Got better	350	47
Stayed the same	221	30
Got worse	19	3
No response	54	7
Total	740	100%

This shows positive perceptions of school meal quality and levels of improvement with over 82 % of parents surveyed reporting school meals as either excellent or good. For the majority of respondents, 60% said there was marked improvement and for some (13%) it was felt that the

improvement was very significant. Parents were less positive about the degree to which the school dining area had improved with 51% reporting that it had stayed the same or become slightly worse. Nevertheless, 40% did report improvements, with a significant percentage (8%) reporting dramatic improvements.

### **12.5 Children's involvement in school based food related activity**

In relation to parental perception of children's involvement with food related activities associated with the FFLP, most parents (77%) reported knowing that their children were involved. An important point of note was that, rather than an even distribution of parents who had not heard about the programme across all participating schools there appeared to be clusters of parents in specific schools. This was highlighted again in the more open-ended questions, where these parents reported that consultation and information sharing was poor across all aspects of school life. One parent commented: "I had no idea she was involved in anything so cannot answer. The school is diabolical at keeping parents properly involved, despite their glowing OFSTED". (Q 84:31).

As a result of this involvement parents were asked about whether their child had raised discussions about healthier food choices at home with other family members. There was a very strong endorsement to this question with 77% reporting that they had. 42% reported that their child had raised the issue of fair-trade, 27% had talked about locally grown food. Some children had been able to connect this with the concept of food miles with 15% of parents reporting this had been discussed at home as a consequence of the programme.

A key element of the programme was the development of food culture that encouraged children to cook and try new foods. Although this had often happened at school as part of the programmed activities, a large number of parents (40%) reported their children were also becoming more adventurous at home, talking about new fruit and vegetables in family discussions. This extended to an interest in shopping with 21% reporting that their children were more interested in local shopping. It also included an interest in where food came from, and animal welfare where 23% of parents highlighted free range eggs as something specific that had been discussed. In addition, 25% reported that their child had raised the issue of organic food. In terms of the environment, 20% of parents reported their children had raised the issue of food packaging and its negative environmental impact.

### **12.6 The content and perceived impact of parent-child discussions**

#### ***Primary Schools***

Cooking was a dominant area of conversation, in particular trying out new recipes and excitement about the development of new skills with 72% of parents reporting conversations at home on this topic. Similarly, lots of children (75%) discussed their experiences of growing fruits and vegetables with parents and siblings. The degree to which the children's involvement in FFLP and subsequent family discussions resulted in changes in eating behaviour was also a focus of the evaluation. Parents were asked to rate the degree to which they ate more, the same or less of a particular food types. These included: organic, seasonal, fair-trade, and locally produced food. In addition parents were asked about changes in relation to free range eggs and organic meat. The results of these questions are summarised in the following table.

**Table 12.3 “As a result of your child’s involvement in Food for Life do you eat any more or less of any of the following”**

	More %	Same %	Less %	Non response%
Organic food	11	69	3	17
Seasonal food	33	60	0	7
Fair trade food	25	59	1	15
Local food	26	62	1	11
Free range eggs	25	64	1	10
Organic meat	7	69	3	21

Parents self reported increases in buying seasonal, locally grown and fair trade foods. 25% of parents also said they were buying more free range eggs, though reported a smaller increase in organic meat purchases. Interestingly there was a much higher non-response rate to this question. These non-responders were also less likely to report that they were aware of the FFLP programme in their school. As demonstrated above the numbers of parents buying less of the identified food groups were very low.

Parents were asked to complete a five point Likert scale against a number of statements connected to their perception of how their child’s involvement had changed family knowledge, attitudes and behaviours around a number of key areas. These areas included school involvement; cooking from scratch; growing; attitudes to food, food buying and consumption. The table below summarises the main findings from the 740 parents who took part:

**Table 12.4 “As a result of my child’s involvement with FFLP we have:”**

	Strongly agree %	Agree %	Neither %	Disagree %	Strongly disagree %	Non response %
Got more involved in school life	9	24	50	9	2	6
Learned more about cooking from scratch	13	40	30	10	3	4
Learned more about growing fruit & vegetables	13	40	30	10	3	4
Changed some of the foods we buy	9	35	34	11	3	8
Changed our family attitudes to food	7	31	40	11	3	8
Eaten more fruit and vegetables	11	34	37	10	3	5
<b>Not</b> changed our level of involvement in school life	7	23	35	16	4	15

From a parental perspective children’s involvement in the project had resulted in take home messages that influenced food culture at home. For example, children’s discussions had influenced cooking and food consumption with 38% reporting they either strongly agreed or agreed with a statement suggesting family attitudes to food had changed. In addition, 43% reported changes in buying patterns and 45% reported they were eating more vegetables as a result of FFLP. For many

(53%) these increases were connected also to learning more about growing fruit and vegetables. On the surface it appeared that FFLP had less impact on school involvement. However, there is a plethora of literature that has highlighted the challenges facing schools in their attempts to get parents involved and participating in all school activities. There are particular challenges in areas of deprivation; nevertheless, nearly a third of all parents reported (strongly agreed or agreed) that their involvement had increased.

These changes were explored in more depth, by inclusion of an open-ended question asking parents to share how their child’s involvement in FFLP had influenced discussions or behaviours at home. Many parents (60%) completed this section in some depth. Content analysis identified the following categories: radical impact of FFLP on family decision making; take home message directly influenced others; impact of take home message on family members; positive impact on family and child’s attitudes and behaviour; an increase in the number of family related food activities taking place; no impact and those who felt that FFLP had a positive impact but included some reservations. A discussion of the main themes and the number of times particular issues were mentioned are summarised in the following table.

**Table 12.5 Parent perceptions of take home influences. Themes for written comments.**

	Examples of the types of issues raised	Frequency and % (n=740)
Radical impact on family decision making	Strongly reported changes in family buying sustainable, making healthier, choices sustainable foods, food labelling. Report of good curriculum links or increasing family involvement in buying or choosing foods	11 (1.5%)
Take home message directly impacted on others	Parent reported through FFLP child has directly influence others, and gave examples	9 (1%)
Positive impact on family and child's attitudes and behaviour	Some changes in child or family attitudes to food, some possible changes to behaviour. For example child more willing to try varied / new foods, cooking or growing at home	286 (39%)
Positive impact on family activities	More practice of cooking or growing at home as a result of FFLP or shopping More parental involvement/connection with school	56 (8%)
No impact (positive, negative and neutral)	Hard to establish from the data a view, but no negative comments are made about take home messages. Although no concrete examples of behaviour or attitude changes given, parents positive about the programme overall.  Hard to establish from the data a view, but no negative comments are made about take home messages  Comments that nothing has changed but is negative overall about the programme	73 (10%)

Positive with reservation(s)	Positive but with potential negative consequences	6 (1%)
No comment or not applicable	Nothing written	299 (40%)
Total		740 (100%)

The most common theme was connected to parental reports of the positive impact on family and child's attitudes and behaviour as a result of FFLP. Parents focused in particular on an increased interest in food that included trying new foods and attempts to cook as the following quotes demonstrate:

*Food for life makes my son chat more about everyday foods full stop he passed his comments on food knowledge he has learnt in cooking such as ingredients. (44:03).*

*We buy more of a variety of fruit and vegetables whether they like it or not they will try food now. (55:09).*

*My child is happier to eat more vegetables especially if home-grown following his involvement in a very successful growing season and their subsequent preparation, cooking and tasting the food is grown. (Q 90:06).*

*My child has show more interest in cooking at home and is now more understanding as to why we choose to cook from scratch. Also why we choose foods with less air miles, so although it has not changed our way of cooking it has changed her attitude (Q 84:15).*

The suggestion that the programme was reinforcing parental values about food was perceived as a good outcome, particularly in relation to healthy eating:

*She is very interested in healthy eating as a result we do not eat convenience foods. We eat lots of fruit and vegetables and meat very rarely, mostly fish and eggs that are free range and cheese. (Q 80:17).*

This theme extended into discussions about the positive impact of FFLP on other family activities. In some instances the ability of children to influence family discussions about food led to changes in parental behaviour in relation to buying, growing and aspects of food preparation. At home children had articulated strong views about the importance and implications of buying fair trade, free range products and the consequences of excessive packaging on the environment. As the following quotes demonstrate these discussions had led to children's active participation in shopping trips, that influenced parent's decisions around consumption:

*My child now tells me to buy more fair trade and free range products which I am happy to do. She also tells me what ingredients she wants me to buy for things she likes to cook. She can now make Victoria sandwich cake without help! (57:04).*

*We talk about the difference between organic and non-organic food, fair trade and food packaging. Our daughter come shopping with us and has an active input into our meals. (44:01).*

Other parents reported preparing different kinds of food and in some cases even growing their own:

*We now make smoothies for breakfast with children and grow vegetables in the garden. We are more willing to try new foods. (43:13).*

*My daughter shows more of an interest in food now. We grow our own tomatoes and chillies. We even attempted growing miniature cucumbers. The family as a whole are a lot more aware of the benefits of healthy eating. (27:02)*

For a small minority of parents this had led to radical and significant changes in life style. Parents clearly identified being more aware themselves and having proactive relationships with their children as result of the discussions children had brought home. In the following quotes parents illustrate this with instances of regular meal planning; discussions about shopping; and reductions in buying convenience food.

*Every Sunday we discuss which meals to have for the following week so I can compose a shopping list. My son has used his knowledge from school to help with this and make suggestions in relation to vegetables and healthy dishes such as vegetable lasagne and pasta dishes. (Q 73:06).*

*The children actively dislike convenience food now. I have always bought free range eggs and some organic and cook a lot from fresh, but we eat even less processed and convenience food now I would say. (Q 73:09).*

*My child has shown a greater interest in healthier eating however, it is in other people's healthier eating not his own! He has however, started to try new things which is a huge improvement. He loves to shop and would also like to start cooking meals at home as a direct result of this program. (Q 20: 12).*

*They take the sourcing of food very seriously -- food miles, locally produced supporting local, UK growers and farmers. Similarly fair trade while concern has attended a fair trade conference. We do now buying more fair trade products but not organic as preferred to buy products grown near to home as possible. (45: 21)*

A number of parents who did view the programme positively overall also raised a number of reservations. This was connected to children wanting to buy more fair trade food but parents feeling that this was unaffordable. In the following quote a single parent highlighted the need for the programme to be sensitive to issues of affordability:

*My children each make one meal per week and usually decide what ingredients they need. However, as a single parent on a low income, I feel it is important for them to use what is available at home and be creative. (Q 49:11)*

There were a small number of parents who stated that the reason they felt the programme had not had an impact was because it was difficult to establish what kids have picked up from school. For these parents there had been little discussion at home, however, children had reported enjoyed particular activities such as attendance on the cooking bus. Several parents suggested that the programme had had a negative impact; this was connected to parental perception that the programme was a distraction from more important learning or the messages communicated as part of the programme were inappropriate. As the following quotes demonstrate some parents were particularly concerned about healthy eating messages, particularly around their daughters and the consumption of fat.



*My child's involvement in food for life has had Zero impact (non, nil, zilch) on discussions at home. This is a good thing as time given over to this, to meet the latest government fads is time taken away from real education (by which I mean liberal education rooted in subject-based knowledge, but I doubt you would understand that). (Q 59:51).*

*The message is too much do not enjoy your food, because of its fat content. And not enough focus on balanced diet. Of course they can have cake from time to time as long as they have their vegetables during the same meal. The message should be more moderate especially for girls wearing in a few years time they will become image-conscious. (Q80: 13)*

*As younger children do, my son saw healthy eating in very black and white ways. He decided that all cake was bad after lessons at school. So I had to explain that home-made wholemeal sc ones are fine! (27:55).*

### **Secondary schools**

Much smaller numbers of secondary schools (n=19) took part in the parental survey. School completion ranged from 4-33, 58% (11 schools) reached the target of 24 parents. The age and Year group profile of parent's first children are included in table below and represented parents of 47% males and 51% females, with a non response rate of 2%. Thirty four per cent of all parents reported their child had school dinner's everyday, 31% some days, 17% never and 18% did not respond. In total 343 parents completed the survey representing a less enthusiastic engagement than primary school parents. This may be connected to lower levels of awareness of the programme with only 47% reporting that they had heard of the programme prior to the survey. This compared poorly to primary parents, at 80%.

There were some similarities in terms of the characteristics between the two samples, with 11% of secondary school parents also reporting their child had free school meals. In relation to school food secondary parents reported a lack of consultation about school meals (57%) and food issues more generally (63%). Nevertheless, they had a positive view of school meals with 69% reporting school meals were excellent or good and 42% suggesting that they had improved enormously or at least got better over the last year. In addition 32% reported seeing improvements in the school dining area. Questions connected to discussions about healthy eating, fair trade, local shopping, organic buying, food miles and new fruits and vegetables were not as marked with primary schools (see tables in appendix). This may be connected to a more general reluctance by older children and teenagers in particular to discuss their learning at home. This also had an impact on subsequent changes in parental and family shopping behaviours, though approximately one fifth (20%) of all parents reported increases in relation to buying seasonal, fair trade and local food and included free range eggs. These results are summarised in the table below.

**Table 12.6 “As a result of your child’ involvement in FFLP do you eat any more of the following?”**

	More %	Same %	Less %	Non response %
Organic food	8	63	4	25
Seasonal food	28	57	-	15
Fair trade food	20	59	2	19
Local food	20	53	1	26
Free range eggs	26	55	1	18
Organic meat	5	63	5	27

Far fewer parents responded to the more open ended questions asking about the impact of FFLP on discussions at home. Of those (n=141) who did respond, the most common view (n=73) was that involvement had resulted in a positive impact on the family and child’s attitudes and behaviour at home, followed by no impact (n=50). In terms of these positive impacts one parent suggested, “my child now chooses healthier options at school and this is due to the school’s excellent attitudes towards food “(Q 84:15). Others focused more on the view that the programme in itself could offer good educational opportunities: “my daughter had a great time at the organic farm, a day trip organised by the school as part of the food for life program. I’m sure this was a great educational opportunity for her “(77:51). Those who reported no or a negative impact focused on concerns about the messages their children were getting. This had resulted in some children becoming faddier about food and feeling preached at. Others felt that the programme had no educational benefit. The following quote eloquently highlights this:

*As a result of government and school initiatives for example less salt or sugar less fats etc daughter’s diet has become increasingly difficult as she cannot understand why in moderation and salt sugar fat, etc is not allowed in the food preparation process. We always monitor her diet for health purposes but it has now got to the stage where as parents we completely object to schools telling us how and what to feed our daughter! (77:53).*

*Generally there have been discussions at mealtimes however my daughter still doesn’t enjoy food! We have never been faddy eaters and had never encouraged this in our daughter but being at school has made her more choosy about food she eats but not for the healthier or economically or ethically better. (77:53)*

*The FFLP partnership is one of those things which are an irrelevancy to school education and I would disband and spend the money on more books. (Q 59:51).*

## 12.7 Discussion & Conclusions

Data from primary parents in particular indicated a high level of awareness of the FFLP. These parents reported significant impact on discussions at home around the activities children had been involved with and the learning that had taken place. These had focused on the core aspects of the programme connected to: food production and preparation, healthy eating, school food culture and the environment. In a significant number of families these discussions had resulted in raised family awareness and changes in patterns of purchasing and consumption. For example parents reported increases in buying fair trade, local and seasonal foods. Parents also reported that their children were now trying more new foods and were more enthusiastic about cooking and growing at home. Children wanted to practise the skills they had learnt at school with other

family members, for some children this extended to active engagement with family shopping and menu planning.

These findings demonstrate from a parental perspective that there were behavioural outcomes that could be attributed to the programme. Nevertheless, the limitations of the survey sample and the self reported nature of the data must be acknowledged. Those parents who completed the survey possibly represented parents sympathetic to the programme's aims and objectives. Consequently these data may not include the diverse and sometimes contradictory range of views held across whole school populations. Given the challenge of generating change in food and health behaviours across home school boundaries FFLP did appear to create increased opportunities for families to discuss food, its relationship to family health and developed innovative ways of improving food related behaviours and activities in home settings.

The literature in the field consistently highlights the importance of understanding the social context of behaviour change. This is particularly important when messages are crossing boundaries that generate their own limitations and complexities. For instance parents did report children feeling strongly about buying more fair trade goods but felt unable to respond due to their own financial constraints or felt messages from school sometimes undermined family food views. This raises issues for programme developers about how to create programmes that can flexibly engage children in school contexts but also within their family and community contexts. Although the programme developers created hypotheses about the impact of take home messages, no clear methodology was developed to shape or support productive communication across home school boundaries. Similarly there were no clear strategies of communication to reinforce or further develop the primary messages delivered to the child within the school setting. It is possible parental reporting of outcomes could have been further improved by an enhanced and systematic approach that clearly identified parents and families as secondary audiences.

## 13. Wider Aspects of Programme Influence: School Performance, Pupil Behaviour & Attainment

### Key findings

School Census data show that FFLP Flagship schools, on average, improved their attainment scores over the course of the programme period.

Ofsted reports are more than twice as likely to give FFLP Flagship primary schools a rating of 'outstanding' across 10 criteria for inspection compared to the period before programme enrolment.

For all cases where data were available, Ofsted inspection reports are 30% more likely to comment positively on an aspect of healthy or sustainable food related activity in schools in the period after enrolment with FFLP.

Half of the Ofsted reports analysed clearly comment directly on FFLP and FFLP activities. These comments largely focus on health aspects, although they also include references to a wide range of ways in which school food culture impacts upon performance.

Eight out of ten senior teaching staff in FFLP flagship schools report that the initiative has been effective across a range of school development priorities. 67% of school leads say that FFLP activities fed through into positive Ofsted assessments for personal development and well-being. Almost a third report direct links to improved test results.

School leads reflect wider research evidence on the complex links between health programmes and attainment. Nevertheless respondents, particularly in primary school settings, highlight the educational value of whole school food reforms.

School leads report that the most challenging aspects of the programme concern time and resource implications - and the reform of catering and school meals. The most successful elements identified include the mainstreaming of food education (growing, cooking and farm links) and the strategic approach to promoting the participation and enthusiasm of pupils in school life.

### 13.1 Introduction

Improving pupil behaviour and attainment and wider aspects of school performance are key long term goals for the Food for Life Partnership. As a holistic and multi-level initiative, healthier eating - for children, their families and the community- links through to a wider set of social and educational benefits. This section of the report examines these broader aspects through an analysis of official reports and external reviews of FFLP schools. In order to help interpret this evidence more closely, it

also draws upon the expert perspectives of teachers and senior school management who have had a leading part to play in the programme. Figure 13.1 gives the framework for analysis in this section.

**See Section 2.7  
for research & policy context**

## 13.2 Methods

This component of the evaluation employed a mixed methods approach that drew upon both school records and the quantifiable and qualitative responses of lead school staff. Ellis, Hillier, & Summerbell's (2006) report notes a vast array of objective and subjective measures used in the assessment of educational attainment, learning and behaviour. This is reflected in the considerable range of indices available and the diversity of professional opinion. The approach reported here intended to capture both official data on performance and the perceptions of professionals with insight into the programme's implementation. In so doing the study sought to examine some of the plausible linkages between short term impacts and longer term outcomes by drawing upon multiple data sources.

The sample included all 111 schools enrolled as phase 1 to 6 FFLP Flagships. These were 31 secondary schools, 75 primary schools and 5 special schools from all 9 England regions. The data sources, measures and analysis used are summarised as follows:

### **1. Official school data and Ofsted reports**

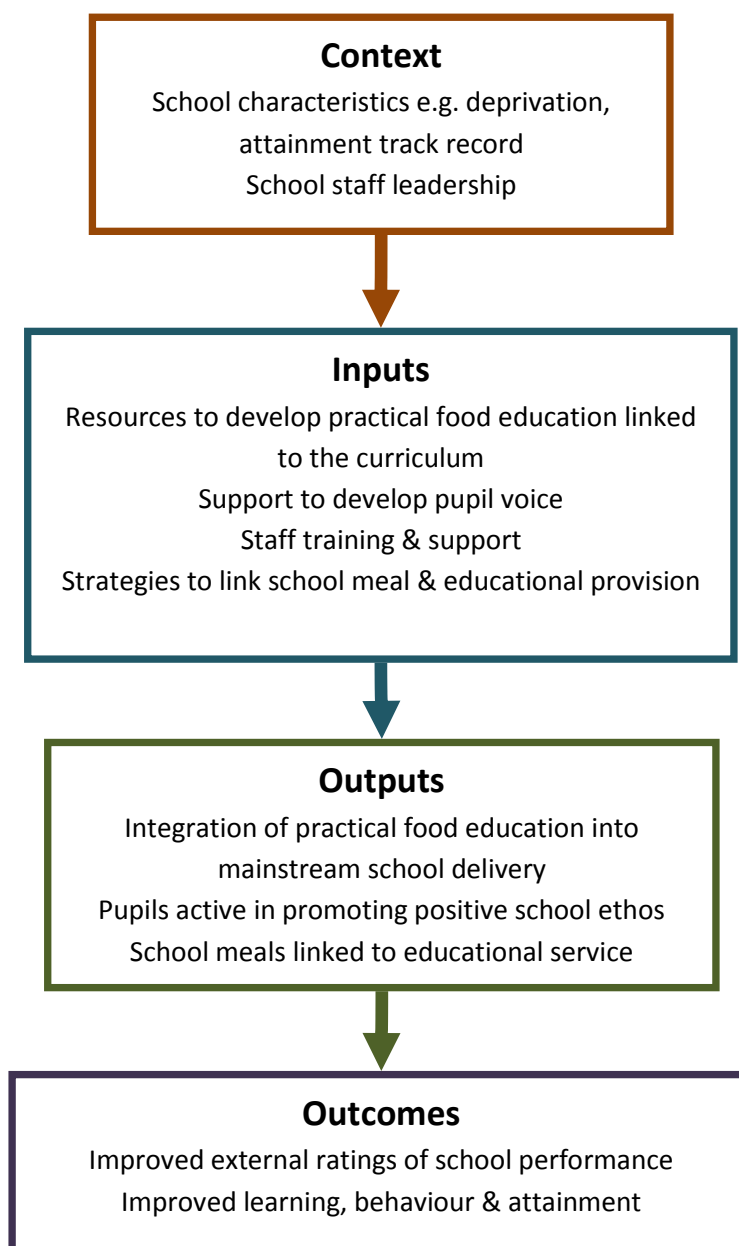
Drawing upon Government School Census and National Statistics data for the period before and after enrolment on the programme we collected information on test scores.

All Ofsted reports were sought for the 1-30 months period prior to enrolment and the 4 to 30 month period post enrolment with the programme. Ofsted inspections are normally conducted on a three year cycle<sup>9</sup>. Due to the phased enrolment process, later phase schools less likely to have post-Ofsted reports. Ofsted letters were included in the analysis. Data on Ofsted judgement ratings and commentary salient to the programme were systematically analysed. Where appropriate for the data, statistical tests were used to examine the strength of association and to compare means.

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<sup>9</sup> Ofsted's inspection process is currently under review (Oct,2010).

**Figure 13.1 FFLP and wider influences on school performance: key elements in the theory of change**



## **2. School lead reports**

All school leads (usually Head teacher or a member of the SMT) were asked to complete a school leads questionnaire at review. These included closed and open questions of attainment, and wider aspects of the programme's impact on the school. The questionnaire was completed alone or as part of an interview by a member of the research team or FFLP regional coordinator. All FFLP coordinators were trained by a member of the research team to adopt a standardised approach interview questions. The research team checked written responses and subsequently contacted school leads for further clarification if necessary. Where appropriate, we used SEFs and FFLP Mark application forms to collect supplementary information. The qualitative data were thematically analysed.

## Findings

### 13.3 School census data on attainment

The attainment scores show that the FFLP Flagship secondary schools attainment scores are slightly lower than the national average but the gap is slightly smaller in 2009 than for the period prior to the programme. The attainment scores for FFLP Flagship primary are slightly greater than the national average and increase in the period following participation in the programme. In both cases the 2009 scores show a decrease in attainment differences over time. The trends in attainment were therefore positive for the study schools, however the sample sizes are too small to make a reliable inference.

**Table 13.1: Flagship Secondary Attainment Scores (Mean average of % GCSEs 5/+ Grades A\*-C)**  
N=31 secondary schools

	Pre-FFLP	Post-FFLP
Academic year	2006	2009
Phase 1-6 Flagship Schools	42.67	49.34
All England Schools	46	50
Difference	-3.33	-0.66

**Table 13.2 Flagship Primary School Attainment Scores (Mean average of Key Stage 2 Aggregate test scores )** N=71 primary schools. Missing data: 4 schools

	Pre-FFLP	Post-FFLP
Academic year	2006	2009
Phase 1-6 Flagship Schools	246.3	254.32
All England Schools	242	247
Difference	4.3	7.32

### 13.4 Ofsted Inspection reports: data collection and analysis

This section reports on the analysis of Ofsted reports for the Flagship schools. Out of the 111 schools, 103 had Inspection reports for the 30 month period prior to FFLP enrolment on the Ofsted website. A total of 70 schools (48 primary, 22 secondary) had Inspection reports that covered both the periods of 1 to 30 months before enrolment and 4 to 30 months following enrolment.

For both pre-enrolment and post-enrolment reports, ten Ofsted judgements were recorded for the 70 schools. The ten areas of judgement included overall assessments of school performance, areas with clear links to the FFLP (e.g. healthy lifestyles), and areas where the links were less direct (e.g. attendance). We also recorded Ofsted judgements for parental engagement and community cohesion, however for these it was not possible to make a before and after comparisons because, as

recently introduced assessment criteria, they were not available in pre-enrolment reports. For each criteria the inspection judgement of ‘outstanding’, ‘good’ ‘satisfactory’ or ‘inadequate’ was recorded. These outcomes were put in the context of national data for England schools.

We also conducted a systematic content analysis of all Ofsted reports with the assistance of the Adobe Systems Inc. electronic search function for PDF documents (see Neuendorf, 2001). The set of salient search words used were:

health\*; food\*; meal\*; dinner\*; nutrition\*; diet\*; garden\*; grow\*; cook\*; farm\*; “fair trade”; sustain\*; MSC; organic\*; SNAG.

All instances of “Food for Life” were logged during the search. Following preliminary analysis ‘sustain’ and ‘organic’ were excluded from the search because both terms produced high frequencies of returns that were not relevant to the study. Following Krippendorff’s (2004) methodology for content analysis each return was then coded semantically using the following framework:

1. “Positive reference”
2. “Negative reference”
3. “Neutral reference”
4. “Duplicate reference”

A ‘positive’ or ‘negative reference’ was used to code the appearance of a search word in the context of an affirmative or critical inspection comment. A ‘neutral reference’ was classified as the use of a search word descriptively with no positive or negative semantic meaning. These search words usually occurred in the standard headings for inspection reports.

A syntactically defined unit was classified as between one to three adjacent sentences that addressed the same subject. Therefore, a search word that occurred in the same syntactic unit as another was coded as a ‘duplicate reference’. The coding protocol and examples for each reference frame are provided in the Appendix.

### 13.5 Ofsted Report Inspection judgements

With regard to the 48 primary schools in the sample of 70, the inspection judgement ratings show considerable improvement when comparing pre-enrolment and post-enrolment reports. Table 13.3 [Appendix] shows that across the ten selected Ofsted ratings the sample of schools were more than twice as likely to receive a judgement of outstanding (17.3% pre: 36.2% post). In table 13.4, paired T tests results showed statistically significant improvements for 7out of 10 recorded areas of performance.

**Table 13.4: Ofsted Inspection Judgements analysed for Flagship primary schools (N=48)**

	Inspection judgements	Paired T test P values
	<b>Overall effectiveness</b>	
<b>1</b>	How effective, efficient and inclusive is the provision of education, integrated care & any extended services in meeting the needs of learners?	0.002
	<b>Achievement and standards</b>	
<b>2</b>	How well do learners achieve?	0.001



<b>Personal development and well-being</b>		
3	How good is the overall personal development and well-being of the learners?	0.083
4	The extent to which learners adopt healthy lifestyles	0.001
5	How well learners enjoy their education?	0.441
6	The attendance of learners	0.000
7	The behaviour of learners	0.224
<b>The quality of provision</b>		
8	How effective are teaching and learning in meeting the full range of learners' needs?	0.000
9	How well are learners cared for, guided and supported?	0.003
<b>Leadership and management</b>		
10	How effective are leadership & management in raising achievement & supporting all learners?	0.003

External factors need to be taken into account when considering these positive trends. Table 13.5 [Appendix] shows that during the study period, there have been annual rises in the percentage of schools receiving positive Ofsted judgements. Nevertheless, even when the national context is factored for, the trends for the primary school Flagship sample is very favourable. There were no clear distinctions in terms of the school deprivation, size or geographical characteristics. This suggests that these positive trends apply to a range of school settings.

The smaller number of secondary schools (22) did not make it possible to conduct a pre- and post-statistical analysis on Ofsted ratings. However the positive trend compares similarly to primary schools.

### 13.6 Content analysis of Ofsted Inspection commentary

For half the schools, the inspection report commentaries clearly recorded either the FFLP programme, or activities related to the programme. Content analysis of the post enrolment Ofsted reports showed that 50% (35/70) made direct and positive reference to FFLP or FFLP activities.

**Table 13.6: Content analysis of Ofsted Reports for FFLP Flagship schools pre- and post enrolment (N=70)**

	Total frequency of search words	Positive reference	Negative reference	Neutral reference	Duplicate reference
Ofsted reports 1-30 months pre-enrolment	683	159	8	75	441
Ofsted reports 4-30 months post-enrolment	581	208	3	129	241

Table 13.6 shows that overall there were more references to the search words in the pre-enrolment Ofsted reports for schools than in the reports for schools in the post-enrolment period. This is likely to be an artefact of revisions to the Ofsted report formats. Over successive years Ofsted have reduced the overall text length of reports: reports published in 2009-10 are considerably shorter than those produced in 2006-7.

Nevertheless despite reduced word length, table 13.6 shows that the frequency of positive references has increased: Ofsted reports are 30% more likely to comment positively on an aspect of healthy food or sustainable food related activity in schools post-enrolment with FFLP. A T-test for the all 70 schools found that the increase was statistically significant (Mean: from 2.23 to 2.83; SEM 0.217;  $t = -2.769$ ;  $P = 0.007$ ). The association for the sub-set of 48 primary schools was highly significant ( $P = 0.001$ ).

Of the 70 post-enrolment Ofsted reports content analysed, 30% ( $n = 21$ ) referred to 'Food for Life' directly and a further 20% referred to an activity specifically linked to the programme. Examples of these specific activities included:

- Using food grown in the school garden for school meals,
- Cultivation of organic fruit and vegetables,
- The role of a pupil food action group,
- Encouragement to cook from scratch at home.

The majority of the references concerned pupils' adoption of healthy lifestyles and were located in the personal development and well-being section of the report commentaries. However Ofsted inspections also linked the programme to a wide range of aspects of school performance. These lend plausibility to an argument that FFLP programme activities are associated with wider aspects of school performance. Examples of some of the links made by Ofsted are provided in boxed section.

Overall, Ofsted reports for primary schools were more likely to comment on the programme compared to those for secondary schools. A number of factors may account for this, however a specific issue is that Ofsted often conduct focused inspections on specific aspects of school provision in the secondary sector. Such inspections may not address FFLP related aspects of provision. Ofsted letters to pupils, where available, were also content analysed. These show that there are cases where Inspectors use achievements in relation to food as a fitting subject for congratulating the children.

## **Ofsted Inspection Commentary on Primary School Food Subjects**

### **Educational value of school meals**

They have a very good understanding of how to stay healthy. One of the main reasons for this is because they eat in the school restaurant 'La Cocina', which provides freshly cooked food, which has been locally sourced, including produce from the school allotment in the summer. This means that a much larger proportion of pupils now eat a hot meal at lunchtime.

*#48) Mar2009*

### **Experiential learning for a healthy lifestyle**

The extent to which pupils adopt a healthy approach to life is outstanding. This is seen in the choices they make for their lunch time meal, their understanding of what constitutes a healthy diet, the

experiences they gain from cooking and growing their own food.

#75) Apr2010

### **Connection between food sustainability and healthier eating**

Pupils have an exceptionally good understanding of the importance of a healthy lifestyle reflecting ...its recognition as a Food for Life flagship school. They know what constitutes a healthy diet and, for example, are growing organic potatoes using environmentally sustainable compost produced by the school wormery. Ethical issues are integral to school initiatives and, for example, pupils are challenged to think about the growing and procurement of food as part of the Food for Life project.

#92) Mar2010

### **The role of food in the creative curriculum**

Much of pupils' personal and academic development comes from their engagement with a creatively planned curriculum. Within it, teachers enliven lessons with innovations to catch pupils' interest and deepen their understanding. Examples include successful lessons in philosophy, involvement in a community effort to grow and eat healthy food and good links with children in other countries.

#26) Jan2009

### **Active pupil voice and personal development**

The 'pupil voice' is heard on a range of important issues through their participation in the school council and other groups. The 'Food for Life' group has been actively involved in helping to promote pupils' excellent understanding of healthy foods and lifestyles.

#67) Jan2009

### **The school-home connection**

Staff have planned a curriculum which meets pupils' needs well because they find it engaging, relevant and fun. A good example of this is the innovative work on the 'Food for Life' project, which has been extended to involve parents in providing healthy meals at home.

#26) Jan2009

### **Food learning and citizenship education**

The 'Food for Life Programme' which involves the growing of vegetables in the school garden to enhance the lunchtime menus and cookery classes is particularly interesting. A good programme for social, health and citizenship education pays dividends in terms of outcomes in pupils' personal development.

#55) Jun2009

### **Food and civil society**

The 'Food for Life' initiative, and close links with outside agencies such as 'Water Aid', are increasingly helping teachers to link subjects together so that pupils can see the relevance of learning, and also promotes community cohesion at a global level.

#50) May2009

### **School as a hub for food culture innovation**

Pupils' understanding of ...awareness of healthy lifestyles [is] outstanding. The school's status as a Flagship Food for Life Partner, providing hot meals to five other local schools as well as subsidising lunches for its own pupils, is rightfully valued by staff, pupils and parents.

#57) May2009

## **Ofsted Inspection Commentary on Secondary School Food Subjects**

### **Linking food technology education to the school meals service**

Students have a good grasp of healthy eating fostered, for example, through enthusiastic involvement in a partnership between food technology lessons and the school catering service

#68 Nov2008

### **Role of food education in promoting take up of school meals**

Students understand the importance of healthy lifestyles through work in lessons, assemblies and the additional enrichment activities such as the 'Food Fayre' and the visit of the 'Cooking Bus'. The number of students taking school dinners has significantly increased showing that they appreciate the healthy food on offer.

#17 Oct2008

### **Food education as an element of PSHE**

Pupils are well informed about the need to lead healthy lifestyles and this is well promoted through the specialist status during food technology lessons and through the outstanding programme of personal, social and health education. A high proportion chooses to eat healthily from the exceptional range of nutritiously balanced food available within school.

#62 Sep2009

### **Reformed school meal provision**

Despite the limited lunchtime facilities, a large number of students are able to have a healthy lunch through an excellent, well-thought-out lunchtime rota.

#6

### **Integration of PSHE and school catering service**

The school's commitment to healthy living is exemplary. Use in the canteen is made of vegetables grown by students and parents in the school's allotment. Innovative practice includes a teacher in charge of the hospitality and catering course who oversees the catering in the school canteen, and is also involved in the planning of the personal, social and health programme delivered to students. All this ensures that students are prepared very well to lead healthy lives.

#37

### **Parent engagement in school life**

Students are actively encouraged to opt healthy lifestyles and benefit from the school's approach to the 'Food for Life Partnership' which involves parents and reinforces key messages about healthy living.

#65

## **Ofsted Inspector's Letters to Pupils on School Food Subjects**

The school looks after you extremely well and gives you really good support when you need help. We especially liked the way they help you keep healthy and learn to grow food for the school meals.

#7) Jul2008

You enjoy the many opportunities that the school offers, both in lessons and the interesting visits and clubs. We were very impressed by your school garden and by the 'Chestnut chickens'.

#38) Apr2009

You are lucky to be in a school with such good facilities, including specialist rooms for art, cooking, music and dance, as well as the vegetable garden where some of you help.

#47) May2008

## **13.7 School lead reports on Food for Life Partnership and school performance**

This section analyses the perspectives of school leads on the programme and its impact on wider aspects of school performance. 95 out of 111 schools responded: 77.8% (71/95) of the forms were completed by the head teacher or member of the senior management team (SMT), the remainder was completed by delegates of the SMT with the role of leading on the FFLP programme in their school.

Table 13.7 shows that, on the whole, school leads believe that the programme has been highly effective across a number of domains of whole school food culture. Furthermore, the responses also show that the areas in question are clearly linked to development priorities for the schools. The areas for the clearest positive ratings were for the overall vision for improving school meal culture and pupil involvement in school food issues. The areas where ratings are less strong concern impact on pupil behavior, attention and attainment; parent involvement; and school meal take up.

**Table 13.7 Responses to the questions: With regard to the following areas (1) how effective has FFLP been in helping your school make improvements? (2) how important has this area been as a priority for your school?**

N=95. Note: percentages have been rounded to the nearest whole number, therefore percentages may not total to 100%. \* = Missing data for these items.

	Perceived effectiveness of FFLP in assisting the school				Level of priority for the school			
	Very effective	Effective	Neutral	Ineffective	Very Important	Important	Neutral	Unimportant
<b>A whole school vision for transforming food culture</b>	56.8%	36.8%	4.2%	2.2%	58.9%	34.7%	5.3%	1.1%
<b>Forums (e.g. SNAG) for leadership, inclusion &amp; action on food in school</b>	45.3%	47.4%	6.4%	1.1%	37.9%	49.5%	10.5%	1.1%
<b>Enhancing the curriculum through food education</b>	38.9%	47.4%	12.7%	1.1%	47.4%	38.9%	8.4%	0%*
<b>Pupil involvement in school food issues</b>	49.5%	45.3%	3.2%	1.1%	57.9%	33.7%	1.1%	1.1%*
<b>Parent involvement in school food issues and wider school life</b>	11.6%	69.5%	16.8%	2.1%	44.2%	44.2%	6.3%	1.1%*
<b>Partnership work with local schools, farmers, businesses &amp; other agencies</b>	34.7%	53.7%	10.6%	1.1%	34.7%	50.5%	11.6%	0%*
<b>Healthier food messages to pupils and their families</b>	36.8%	58.9%	4.2%	0%	61.1%	32.6%	2.1%	0%*
<b>Increasing school meal take up</b>	17.9%	44.2%	29.6%	8.5%	41.1%	43.2%	7.4%	4.4%*
<b>Provision of more local, seasonal and sustainably sourced food in school</b>	40.0%	46.3%	11.6%	3.2%	41.1%	43.2%	7.4%	1.1%*
<b>Improving pupil behaviour, attention and attainment</b>	17.9%	37.9%	42.2%	2.2%	51.4%	29.6%	16.9%	0%*

School leads were asked to judge the extent to which their school’s participation had an impact upon the school’s Ofsted inspection reports. Matched analysis to the Ofsted inspected schools reported on in the section above shows that, overall, the perceptions of school leads corresponded

to the content analysis findings. Table 13.8 shows that school leads clearly identified the programme’s link to the Ofsted assessment area of ‘pupils’ personal development and well-being.’

**Table 13.8 Responses to the question: Has participation with Food for Life Partnership had an impact on your school’s Ofsted inspection reports?**

Note: percentages have been rounded to the nearest whole number, therefore percentages may not total to 100%. Base =70

	<i>Yes, clear impact on Inspection Report (%)</i>	<i>Uncertain impact on Inspection report (%)</i>	<i>No, no evident impact on Inspection report (%)</i>	<i>No response (%)</i>
<b>Achievement and standards</b>	32.8	34.3	21.4	11.4
<b>Pupils’ personal development and well-being</b>	67.1	20.0	4.2	8.5
<b>The quality of teaching and learning</b>	35.7	22.8	27.3	14.2
<b>Curriculum provision</b>	54.2	21.0	12.9	11.9
<b>The care, guidance &amp; support provided by the school</b>	45.7	24.3	15.7	14.3
<b>The leadership and management of the school</b>	35.7	26.8	21.4	16.1
<b>Overall impact (mean)</b>	<b>45.2</b>	<b>24.6</b>	<b>17.2</b>	<b>12.7</b>

School leads were asked to further assess the impact of the programme on wider aspects of the school’s performance. Table 13.9 shows that the programme was very positively linked to most of the areas in question; however fewer respondents linked the programme to achievement and attainment, and National Curriculum test results.

**Table 13.9. Responses to the question: Has participation with Food for Life Partnership contributed to any of the following areas?**

Notes: Percentages have been rounded to the nearest whole number, therefore percentages may not total to 100%.

\*Bases change due to late introduction of some questions to the questionnaire

	<i>Yes- clear contribution(%)</i>	<i>Uncertain contribution(%)</i>	<i>No evident contribution(%)</i>	<i>No response(%)</i>
<b>Achievement and attainment. National Curriculum test results</b> Base=95*	29.5	45.3	24.2	1.1
<b>Staff development e.g. CPD, team building, work satisfaction</b> Base=74	84.0	0	2.0	14.0

<b>New awards, recognition, grants and/or funds</b> Base=95	72.3	3.2	21.3	2.7
<b>Sharing good practice with other schools</b> Base=74	75.5	4.1	8.2	12.2
<b>New links with other organisations</b> Base=95	84.1	2.3	11.4	2.3

For all the areas reported on above, school leads were given the option to provide additional written commentary or - in the case of interviews – recorded verbal commentary which was then transcribed. This commentary reveals some layers of complexity to the subjects and the impact processes addressed. Respondent’s perceptions of the most challenging and most successful aspects of the programme are summarised in the following tables.

**Table 13.10 Themes in response to the question: What have been the most challenging or difficult aspects of the programme for your school?**

78/95 responded to the question. [Note: non respondents likely to have addressed this question elsewhere in their report]

	Frequency
Staff time, staff costs associated with developing management, development of school food policy and delivery of activities	22
FFLP criteria: meeting the criteria, paperwork	17
Caterer commitment	16
Increasing meal take up	15
Food sourcing	14
Parent and wider community involvement	14
Facilities and capital costs for educational cooking and growing. Farm link costs	10
Momentum. Maintaining change over a long period of time	8
Kitchen and dining hall facilities and capital costs	6
Making links with other schools	5
Problems with FFLP communications and staff support	3

**Table 13.11 Responses to the open question: What have been the most successful aspects of the programme for your school?**

86/95 responded to the question. [Note: non respondents likely to have addressed this question elsewhere in their report]

Successful area	Frequency
Development of garden enhanced education	35
Development of cooking education	28

Promotion of whole school food culture	23
Development of farm link and sustainable food education	20
Promoting pupil participation and enthusiasm in school life	20
Parent and community participation in school life	18
Promotion of a healthy lifestyle / healthy eating	16
Improvements to school meal provision	12
Improvements to school dining hall, dining ambience	11
Development of links between teaching & cooking/catering staff	6
Development of links with other schools and outside agencies	6
Creation of new food sourcing opportunities for the school	5

### 13.8 Qualitative analysis of responses from school leads

In addition to the open question on successes and challenges, schools were asked to make further comments to the closed questions reported on above. These additional written (or transcribed verbal) responses provide an important resource for understanding the interaction between programme processes and the school setting.

#### ***Ofsted Inspection views on FFLP: school lead perceptions***

Some school leads felt that FFLP formed a very visible aspect of the school's work during the Ofsted inspection and that this was reflected in their reports.

*In our recent Ofsted we were congratulated on achieving our Silver Mark. Our work through FFLP was which is clearly visible throughout the school was well noted by the inspectors. #8*

*The children were very vocal during OFSTED. We were able to demonstrate children's' confidence and self-esteem with the example of the Pass It On event where pupils presented to and taught other children and parents. This came through in the report. #21*

*We showed them [Ofsted] how the school garden has helped to develop personal skills and well being, as well as community cohesion. #18*

However some school leads reported that FFLP related work had not been a focus for the Ofsted Inspection and therefore had gone unrecorded.

*We feel that participation with FFLP has made an impact on these areas, as frequently referred to in the SEF, however OFSTED did not write about it in their inspection report. #100*

*OFSTED is only driven by attainment which influences all judgements and did not report favourably on aspects of healthy eating within school. #14*

*We had a recent OFSTED inspection. The school promoted FFLP but OFSTED weren't interested. However the Statutory Inspection of Anglican Schools (SIAS) was positive and very interested. #40*



### ***Pupil attainment, academic achievement***

The responses to closed questions suggested that many school leads were not certain about the impact of the programme on student attainment or academic achievement. Many school leads provided written explanations that they felt unable to determine evidence of impact on attainment. Nevertheless these judgements were often qualified by supplementary points about how the programme activities provided a platform for attainment outcomes.

*This impact on attainment is not quantifiable, however the contribution to the curriculum and family dining has increased enthusiasm and motivation #87*

*It's very hard to cite improvement in behaviour - apart from during cooking skills. #21*

FFLP related activities were reported to have an important role in the education of children who were struggling with standard educational provision. The following respondent provided an illustration of this work:

*A small number of pupils with learning/behaviour difficulties have been taken off time table for the last 2 years. They have had a curriculum based on food technology - growing, planting, cooking, eating. Their behaviour and attitude to learning increased immeasurably as they took on responsibilities, devised and prepared meals, ate with invited adults and peers in a social setting. Socially and verbally the pupils increased skills, their confidence soared, and they learned from the focus on organisation, purposeful work tasks, sharing and nurturing. # 88*

For some schools, existing good academic achievement meant that FFLP was unlikely to make a significant direct impact:

*Pupil behaviour is generally good so really FFLP has simply helped us maintain this. #40*

*Our academic achievement levels were already above national averages in the core subjects, but FFLP has greatly enhanced achievement in other subjects. #101*

Some respondents felt that they could confidently make some connections with attainment. A feature of this feedback was the emphasis on the role of the creative and experiential learning associated with FFLP activities

*The new Creative Curriculum has been the catalyst for an improvement in children's learning experiences, and FFLP has been built in to the curriculum from the start. #101*

*FFLP has helped us move better across curriculum, helped joined up thinking. #64*

The connection between healthier school food and children's performance was less frequently raised. For example:

*Food for Life has had general links with behaviour by helping promote a balanced diet. #41*

### **Wider effects of the programme**

The quantitative data reported above shows that school leads frequently reported effects of the programme on areas of school performance that are indirectly connected to FFLP. The Ofsted inspection judgements and commentary also suggests wider links. With regard to care guidance and support school leads supplemented these connections with examples:

*Keeping the chickens & guinea pigs has helped children with self esteem issues/children who struggle at school with friendships and issues such as bereavement #87*

*The gardening and cooking activities provide vital life skills for the children. FFLP radically improves all the aspects of care, guidance and support. #101*

*Our exclusions have gone down (since participating in FFLP). #38*

The programme was also reported to have an effect on aspects of school leadership and external engagement with the wider community.

*FFLP has united the leadership team, and created excellent working relationships between teams (e.g. dining room staff/ kitchen staff/children/parents) through the SNAG group. # 101*

*It's helped develop community links with local Indian restaurant #34*

*FFL has helped with community cohesion. Our links with the allotment community are now a reality. #72*

*This project has given children real first-hand experience and enabled the school to broaden its relationships with the wider community, for example, we have an active group of grandparents who regularly help #7*

*FFLP has played a key role in our Extended Schools and Community Cohesion. #5*

### **Whole school food culture reform**

One noteworthy finding recorded in Table 13.11 is the relatively high number of respondents reporting wider whole school system changes. These were coded as the promotion of whole school food culture. Examples of these responses show how the programme is clearly interpreted as a package that integrates different spheres of school life:

*The whole process has changed the outlook of the school. We have wider knowledge across the board about the school's vision and philosophy. We've provided the best possible education and welfare based upon a foundation of food culture and well-being. #2*

*FFLP has focussed and united the staff and pupils in shared vision in the development of a creative curriculum with a green ethos for our school. #49*

*Whole school involvement has helped transform our culture. This has worked having committed and enthusiastic and hard working co-ordinators. #23*

*The general approach of the whole food process; growing is embraced and celebrated, this then feeds in to the school dinners where a positive approach to food and eating is developed. #7*

*Collaborative work inside college between several facilities, and outside agencies and schools [has been successful]. This has been helping with applications into other projects. Here the efforts of three people separately aren't as effective as those being combined and creating more momentum with often unexpected results. #85*

*The way the whole programme links together & getting the programme to cascade within the school. #81*

### 13.9 Discussion and Conclusions

Whilst commitments to improve school meals and school food education have been primarily made on health grounds, there is considerable interest in whether such these activities may also impact on behaviour, learning and performance. Yet the links between multi-component programmes and wider aspects of school performance are unlikely to be straightforward. In the context of this study it should be noted that the research design allows for the exploration of associations – but can make no causal inferences from the data. Nevertheless the mixed methods approach here have sought to combine an analysis of official data and expert views to provide a basis for judgements based upon plausibility and reference to external evidence.

The findings show that there are differences in Ofsted Inspection reports on schools before and after enrolment with FFLP. Comparing the two data collection periods, Ofsted Inspection Reports are twice as likely to rate schools as Outstanding across ten areas of judgement on school performance for the period following FFLP enrolment. Content analysis of Ofsted references to food in school show that Inspectors are likely to comment positively on FFLP activities in their reports. These comments are mainly concerned with the healthy lifestyles of children, but also include references to a wider range of ways in which school food culture impacts upon performance. These positive comments show a significant increase in comparison to the period before FFLP enrolment – despite reduced length of the later reports.

School leads report very positively on the impact of the programme across a wide range of domains of school life. They are considerably less certain in their assessment of impact upon attainment and academic achievement. In some cases this reflects the lack of clear links between inputs and outcomes as perceived by lead actors in the programme setting. Equally School Census data on attainment results cannot offer clear supporting evidence. However school leads assessment of impacts on Ofsted ratings and commentaries broadly concur with the documentary evidence. For school leads, particularly in the primary sector, there were some areas of agreement on the positive links between FFLP and sound educational values. Moreover they clearly account for the linkages – or causal mechanisms – that connect the programme to children's personal development and wellbeing and to wider processes of school improvement. Some of these claims reflect educational research in similar contexts (Houlihan & Waring, 2008). These holistic perspectives also reflect current educational theory and research on the importance of a creative and empowering curriculum within the school environment (Cambridge Primary Review, 2009; Rose Review, 2009).

## 14. Study Conclusions and the Whole School Food Programme Approach

### 14.1 Introduction

This section of the report revisits the central research questions that have informed the evaluation. It brings together different elements of the evaluation to examine the theorised connections between the delivery and the longer term goals of the programme. As a whole school initiative, the section explores links between different components of the programme working together.

### 14.2 Food Sourcing

Although limited in its scope, the analysis of FFLP food sourcing activities presented in this report show clear direct benefit in terms of the numbers of local and organic producers supplying FFLP schools. Impact on MSC producers was less pronounced, mainly because sourcing requirements within the award criteria were less and at least one established food distributor was able to supply an MSC certified line along with its conventional range of products. Nonetheless, the reported increase of 73% for local suppliers and 50% for organic suppliers represents significant new market opportunities when extrapolated across the programme.

This analysis is unable to take account of displacement effects (i.e. producers gaining new local contracts but losing distant contracts as a result of FFLP). Moreover, apart from Gold standard schools, values and volumes of these foods are likely to be small unless part of a larger procurement contract. Evidence does exist however, of Local Authority caterers altering their sourcing arrangements for all schools to assist mark attainment for a small number of FFLP flagship schools. In terms of impact on individual producers, our data shows a large presence of relatively small producers for whom even individual school supply arrangements are likely to be significant. Public procurement contracts are, in principle at least, more secure than other supply arrangements for producers although margins tend to be lower as well.

The increase in awareness and non-school consumption of local, organic and MSC products demonstrated by pupils and their families as well as other stakeholders involved in the programme (including teachers and catering staff) will no doubt also have a positive impact for producers.

In terms of integration with other elements of the programme, both producers and caterers have clearly become more involved with school based food education. Although there was little evidence of many producers both supplying food and hosting farm visits, FFLP should be confident that programme interaction produced a positive two-way learning experience for many farmers and producers.

As existing literature demonstrates, sourcing from local and organic producers stimulates additional premiums, principally in terms of economic and environmental benefits, than conventional producers (Thatcher & Sharpe 2008, Lancaster & Durie 2008). A more complete account of the

impact of FFLP involvement on local, organic and MSC producers will be provided in the Evaluation Food Sourcing Case Study report.

### 14.3 Healthier eating and food sustainability awareness

After 18 to 24 months of programme delivery, the evaluation finds plausible evidence of an impact on Year 5 and 6 students' attitudes towards healthier eating and sustainable foods. As a whole school approach there are several evidence-based lines of connection between the programme activities and these longer term behavioural goals. Teacher reports and monitoring records from schools show a considerable upward shift in the scale, integration and range of educational sustainable food activities over the evaluation period. This was accompanied by a rapid process of staff training, improvements in facilities and redeveloping a curriculum for experiential learning.

Activities have increased most markedly in primary schools and these were focused on gardening, practical skills based cookery and engagement with topics on sustainable food. Visits to farms and food businesses were reported as less frequent -but high impact- activities. Through food action planning, students are reported to actively carry this learning into the school environment, for example, with respect to helping to reduce waste at school lunch, running healthy tuck shops or assisting with whole school food celebrations.

This engagement fed through into student questionnaire reports where it was evident that some school based activities had increased amongst the Year 5 and 6 groups that we focused on. Student attitudes, particularly in primary settings, were already very positive. Sustainable food education is clearly linked to student attitudes which indicate the value of this learning. The association between student attitudes and FFLP related activities, is reported in the questionnaires, lends support to the potential for education on sustainability to influence health behaviour.

Increased take up of school meals is itself predictive of healthier eating given external evidence on the better dietary value of school meals as opposed to packed lunches (e.g. Rees et al, 2008). Over 17% more children rated school meals positively, and over 24% more children rated their dining room positively compared to baseline respondents. Over half of children thought that school meals had improved in the last year. Responding to an open question, over one third of children wrote that they thought the meals had become healthier and over 30% wrote that there had been improvement to their dining room. This evidence suggests that healthier school food has increasingly become an established aspect of provision.

Amongst Year 5 and 6 students, increased self reported consumption of fruit and vegetables suggests behavioural impact. However it is important bear in mind that the sample comparison is between two cross sectional studies. Other factors may account for the differences including influences outside the programme itself. Despite larger sample sizes than Health Survey for England, it should also be recognised that the analysis of children's consumption in this evaluation could be questioned, not least because of issues with the reliability of self report data.

At a school level, the contextual factors of higher socio-economic status (measured as lower percentage of free school meal entitlement) and home background appear to be predictors of healthy eating behaviours. The data show that the most promising programme change mechanisms

the experiential and skills based learning elements: notably practical gardening, food preparation and farm link activities. As a holistic intervention, a general stimulus effect is also probable.

Supplementary data tracking a sub-sample of six primary schools suggests that behaviour changes occur in the first year of the intervention, and are sustained one year after most FFLP external staff inputs have withdrawn. Behaviour changes are most evident amongst children in the upper middle bracket of fruit and vegetable consumption.

The secondary school surveys with Years 7 to 10 produced less conclusive results. At follow up there were positive trends for increased fruit and vegetable intake, and attitudes towards: the school meal service, cooking, growing, food sustainability and healthier eating. However none of these positive trends were statistically significant. Student questionnaire reports and school lead reports indicate quite limited exposure of students to the combined elements of the programme. This may account for the results, although it could also be the case that a longer time period is needed for observable changes to occur.

Nevertheless the secondary surveys provide valuable insight for health and sustainability programmes in schools. The findings suggest that action to promote practical food skills and interest in environmental sustainability is needed to address deficits in the learning experiences of young teenagers.

#### **14.4 School Meal Take Up**

The evaluation finds that the FFLP Flagship school programme is associated with increases in school meal take up that are above national trends for both paid and free school meals. Increases in take up are evident within the first year and are sustained into the second year of the programme.

For primary schools increased take up was greater amongst those schools supplying higher quality data. This might be because these schools and caterers were keen to evidence their positive results. However better monitoring in itself is also likely to help schools and caterers track the progress of their reforms –which can link through to clearer and more focused action (Ofsted, 2010). Poor quality monitoring at the local level has been reported elsewhere (ibid) and this evaluation has also found that this did not assist in their food action planning.

The take up trends in relation to FFLP Mark status was found to be broadly positive, although the specific added value of stakeholder involvement proved harder to evidence. The link between programme actions and free school meal take up is an important connection. This may reflect evidence of the building of greater trust and confidence in the quality of school meals amongst parents and students. It also needs to be recognised that external economic trends are likely to have played a role for some schools. Nevertheless these trends suggest that participation in the FFLP Flagship programme has been effective for schools with in areas of high social deprivation.

In addition to the evaluation data provided in the school meal section of the report, other data sources lend plausibility to the effectiveness of FFLP strategies. Records provided by schools show a considerable volume of activities from different quarters to promote school meals. These include school food action planning, closer integration between food education and the work of the school kitchen and, to a lesser extent, reforms to school food procurement.

In primary school settings these changes are evidenced in participant feedback. Questionnaire survey results find that students rate school meals more positively as a result of FFLP. They also report that school meals have become healthier, tastier and better presented and that the dining environment has improved. 60% of parents surveyed reported that they believed school meals had markedly improved. Student and parent feedback from secondary schools is more mixed, although positive overall.

#### **14.5 Home influences and parental engagement in school life**

The evaluation suggests that from a parental perspective schools adopting the FFLP approach influenced parental behaviours towards healthier & sustainable foods. This was characterised by parents as increased discussions at home about food and more involvement in food based activities such as cooking, growing and shopping. Findings from children supported this with 35% reporting they had helped to grow fruit and vegetables at home in the last year. For some families this translated into changes in patterns of buying and consumption, particularly in terms of healthier, locally produced, fair trade and seasonal foods. These are findings that are consistent with others in the field that have highlighted the impact of children's learning in influencing family eating patterns (Heim et al 2009; Demas 1998). In particular, parents talked with enthusiasm about their children taking more interest in what they ate, how it was produced and a desire to try new foods. Writers such as Byron (2009) have argued that engaging with children in discussion about areas they are enthusiastic to share is a key way of maintaining open dialogue with children and young people, as it is unthreatening. On a practical note, parents did raise some concerns about the financial implications of making changes for those on low incomes and aspects of the health promotion messages delivered by the programme. In particular, those connected to promoting foods with a low fat content for children and young people already concerned about body image and dieting.

In addition, the proposition that the FFLP approach encouraged parents and community members to get more involved in school life" certainly resonated with increased participation in a whole number of food related activities. Discussion and involvement included not just parents but also extended families (grandparents, & siblings) and engagement with other members of the local community. Moreover, two thirds of the parents who took part in the case study suggested it had changed their interest and involvement in school life. Activities associated with FFLP attracted high levels of parent engagement and acted as a basis for involving a wide range of parents in school life. This is important given the recognised challenges school face particularly within deprived communities in successfully engaging and retaining parental involvement.

This is supported in the analysis of Ofsted Commentaries where positive reference to FFLP or its activities were connected to the school-home connection; reviewers suggested that this had culminated in parents providing healthy meals at home. These community connections were also highlighted in the school lead review where the programme was reported to have an effect on aspects of school leadership and external engagement with the wider community. School leads highlighted the close networks of teams between dining room staff/ kitchen staff/children/parents that had worked together to maximise the impact of the programme. This had also enabled the school to broaden its relationships with the wider community, including for example active groups of grandparents who regularly helped in extracurricular activities. Some of these links extended to

external agencies such as 'Water Aid', which were used to link subjects together so that pupils understood the relevance of learning, and also promotes community cohesion not only at a local but also a global level.

Nevertheless, those parents who most actively engaged with this evaluation are perhaps those most sympathetic to the programme's aims and objectives. These data may therefore not include the diverse and sometimes contradictory range of views held across whole school populations. In addition, given the literature in the field highlights the complex and challenging nature of communicating messages across home school boundaries, an enhanced and systematic approach that clearly identified parents and families as secondary audiences may have improved outcomes still further.

#### **14.6 Wider school programme influences of the programme**

Official data shows a diverse mix of schools participating in the evaluation in terms of sector, region, size, catering model, free school meal eligibility, pupil ethnicity and attainment. The FFLP approach has therefore been implemented in a wide range of school and catering contexts across England. External research suggests that the links between health promotion initiatives and school performance is likely to be shaped by these factors. Moreover the links between programme inputs and educational outcomes are likely to be complex and longer term in character.

In terms of shorter term influences, the evaluation has found that external official school assessments by Ofsted often comment positively on FFLP activities. Such inspection commentaries go beyond the health aspects to identify wider educational benefits of the programme. Comparing the periods before and after programme participation, Ofsted Inspection Reports are twice as likely to rate schools as Outstanding across ten areas of judgement on school performance in the period following FFLP enrolment. Whilst the connections are not always easy to draw, 45% of school leads reported that the programme has had a clear impact on their Ofsted results.

Evidence from official data sources for changes in test results, absenteeism and other indicators apart from Ofsted reports are inconclusive. These processes are best examined over a longer period of years and with a larger sample of schools.

Although direct connections were not always evident, one third of school leads associated FFLP activities with improved attainment and behaviour. As research on other health promotion initiatives has found (e.g. Houlihan & Waring, 2008), teachers identify the holistic programme approach and whole school vision as underpinning drivers for creating better educational outcomes in their schools.

The FFLP programme design gave emphasis to the role of programme activities in promoting enjoyment and confidence to grow and prepare food and to understand food origins. The evaluation surveys suggest positive changes in these areas, especially in primary school settings. Parent and teacher reports suggest that improvements in these areas contributed to wider learning outcomes. The connections were therefore widely perceived by those engaged with the FFLP approach, even where clear outcome evidence was not necessarily available.



### 14.7 Strengths and Limitations of the study

The methodology section outlined a number of challenges in the evaluation of complex community based programmes. The theory of change approach adopted in this study helped track the links between programme inputs through to early evidence of outcomes. The scope and depth of data collection has provided an opportunity to test the mechanisms for change articulated in the FFLP programme model.

Nevertheless the findings of this report need to be put into to context of the scope of the evaluation and the research design. There are a number of aspects of the programme that were not included within the scope of the evaluation commission. Some aspects include:

- an economic analysis of the programme,
- in depth analysis of the phase 1-6 special schools,
- evaluation of longer term development and outcomes of the programme,
- evaluation of the FFLP partnership schools,
- analysis of clusters or networks of schools adopting the FFLP approach,
- analysis of the wider policy impact of the programme.

Whilst the study has a pre- and post- design, there is no external comparison with schools outside the Flagship programme. This limits understanding of how schools can employ FFLP approaches in the absence of FFLP Flagship programme support. The original evaluation proposal included a matched comparison with non-Flagship schools, however this component of the evaluation was not finally commissioned.

Some other limitations to the evaluation findings include:

- the self selected programme recruitment process,
- the subjective nature of the evaluative ratings and qualitative feedback from school and caterer lead staff,
- scope for an approval bias in the responses of some participants closely engaged in the programme,
- revisions to the data collection tools in response to emerging elements of the programme delivery,
- non-responses, missing data and low quality data notably for some aspects of the food sourcing and catering elements of the programme.

### 14.8 FFLP and the Whole School Approach

FFLP's Flagship programme whole school approach has been extensive and wide ranging. It has sought to work not only with children and young people but the whole school community: including parents and other stakeholders such as school cooks. Its educational work has sought to go beyond the classroom to include the lunch break and the extended school environment. The programme delivery has included support to develop new resources and facilities, staff training, policy development and external partnerships.

As a multi-component initiative the programme therefore works on a variety of levels of implementation. It has also sought achieve short term and longer term objectives that not only that

address the promotion of health, but also connect to social and economic sustainability and the improved performance of school based education.

For FFLP, the whole school approach appears to have had some benefits that might be less evident in a single issue programme. Some of these deeper processes can include:

- Working on a wide range of issues at the same time, FFLP's whole school approach generates a general stimulus. Programme messages become reiterated or amplified in multiple settings – such as the classroom, the dining room and the after school club.
- As part of an inclusive process, the whole school approach mobilises diverse stakeholders to act, each within their spheres of influence - whether these are amongst student peer groups, catering teams or parent social networks.
- Previously disconnected areas of activity become linked – such as the kitchen and the school garden – and these connections unlock creative possibilities for action. Moreover they then become areas of school activity that obtain greater visibility and credibility as part of a joined up initiative.
- The whole school approach creates an overarching set of principles and practises for organising work over the longer term. This helps the school maintain continuity of action despite shifting circumstances.

The evaluation results show all of these processes in operation across different areas of the FFLP's programme implementation. They support the case for holistic rather than single issue reforms in school settings. However, the evaluation also identified a number of downsides associated with the whole school approach. Some of these include:

- Programme inputs become highly dispersed in an effort to create an impact across the whole school. This dilutes the potential impact of the programme.
- Action to address a wide range of goals leads to difficulties for prioritisation. In some contexts this led to action on the quick wins rather than the more complex or demanding aspects to the programme.
- Programme messages become conflated with local or other external issues such that there is an erosion of the programme's identity.
- The extent, intensity and duration of the actions required create high levels of demand for participating schools.

Thus, although FFLP's whole school approach holds considerable appeal, some of the ambitious aspirations have clearly presented a challenge for participants. The evaluation results show all of these processes in operation across different areas of the FFLP's programme implementation. Changes theorised in the FFLP model were found to have an empirical basis across a number of domains of action. Although not universally the case, FFLP Mark standards can act as a point of reference for school meal take up, parental engagement, sustainable food attitudes and healthier eating. These outcomes relate to schools in different settings for example those with indicators of higher social deprivation or lacking in infrastructure or staff skills at the outset. Achievement in these circumstances provides a strong case for multi-level and holistic food reform programmes in school settings.

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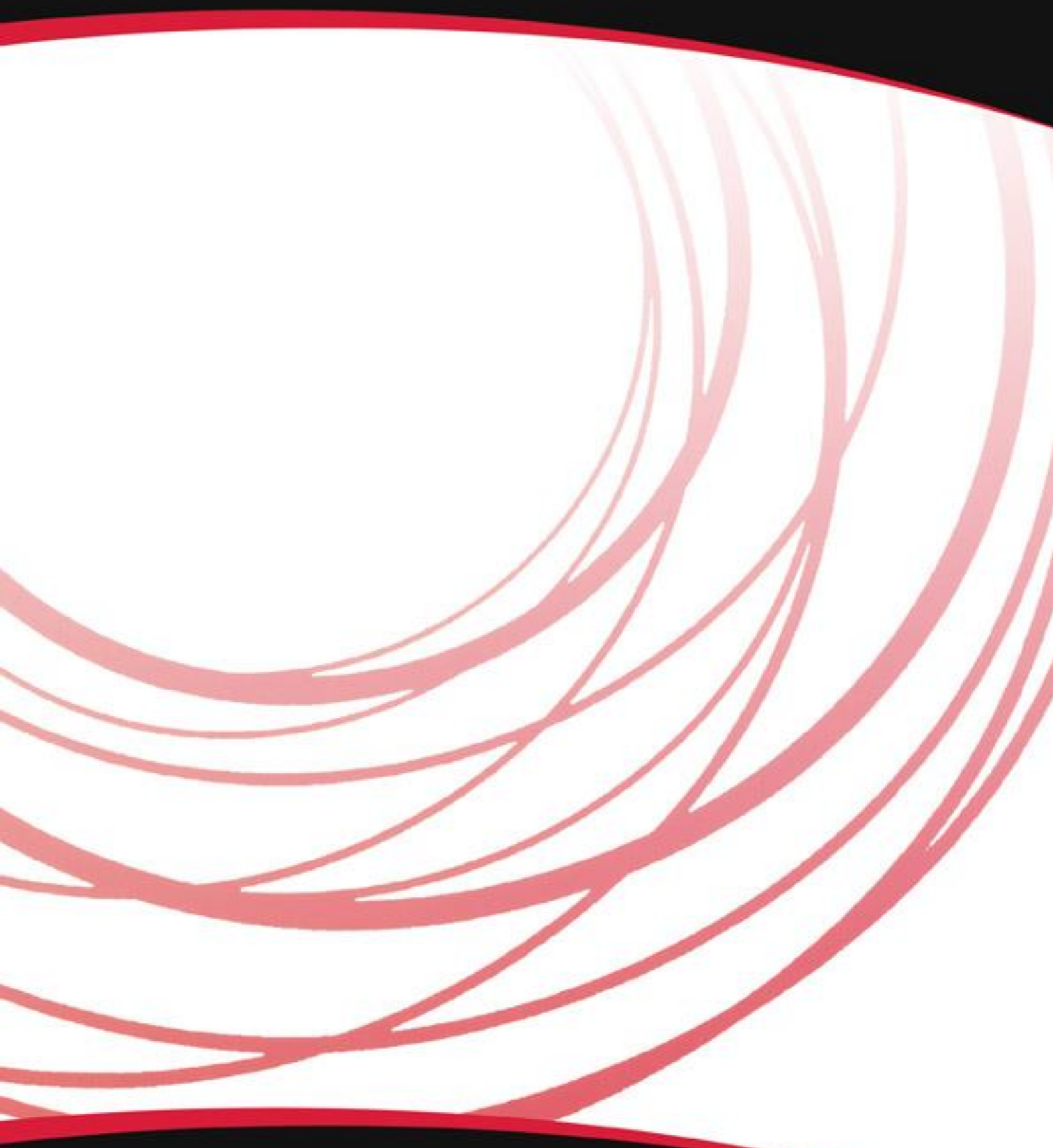
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## Appendices

The appendices for this report are available at: <https://figshare.com/s/43f1c50816c2834036ff>



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**Paper 3**     **Jones, M.,** Dailami, N., Weitkamp, E., Kimberlee, R., Morley, A., Salmon, D. & Orme, J. (2012) Food sustainability education as a route to healthier eating: evaluation of a multi-component school programme in English primary schools. *Health Education Research*, 27 (3), 448-458. [doi.org/10.1093/her/cys016](https://doi.org/10.1093/her/cys016) ISSN 0268-1153

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# Food sustainability education as a route to healthier eating: evaluation of a multi-component school programme in English primary schools

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## Abstract

Promising approaches to the promotion of healthier eating among children in primary school settings include the opportunity to practise practical cooking and growing, promoting the take up of healthier school meals and nutritional education. However, less is known about the potential for strategies that integrate approaches through a focus on food sustainability issues—such as the promotion of awareness about local, seasonal, organic, fair trade and higher animal welfare foods. This paper presents an evaluation of the Food for Life Partnership, a multi-component programme that sought to address both the health and sustainability aspects of food. The study consisted of a two-stage cross-sectional survey of Years 5 and 6 students (ages 9–11) in 30 primary schools at enrolment and after 18–24 months, combined with an analysis of programme delivery. Higher self-reported fruit and vegetable consumption in the second stage survey was associated with a range of indicators of school participation in the programme. These included the reform of school meal procurement and preparation; experiential food growing, cooking and farm-based education and improved

opportunities for stakeholder engagement. The study therefore develops a case for multilevel programmes that incorporate sustainability issues alongside experiential food education in primary school settings.

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## Introduction

Over the last 10 years, there has been increasing concern over the health of English children particularly in relation to rising obesity rates. This is partly explained in relation to poor diets [1–3]: research suggests that significant numbers of children consume sugar, salt and saturated fat that are far in excess of recommended amounts, while at the same time failing to consume the recommended amounts of fresh fruit and vegetables [4].

With most children attending school daily, schools are in a unique position to influence and promote healthy eating among this age group. Research in school settings indicates that practical food education is a promising strategy for promoting children's interest in healthier eating. Development of cooking skills has been shown to promote healthier eating and encourage children to try new foods [5]; studies report that children involved in growing food for consumption are more positive

about eating fruits and vegetables and tend to have higher fruit and vegetable consumption—although the actual reported shifts in intake are uncertain [6–12]. Similarly, studies suggest that children in schools with strong farm links eat more fruit and vegetables [13, 14].

Furthermore, a growing body of evidence has emerged on the significance of food in school and, in particular, the benefits of healthier school meals. Following the introduction of new standards in England, school lunches have been found to be more likely to contain all five healthy food groups (starch, protein, vegetables, fruit and dairy) in comparison to packed lunch alternatives [15, 16]. More generally, longitudinal tracking studies suggest that sensible eating habits formed at school are considered to have lasting significance into later life [17, 18]. School meals can be seen to have a wider role when understood as an additional lesson in the day. As part of a whole school approach, the lunchtime can reinforce messages on the importance of a healthy varied diet and a willingness to try to new foods.

Participant involvement is widely accepted as an important element of successful school-based health promotion programmes. Research reviews therefore highlight the need for programmes to create situations for children to have ownership over their food choices [19] and for parents to have a role in the implementation and adoption of programme messages [20].

Reviews of school-based interventions [20, 21] suggest that multifaceted approaches are likely to be most effective on diet and nutrition, combining reforms to the curriculum, school food provision and engagement of stakeholders. The review of Van Cauwenberghe *et al.* found strong evidence of the positive impact of multi-component programmes with children aged 6–12 years old. More specifically, the review of 30 studies by De Sa and Lock found that 22 reported a significant positive intervention effect on fruit and vegetable intake at follow-up. Differences in intervention effect ranged from +0.14 servings to +0.99 servings per day.

Although parts of the evidence base are coming together, there has been little research on school programmes that frame food as a matter of social

and environmental sustainability—as opposed to personal nutritional health—and their role in health education. Ecological, ethical and welfare aspects of food have increasingly come to the foreground as a part of a global debate about food security and the environmental impacts of an industrialized food system.

Climate change, biodiversity, animal welfare, local economic development, social justice and cultural regeneration aspects of food are topics that may create alternative routes for health education messages. Furthermore, food sustainability, as an overarching theme, may offer the opportunity to re-energize multi-component health programmes in schools as a conceptually coherent set of practices. This study sought to examine the associations between the promotion of sustainable food issues in primary schools and student self-reported fruit and vegetable consumption and a range of associated student behaviours.

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## Methods

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### Programme characteristics

The Food for Life Partnership (FFLP) is an England-wide programme delivered by a partnership of four charities. The initiative evolved out of a concern that obesity and the climate change impact of food cannot be addressed unless ‘individuals and communities are reconnected to how their food is produced and regain the skills and knowledge needed to take active control over what they eat’ [22]. As a simple membership scheme, all schools in England can enrol with the programme. The focus of this study was on FFLP ‘flagship’ schools: these were selected by the programme to receive the enhanced level of staff and small grant support outlined in Fig. 1. This support was delivered over approximately 18 months. Flagship schools had been selected from a pool of applications in response to regional and national advertisement. Successful enrolment on to FFLP was based upon programme officers’ assessment of a school’s commitment and capacity for change as articulated in the head teacher’s application and through site visit.

1) Food leadership.

This component provided the framework for coordinating the whole school approach. In the first 4 months, an FFLP programme officer established a food action group consisting of student representatives, lead school staff and caterers, and parents or other community members. This group set up consultations with students, parents, staff and the wider community to identify improvements in all aspects of food in school.

As an outcome of this consultation, the group developed a school food policy and action plan that provided the reference points for improving the provision of healthier foods including an emphasis on sustainability and wider engagement with food producers and the local community. After the first 4 months, the food action group convened every 6 weeks to review and plan reforms on an ongoing basis. Student representatives produced bulletins on progress to peers and parents.

2) Food quality & provenance.

This component focused on school food procurement and standards. FFLP staff delivered a package of training and support for catering teams (cooks and food procurement staff) to make greater use of sustainable food in school meals. FFLP interpreted sustainable foods to include: in-season produce, high animal welfare standards meat, free range eggs, marine conservation certified fish, locally sourced produce, Fair Trade certified produce and produce from a certified organic source. All such ingredients were to be used in menus that complied or exceeded national guidelines on healthy lunch menus.

FFLP training for cooks, totalling about 5 days, covered the promotion and marketing of healthy diets and food sustainability; cooking with unprocessed foods; menu planning; waste reduction and effective staff, parent and student liaison work. FFLP staff supported caterers on an ad hoc basis to switch to sustainable food suppliers. FFLP issued small refurbishment grants for, for example, the installation of fresh fruit and salad bars.

3) Food education.

FFLP provided teacher manuals, lesson plans and project activity packs covering food origins and environmental aspects of farming, growing in school, cooking with unprocessed fruit and vegetables and sustainably sourced ingredients. FFLP staff provided guidance on how to integrate these educational resources into the school curriculum such that food sustainability issues would be addressed as a regular element of lessons.

Training for school staff covered skills for food growing, cooking and food based preparation using sustainably sourced ingredients. FFLP staff advised and provided small grants to develop a school garden area, whole-class cookery facilities and educational links with food producers such as farms and community gardens.

4) Parental and community involvement

This component established formal engagement with parents, by means of consultation questionnaires and interactive meetings, in the first 4 months of the programme. This covered strategies for promoting fruit, vegetables and sustainability issues in school at lunchtime, break times, lessons and after school groups.

All parents were provided with written information on the aims of the programme, ideas for using healthy and sustainably sourced ingredients in home cooking projects with children and ideas for growing fruit and vegetables at home. Parents and wider community members were invited to take part or actively deliver FFLP-related school activities such as cooking clubs, farm visits and harvest celebrations. These messages were reinforced through newsletters and other routine communications.

**Fig. 1.** The food for life partnership programme for 'Flagship' schools.

To encourage local ownership of the programme, each school exercised considerable scope in developing their own specific strategies for implementation. For example, while the FFLP provided

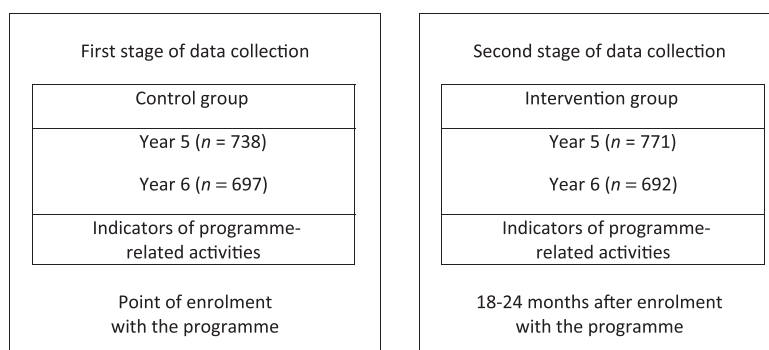
standard educational resources, teachers decided how to incorporate them into their schemes of work. Thus, the programme had many elements of a 'bottom-up' social movement as opposed to an externally directed intervention [23].

## Study design

Following Somerset and Markwell [11], a historical control design was adopted. In the first stage, students completed questionnaires at the point of enrolment with the programme. These data were used as a control for the second stage of data collection with students after the programme intervention period (between 18 and 24 months). For complex interventions such as FFLP, Nutbeam [24], Springett [23], Victora *et al.* [25] and Connell and Kubisch [26] emphasize the importance of establishing plausible evidence of the links between activities and outcomes. Therefore, in addition to the student data, we collected data on multiple indicators of programme related activities in schools at both stages in the research. Figure 2 summarizes the data collection design.

## Sample

The study was conducted with a sample of 30 primary schools from the first 75 schools enrolled in the flagship programme in 2008. Using the enrolment list, we sought at least three schools from each of the nine regions in England. We then checked for representation in the sample of schools with indicators of high socio-economic deprivation. Otherwise, no further information was used to inform the sample selection from the enrolment list. The schools varied in size from 51 to 671 students and were, on average, larger than the English average (mean = 285; England = 238). The majority of schools were located in urban areas. Sixteen per cent (5/30) of the primary schools were in the top national quintile for free school meal entitlement. Free school meal entitlement for parents in receipt of income and family benefits is widely used as an indicator for socio-economic deprivation [27]. The schools were more likely than average England schools to have a track record in health promotion



**Fig. 2.** Summary of the historical control design used in the present study.

and environmental activity (assessed in terms of participation in the National Healthy Schools and Eco-Schools initiatives).

At the first and second stage, at least half of the Years 5 and 6 classes (ages 9–11) in each school took part in a questionnaire survey. School staff were asked to identify mixed ability classes that were available in on the day of questionnaire administration. In total, 1435 students completed the Stage 1 and 1463 students completed the Stage 2 questionnaire. On both occasions, an average of 61% (SD 6.33) of Years 5 and 6 students completed the questionnaire at each school.

In each school, students completing the Stage 2 questionnaire were of the same Year group to those undertaking the Stage 1 questionnaire. They were not the same individuals. For each school, the two groups did not statistically differ with regard to gender and Year ( $P < 0.05$  for both). All classes were of mixed educational ability. Average absenteeism or withdrawal was less than 2% on both survey occasions. For both surveys, the questionnaires were administered by the research team or, on occasions, programme officers using standardized guidance.

## Measures

### *Self-reported fruit and vegetable intake*

Children were asked to estimate their intake of fruit and vegetables using the standard measure common to all programmes funded through the Big Lottery

Well-being initiative [28, primary schools tool]. Eight written examples of one standard portion were given such as ‘one apple’ or ‘a small bowl of salad’. To reinforce understanding of portion size, administrators of the questionnaires used pictures and standard language to read out the question to the class. After checking that students understood and had thought about the question, they were asked to record their estimate reflecting on their previous day.

Through piloting, we assessed the validity of the measure with 139 students. Two hours after recording their estimate, these students then completed the ‘Day in the Life Questionnaire’: a validated 24 hour food consumption recall tool for group level measures [29, 30]. The fruit and vegetable combined results showed an acceptable level of concurrent validity (Spearman’s rank = 0.786,  $P < 0.001$ ). Field notes from subsequent small group interviews with pilot students reinforced the importance of a standard verbal explanation and checks for comprehension. Although self-reported estimates are known to be unreliable for detecting change in individual behaviour, Moore *et al.* [30] note their value as logistically viable tools for group level analysis within the parameters of the type of design adopted in the present study.

For the purpose of a fair comparison, the Stage 1 results were compared with the Health Survey for England [31] data on fruit and vegetable consumption for 950 9–10 year olds. The comparison showed a statistically similar distribution of fruit and vegetable portion intake.



### *Implementation of programme-related activities*

The student questionnaire also used measures related to programme activities. Using a Likert scale, these included: school meals and the dining room experience; cooking at home and school; growing at home and school and farm activities. Students were asked to indicate their preferences towards four items that were defined by FFLP as examples of sustainable foods. These were a Fair Trade snack bar, a bag of organic carrots, a box of free range eggs and a locally sourced apple. Using simple picture and price comparisons, students were asked to opt between these items or cheaper counterparts that lacked a 'sustainable source' label. The four measures had an internal reliability value of 0.825 Cronbach's Alpha. These were combined to provide a five-point attitude scale towards FFLP-related 'sustainable food'.

A second questionnaire for completion with lead school staff focused on key aspects of programme delivery, such as stakeholder involvement in decision making; use of sustainably sourced ingredients in school food and the extent of practical food education. These data were used to assess whether schools had met each of the 58 FFLP criteria that lead to programme awards. Taken together, these measures provided a set of indicators to assess exposure and fidelity to the programme-related activities at both stages of the research.

### **Data analysis**

All data were entered, cleaned and analysed using SPSS, version 17—a statistical software package. Analyses were confined to frequency distributions, calculation and comparison of mean scores and cross tabulations between Stage 1 and Stage 2 groups. Statistical tests were used to examine strengths of association between key variables. Regression analysis was employed to assess the relationship between self-reported fruit and vegetable consumption and FFLP programme-related variables. A 0.05 significance level was applied to all analyses.

### **Ethical issues**

The evaluation protocol was approved by UWE Research Ethics Committee. School head teachers were asked to give written consent based upon written and verbal information provided by the researchers. Schools provided parents with standard written information on the study, data protection and right of withdrawal. Students were informed of the purpose of the study. We adhered to each school's policy on the right of students to opt out.

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## **Results**

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### **Student self-reported fruit and vegetable consumption**

Comparison between the survey groups shows that the intervention respondents reported eating an average of 0.31 more portions of fruit and vegetables per day compared with the Stage 1 respondents (3.11–3.42; SEMs: 0.03,  $P < 0.05$ , Table I). The self-reported consumption of both fruit and vegetables were higher in the intervention group. Vegetable consumption increased slightly more than fruit consumption, but the difference was not statistically significant.

Table II shows that the intervention respondents reporting eating four or more portions of fruit and vegetables in the previous day increased by 13.1%, from 38 to 51.1%. The difference between the two survey groups was more pronounced for Year 5 students. Those reporting eating four or more portions in the previous day increased from by 15.7% from 37.5 to 53.2%. There were smaller differences between the two groups for those respondents reporting lower portions of fruit and vegetable consumption (three portions or less).

### **Programme implementation: mechanisms for change**

Overall, the results show that the programme was associated with a range of school reforms. In most cases, training, facilities, participation and student exposure to sustainable food issues increased over the course of the evaluation period. Tables III

**Table I.** *Self-reported fruit and vegetable consumption (portions in previous day)*

	Mean, control	Mean, intervention	Mean, change	Median, control	Median, intervention	SE mean, control	SE mean, intervention	Count, control	Count, intervention
Year 5	3.1	3.46	+0.36, $P < 0.05$	3.0	4.0	0.046	0.042	738	771
Year 6	3.13	3.37	+0.24, $P < 0.05$	3.0	3.0	0.046	0.043	697	692
Years 5 and 6	3.11	3.42	+0.31, $P < 0.05$	3.0	4.0	0.032	0.030	1435	1463

Baseline missing data = 32. Follow-up missing data = 1. Years 5 and 6 respondents.

**Table II.** *Self-reported fruit and vegetable consumption (portions in previous day)*

	<2 portions	≥2 portions but <3	≥3 portions but <4	≥4 portions but <5	≥5	Total bases
Stage 1 (control) 2008						
Year 5 (ages 9–10)						
Percentage	10.8%	25.3%	26.2%	20.4%	17.1%	
Base	80	187	194	151	126	738
Year 6 (ages 10–11)						
Percentage	7.6%	27.3%	26.5%	22.2%	16.3%	
Base	53	190	185	155	114	697
Years 5 and 6 (ages 9–11)						
Percentage	9.3%	26.3%	26.4%	21.3%	16.7%	
Base	133	377	379	306	240	1435
Stage 2 (intervention) 2010						
Years 5 (ages 9–10)						
Percentage	6.2%	15.8%	24.8%	32.3%	20.9%	
Base	48	122	191	249	161	771
Year 6 (ages 10–11)						
Percentage	6.2%	16.0%	28.9%	32.1%	16.8%	
Base	43	111	200	222	116	692
Years 5 and 6 (ages 9–11)						
Percentage	6.2%	15.9%	26.7%	32.2%	18.9%	
Base	91	233	391	471	277	1463

Baseline missing data = 30. Follow-up missing data = 1.

and IV provide examples of school-level programme indicators and data on student participation. Table V summarizes the results for student self-reported data. The results show positive trends between the two groups, although no—or only small differences—were recorded for farm visits and cooking at home.

### Further data analysis: linking mechanisms and outcomes

An analysis of the characteristics of intervention participants showed that self-reported fruit and

vegetable consumption was positively and significantly associated with experiences and attitudes towards programme-related activities (Table VI). Ordinal regression analysis was used to further test these theorized links. Table VII shows the result of a reduced model with selected questionnaire measures using the logit link. The Pearson chi-square goodness-of-fit value was  $P = 0.757$ , and the Cox and Snell test showed good predictive ability (pseudo  $R^2 = 0.141$ ). The analysis suggests that explanatory variables such as enjoyment of growing, school meal ratings and attitudes towards

**Table III.** *Examples of school-level programme indicators*

Programme strand and indicator	Stage 1, control Number of schools, <i>N</i> = 30 <sup>a*</sup>	Stage 2, intervention
Food leadership		
School food policy and food action plan covering sustainability issues	5	30
Student representation on school food action group or similar group	12	30
Food quality and provenance of school food		
School menus are seasonal and highlight in-season produce	2	26
Meat is farm assured and eggs are from cage-free hens	2	26
Menu includes a range of locally sourced items	0	21
Poultry, eggs and pork conform to Freedom Food scheme or 10% ingredients are from a certified organic source	0	14
Food education		
Staff training covering skills based, food sustainability issues—staff with formal organic horticultural education training	7	28
School-wide curriculum references sustainable food education	10	29
Facilities for whole-class cookery classes	5	24
Use of sustainably sourced ingredients in cookery classes	7	31
Facilities for growing—growing area over 10 m <sup>2</sup>	9	29
Food plant bio-diversity—growing over 5 of 15 crop types	13	29
An ongoing educational link with a working farm	17	30
Parent and community engagement		
Parents consultation process on food in school	11	30
Home projects: growing and cooking with sustainable food ingredients	2	30
Community participation—volunteers assist in school garden	7	20
Overall programme performance		
Schools meeting FFLP award criteria: 'Bronze', 'Silver' or 'Gold'	0	26
Programme criteria achieved—mean out of 58 criteria	12 [SEM 3.5]	44 [SEM 4.23]

Measures cover 12-month period prior to each data collection point.

<sup>a</sup>No missing data for all measures.

**Table IV.** *School records on student participation in programme-related activities*

Area of recorded student participation	Stage 1, control Percentage of students for 30 schools	Stage 2, intervention
Take up of school meals <sup>a</sup>	44.3%	48.2%
Take up free school meal entitlement	76.0%	90.2%
Participation in growing activities	29.0%	74.0%
Participation in cooking with sustainably sourced ingredients	54.2%	80.6%
Participation in farm visits	18.2%	26.7%

Indicators cover 12-month period prior to each data collection point.

<sup>a</sup>Take up calculated using national NI52 formula. Student weighted averages. Missing data from two schools.

**Table V.** Student responses towards programme-related activities: Years 5 and 6, 30 schools

Questionnaire measure	Stage 1, control Percentage of respondents, N = 1435 <sup>a</sup>	Stage 2, intervention Percentage of respondents, N = 1463 <sup>a</sup>
Rating of school meals 'good' or 'excellent'	45.6%	53.7%
Rating of dining room 'good' or 'excellent'	40.5%	50.4%
Growing fruit or vegetables in school in last year	54.1%	82.5%
Growing fruit or vegetables at home in last year	26.0%	35.2%
Practising food preparation skills at school in last month	17.3%	37.5%
Cooking at home with basic ingredients in last week	51.5%	48.5%
Enjoyment of growing fruit and vegetables	34.8%	39.3%
Participation in farm activities in last year	22.6%	26.1%
Highly positive attitude towards sustainable food	10.7%	21.8%
Reporting that school meals have become healthier in last year <sup>b</sup>	—	35.9%
Reporting improvements to dining room in last year <sup>b</sup>	—	30.2%

<sup>a</sup>Missing data for all measures <1.5%.

<sup>b</sup>Open question: 'Have you noticed any changes ... ?' Intervention measure only.

sustainable foods were significantly associated with the fruit and vegetable intake.

Further analysis tested the school-level association between self-reported fruit and vegetable intake and FFLP criteria achieved (see Table III). For the 30 schools, those that showed above average positive group changes for 4 or more fruit and vegetable portions were significantly more likely to have met an above average number of programme criteria after the intervention ( $\chi^2 = 4.821$   $P = 0.028$ ). This analysis suggests a positive relationship between fidelity towards and implementation of the programme process and the programme outcomes.

## Discussion

The study sought to examine the association between healthier eating among 9- to 11-year-old

children and a wide range of school-based activities organized around issues of food sustainability. Some methodological limitations need to be taken into account when interpreting the results. The use of a historical control design meant that the study did not track longitudinal change in individual behaviour. Apart from the national data, the study has no external comparison: thus the study design does not allow for causal attribution. The programme delivery occurred in the context of other national and local school food-related reforms—all of which might have had an impact on research measures. It is also important to take into account the self-selected programme recruitment process. This is likely to mean that participating schools may not reflect the wider profile of English primary schools in terms of the preparedness to work with the programme goals. Nevertheless, the study sample

**Table VI.** Student responses towards programme-related activities cross-tabulated with self-reported fruit and vegetable consumption

Questionnaire measure	$\chi^2$ value	<i>P</i> value
Rating of school meals 'good' or 'excellent'	72.323	<0.001
Rating of dining room 'good' or 'excellent'	52.081	0.001
Growing fruit or vegetables in school in last year	39.444	<0.001
Growing fruit or vegetables at home in last year	64.456	<0.001
Practising food preparation skills at school in last month	63.293	<0.001
Cooking at home with basic ingredients in last week	189.614	<0.001
Enjoyment of growing fruit and vegetables	86.263	<0.001
Participation in farm activities in last year	90.774	<0.001
Highly positive attitude towards sustainable food	63.692	<0.001

Years 5 and 6, 30 schools, *N* = 1463.

**Table VII.** Ordinal regression parameters estimate for selected programme-related measures and self-reported fruit and vegetable consumption

Questionnaire measure	Regression coefficient	<i>P</i> -value
Rating of school meals 'good' or 'excellent'	-3.092	0.041*
Practising food preparation skills at school in last month	-1.591	0.001*
Highly positive attitude towards sustainable food	1.352	0.020*
Enjoyment of growing fruit and vegetables	-1.299	0.014*
Growing fruit or vegetables at home in last year	-13.416	0.000*
Participation in farm activities in last year	-0.906	0.109

\*Significant.

sought to include a diverse selection of schools, including schools with little previous track record on food sustainability issues, and the participation of mixed ability students.

The study design sought to explore the links between programme outputs and longer term outcomes. The extent, scale and temporal sequence of school level changes lend support to the proposition

that the programme had an impact on increased student fruit and vegetable intake. School-level data showed an upward shift in the scale, integration and range of educational sustainable food activities over the evaluation period. This was accompanied by a rapid process of staff training, improvements in facilities and redeveloping a curriculum for experiential learning. Progress across this set of

organization level indicators lends support for a positive programme effect [25]. Moreover, a positive programme outcome was associated the achievement of programme criteria.

This interpretation is supplemented in the form of student self-reports—a form of data triangulation [24]. These include student perceptions of school meals and the dining hall environment, food preparation at school and participation in growing fruit and vegetables both at school and at home. External research evidence lends support to the causal mechanisms anticipated in the FFLP approach. These include the positive effect of increased take up of school meals [16], the role of skills based food preparation education [5] and fruit and vegetable gardening in school [12]. Other results showed little or no difference at the levels of school and student data collection. This suggests that elements of the programme, such as farm-based activities and cooking in the home environment are less likely to act as causal pathways for the anticipated outcomes.

The programme had a variety of levels of implementation across the school setting. This approach appears to have had some benefits that might be less evident in a programme with more restricted domains for action. Working on a wide range of issues at the same time, programme-related outputs were evidenced in multiple settings—such as the classroom, the dining room and the after-school club. The focus on sustainability appears to have mobilized change among different agents—whether these are among student peer groups, catering teams or parent social networks. This reflects a health promotion approach in which there is a synergy of effort at multiple levels [26].

This focus may also allow previously disconnected areas of activity to become linked—such as the kitchen and the school garden—and in so doing lend greater visibility as part of a joined up initiative. Thus, a food sustainability approach could create an overarching set of principles and practises for organizing work over the longer term.

However, the programme indicators also suggest a highly dispersed set of activities. This could have diluted the potential impact of the programme. The theorized links between messages on food

sustainability and messages on healthy nutrition are complex and potentially contestable. For example, there is no ‘necessary’ connection between the promotion of organic or locally sourced foods and the promotion of fruit and vegetable consumption. In part, this may account for the trajectories of the study schools as school planning groups interpreted the priorities for implementation somewhat differently. This complexity raises a challenge for the roll out and coherence of this type programme as a combined health and sustainability initiative. It also throws light on an emerging agenda to conceptualize food-health-sustainability links in the design of both programmes and their associated evaluations.

While these issues demonstrate considerable scope for refinement, the changes theorized in the FFLP model were found to have an empirical basis across a number of domains of action. Thus, the study reinforces a case for multi-level programmes that adopt a holistic, experiential and environmental approach to food education in primary school settings.

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### Conflict of interest statement

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None declared.

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*Article*

## **Engaging Secondary School Students in Food-Related Citizenship: Achievements and Challenges of A Multi-Component Programme**

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**Abstract:** Global food security and sustainability, animal welfare, dietary health, and socially just relations of food production have become prominent societal issues. They are of particular concern for young people as their lives progress towards becoming independent consumers and citizens with the capacity to shape food systems of the future. This paper examined the role of the Food for Life Partnership programme in promoting young people's engagement with food-related citizenship education in secondary schools. The research consisted of a two stage study of 24 English schools. We surveyed experiences and attitudes of students and staff, and recorded programme activities. The results presented a mixed picture. Staff reports and monitoring evidence showed much successful implementation of programme activities across the whole school. However, there was less evidence of positive student behavioral change. Amongst a range of possibilities to account for the findings, one explanation is the organizational challenges of delivering a complex and ambitious programme in the secondary school setting. This

suggests the need to develop food citizenship programmes that combine long term institutional reforms alongside focused interventions with specific groups of students. It also highlights the case for ensuring a place for food related citizenship on the educational policy agenda.

**Keywords:** food; citizenship; sustainability; environmental education; schools; young people

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## 1. Introduction

Increasingly, international attention has turned to the environmental and social dimensions of food production. A recent UK Government report, *'Food 2030'* [1] highlights a number of key issues such as growing concerns about the security and sustainability of a food system that is reliant on high inputs of limited or non-renewable resources; the socially exploitative nature of some food production systems; the impact on industrialized systems on animal welfare; and the dietary and nutritional quality of highly processed foods.

Many of these issues are of particular concern for young people as their lives progress towards becoming more independent consumers and citizens with the capacity to shape the character of food systems of the future. Yet whilst an imperative for young people's engagement seems clear, it may also be the case that young people in industrialized countries are becoming progressively disconnected from the food that they eat, both in terms of their understanding of an increasingly complex global food production system and of the skills required to act as critically informed producers, purchasers and preparers of food [2,3]. The influence of the multinational fast food, snacks and soft drinks industry on shaping young people's consumer tastes only serves to further reinforce their distance from the environmental and social relations of food [4,5]. This disconnect has been further attributed to a risk averse culture [6]; parental bubble wrapping [7]; and the demand for safe, sanitized environments for young people [8].

In the UK, the mainstream secondary school system includes some elements of food-focused education. Topics occur within the main curricular subjects such as science, geography, and personal, social and citizenship education. Food is also a subject that is addressed through cookery skills classes, student school councils, school meal consultations and occasionally through other routes such as assemblies. However, for most secondary schools such activity is fragmented, dispersed and represents little in terms of a coherent approach to food and citizenship education [9]. Multiple other priorities-for example on core academic attainment [10]-could also consign such education to the periphery of secondary school experience in the future.

Nevertheless there has been interest in promoting learning about sustainability-and related food issues-in schools [11]. A number of initiatives in school settings have sought to develop education specifically on the environmental and social aspects of food and, in so doing, encourage young people to become active citizens and consumers with regard to food issues [12]. In the UK these include the Eco-schools programme [13], Healthy Schools programme [14] and other more specific initiatives such as Growing Schools [15] and annual focused events such as Fair Trade fortnight [16].

Evidence of the synergy between food-related health and citizenship is beginning to emerge. For example, in primary school settings climate change, biodiversity, animal welfare, local economic development, social justice and cultural regeneration aspects of food are topics that may create alternative routes for health education messages [17]. However, to date there has been little research on these initiatives in secondary schools. This is a setting that raises some specific challenges. Apart from competing educational pressures, schools have limited resources—including staff, funding and appropriate expertise—to promote active citizenship [18]. Staff report problems embedding new and prescriptively organized programmes into routine school life [19]. The aim of this paper is to understand the opportunities and challenges for the implementation of a food education and sustainability programme, the Food for Life Partnership (FFLP), and its relationship to student food citizenship learning.

## 2. The Food for Life Partnership Programme

The Food for Life Partnership is an England wide food programme working to transform food culture in schools by reconnecting individuals and communities with food production. Underpinning the ethos of the programme is a commitment to supporting communities to live within environmental limits and the enabling of a strong, healthy and just society in the future [20]. In the period 2007–2012 FFLP succeeded in recruiting over 3600 primary, secondary and special schools to the programme. All received printed and online resources and tailored support in the form of, for example, advice on developing food sustainability projects. Table 1 summarizes how FFLP organized its activities based upon criteria in four strands.

**Table 1.** The Food for Life Partnership Programme. Schools are encouraged to work towards Bronze, Silver and Gold Mark awards based upon criteria in four strands.

<b>The food for life partnership programme</b>	
Food leadership	Including promoting the programme aims through an action group with student, teacher, catering staff and parent representatives.
Food quality and provenance	Including work with school meal caterers to procure more local, seasonal, organic, marine stewardship council and higher welfare foods. It also includes reforms of the kitchen and school dining room to enable, for example: greater use of freshly prepared foods, advertising of ingredient origins, and a pleasurable mealtime experience.
Food education	Including the reform of practical and skills based food education, particularly with regard to raising issues of environmental and social sustainability through gardening, cooking, visits to farms and local food producers, and classroom projects.
Food culture and community involvement	Including engagement with parents and the wider community on the use of healthier and more sustainably sourced ingredients in food in school and at home.

This paper concentrates on a sub-group of FFLP “flagship” secondary schools that received enhanced levels of support from visiting programme officers and approximately £1500 to help fund trips, equipment and events. A wide range of schools were recruited for the flagship scheme including those with little previous track record in food and citizenship studies.

The FFLP initiative exemplifies a complex intervention with several interacting components [21]. It involved a number of behaviors required by those delivering the initiative across different groups and organizational levels, resulting in a range of outcomes. It is also important to note that a degree of flexibility and tailoring of the different elements of the initiative was permitted throughout the delivery. The components were delivered by a partnership of four educational charities as a package. These involved: (1) The development of a Flagship School Nutrition Action Programme led by the Health Education Trust and designed to support schools through an action planning process involving consultation and the development of School Food Policy; (2) A focus on school food sourcing led by the Soil Association; (3) A school meals and catering programme led by the Soil Association; (4) A growing skills programme led by Garden Organic; (5) A cooking skills programme led by the Focus on Food Campaign; (6) A farm links and sustainable food education programme led by the Soil Association. Central to the School Food Policy element of the programme was setting up a School Nutrition Action Group (SNAG), a school based alliance, in which teaching staff, pupils and caterers supported by health and education professionals work together to review and improve the school meals service and adopt a whole school approach to food based education and citizenship. As a typical experience of the programme, students would expect to encounter much stronger emphasis on food sustainability education across a range of curricular and extra-curricular subjects; they would see this reflected in school food available in the canteen at other times of the school day and in whole school celebration events; finally, they and their parents could also expect to be consulted-or otherwise involved-on school food issues across the course of the year.

### 3. Methods

#### 3.1. Design

The study used a two stage multi-method research design. For each area of analysis, we collected data at the point of enrolment (baseline) and then at a second stage approximately 18–24 months following enrolment (follow up). Given the complex and diverse character of the programme initiatives, the evaluation collected multiple types of data to capture changes in terms of programme outputs, student behaviour and staff perspectives [22].

#### 3.2. School Sample

Thirty one secondary schools were recruited to the FFLP flagship programme between September 2007 and September 2008. Of these, 24 were sampled to take part in the evaluation. These were list selected to represent at least 3 from each of the nine regions of England. The seven schools that did not participate were simply the seven last entrants to the regional recruitment list.

The 24 schools reflected a range of sizes, ranging from 401 to 1809 pupils (average: 978; SD: 323). Pupil ethnic background for participating FFLP Flagship secondary schools was similar to England School Census figures for “White British” origin (88% compared to 86%). Free school meal (FSM) entitlement (an indicator of socio-economic deprivation) suggested that the sample of schools reflected a range of socio-economic contexts: the highest FSM eligibility was 55% and the lowest was 2%. In terms of activities relating to environmental and citizenship aspects of food, at the beginning of the

programme 48% of schools had achieved Eco-School flag status and 76% had achieved national Healthy School status.

### *3.3. Data Collection: Outputs Associated with Programme Implementation*

Drawing upon the programme's own achievement criteria, we developed indicators of programme related outputs. School staff who led on different aspects of the programme were asked to provide evidence of relevant activities at baseline and follow up. This usually resembled the documentation that schools needed to provide in their applications for FFLP Bronze, Silver or Gold Awards

### *3.4. Data Collection: Student Perceptions*

At baseline and follow up, from Years 7, 8, 9 and 10 we requested 20–30 students in each Year to complete a standard questionnaire. In consultation with lead staff, the students were drawn from mixed ability groups who were available on the day of the questionnaire administration. In each school, students completing the follow up questionnaire were of the same Year group to those undertaking the baseline questionnaire. They were not the same individuals. For both surveys, the questionnaires were administered by the research team or, on occasions, FFLP programme officers using standardized guidance.

The questionnaire measures covered attitudes towards food, citizenship and sustainability issues. The measures were derived from the Food Standards Agency Low Income, Diet and Nutrition Survey [23], the Big Lottery Well-being questionnaire toolkit [24], or were developed specifically for the programme. The questionnaire was piloted with 104 students and subsequently revised for clarity before being adopted for the present study.

### *3.5. Data Collection: Staff Perceptions*

Teaching and other school staff completed semi-structured questionnaires at baseline and follow up. Schools delegated lead roles for different aspects of programme to specific members of staff. The respective lead person was therefore asked to respond to the relevant section of the questionnaire. The questionnaire covered a range of school activities that related to the implementation of the programme. Staff were asked to provide ratings on their perception on the role of the programme in effecting these changes. Staff were able to provide further written feedback to reflect on their experiences. The baseline questionnaire was piloted with 6 schools, and then revised to provide greater salience and simplicity.

### *3.6. Data Analysis*

To enable statistical analysis all data were entered, cleaned and analyzed using SPSS, version 17—A statistical software package. All staff written data were transcribed and thematically analyzed.

### *3.7. Ethical Issues*

The evaluation protocol was approved by UWE Research Ethics Committee. School head teachers were asked to give written consent based upon written and verbal information provided by the

researchers. Schools provided parents with standard written information on the study, data protection and right of withdrawal. Students were informed of the purpose of the study. We adhered to each school's policy on the right of students to opt out.

## 4. Findings

### 4.1. Outputs Associated with Programme Implementation

Table 2 shows a range of indicators of school programme related outputs. Overall the results suggest that in the period before enrolment only a minority of schools were engaged in whole school social and environmental food activities. Over the course of the programme schools clearly engaged in a range of reforms. In most cases, training, facilities, participation and student exposure to sustainable food issues increased over the course of the evaluation period. Routine provision of higher welfare foods and community participation stood out as areas where fewer schools were able to demonstrate programme implementation.

**Table 2.** Examples of school level programme indicators. Measures cover the 12 months period prior to each data collection point.

Programme strand & indicator	Stage 1 Baseline	Stage 2 Follow up
	<i>Number of schools N=24</i>	
<b><i>Food leadership</i></b>		
School food policy and food action plan covering sustainability issues	2	22
Student representation on school food action group or similar group	4	22
<b><i>Food quality and provenance of school food</i></b>		
School menus are seasonal and highlight in-season produce	0	19
Meat is farm assured and eggs are from cage-free hens	0	14
Menu includes a range of locally sourced items	0	14
Poultry, eggs and pork conform to Freedom Food scheme or 10% of ingredients are from a certified organic source	0	10
<b><i>Food education</i></b>		
Staff training covering skills based, food sustainability issues—e.g., a member of staff with formal organic horticultural education training	2	20
School-wide curriculum references sustainable food education	2	20
Facilities for whole-class cookery classes	14	18
Use of sustainably sourced ingredients in cookery classes	6	19
Students prepare organic growing area and composting facilities	2	10
An ongoing educational link with a working farm	4	16
<b><i>Parent and community engagement</i></b>		
Parents consultation process on food in school	4	18
Home projects: growing and cooking with sustainable food ingredients	4	12
Community participation-volunteers assist in school garden	1	5
<b><i>Overall programme performance</i></b>		
Schools meeting FFLP award criteria: 'Bronze', 'Silver' or 'Gold'	0	18

## 4.2. Student Perceptions

### 4.2.1. Profile of Student Respondents

Two of the 24 schools withdrew from the student element of the study at follow up due to competing educational priorities. The present study therefore reports student results from 22 schools. In total, 2054 students completed the baseline and 1926 students completed the follow up questionnaire. The profiles of the two groups were similar in terms of the mean respondents per school (baseline: 71.6, SD: 33.5; follow up 69.4, SD: 29.8); gender (baseline: 54.2% female; follow up: 52.2% female); and take up of school meals (baseline: 30.3%, follow up: 30.1% for purchase of school food 5 days a week).

### 4.2.2. Attitudes Towards Food in School and at Home

Student responses to a range of questionnaire measures are summarized in Table 3. The findings show a mixed pattern of responses between the baseline and follow up survey groups, although the data suggest that, overall, there were few differences between the two groups.

**Table 3.** Attitudes to, and experiences of, food in school and at home. Percentages. N = 22 schools. Baseline n = 2054; Follow up, n = 1926.

<b>Attitude to, or experience of, food in school and at home</b>	<b>Baseline</b>	<b>Follow up</b>
Rating of school food from the canteen as good or excellent	55.4%	57.3%
Really or quite liked main dining area	55.7%	47.2%
Recalled being consulted on the dining area in the last year	11.1%	16.3%
Recalled being consulted on school meals in the last year	27.3%	20.5%
Felt the school had listened to their views on school food	14.6%	15.9%
Helped to grow fruit or vegetables at school in last year	6.9%	12.5%
Agreed or strongly agreed that enjoyed helping to cook at home	67.3%	66.7%
Agreed or strongly agreed that enjoyed eating healthy food	63.5%	65.3%
Felt able to prepare a meal, without help, from basic ingredients	32.8%	35.3%
Often helped to grow fruits or vegetables at home	9.6%	14.6%
Ever taken part in a practical farm activity (such as feeding animals)	47.2%	48.1%
Reported eating five or more portions of fruit and vegetables on previous day	17.5%	21.8%

The last variable presented in Table 2 summarised the result of students self reported fruit and vegetable consumption. This suggests higher consumption at follow up. The mean for the baseline was 3.06, and 3.32 for the follow up survey, however the difference was not statistically significant. The median in both cases were 3. Analysis by gender showed a positive, but not statistically significant, positive trend for both girls and boys.

### 4.2.3. Attitudes Towards Eating Healthy and Sustainable Foods

Students were asked to give their views on eating a range of types of food. The range included sustainable, energy dense (high fat, high sugars foods), and processed or “fast foods”. Table 4 suggests

little overall difference between the two survey groups. Statistical analyses found no significant differences for any of these variables (applying t-test with unequal variances) between the baseline and follow up profile of responses. However there were some trends towards more positive attitudes towards sustainable foods. This trend was more pronounced for positive attitudes towards fair trade food, home grown food and free range eggs.

**Table 4.** Attitudes towards eating types of food and food related issues. Percentage of respondents stating that they thought about eating more of the item listed. N = 22 schools. Baseline n = 2054; Follow up, n = 1926.

Type of food and food related issue	Baseline	Follow up
Fair trade food	24.2	31.0
Whole meal bread	36.8	36.5
Locally produced food	27.8	31.4
Home grown food	27.6	33.3
In season food	50.2	51.5
Organic food (any)	30.0	33.5
Free range eggs	29.6	34.7
Organic chicken	28.5	31.5
Organic pork/ham/bacon	25.3	27.5
Organic beef	23.6	26.0
Food transported over a long distance	5.2	5.8
Microwave ready meals	6.2	7.0
Processed meat (e.g. sausages, burgers)	10.6	12.2
Food with a lot of packaging	6.4	6.6
High fat food	5.5	5.8

#### 4.2.4. Theorized Links Between FFLP Activities and Behavioral Outcomes

**Table 5.** Secondary school associations between fruit and vegetable consumption and FFLP related behaviors. N = 22 schools.

Cross tabulation		Degrees of freedom	$\chi^2$ value	P-value
Higher self reported fruit&vegetable consumption on previous day	× positive attitude towards organic food	16	36.9	0.002
	× positive attitude towards fair trade food	16	43.9	< 0.001
	× positive attitude towards whole meal bread	16	32.5	0.008
	× positive attitude towards locally produced food	16	39.9	0.001
	× positive attitude towards home grown food	16	47.2	< 0.001
	× positive attitude towards eating healthy food	24	108.2	< 0.001
	× positive attitude towards helping to cook	20	59.6	< 0.001
	× positive attitude towards growing fruit & vegetables	4	24.3	<0.001
	× positive attitude towards growing food at school	8	15.0	0.059*

\* no statistically significant association.



For the follow up survey we analyzed the associations between a number of key variables. With the exception of the last cross tabulation, Table 5 shows the variable higher reported consumption of fruit and vegetables had a statistically significant set of associations with positive attitudes towards healthier and sustainable foods.

#### 4.3. School Staff Perceptions of Programme Implementation

School leads were asked to provide feedback on the implementation of the programme and its impact on wider aspects of school life. In all 24 schools the questionnaires were completed by a member of the senior management team, with specific sections completed by staff with a role in leading aspects of the FFLP programme in their school.

**Table 6.** Responses to the questions: With regard to the following areas: (1) how effective has FFLP been in helping your school make improvements? (2) How important has this area been as a priority for your school? N = 24 schools.

	Perceived effectiveness of FFLP in assisting the school				Level of priority for the school			
	Very Effective	Effective	Neutral	Ineffective	Very Important	Important	Neutral	Unimportant
A whole school vision for transforming food culture	9	14	1	–	13	9	1	1
Forums (e.g., SNAG) for leadership, inclusion & action on food in school	8	14	2	–	8	13	1	2
Enhancing the curriculum through food education	3	14	7	–	9	11	4	–
Pupil involvement in school food issues	7	14	2	1	13	10	1	–
Parent involvement in school food issues and wider school life	2	16	6	–	10	9	4	1
Partnership work with local schools, farmers, businesses & other agencies	6	16	1	1	9	11	4	–
Healthier food messages to pupils and their families	7	17	–	–	16	8	–	–
Increasing school meal take up	2	13	8	1	10	9	4	1
Provision of more local, seasonal and sustainably sourced food in school	5	15	2	2	8	10	5	1
Improving pupil behaviour, attention and attainment	5	7	10	2	15	7	2	–

Table 6 shows that, on the whole, school leads believed that the programme was highly effective across a number of domains of whole school food culture. Furthermore, the responses also show that the areas in question are clearly linked to development priorities for the schools. The areas for the clearest positive ratings were for the overall vision for improving school meal culture and pupil involvement in school food issues. The areas where ratings are less strong concern impact on pupil behavior, attention and attainment; parent involvement; and school meal take up.

School leads were given the option to provide additional written commentary on the most successful and the most challenging aspects of the programme. This commentary revealed some layers of complexity to the subjects and the impact processes addressed. The main themes arising from respondent's perceptions are summarized in Tables 7 and 8.

**Table 7.** Themes in response to the question: What have been the most challenging or difficult aspects of the programme for your school? Frequency of theme from 24 schools.

<b>Challenging or difficult aspect of programme: main themes</b>	<b>Frequency</b>
Staff time, staff costs associated with developing management, development of school food policy and delivery of activities	13
FFLP criteria: meeting the criteria, paperwork	11
Caterer commitment	9
Increasing meal take up	6
Sourcing sustainable and ethical foods	6
Parent and wider community involvement	5
Facilities and capital costs for educational cooking and growing. Farm link costs	5
Momentum. Maintaining change over a long period of time	4
Kitchen and dining hall facilities and capital costs	4
Making links with other schools	2
Problems with FFLP communications and staff support	2

**Table 8.** Responses to the open question: What have been the most successful aspects of the programme for your school? Frequency of theme from 24 schools.

<b>Successful aspect of the programme: main themes</b>	<b>Frequency</b>
Promotion of whole school food culture	15
Promotion of a healthy lifestyle / healthy eating	14
Development of cooking education	10
Promoting pupil participation and enthusiasm in school life	8
Development of farm link and sustainable food education	8
Development of garden enhanced education	8
Improvements to school meal provision	4
Improvements to school dining hall, dining ambience	4
Development of links between teaching & cooking/catering staff	4
Parent and community participation in school life	3
Development of links with other schools and outside agencies	2
Creation of new food sourcing opportunities for the school	2

## 5. Discussion and Conclusions

This study focused on the involvement of 24 secondary schools in England in the FFLP flagship programme between 2007 and 2011. The results show that the programme was implemented across a wide range of areas of school life in accordance with the planned design of the scheme. Many of the programme outputs and the perceptions of school staff suggest that the scheme was successful in promoting food-based citizenship education. Such learning took place through formal classroom settings in which students had the opportunity to engage in the wider social and environmental dimensions of garden, cookery and farm-linked education in addition to other learning that became more embedded in mainstream curriculum subjects. Students also had the chance to engage in less formal learning through participation in school food policy making, school food reforms and extra-curricular activities. However other results present a less convincing picture of the behavioral impact of the programme on students. The surveys suggest few differences between comparable student groups before and after the intervention at 18–24 months—although there were positive trends for some measures.

The whole school approach appears to have had some benefits that might be less evident in a single issue programme, including:

1. Working on a wide range of issues at the same time, FFLP's whole school approach generated a general stimulus. Programme messages became reiterated or amplified in multiple settings.
2. Previously disconnected areas of activity became linked—Such as the kitchen and the school garden—and these connections unlocked creative possibilities for action. Moreover they then became areas of school activity that obtained greater visibility and credibility as part of a joined up initiative.
3. The whole school approach created an overarching set of principles and practices linked to citizenship for organizing work. This might help schools maintain continuity of action despite shifting circumstances.

The evaluation results showed these processes in operation across different areas of the FFLP's programme implementation. They support the case for holistic rather than single issue reforms in school settings. Staff reported a range of challenges, notably associated with the implementation of the complex set of reforms. Indicators for a range of programme elements suggest that not all schools were able to demonstrate evidence of whole school change. Furthermore, two of the 24 schools had to suspend their involvement in the programme during the evaluation period.

There are a number of explanations that could account for the mixed picture of programme implementation and student behavioral impact. Firstly a number of limitations to the study need to be taken into account when interpreting the findings. With regard to the baseline and follow up respondents, the student questionnaire was administered on two occasions to similar Year groups in the same schools. This means that the study is not tracking longitudinal change in individual student behaviour. Furthermore, the study design cannot attribute change (or absence of change) to the intervention given that it did not have an external comparison with schools outside the Flagship programme.

Although the mixed methods approach helps triangulate the findings, some measures are inherently subjective—so for example there was scope for an ‘approval bias’ in the responses of some staff closely engaged in the programme. It should also be recognized that the study period of 24 months may have been simply too short to capture changes in student behaviour that are longer term in character. This perspective certainly reflects wider learning from the outcome evaluations of complex community based interventions [22].

A second area of explanation also reflects the complex nature of the programme. Staff accounts of the challenges suggest that programme inputs became dispersed in an effort to create an impact across the whole school. The extent, intensity and duration of the programme actions created high levels of demand for participating schools [19]. On occasions, action to address a wide range of goals may have led to difficulties for prioritization. These processes may have diluted the potential impact, and so students had quite a limited direct exposure to, or awareness of, the combined elements of the programme. For example, the significance of changes to the sourcing of school meal ingredients may not have been sufficiently reinforced through joined up elements of the programme. This explanation is plausible given the competing pressures on secondary schools to address a wide range of agendas—including those that are likely to take greater precedence. By contrast, it is notable that the evidence of FFLP’s positive behavioral impact in primary school settings [17] is clearer than in secondaries. In part this may be connected to the smaller organizational scale of primary schools and the ability of senior staff to effect whole school changes.

A third area of explanation relates to the lives of the students themselves. Commentators have argued that young people in the West have become profoundly disconnected from many social and environmental aspects of the food they eat, whilst simultaneously becoming the focus of a food industry dedicated to highly processed, convenience foods. Young people aged 11–16, in comparison to younger children, may also be more fixed in their dietary, societal and environmental views—and less influenced by school driven norms and values [25]. This perspective therefore highlights the challenges of effecting behavioral changes with regard to food-based citizenship education with this age group. Some evidence from our study reflects this picture. Most students lacked experience of activities such as growing fruit and vegetables, cooking from scratch, visiting working farms or making decisions about food in school. However, in many cases they held positive attitudes towards social and environmental food issues. This suggests a more positive outlook and one that indicates latent scope for behavioral change.

Whilst all of these explanations are likely to hold some water, the more direct evidence presented in this study points towards the organizational challenges of delivering a complex and ambitious programme in the secondary school setting. This poses some challenges for research, policy and programme development in this field. Clearly longer term, controlled studies would have value, although they are best warranted with an FFLP-type programme that has refined its theory base and blueprint for delivery [21]. For secondary schools, FFLP-type programmes may have greater impact when delivered as two tier initiatives that consist of (a) an overarching set of coordinated and long term school policy reforms and (b) highly focused, project driven interventions with discrete groups of students. This approach would assist the design of a monitoring and evaluation framework to track behavioral change for targeted students. Finally, for food citizenship initiatives to become more firmly embedded in schools, they need supportive school-level leadership and clear national policy drivers.

Given the tangible significance of food and dietary health, and the importance of active citizenship for young people, focused action in secondary school settings clearly needs to stay on the educational policy agenda.

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# **Realizing a Holistic Approach to Food through School Gardens and Growing Activities**

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## **Abstract**

*Garden-enhanced education in schools is increasingly recognized as a promising strategy for promoting healthier eating and environmental awareness for children. Analysis of the development of school garden initiatives can offer insights into how these benefits may be optimized. Using a mixed-methods approach, our study tracked the progress of 55 primary schools participating in the Food for Life Partnership: a multi-component school food program. The findings showed considerable expansion of food growing facilities, outputs and supporting infrastructure. Participating students, parents and community volunteers helped create new links to food-related activities in the dining hall, the classroom and the home environment. This provided a mandate for lead teaching staff, often working under conditions of social deprivation and poor green space, to create a more holistic approach to food in school life. The effectiveness of these changes connected to the strategic re-development of growing spaces and the conceptually integrated messages on food sustainability.*

**Keywords:** [food](#), [sustainability](#), [school](#), [garden](#), [students](#), [program implementation](#)



## **Introduction**

Schools offer an important setting in which children can learn about the health, environmental and social aspects of food. Notably, garden-enhanced education in schools is increasingly recognized as a promising strategy for promoting healthier eating and environmental awareness for children, not least because it offers a wide range of experiential possibilities.

A range of research studies suggest beneficial outcomes of food-growing activities for children and youth. Children's consumption behaviors are directly related to their opportunities to experience different foods (Blanchette and Brug 2005), and gardens in school settings offer the chance for children to develop a personal connection with their food. Research suggests that education with primary school-aged children (4-11 years) about diet and nutrition should focus on concrete experiences with food (e.g., Parmer et al. 2009). Participation in growing edible plants is associated with an increased ability to identify fruits and vegetables (Somerset and Markwell 2009), a willingness to taste vegetables grown in the garden (Morris, Neustadter and Zidenberg-Cherr 2001), and a willingness to try vegetables in school meals (Morris and Zidenburg-Cherr 2002).

Children participating in structured educational courses on growing food express more positive preferences for fruit and vegetables (Libman 2007; McAleese and Rankin 2007; Birch 1999; P. Morgan 2010). The school setting may be important because it offers opportunities for positive peer influence and social support (Brug et al. 2008). School-based hands-on experiences with fruits and vegetables can enable children to prepare these foods at home with their families and influence the quality of the food their families buy and prepare (Heim et al. 2009; Demas 1998). Learning at an early age can have long term positive effects on health. Studies have found an association between gardening and fruit and vegetable consumption, even when the gardening activity occurred in the past (Alaimo et al. 2008; Devine et al. 1999).

School food-growing activities can provide a range of benefits in addition to the promotion of healthier eating. Through creative outdoor learning, children can develop practical life skills as well as generic social skills (Graham et al. 2005). Gardening activities are reported to provide hands-on study of science concepts as well as a range of other subjects such as literacy, mathematics, history and the arts (Passey, Morris and Reed 2010). School gardens are therefore a useful supplement to the resources of a school (Graham et al. 2005). Some evidence suggests that garden-based education may be an effective method to improve students' learning outcomes, for example in science (Klemmer, Waliczek and Zajicek 2005). Projects delivered through school gardens can be more attractive than their alternatives. Visits to external horticultural projects or farms may be less likely than an integrated garden to improve the school environment or to shape school norms through routine experience (Ozer 2007).

Hands-on experience of local food production can help build a mandate amongst both students and staff for local ecological improvements, thus contributing to a wider agenda on well-being and sustainability in the school setting (Story,

Nanney and Schwartz 2009). In addition to student-related outcomes, school food gardens may contribute towards an agenda on civic participation by offering opportunities for parent and the wider community involvement and the celebration of school life (Blair 2009; Ozer 2007). This in turn may produce benefits for schools in terms of, for example, higher levels of parental support for student learning.

While this research suggests considerable benefits for garden-enhanced education, it is not without limitations. Research studies often focus on heavily structured, specialized and externally delivered interventions (CDC 2010). Reports based upon these initiatives may not necessarily reflect their performance under “ordinary” learning conditions (Nutbeam 1998). Other reports, according to Scott, Reid and Jones (2003), suffer from a surfeit of assertion over empirical evidence for the benefits of school environmental education.

There has been little research on the conditions under which garden-enhanced education can become integrated into mainstream school practice. Clearly some pre-requisites include adequate space, facilities, equipment and partnerships to enable experiential lessons on fruit and vegetable production, preparation and storage. Other issues, such as the threat of vandalism, are likely to be important considerations. Equally, other factors may be critical for success. While gardening remains a popular hobby, the effective management of growing projects over the course of a school year requires horticultural skill, enthusiasm and commitment. Previous research indicates that staff need professional development in this area, especially given that it has little place in contemporary teacher training. While professionals from outside the school may play a part, in the longer term schools need to develop in-house skills (Scott, Reid and Jones 2003), drawing upon either staff or adult volunteers. This in turn requires buy-in from the school leadership team, administrators and others such as grounds maintenance staff.

Evidence from research on school nutrition programs (van Cauwenberghe et al. 2010) indicates that school gardens are also likely to have greater impact as part of a combined effort across a number of dimensions of school life. Program links to school food policy, educational cooking, food preparation and tasting activities, lunchtime food provision, as well as reinforcement through visits to farms or community gardens, can all contribute towards a more holistic approach to food. Regardless of the type of initiative—whether it focuses on cooking, nutrition or the promotion of school meals—often there is a failure to integrate messages consistently across the whole school. This leads to inconsistent and compromised implementation. With reference to effective outdoor learning in schools, Rickinson and colleagues’ (2004) review of the literature identified a similar need for integration and summarized key barriers in terms of: health and safety issues; teacher confidence and expertise; the constraints of the school curriculum; shortages of time, resources and support; and political/institutional constraints, such as an emphasis on “back to basics” in education. To this list Dyment (2005) adds competition within and between other educational programs in sports and the performing arts. Other potential issues for understanding how schools implement and embed garden-enhanced education remain under-explored. While there are

many attractions to school gardens, some of these obstacles may account for gardens' patchy and uneven adoption in schools.

This paper focuses on the role of the school garden and growing activities in the realization of a holistic approach to food as part of the Food for Life Partnership program. As Springett (2001) points out, some of the most valuable learning from program evaluation can arise from an analysis of the implementation and the role played by leading stakeholders. According to this perspective, programs of health promotion in complex community settings are best understood as social reforms or processes of change—as opposed to interventions that deliver a “dose” or “treatment.” Springett argues that “one could characterize health promotion as a decision-making process involving a number of key agents whose combined actions contribute in varying degrees to the final outcome” (2001, 140). Our present study, therefore, sought insight into participants' interpretation of the program and their perceptions of the character and context of the changes that occurred. This focus on how, why and for whom the program had effects also draws upon elements of Pawson and Tilley's (1997) framework for creating a realistic evaluation.

### **Aim and Objectives**

The overall aim of this paper is to explore the role of the Food for Life Partnership (FFLP) program of garden design, development and associated growing activities in creating a holistic approach to food in school. The objectives are to:

1. Determine the impact of the FFLP initiative on the gardens and food growing activities of participating primary schools (students aged 4-11 years).
2. Assess the role of students and other stakeholders in making school gardens and food growing activities.
3. Explore the perspectives of students and other stakeholders on the opportunities to make links between growing activities and other food-related activities in schools.
4. Theorize the role of school gardens in promoting a holistic approach to food and to draw research, practice and policy implications.

### **The Program**

The Food for Life Partnership is a program that works with 3,600 schools in England seeking to transform children's food environment. Started in 2007, the initiative evolved out of a concern that obesity and the climate change impact of food cannot be addressed unless “individuals and communities are reconnected to how their food is produced, and regain the skills and knowledge needed to take active control over what they eat” (Food for Life Partnership 2010). FFLP has four areas of focus in its work with schools:

1. Food leadership: promoting food reform through an action group with student, teacher, catering staff and parent representatives.

2. Food quality and provenance: working with school meal caterers to procure more local, seasonal, organic, marine stewardship council<sup>1</sup> and foods produced to high animal welfare standards.
3. Food education: reforming practical food education, particularly with regard to raising issues of environmental and social sustainability through gardening, cooking, visits to farms and local food producers, and classroom projects.
4. Food culture and community involvement: engaging with parents and the wider community on the use of healthier and more sustainably sourced food in school and at home.

This paper concentrates on the program's impact on the role of growing fruit and vegetables in schools. These activities cut across all four areas listed above. FFLP's garden-based work intends to develop both a social and an ecological space for influencing educational practices, food consumption in school, the social life of the school community and, more widely, provide an opening to the food environment beyond the school gates. There is an emphasis on organic and bio-diversity principles in the development of the school fruit and vegetable garden. According to the initiative, students should take an active role in the set up and use of growing spaces to change food culture across the school. Schools that applied to the FFLP "flagship" program are eligible for an enhanced level of support because they have high proportions of students from poorer socio-economic backgrounds, lack a garden or green space inside the school, are located in areas of high urban density, or have little track record of school food policy development. Over a period of 18 months, each flagship school receives up to £500 (approximately US\$800) in funding for resources, such as garden tools and written materials to support garden development and education. Over the course of ten visits from an FFLP garden education officer, all flagship schools are likely to participate in a process with the following common elements of training and support:

- assessment and consultation to establish the school's priorities, interests and capacity for change;
- facilitation of an action group to develop a garden plan and calendar of activities;
- training of staff and volunteers in organic horticultural skills (such as crop rotation, composting and pest control), project development, and safety and risk management;
- teaching plans to connect garden activities with curricular studies, experiential learning from farms, and use of produce in food in classroom activities, school meals, and wider learning;
- networking with like-minded schools, advice on further funding opportunities, community engagement, voluntary support and the active participation of students.

FFLP staff do some work directly with students, but largely in the role of modeling best practices with school staff or as part of a consultation and celebration event.

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<sup>1</sup> A scheme for promoting sustainable fishing practices

While a standard package of support is available, in practice each school works within the framework established by FFLP to develop its own, bottom-up solutions for the design of the garden areas and the role the garden plays in changing the food culture of the school. Qualitative research on FFLP, conducted separately from the present study, found that schools adopted the program flexibly by building on and complementing pre-existing activity and their school ethos (Teeman et al. 2011).

## **Method**

### **Methodology**

The study used mixed methods research to collect and analyze data, integrate findings and draw inferences using both qualitative and quantitative methods (Tashakkori and Creswell 2007; Onwuegbuzie and Leech 2005). We selected mixed methods as a pragmatic approach for exploring a range of program-related changes from a number of different perspectives, including those of lead participants (Springett 2001). We collected multiple sources of data to capture changes at the student group level and at the school organizational level at the point of enrolment with the program ("baseline") and again after approximately 18-24 months ("follow up").

### **School Sample**

The first 55 primary schools enrolled in the FFLP flagship program in 2007/8 were sampled to take part in the study. These were located across all nine regions of England. The average number of students enrolled in these schools was 287. This is somewhat higher than the England average of 228 although the sample figure masks a considerable range (min. 48, max. 671; SD 137.5). The schools were more likely than average England schools to have a track record in health promotion and environmental activity. Eighty-two percent of the schools had National Healthy Schools<sup>2</sup> status, and 53 percent of schools had Eco-Schools<sup>3</sup> flag status.

### **Quantitative Data Collection**

In each school at baseline and follow up the lead teacher contact, usually a member of the senior management team, was asked to complete a structured questionnaire on school food growing-related activities. This consisted of questions on the school's resources and capacity to deliver food-growing education, and the engagement of stakeholders in the design and function in the school garden areas. The majority (48 out of 55) of the baseline and review forms were completed by the same member of staff.

At baseline and follow up, at least half of the Year 5 and 6 classes (ages 9 to 11) in each school were randomly selected to take part in a questionnaire survey. The baseline questionnaire was completed by 1,435 students, and 1,423 students

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<sup>2</sup> A national program intended to improve health and encourage closer working between health and education providers.

<sup>3</sup> An international program of environmental and sustainable developmental education for schools.

completed the follow up questionnaire. For both occasions this amounted to a sample of 61 percent (S.D. 6.33) of the total population of the Year 5 and 6 students in the schools sampled. Using Likert scale questions, students were asked to report on their involvement in food growing and health education related activities. The questionnaires were administered by the research team or, on occasions, program officers using standardized guidance.

**Qualitative Data Collection: Staff**

At the point of review, lead staff were asked to give written responses to open questions on their perceptions of successful and challenging aspects of developing garden-enhanced education, and its role in promoting a holistic approach to food. Of the 55 respondents, a random selection of 24 participants supplemented their responses through an audio-recorded semi-structured interview with a member of the research team.

**Qualitative Data Collection: Students**

In six of the 55 schools we conducted group interviews with students 12 months following enrolment with the program. These schools were selected on a list basis to include a geographical spread of two in the north, two in the midlands and two in the south of England. For each school, there were five group interviews ranging in size from three to six individuals. The students were drawn from mixed-ability classes in Years 3 to 6 (ages 7-11). A total of 77 students took part in interviews. The topic guides explored perceptions of food growing activities and students' roles in developing the garden areas.

**Data Analysis**

All quantitative data were entered into SPSS Version 17, a statistical software package. Quantitative data were used to generate the frequencies and cross-tabulations in this report. Qualitative data were transcribed and analyzed thematically (Francosi 2004). In order to validate the research, written summary points from the preliminary analysis were checked with lead staff in participating schools and lead program officers (Silverman 2011). Following Morgan (2007) we adopted a pragmatic approach to integrating qualitative and quantitative findings. This took the form of comparing, contrasting, building on, or embedding findings to establish a plausible set of conclusions.

**Ethical Issues**

The research protocol was approved by the University of the West of England Research Ethics Committee. School head teachers were asked to give written consent based upon written and verbal information provided by the researchers. Schools provided parents with standard written information on the study, data protection and right of withdrawal. Students were informed of the purpose of the study. We adhered to each school's policy on the right of students to opt out.

## **Quantitative Findings: School Garden-Related Activities**

### **Impact on School Garden Design and Infrastructure**

In the year prior to enrolling with the FFLP initiative, the majority of schools reported some, albeit often very limited, engagement with garden-enhanced education. For example, of the 55 schools, 42 already had a small area demarcated for growing fruit and vegetables. After 18 months of participation in the program, most schools had considerably expanded the plot areas of their school gardens. For the 55 schools as a whole, this equated to the creation of 20 full-size allotments overall. This may be an underestimate given that orchard and supporting wildlife areas were excluded from the calculation.

At baseline, schools generally had good access to basic facilities such as changing rooms, hand washing, toilets and accessible paths. However the majority of schools lacked a full array of specific facilities to deliver a whole-school program of garden-based education. The majority of schools had strategies for conserving or attracting wildlife. A significant fraction, almost a third, lacked green space features on site such as hedges, trees, shrubs and wildflower or rough grass areas.

At follow up, the majority (at least 36/55 across a range of measures) of schools reported improvements in their gardening facilities; the growing site, equipment and composting facilities stood out as areas with the greatest levels of improvement. The majority of schools had no pre-designated space to develop growing areas and therefore had to create areas directly outside classrooms, make use of planters on asphalt playgrounds, outside the school kitchen or convert other play and ornamental areas. Six schools took up plots on nearby allotment sites.

### **Staff Professional Development and Educational Delivery**

At the outset, the 55 school leads were asked to rate the significance of a list of issues that might affect the sustainable delivery of the growing skills program in their school. Areas that were rated as most problematic (a "major" or "significant issue") were: freeing up staff time to dedicate to growing projects (n=33), lack of equipment (n=21), parent and community support (n=21), and running costs (n=18). The majority (n=31) of school leads reported that the staff had had no specific skills in garden design, growing, or the use of produce in educational cooking, nor had they undertaken any training in a formal course of horticultural education. Only six schools closely followed guidelines for organic gardening practice. Schools were not likely (nine or fewer) to have policies in place to support more growing-specific aspects of work such as use of garden tools, risk assessments for use of garden produce in school meals or making compost. The following indicators illustrate how, at follow up, this picture had changed quite significantly:

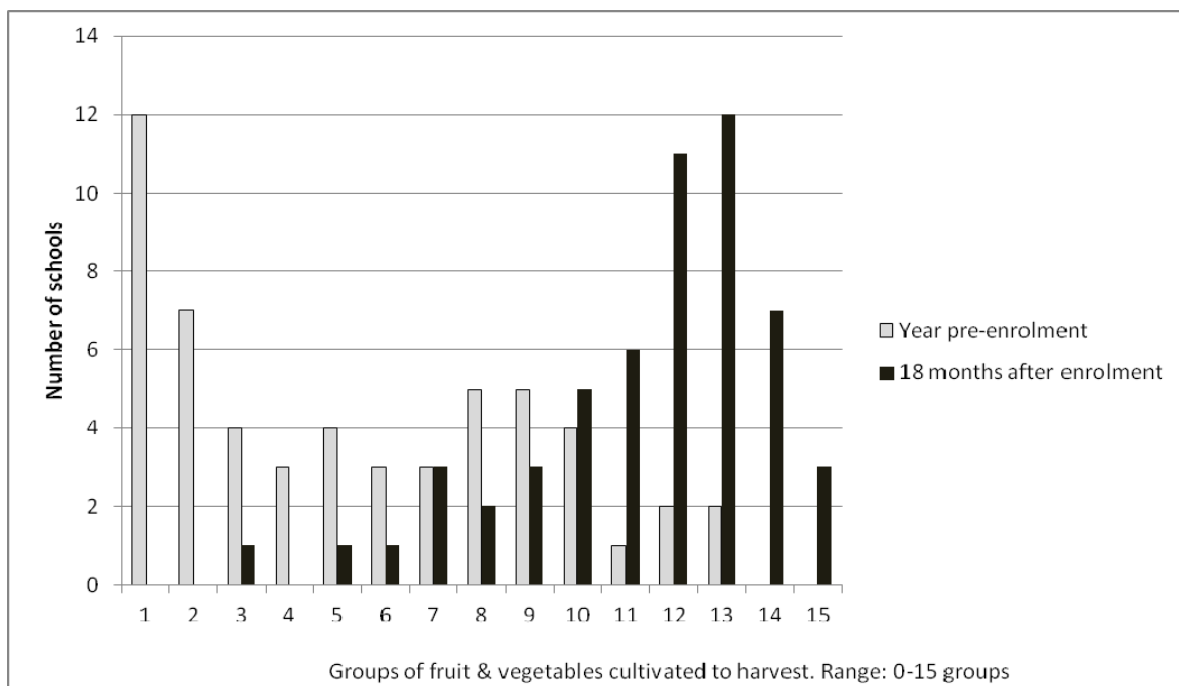
- 42 of 55 schools had arranged for staff to undertake new training in horticultural education.
- 46 of 55 schools had adopted new systems for organic gardening.

- 30 of 55 schools had adopted new policies and risk assessment.

**Fruit and Vegetable Production**

At the points of baseline and follow up, lead staff were asked to list fruit and vegetables their school had grown in the last 12 months. We categorized these into groups such as roots (e.g. carrots, parsnips); brassicas (e.g. cabbage, broccoli); salads (e.g. lettuce, cress); and soft fruit (e.g. strawberries, raspberries). Before enrolling with the program, the majority (30/55) of schools had only grown five vegetables or fruit from five of these groups. This very restricted range included plants commonly employed in curricular study, for example broad beans or cress. The position had changed considerably at the point of review (see Figure 1). Three-quarters of schools were growing fruit and vegetables from over ten groups. This diversity included many unusual types of garden crops such as mushrooms, callaloo, chilli, squash, traditional English apple varieties and other “heritage” plants.

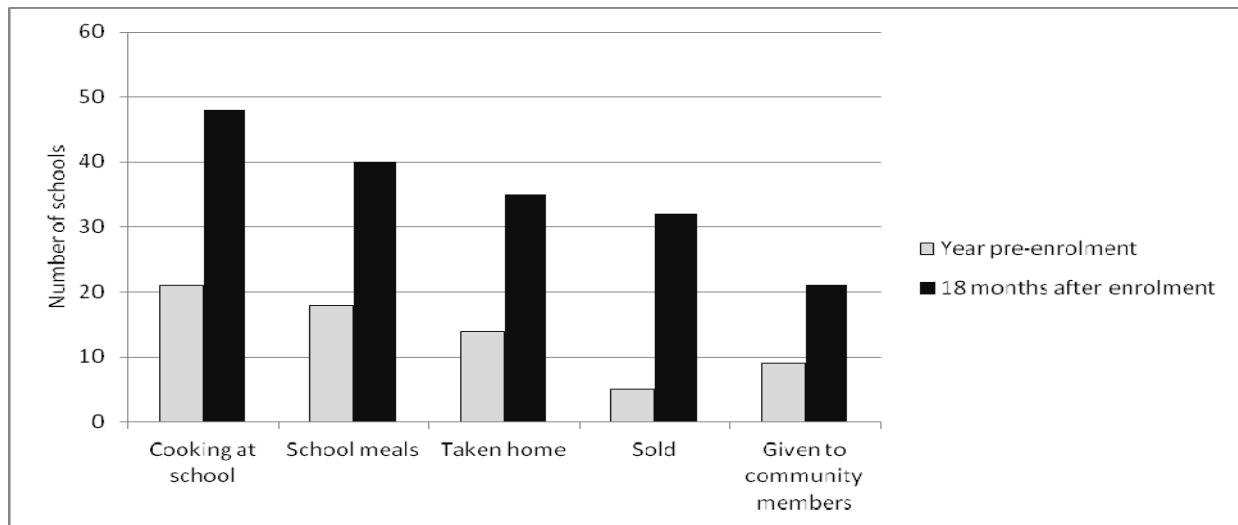
**Figure 1. Groups of fruit and vegetables grown by schools. N=55. Missing data=0**



Staff also reported an increase in the cultivation of crops to harvest and an increase in crop yields. Although no quantifiable data was recorded in this respect, Figure 2 shows a shift towards actively making use of crops in school meals, the classroom and community activities.

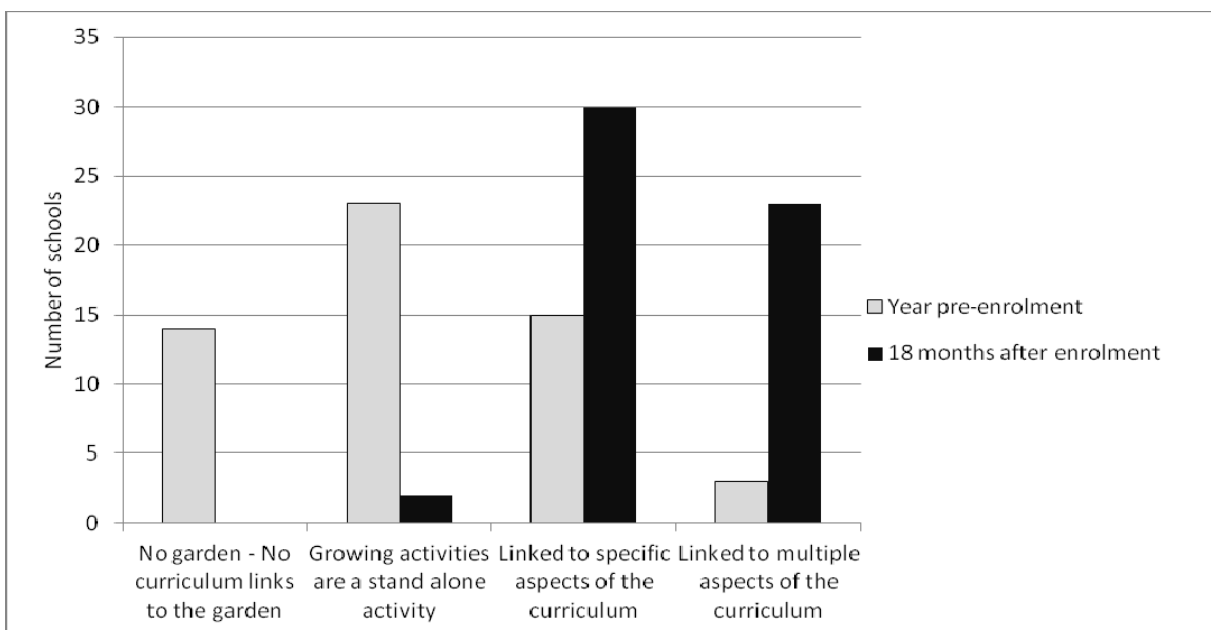


**Figure 2. How produce from the school garden area was used (N=55. Missing data=2)**



School leads were asked to categorize the status of their curriculum links at baseline and follow up. They were also asked to provide supplementary evidence in terms of a summary statement and schemes of work. At follow up a majority of schools had improved their links at either specific or multiple levels within the curriculum (Figure 3).

**Figure 3. How growing activities were linked to the curriculum (N=55. No missing data)**



For many schools at follow up the emphasis had shifted to integrated links between the garden area and many aspects of school life. Some schools adopted a themed approach to the curriculum in which, for example, a garden-based project combined literacy, history and science learning.

### **Role of Parents and the Wider Community**

School leads were asked to estimate the involvement of parents and other adult members of the local community. Over the research period the percentage of schools with two or more such adults involved rose from 13 to 33 out of 55. These individuals assisted with the development, planning and maintenance of the areas.

### **Staff Reports and School Records on the Role of Students**

School leads were asked to report the number of students taking part in a growing activity in the past 12 months. Here growing activities were defined as the school-based cultivation of fruit and/or vegetables with the aim of producing a harvestable crop. School leads were encouraged not to include in their report science-based projects that did not have this aim. An average of 28.6 percent of students took part in some form of growing activity in the 12 months before enrolment. In the 12-month period before follow up this figure rose to 74.4 percent. These overall averages disguised wide variations: students in smaller schools or in schools with higher social deprivation scores were significantly more likely to be involved in growing activities.

In terms of the level and character of student involvement, at baseline only nine of 55 school leads reported that at least one year group of children were actively involved in most aspects of food growing. At follow up 38 of 55 school leads reported that students had taken on more active forms of engagement. These roles included helping to decide the layout of gardens, planning the types of crops to grow, maintaining the garden areas and cultivating crops through to harvest.

At baseline seven of 55 school lead staff reported that children in their school were able to actively make use of garden produce in school or extra-curricular activities, for example, cooking activities. At follow up 29 of 55 school leads reported that children had this opportunity.

### **Student Questionnaire Reports on Engagement with the School Gardens**

Student data largely mirrored the staff reports. The percentage of 9 to 11-year old children reporting growing fruit and vegetables at school in the last year rose from 54.4 percent to 82.5 percent. These growing activities included preparing the soil, sowing seeds, watering, weeding, planting out, staking and harvesting.

There was some evidence that the school garden activities could have had wider impact. The number of students reporting having helped to grow fruit and vegetables at home in the last year rose 26 percent to 35.2 percent. Children who had taken part in FFLP-related education on food growing and environmental sustainability were more than twice as likely to hold positive attitudes towards

organic, local, free range and fair trade foods, compared to those who had had no such education in the last year (21.8 percent compared to 10.7 percent).

### Perceived Effectiveness of Program on Food-Growing Activities

The final form of quantitative data concerned lead school staff perceptions of the overall role of the FFLP program in their school. At the follow up stage, staff were given a list of activities that were associated with the program and asked to rate the influence of the program (from “ineffective” to “very effective”) and the level of priority for the school (from “unimportant” to “very important”). Table 1 shows positive or very strongly positive ratings and lends support to the empirical evidence of change set out above. The ratings also highlight some areas that were more challenging, such as parental and community engagement.

**Table 1. With regard to the following areas (1) how effective has FFLP been in assisting your school? (2) how important has this area been as a priority for your school? Frequencies represent number of respondents. Data available for 51 of the 55 study schools.**

	Perceived effectiveness of FFLP in assisting the school				Level of priority for the school			
	Very effective	Effective	Neutral	Ineffective	Very Important	Important	Neutral	Unimportant
Design and development of suitable sites for growing activities	31	10	5	5	26	13	8	4
Organic horticulture training and advice	35	15	-	1	35	10	3	3
Health, safety and practical advice on management of growing areas	19	18	10	4	18	23	5	5
Linking growing projects to the curriculum and wider educational goals	17	18	15	1	27	15	5	4
Actively involving students in decisions	26	13	7	5	33	10	5	3
Actively involving parents or wider community	15	18	13	4	26	16	5	4

### Qualitative Findings: Teacher and Student Perspectives

This section reports on the staff and student interviews and written feedback on the role of school gardens and associated growing activities in developing a holistic approach to food in school life.

### **A Generative Space**

Most participants held very positive views about their school garden. This was often expressed as a strong appreciation and enjoyment of the plants and the outdoor space. Students were interested, enthusiastic—and sometimes surprised—about the growing fruit and vegetables. These 8-year-old interviewees illustrate this engagement:

*Student LH53: When you plant them and water them and you go away for quite a long time you come back and they've got a little leaf coming out. And when you go away and come back they've just started getting bigger. It's wicked! I've learnt at school that not all vegetables grow on top of the ground: some grow underground.*

*Student LH32: We grow mushrooms in the shed and I look at them every day. I've learnt that carrots are roots.*

According to the majority of teachers interviewed, this experiential learning helped bring to life abstract learning about healthier eating. It also helped class-based education about local, seasonal, organic, fair trade food issues:

*Teacher CB01: The whole school has got excited about watching plants grow and then tasting them. Spinach, beans and peas being taken into the kitchen and made into meals helped to show kids that veg can be fun!*

Those who had grown food in school felt more engaged and informed when they went on visits to farms and food producers on school field trips. Teachers reported how the food growing activities linked to other aspects of food related work in schools. Teachers reported that the garden formed a basis for making connections:

*Teacher TV01: The general approach of the whole school food approach: growing is embraced and celebrated; this then feeds in to the school dinners where a positive approach to food and eating is developed. It's had a huge educational impact on children's food choices.*

Teachers from one school explained how growing activities had become more integrated in the life of the school as they started to make more use of their allotment (a community garden plot):

*Teacher OV2: In the past we had an allotment: it was nice but it was very much just enrichment to the school experience. There was no greater thought beyond that.*

*Teacher OV1: It would be a bit of a treat: you'd go off to the allotment and make perhaps a thing out of it.*

*Teacher OV2: Now we are more focused on how we can use the allotment for education. Each year group has got a plot, children are involved in the actual selection of produce to grow, the growing process and the use of the*

*produce... So eventually we'll be using the produce in cooking and healthy meals education and things like that and not even shout about it.*

While there were examples of students with knowledge of sustainable food issues, the majority of students interviewed during the intervention had a limited understanding of, for example, the term “organic food.” It was also not always clear how much school growing activities were contributing to this understanding—as opposed to knowledge already held by these children.

### **Connected Curriculum**

A theme arising from the interviews was the connections between food growing activities and the formal curriculum. These links evolved—sometimes spontaneously—out of the garden development process:

*Teacher ART3: I started off being rather dubious about the relevance of the [FFLP gardening] project to the curriculum if I am honest. I couldn't see how it fitted in with what we have to deliver in class. But it seems to work... largely through the kids because they make the links across science, mathematics and food technology rather than us. They talk about food and growing all the time. It has helped them to learn about the relevance of food in so many different areas that I have become more and more convinced... it has made these issues very real for them.*

Growing activities, in some cases, became highly integrated into the school's curriculum. As one member of staff commented:

*Teacher GB02: We have dedicated curriculum time every week and part of our planning. Each class has a plot and classes do research for the garden in terms of conditions needed for growth, plant families and so on. This feeds into theme weeks around the topic of food. Gardening has given us a license to do what we wanted to do.*

Some teachers found it difficult to incorporate the routine gardening activities into the constraints of the standard class-based educational format:

*Teacher PE01: Growing is bitty: it's a case of a little here and little there—you don't go from sowing, to harvest, to eating in one go! With a weekly rotation, if you're the first pupil you may not be the one to try the produce—and you don't always get to see the whole process. Then there's the issue of whether you've got enough activities for everyone to do on a session. It's difficult educationally.*

### **Equity and Meaningful Engagement**

This type of difficulty raised issues of equity for some teachers who were conscious that that full participation could be hard to achieve:

*Teacher MDT1: The challenge for us at the moment is embedding [food growing] in classroom culture and practice. So the teacher makes sure all*

*kids are going out, seeing to their plants in their beds regularly through the whole cycle, you know, not just planting up and then forgetting about it!*

Other schools faced this challenge by directing garden activities at specific classes or groups of children, or created rotational sessions to maximize participation:

*Teacher PH02: It's a Year 5 thing at the moment: the idea being rather than everyone just getting a little taste they get more in-depth experience of cookery and growing—and they build up their skills on a week-on-week basis...*

One large school's rotational approach had helped promote maximum class involvement in the garden and to develop projects with larger groups over the course of the gardening calendar.

*Teacher SJ01: I just found that there were so many children in the school it has presented a real challenge. We have allocated dedicated slots in which we will take groups of children into the garden during the week. At the moment we have a potato competition going on. Every class has sacks, potato seeds and compost and we are going to see who can grow the heaviest yield of potatoes. The winners are going to have a day cooking potato-based products. Over the summer holidays every child in the school is going to take a plant home, whether it is a sunflower, a courgette [zucchini], a cucumber and... hopefully children can bring their produce to a fête in September. So we've tried to include every child in the school.*

By contrast other teachers highlighted the role of the garden area in targeting their work with children with specific needs:

*Teacher SE02: Gardening is the sort of thing that engages them: taking them out, weeding the plots... I mean it's completely inclusive if we need resources or anything for someone with special needs then there's no issue and no problem: behavior-wise it's the ideal curriculum isn't it?*

### **Students as Active Participants**

As part of the program, all schools set up action groups with student representation to assist in the development of a whole-school approach to food. Such active participation was reported to help create closer engagement and dialogue:

*Teacher PE01: The children have loads of ideas. The [action group] feels like its part of the school as a whole rather than just me or another member of staff.*

*Teacher PE03: I think it's good that everyone comes together and shares ideas: children have very different ideas compared to the adults. It gives the children part ownership in what's going on.*

Two 10-year-olds involved in the garden planning group explained how the system worked in their school:

*Student MD01: We've got little planters for each class and we're growing carrots, lettuce, cauliflower, tomatoes and last year we were planting peas. We've the three allotments on the back of the school and we're going to keep chickens.*

*Student MD11: We thought it was fair if every class has planters and does it. Most of the people in [the fruit and vegetable] growing club get to do a lot more growing than that.*

In contrast to some of the more rigidly defined areas of the school, garden areas offered the chance to draw up and implement plans over the course of a season. The tasks involved in gardening also offered many opportunities for decision making, leadership and team work. Sometimes this involved a reversal of roles, for example where students took food into the school kitchen and asked the cook to prepare it for their lunch.

### **Developing Staff Interest**

A theme amongst teachers was the importance of engaging a wide range of staff in order to make food growing a whole-school activity. Some interviewees felt that garden-based activities had helped make this possible:

*Teacher FD01: Growing produce has brought together different aspects of the school around a common theme. It's given us [staff] a focus to pull together all the expertise we have actually got within the staff and wider community.*

Such activities not only engaged teachers but also ancillary staff such as cooks, teaching assistants, groundskeepers and caretakers. Where this support was lacking—due to other commitments, lack of confidence, or low expertise—interviewees reported that they had difficulties developing the project:

*Teacher SB01: [One challenge is] getting all staff on board with the gardens. There's a coordinator developing gardening, but it needs support from all staff in school to work. It can't fall on one person.*

This was felt to be particularly important given the range of project skills, troubleshooting expertise and mutual support needed to keep food growing projects running over the course of time.

### **Connecting with the Home Environment**

Support from parents, other community members and external organizations also emerged as a theme. In some cases, gardens were reported to attract parental interest:

*Teacher DS01: We never used to be able to attract parents into the school: I don't know why. But with the events like the Growing Day the response from parents has been absolutely amazing—on that day about 60 parents came. We seem to have attracted a lot more parents in just lately with Food for Life.*

However such support was also reported to present difficulties:

*Teacher MP01: Getting the parents engaged in the gardening project was also very difficult at first as they would have lots of ideas but be reluctant to come and do anything in school!*

Where such support was achieved, teachers felt that it helped influence families in their home environment.

Discussion among students at one school illustrates how general interest was perceived to stimulate change at home:

*Student SA46: [after talking about growing in school] My mum's now thinking she could dig up a bit more of the garden so that we could grow more carrots and potatoes and maybe lettuces too.*

*Student SA21: I planted a squash plant [on a farm visit]. I've never seen a squash plant. I told them and my parents said would we like to try it at home.*

Such home-school interactions created a virtuous circle, for example:

*Teacher SM01: Class plots are developing well with teachers becoming more confident to have a go at a wide variety of fruits and vegetables. The confidence of the children has grown also and they are learning from one another, seeking support from their parents and grandparents.*

However a significant minority of students said that they had few opportunities at home. Students at one urban school illustrated some of the restrictions despite, on occasions, the efforts of households.

*Student LH06: I've got this little small pot of strawberries and I tasted some they were very sour. My garden's covered in concrete and dead leaves and my cats poo in the garden. It's covered in it.*

*Student LH08: We have a very small garden at home so we don't grow anything. So we get most of things from [a large supermarket].*

## **Discussion and Conclusions**

This article aimed to explore the role of the Food for Life Partnership (FFLP) program of garden design, development and associated growing activities in creating a holistic approach to food in school. Prior to enrolment, the majority of



schools lacked the basic facilities needed to deliver an effective garden-enhanced education, staff with applied horticultural skills, specific safety guidelines, or multiple links between growing activities and the curriculum. Drawing upon both qualitative and quantitative data sources, our research found that the FFLP program made considerable changes to the capacity of schools to undertake food-growing activities. These activities connected to a wider set of changes involving the way in which food issues were conceptualized in the educational sphere of participating schools. School garden-based activities succeeded in connecting different areas of action together. For some, but not all schools, students were actively involved in this process. This process of change also promoted opportunities for a diverse range of learners and created an impact on how the school engaged with parents and the wider community on school food issues. Overall the process helped re-position the role of food in school, change the nature of the bio-physical environment and affect the educational ethos.

The FFLP program provided a mandate for lead staff to develop the growing area as an outdoor classroom, to formalize the role of the food growing as part of curricular study and to create more personalized learning. In this way, the FFLP program reinforced staff capacity to apply health promotion and environmental education roles. However this work was not without difficulty. As other studies have found (e.g. Van Cauwenburghe et al. 2010; Bell and Dymont 2008), factors that inhibited progress included the complex and multi-component nature of the program; forging the links between school kitchens and educational cooking activities was a challenge for schools. As institutional gatekeepers, lead school staff were pivotal in this process, although the concerted efforts of the whole staff team helped ensure that student involvement extended beyond a limited circle.

Quantitative evidence of an increase in student participation in growing activities over the evaluation period provided a backdrop to the qualitative accounts of students. These data lent support to other research on types of learning outcomes of food-growing activities for students (e.g. Graham et al. 2005; Ozer 2007). Those students who were actively involved in planning, development and maintenance are likely to have obtained greater benefits (Bell and Dymont 2008). However, students' regular and structured participation can be difficult to achieve particularly where there are practical obstacles to running group-based outdoor learning and integration into schemes of work. Meanwhile, schools that successfully promoted parental support appear to have gained from practical expertise, enhanced social interactions across the school community and greater exchange with students' home environments. Teachers reported that these dividends were hard to achieve, but that the school garden was a space in which parents could engage with the school on more informal terms.

It is important to recognize that there are some limitations to our analysis presented in this article. School lead reports may not reflect the perspectives of other staff in their schools, particularly with regard to the subjective ratings and qualitative feedback. They are, however, likely to reflect the strategic perspectives of the school leadership team. Furthermore, while the study has a pre- and post-design, there is no external comparison with schools outside the FFLP program. This

limits understanding of how schools can make growing skills reforms in the absence of enhanced support from an external team of experts. Further research on the adoption and development of food growing activities in schools that lack specialist support could help inform our understanding of best practices in the mainstreaming of garden-enhanced health and environmental education.

It should be noted that the overall findings conceal important variations and patterns. There are distinct issues in some schools to do with organizational scale, project coordination, curriculum integration and stakeholder commitment. These issues help account for the slow progress for some of the schools, particularly those with a larger student roll. Nevertheless, the trajectory of schools in contexts of higher social deprivation and low access to green space suggests that food gardens can be implemented under challenging circumstances. This is significant given that students in such schools face restricted access to food growing in their home environment and are likely to experience higher levels of health and social needs.

There are a number of implications for policy, practice and research. Although some elements of the reforms ran counter to policy trends in education, feedback from staff suggests that the initiative was congruent to the core educational mission of schools (cf. Teeman et al. 2011). Practical experience with cultivating fruit and vegetables in primary schools appears to help children grasp social and environmental perspectives on food, in addition to the health aspects of food that have been reported elsewhere in a growing body of research (Robinson-O'Brien, Ramona and Heim 2009). Thus school gardens can act as a locus for exploring issues such as local sourcing, ecological sustainability and socially just methods of food production.

The development of school gardens is feasible even in adverse circumstances. However, as Ozer (2007) makes clear, school garden programs require long-term commitment and effort on the part of the principal and the school community to be adequately sustained. In the case of the FFLP program, expert personal training and advice enabled participating schools to realize their vision to link educational work, stakeholder involvement and sustainable food provision. It was these "human" elements that figured strongly as a theme in our research over and above the importance of funds for equipment and other resources. This provides a case for focused teacher training (cf. Copeland et al. 2011) and the continued use of outside professionals, qualified in horticultural education and a participatory approach to garden design, to assist schools that are new to this area.

Research on the longer-term sustainability remains an open question, however the majority of schools were able to show evidence of how they had succeeded in actively training and engaging a wide range of stakeholders in the initiative. As Bell and Dymont (2008) suggest, gardening activities can provide ongoing opportunities to build positive relationships among students, staff and parents. Such interaction is a good predictor of sustainable project delivery. Where they were utilized well, school gardens acted as a central locale through which schools could engage with a holistic approach to food. Not only did they yield produce to be used in educational cooking, and school and home meals but they also formed a site for engaging with

health and sustainability issues, and the social dimensions of production and consumption of food. Overall the effectiveness of the changes reported in this article appear to be connected to the strategic re-development of growing spaces and conceptually integrated messages on food sustainability.

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Article

## Creating a Learning Environment to Promote Food Sustainability Issues in Primary Schools? Staff Perceptions of Implementing the Food for Life Partnership Programme

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**Abstract:** There is increasing interest in the role that schools can play in promoting education for sustainable development (ESD), and evidence is emerging that schools can be influential in the emerging agenda around the ecological, ethical and social aspects of food, diet and nutrition. With regard to such food sustainability issues, this paper analyses the role of the Food for Life Partnership national programme in supporting garden and farm-based learning activities in 55 primary schools in England, UK. Using a mixed methods approach, the study examined the programme's implementation through staff perceptions and a range of school change indicators. The study found that the programme delivery was associated with widespread institutional reforms. According to staff, implementation of the programme provided a range of opportunities for pupils to learn about food production and sustainability, but addressing these issues was challenging for teachers and raised a number of questions concerned with effective, equitable and on-going implementation. At a pedagogical level, teachers also reflected on conceptually challenging aspects of food sustainability as a topic for primary school education. The study identified ways that ESD programmes could support schools to think about and implement learning opportunities as well as identifying significant barriers related to resourcing such programmes.

**Keywords:** education for sustainable development; food; primary schools; programme implementation; mixed methods

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## 1. Introduction

A realisation that societies need to move toward more sustainable lifestyles was first mooted on the international policy stage in the so called “Bruntland Report” [1]. This need to address global environmental and social problems sparked an interest in developing approaches to address a perceived disconnect between young people and the environment and to help young people develop the skills and interest in participating in local and global decision making. Realising the importance of environmental and related social issues, schools have begun to adopt approaches to support pupil learning about environmental and sustainable development. These programmes seek to combine learning that fosters participation in decision making, both at local and global level, with approaches that explore the need to improve quality of life now without damaging the planet for future generations [2]. Many initiatives, both at local and national level, seek to foster ESD in primary schools, for example the Eco-Schools initiatives in the UK and USA and the Australian Sustainable Schools Initiative. Some of these initiatives focus on reconnecting young people with the natural environment and include programmes supporting school-based gardening activities and farm links programmes that bring young people into direct contact with food production systems. However, few initiatives set out to specifically foster a multi-component approach to food education for sustainable development. As such it is interesting to explore the impact and challenges of one such initiative, the Food for Life Partnership programme (see [3]) in England, UK.

### 1.1. Education for Sustainable Development

Bonnett [4,5] argues that environmental education should seek to develop sustainability as an attitude of mind, something which is considered in the context of everyday actions. To this end, ESD programmes might focus on developing young people’s relationship with nature such that they have a lived relationship with the environment. This reflects wider concerns that the day to day lived experience of many people is increasingly removed from the natural environment. Developing a relationship with nature (both “wild” and “domesticated”) can and should be combined with some understanding of the consequences of everyday choices on the environment and local and global society. As such, environmental education might reasonably encourage young people to discuss sustainability issues which they might realistically encounter, such as whether to consider animal welfare issues (e.g., free range meat and eggs) in purchasing decisions or whether to support local producers. With this in mind, a number of initiatives are emerging that seek to promote what Elliot [6] refers to as a “transformation of the ways in which the school as an organisation in all its manifold aspects interacts with, and impacts upon, the environment” (p.331).

Research is emerging that suggests that whole school approaches to ESD may be able to transcend the targets culture (where schools are driven to meet government targets at the expense of deeper learning) that has emerged in schools in recent years [7–9]. Rauch [8] terms this “ecologisation” of

schools, whereby schools seek to engage with the wider community and look to the “outside” world as they develop new forms of teaching and learning. Such an approach seeks to empower pupils to contribute to sustainable development. Within this context, sustainability moves beyond “do your bit” to confronting young people with often complex problems and choices—is organic always better (if for example it means greater food miles or heated greenhouses)? However, these complexities are often side-stepped. Reviewers such as Stables [10] and Scott [11] have noted how conflicting assumptions—ultimately philosophical in character—are often closed down or unexamined in the ESD field. It is within this context that our research explored the potential of garden-based education, school-farm links and practical food education to promote ESD within UK primary schools.

### 1.2. Garden Enhanced Education and Farm Visits

Growing evidence suggests that school-based gardening activities can encourage children to eat more fruit and vegetables and there is evidence that garden enhanced education can promote environmental awareness (see for example [12,13]). Lautenschlager and Smith [13] suggest that participating in gardening activities may be an effective approach to increase young people’s awareness of food related environmental issues, including sustainable production of food and Blair [14] reports that school gardens can act as a focus for environmental education. In this context, garden “enhanced” education has been shown to strengthen young people’s appreciation of other cultures [13,15], increase interest in cooking [15], encourage fruit and vegetable consumption and willingness to try new fruits and vegetables [12,16]. However, Ozer [17] identified a number of barriers that can limit the effectiveness of school garden programmes, including unequal access to gardening activities, divergent experiences (within and outside school) and limited support from within school or from the wider community.

Embedding gardening in the wider context of food production and food preparation education may further enhance its potential as a powerful learning opportunity. Jones *et al.* [18] report that providing a wider context to efforts to promote healthier eating, such as connecting food production and preparation with healthy eating messages, can be effective. Similarly, research suggests that integrating programmes into the curriculum and involving the wider school community (e.g., cooks and parents both at home and in school) is important for successful implementation of programmes designed to promote healthier eating [19,20].

There has been little exploration of the potential role of farm visits and farm links as learning experiences that could support ESD. Joshi *et al.* [21] argue that farm visits can facilitate learning about sustainable and ethical food production and it seems pertinent to explore the potential of farm visits and farm links programmes in the context of a multicomponent school approach to embedding education for sustainable development. Furthermore, farm and garden based learning may help to overcome the sense of independence experienced by some urban children, giving them concrete experiences of how modern divisions of labour in fact increase dependence on others. Clearly, farm and other food production settings offer “learning space” that is potentially more innovative and experiential compared with conventional classroom settings [22]. However, there is limited exploration of how schools might implement a wide ranging school programme designed to facilitate education about sustainable food production and animal welfare issues. Critically, little evidence exists to identify factors that are essential for the success of a programme designed to help primary schools

deliver education about sustainable food production and explore how teachers integrate education about sustainable food production into the wider curriculum. As the Food for Life Partnership programme sought to encourage change throughout the school, seeking to embed education about sustainability within the wider school learning environment, it provided an opportunity to explore these issues.

### *1.3. The Food for Life Partnership*

The Food for Life Partnership consists of a group of charities that share a concern to promote food-based environmental learning in schools. The initiative evolved out of a concern that obesity and the climate change impact of food cannot be addressed unless “individuals and communities are reconnected to how their food is produced, and regain the skills and knowledge needed to take active control over what they eat” [23]. FFLP organises its work with schools around four strands:

1. Food leadership: promoting food reform through an action group with student, teacher, catering staff and parent representatives.
2. Food quality and provenance: working with school meal caterers to procure more local, seasonal, organic, Marine Stewardship Council and higher welfare foods.
3. Food education: reforming practical food education, particularly with regard to raising issues of environmental and social sustainability through gardening, cooking, visits to farms and local food producers, and classroom projects.
4. Food culture and community involvement: engaging with parents and the wider community on the use of healthier and more sustainably sourced food in school and at home.

Schools are encouraged to work towards Bronze, Silver and Gold FFLP Mark awards based upon criteria in each strand. In the period 2007–2011, over 3,600 primary, secondary and special schools signed up to take part in the programme. All received printed and online resources and tailored support in the form of, for example, brokering links with local farms that could host educational visits. This paper concentrates on a sub-group of FFLP “flagship” primary schools that received enhanced levels of support from visiting programme officers and approximately £1,500 to help fund trips, equipment and events. Further details on the programme can be obtained at the Food for Life Partnership website [3].

## **2. Methods**

### *2.1. Methodology*

With a focus on staff perceptions, we sought to examine the implementation of the programme in terms of its fidelity, or the extent to which the programme was delivered as planned; the student exposure and reach of the programme; and context, in terms of aspects of the environment that may have influenced the programme [24]. Mixed methods were used to collect and analyse data, integrate findings and draw inferences [25]. Given the complex and diverse character of the programme initiatives, we collected multiple types of data to capture programme related changes from a number of different perspectives [26].

## 2.2. School Sample

The first 55 out of 75 primary schools enrolled as FFLP flagship schools in 2007/2008 were sampled to take part in the study. These schools had all applied to participate in the FFLP flagship programme. The programme application process involved expressing commitment to the overall aim of the initiative, although schools did not need a track record of related activity. For the research, school head teachers were asked to give written consent based upon written and verbal information provided by the researchers. The research protocol was approved by the University of the West of England Research Ethics Committee.

The schools were located across all nine regions of England. The average number of students enrolled in these schools was 287 (min. 48, max. 671; SD 137.5). This is somewhat higher than the England average of 228. Compared with the national average, the schools in the sample were more likely at the beginning of the programme to be involved in initiatives related to ESD: 62% of schools had achieved Eco-School flag status and 74% had achieved national Healthy School status.

## 2.3. Data Collection

Fifty five teaching staff completed semi-structured questionnaires at the point of enrolling with the programme (“baseline”). Sixty nine per cent (38/55) were head teachers and 31% (17/55) were teachers with a lead role for programme liaison. At the 18–24 month review point in the programme, 55 staff, either, completed “follow up” questionnaires or responded to interview questions. Of the follow up respondents 78% (43/55) were the same individual as the baseline respondent and 22% (12/55) were different individuals who had taken up the lead role in the period post baseline. The school lead was responsible for collecting relevant details from other staff who delivered specific aspects of the programme. For activities that took place over a limited duration—such as a series of farm visits—we asked 30 of the 55 schools to provide additional data specifically on these activities.

## 2.4. Measures and Interview Topics

The baseline and follow-up questionnaires covered a range of school activities related to garden, farm and other closely linked aspects of sustainable food-based learning. The baseline questionnaire was piloted with 6 schools, and then revised to provide greater salience and simplicity. Drawing upon the programme’s own achievement criteria, we developed indicators that reflected on key areas for change. Fifty-five staff were asked to provide ratings on their perception of the role of the programme in effecting these changes. We checked the school and programme delivery records to assess the reliability and validity of the responses. The interviews provided an opportunity to clarify any discrepancies, to pursue key topics in greater depth and to give staff an opportunity to reflect on their experiences.

## 2.5. Data Analysis

Descriptive statistical analyses of quantitative data were conducted using SPSSv.17. All written and audio recorded qualitative data were transcribed and analysed thematically, using a grounded theory approach. Follow up interviews provided the researchers with the opportunity to check the emergent themes arising from the baseline stage with respondents [27].

### 3. Results

#### 3.1. Section 1: School ESD Related Outputs and Outcomes

Table 1 provides a set of indicators of ESD-related activities in the study schools. Overall they suggest an increase in the number of schools actively engaging in garden-based and farm-linked educational activities. These baseline data suggest that in the absence of a specific stimulus, experiential opportunities for sustainable food education were largely marginal activities, not closely integrated into school development planning or schemes of work. Follow up data show, for all indicators, the majority of schools had acted to enhance their capacity to deliver ESD-related activities. The indicators also show how educational activities are connected as part of a whole school initiative, for example the garden or farm produce was used in cookery projects or school meals. Some of the indicators also show how a wider range of stakeholders—such as parents and community volunteers—became involved in the initiative.

**Table 1.** Indicators of ESD-related activities in schools. Measures cover the 12 month period before each data collection point. N = 55 Schools.

Programme indicator	Baseline	Follow up
<b>Garden-based education</b>		
Facilities for growing—growing area over 10 m <sup>2</sup>	16	53
Staff training covering organic horticultural skills	13	51
Food plant bio-diversity—growing over 5 out of 15 crop types	24	52
Community participation—parents and volunteers assist in school garden	12	37
Over 25% of students participated in school-based growing activity	16	41
<b>Farm-linked education</b>		
School has an educational link with a working farm	31	55
A class of students keep in touch with a local farm throughout the year, through farm visits/online links.	2	32
Community participation—parents and volunteers assist with farm visits	10	41
Parents/carers can buy or collect organic local farm produce at the school	0	11
Over 25% of students participated in farm visits	8	18
<b>Whole school aspects of ESD</b>		
Parent consultation process on food and sustainability education in school	20	55
Home projects: growing and cooking with sustainable food ingredients	4	53
School food policy and food action plan covering sustainability issues	9	55
School-wide curriculum references sustainable food education	18	53
Use of sustainably sourced ingredients in cookery classes	7	55
School menus are seasonal and highlight in-season produce	7	47
Over 25% of students participated in cooking at school with sustainably sourced ingredients	30	45

Table 2 summarises quantitative elements of the teacher feedback questionnaires on ESD-related aspects of the programme delivery. These data highlight not only support in setting up physical infrastructure, such as the introduction of gardening equipment and the development of features to attract wildlife, but also the role of the programme in supporting learning, both of teachers (e.g., training in horticulture) and pupils (e.g., ensuring the educational value of farm visits). The data also point to the potential of this type of ESD programme to facilitate the involvement in school life of

parents and the wider community. Overall, they suggest that respondents believed the programme had a clear role in creating the changes.

**Table 2.** Teacher ratings of the role of FFLP in supporting food related ESD in their school. “With regard to the following areas how effective has FFLP been in assisting your school?” (percentage given for “effective/very effective”). N = 55 schools.

A whole school vision for transforming food culture	92%
Provision of more local, seasonal and sustainably sourced food in school	86%
Setting up farm visits with clear educational value	96%
Setting up farm visits with a good standard of facilities	76%
Setting up farm visits where health and safety issues have been addressed	87%
Design and development of suitable sites for growing activities	80%
Training and advice on organic horticulture and farming	98%
Health, safety and practical advice on management of growing areas	73%
Development of areas to attract wildlife	65%
Provision of garden tools and equipment	83%
Linking growing projects to the curriculum and wider educational goals	71%
Actively involving students in decisions on food & sustainability in school	75%
Actively involving parents or wider community	67%

### 3.2. Section 2: Staff Perspectives on Implementing Farm and Garden-Based ESD

#### 3.2.1. Making Links to the Curriculum

A recurrent theme in staff reports was the importance of good planning as a basis for successful use of garden and farm-based activities. Support from FFLP staff from outside schools had a central role with respect to, for example, identifying suitable farms, advising on garden plans and designing lesson plans. Whilst such preparation is necessary for any practical education, teachers felt that this was particularly the case where they lacked the training, skills or resources to develop a new sphere of activities in their school.

Confidence in finding clear links to the curriculum was also an important prerequisite for implementation. Teachers demonstrated a broad range of ways pupils could integrate their learning into existing aspects of the school curriculum.

[The farm visit was] a fantastic experience that has had a brilliant knock on learning effect. The children in their food lessons can now describe organic farming, egg production, chicken meat production and discuss the advantages and disadvantages of various methods of production. This learning is invaluable as they learn from experience rather than the teacher saying so. (17:3)  
We have dedicated curriculum time every week as part of our planning. Each class has a garden plot and classes do [horticultural] research for the garden in terms of conditions needed for growth, plant families and so on. This feeds into theme weeks around the topic of food. (5:2)

Projects based in farm or garden settings provided an extended sphere of learning beyond the classroom, as one teacher explained:

Having a link with a farm means that we have more resources to work with and it makes our classroom curricula teaching come to life because they can see how food is produced in its natural setting. (42:1)

### 3.2.2. Underpinning the School Ethos

Staff reported that the garden and farm-based elements of the programme helped draw together diffuse ideas and underpin a school ethos on sustainability. As some interviewees explained:

[FFLP's gardening and farm link based activities have] focused and united the staff and pupils in shared vision in the development of a creative curriculum with a green ethos for our school. (29:1)

The general approach of the whole food process; growing is embraced and celebrated, this then feeds in to the school dinners where a positive approach to food and eating is developed. (7:2)

As a consequence some staff felt that the activities had quickly become embedded into school life.

### 3.2.3. Involving Parents and Community Engagement

It was also clear that schools came to act as community champions for growing activities, as these teachers reported about their garden-based work:

Children and parents are now involved in growing fruit and vegetables, and flowers. They grow things at school and take some home. We now have a few parents with chickens at home, following our lead. (43:1)

Greater involvement of parents in school life was also seen as a benefit of farm visits. One Head teacher reported very positive feedback from parents:

Parents tell us that invariably they remake the meal as soon as they get home because their child is so keen to demonstrate what they have just learnt. Testament to this is the fact that the local supermarket ran out of filo pastry after children made home grown potato and pea samosas one week. (27:1)

Practical food events proved particularly popular with parents who would not have normally attended formal meetings, as one teacher explained:

We never used to be able to attract parents into the school: I don't know why. But with the events like the Growing Day the response from parents has been absolutely amazing. We seem to have attracted a lot more parents in just lately. (14:2)

### 3.2.4. Extending the Educational Sphere

Respondents reported that the programme strengthened links between the food and environmental learning and other aspects of school life—such as the school dinner times. For example, in one school the head cook felt the programme gave her licence to create a new garden immediately outside the kitchen. The cook went on to routinely make use of produce for the salad bar and side dishes:



I take the children out into the garden to pick the veg and show them how it's prepared in the kitchen. I find that because they've actually been helping grow the stuff they'll actually eat it. I notice that when we have one of the other lettuces bought in they won't eat it, but they want to eat the one that they've grown. We gave them mizuna [an oriental salad] to taste...they loved it (laughs)...the next day they asked whether they could have it again at lunch. (29:4)

### 3.2.5. Challenges: Funding, Capacity and Risks

Staff reported a range of challenges that could be anticipated with an initiative that went beyond established school practices. Respondents identified problems freeing up staff time, lack of equipment and facilities for growing projects and difficulty covering additional costs of farm visits. The upkeep of school gardens sometimes depended upon the voluntary time of parents, volunteers or staff. Teachers identified various health and safety difficulties. For example, for some schools active student involvement in recycling and composting proved challenging:

Composting is a challenge because of the health and safety implications and staffing challenges for the children to manage our waste daily. As a result we are reliant upon the caretaker moving compost waste with the exception of reception children who manage their own fruit and veg waste. (49:2)

Teachers also raised problems about the prescriptive and challenging character of the programme-based targets.

### 3.2.6. Challenge of Sustainability Messages

Teachers reported on the challenges of communicating food sustainability messages with primary school children. Interviewees questioned whether to stress the merits of locally sourced non-organic produce as opposed to organic produce from further afield; whether industrial farming practices necessarily led to poorer animal welfare standards; whether low income families could reasonably be expected to pay for higher priced sustainably-produced foods; whether to emphasise the merits of amateur—and sometimes poorly grown—school produced vegetables over shop bought produce. Food sustainability was therefore a complex subject.

Some teachers felt that a good educational outcome in itself was to simply raise student awareness of these debates. A further approach was to bracket out the bigger debates and focus on small, tangible actions where there might be consensus. This is illustrated in one case:

We used the assembly to raise the idea of making small changes. We're very aware that all families are on a budget. So we proposed that if one family buys one fair trade item a week, then that would be over 400 items in our school. If another school does the same that figure becomes 800. So small changes can make a big effect. (38:2)

Similarly, one teacher felt her message was about encouraging small changes of attitude:

I took [into class] sunflowers, tomatoes...and some of the other things we were growing. We talked [about where the produce came from]. I said it would be cooked at lunchtime and most

of them wanted to try it. [Later] most of them were saying “it’s lovely.” Even if they hated the veg they said they’d give it a go. (51:2)

### 3.2.7. Opportunities for Participation in Programme Activities

It was difficult for many schools to give all students in a year group the opportunity to take part in farm and school garden education. Many activities lent themselves to small group work and lower staff-student ratios. In order to address this issue, schools often selected students as a study reward or as part of a programme of differentiated learning for children with special educational needs (SEN). Alternatively schools adopted rotational approaches to maximise participation, as one teacher explained:

[With] so many children in the school it has presented a real challenge. We have allocated dedicated slots in which we take groups of children into the garden during the week. At the moment we have a potato competition. Every class has sacks, potato seeds and compost and we are going to see who can grow the heaviest yield. So we’ve tried to include every child in the school. (27:1)

## 4. Discussion and Conclusion

It is clear from the implementation analysis that schools participating in the FFLP programme had built on the learning opportunities provided by school garden, farm visits and linked activities to explore food sustainability issues. These provided opportunities for young people to explore the food production system, though in many cases addressing wider issues of food sustainability proved challenging for teachers and pupils alike. Questions such as how to choose between conventionally produced, but locally sourced food *versus* organically produced food from further afield are not simple and were often difficult for teachers to address. Teachers also raised concerns about promoting food choices that might be considerably more expensive, particularly where families might be on tight budgets. Schools identified inequality of access issues, particularly in relation to the school garden. These issues are similar to those identified by Ozer [17] and can create tensions for teachers and school managers. Conflicts such as these are likely to arise in many programmes seeking to promote education for sustainable development, and helping teachers to think through these issues and how they could be developed as learning opportunities should be addressed at the programme conceptualisation stage.

Although teachers report that farm visits help them communicate complex age appropriate issues to children about food production, sustainability and ethical issues, there was only limited evidence that this extended beyond post-visit discussion and curriculum linked activities. Schools did make an effort to embed food sustainability within the school as a whole, through changes to food procurement, lunch room environments and school management processes (reported in Jones *et al.* [18]). This may, to a limited extent address Bonnett’s argument that environmental education should encourage young people to consider sustainability in their everyday actions [4,5] and there were examples of schools helping young people to discuss sustainability issues which they might realistically encounter (e.g., animal welfare issues raised through discussion of free range eggs) and giving clear, simple and specific messages about some aspects of food sustainability.

Teachers involved in the evaluation were positive about its benefits of the FFLP programme throughout the school. However we should recognize that the study respondents had self-selected to participate in the programme and might, therefore, be inclined to give an optimistic view. They identified a number of strategies that programmes such as the FFLP programme could undertake to support the move to what Elliot [6] terms a transformation in the way schools interact with the environment. Key amongst these are:

- involvement of external experts and resources, possibly provided by specialist support agencies or as part of national schemes, such as the Eco-Schools initiative
- highlight the importance of planning and support schools to identify ways to integrate these into the curriculum or other school activities
- help schools to identify ways to facilitate the involvement of the wider community in the programme
- facilitate sharing of good practice between schools, through partnership links and development of progressive skills based learning approaches.

As suggested by Ozer [17], wide support is needed for the successful implementation of such a programme and teachers recognised a need for commitment from a broad range of school constituents. This included working through a school council or food action group to help garner pupil buy-in.

Whilst there is much to be learnt from school experiences on how to best implement an ESD programme, there remain deeper problems related to the pedagogy for food sustainability in primary school settings. The issues related to food sustainability are complex and not always easily connected; there remains the problem (for teachers) that many sustainable development issues are contested and subject to much debate. How should these be approached? Furthermore, some aspects are seen to be value driven and these values may conflict with deeply held values within the school's wider community, creating a point of conflict with, amongst others, parents, governors and teaching staff. Discussion of such conflicts are a valuable part of education, but perhaps more suited to older primary school and secondary school children, where a greater depth of discussion can be developed. For young people and teachers, acknowledging the complexity of food sustainability is an important outcome in itself, which should increase learners' ability to navigate these problems in the future. This study identified a number of other barriers that schools may face in implementing a multicomponent ESD programme:

- Freeing up staff time for programme implementation and to take full advantage of opportunities for greater depth of educational engagement
- lack of funds, facilities and equipment to support an integration of ESD across school life
- difficulties communicating complex concepts and issues related to food sustainability
- reliance on under-supported community volunteers, which can place aspects of the programme at risk or lead to dilution of ESD messages
- equality of access for all students in cases where some activities are restricted to certain groups of children

This study of the FFLP project focused on staff experiences and staff reports, supported by a more limited investigation into pupils' experiences. As such, it is not possible to say with certainty what

messages and learning pupils gained, whether these were internalised and to what extent the programme was able to change the lived relationship and everyday actions of young people with the environment. Further research on the impact of such a programme on young learners is clearly warranted. To what extent are sustainability messages received? Are they valued and acted on or do they become crowded out by other, often conflicting, messages?

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### Conflict of Interest

The authors declare no conflict of interest.

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# A process evaluation of student participation in a whole school food programme

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## Abstract

**Purpose** – Health promotion programmes are widely held to be more effective when the subjects of them actively participate in the process of change. The purpose of this paper is to report on an evaluation of the Food for Life Partnership programme, a multi-level initiative in England promoting healthier nutrition and food sustainability awareness for students and their families through involvement in cooking, growing, farm visits and School Nutrition Action Groups (SNAGs).

**Design/methodology/approach** – The study adopted a mixed methods approach, drawing upon quantitative and qualitative data sources. The data sources included quantitative data on school level programme related activities, qualitative data collected through focus groups with children and reports from teachers and other staff involved in the delivery of the programme.

**Findings** – The paper concludes that the pivotal role of SNAGs in catalysing and embracing a whole school approach must be seen as an important mechanism for any health promotion in complex school environments.

**Originality/value** – This was a national evaluation of a unique school food project aiming to transform food culture in primary and secondary schools. The findings highlight the importance of a whole school approach to public health initiatives and the centrality of pupil participation in the success and sustainability of such interventions.

**Keywords** England, Primary schools, Secondary schools, Children, Young people, Health, Eating, Nutrition, Participation

**Paper type** Research paper

## Introduction

### Overview

The Food for Life Partnership (FFLP) programme is a curriculum development initiative which adopts a whole school approach to integrate action on both the health and sustainability aspects of food across multiple areas of school life. Within this framework, a whole school approach is seen as covering ten overarching areas of activity:

- (1) leadership, management and managing change;
- (2) policy development;



- (3) curriculum planning and resourcing;
- (4) learning and teaching;
- (5) school culture and environment;
- (6) giving children and young people a voice;
- (7) provision of support services for children and young people;
- (8) staff continuing professional development needs, health and well-being;
- (9) partnerships with parents/careers and local communities; and
- (10) assessing, recording and reporting the achievement of children and young people.

In the context of the FFLP programme, a whole school approach includes reforming procurement and preparation of school meals; experiential food education with respect to growing, cooking and farm-based learning; and forums for engaging a range of stakeholders. This paper focuses on the role ascribed to students in the implementation of the initiative drawing upon the perspectives of students and teachers and associated programme records.

*Student “voice” and participation in schools-based health promotion*

Schools have become an established focus for health promotion initiatives. Emerging evidence about the links between diet, physical activity, obesity and health outcomes have resulted in national policy that acknowledges the pivotal role the school setting plays in improving public health (Department of Health, 2010).

The term, student voice, refers to creating a culture where students are consulted and take a lead in shaping their own educational experiences (National College of School Leadership, 2011). The Office for Standards in Education framework (2005: currently under review) required English schools to take account of the views of stakeholders. Developing student voice work is an important part of the UK government’s “Every Child Matters” agenda, (set up by the Labour administration in 2003 and continued, nominally at least, by the present coalition government) which aims to promote child well-being in a coordinated way across children’s health, welfare and educational services. The five outcomes of ECM were originally developed in consultation with children are: “be safe; be healthy; enjoy and achieve; make a positive contribution; and achieve economic well-being” (Department for Education and Skills, 2004). Clearly all five of these outcomes provide opportunities for student consultation, but the fourth, “make a positive contribution”, signals the extension of student participation to go beyond simple consultation into something more dynamic and democratic. Internationally, these participatory rights are underpinned by Article 12 of the United Nations Convention on the Rights of the Child (United Nations General Assembly, 1989).

The active participation of children is widely felt to be an important, if not essential aspect of the successful delivery of health promotion in schools. As the intended recipients, children can offer feedback on the health promotion message, help shape the priorities for change, or actively deliver aspects of a programme themselves. Participation is a matter of pragmatism: a “means to an end” for programme agencies. It is also a matter of principle: an “end in itself” that affirms the rights and responsibilities of those engaged and has been continued across governments in the UK in recent years (Department for Children, Schools and Families, 2008).



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Whitty and Wisby (2007) highlight the fact that 95 per cent of schools in England and Wales had a school council. Research has shown an increasing awareness of the role young people can and should play in improving educational provision, as well as the duty schools have to model processes of consultation and participation so that young people are equipped to play a full role in a democratic society (Taylor and Johnson, 2002; Fielding and Bragg, 2003; MacBeath *et al.*, 2003; Flutter and Rudduck, 2004). In work undertaken in Denmark by Simovska (2012) exploring children's participation in health promotion initiatives focusing on road and playground safety, it was shown that children, if given sufficient guidance, can act as agents of health improvement. This work argued the importance of clearly outlining at every stage of an initiative, the opportunity for participation to develop students' capacities to actualise their ideas.

Shier (2001), as illustrated in list below, highlights different levels of pupil participation and provides a useful framework for understanding the various forms that student participation might take, ranging from a school with no student involvement in decision making to one in which students are fully active partners:

- children share power and responsibility for decision-making;
- children are involved in the decision-making process;
- children's views are taken into account;
- children are supported in expressing their views; and
- children are listened to.

The development of school councils has been based on an acknowledgement of the benefits of children's participation in the active management of school processes, including discussion and active involvement in implementing ideas. Participation is thought to improve self-esteem, confidence, critical and moral reasoning, communication, team work and relationship skills (Lyons and Freedman, 2002). The effectiveness of involvement will depend on the degree to which a school respects and listens to its pupils. Lyons and Freedman (2002) suggest that many schools pay lip-service to the idea by having a council, but fail to enable it to become actively engaged in shaping school policy. According to Middleton (2006) this is largely because schools have limited resources: including staff, funding and appropriate expertise. Similarly Hart (1997) demonstrates the importance of being aware of additional lower levels of participation in his "ladder" which discussed levels of "manipulation" of children by adults pretending that causes are inspired by children, "decoration" where young people are used to indirectly support a cause and "tokenism" where young people appear to be given a voice, but actually have little choice about how they participate. This underlines the importance of understanding the diverse characteristics and effects of participation.

#### *School Nutrition Action Groups (SNAGs)*

SNAGs are policy groups focusing on improvements in food education and whole school food culture. SNAGs represent an approach to linking both the formal curriculum and the more informal learning such as "skills for life" (Passmore, 1996). The aim of these groups has been actively to involve pupils in decision making around school food policy and to enable pupils to have a voice around a range of issues (Passmore and Harvey, 1994). They offer a mechanism to break down existing barriers

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between pupils, caterers and the school management. It is apparent that SNAG membership varies across schools but composition can include representation from the senior management team, school cook and pupils from all year groups (Passmore and Harris, 2005). In addition the inclusion of parents and teachers from key curriculum areas are considered to be important in the effective functioning of these groups (Passmore, 1996; Food for Life Partnership (FFLP), 2011).

SNAGs have been seen as a “powerhouse for change” (Passmore and Harvey, 1994) for influencing improvements in food education, eating behaviours and access to and provision of healthy school food. Continued focus and concern around school food policies has resulted in renewed attention on SNAGs (Food for Life Partnership (FFLP), 2011) as a useful approach within a constantly evolving educational framework. For example, SNAGs have been involved in a spectrum of activity from improving the quality of school meals to ensuring healthier snacking and supporting national campaigns.

However, the active participation of students in SNAG-related initiatives is not necessarily easy to achieve. The difficulty of maintaining pupil engagement in SNAG endeavours is recognised and has led to guidance being developed to support schools in achieving the longer term sustainability of these groups. Practical suggestions (Food for Life Partnership (FFLP), 2011) include starting meetings with warm up activities, setting up relevant debates, tasks to complete for next meeting, identification of champions for discrete areas of activity, arranging guest speakers and involvement in communication activities. This suggests that a creative whole school approach is vital in setting the appropriate environment in which active and meaningful pupil participation can take place.

To date little research has been undertaken on the processes by which primary schools establish forums for student participation in health promotion initiatives and the perceptions of those involved in their implementation. Such evidence is important for refining our understanding of how programmes can effectively engage with their target audiences and become embedded within the social context of their delivery (Springett, 2001).

#### *Aim and objectives of the study*

With a focus on SNAGs, this paper examines the role of students in the implementation of a whole school food programme in the FFLP programme through:

- identifying the nature and extent of student participation as documented in the programme records;
- exploring the perspectives of school staff who were engaged in the programme;
- exploring the perspectives of students participating in the programme; and
- synthesising the central themes and developing implications for policy, practice and research.

## **Methodology**

### *Overview*

The study adopted a mixed methods approach drawing upon quantitative and qualitative data sources in order to develop a multi-layered understanding of the research setting (Tashakkori and Creswell, 2007). The data sources included quantitative data on school-level programme related activities, qualitative data

collected through focus groups with children and reports from teachers and other staff involved in the delivery of the programme.

*The programme*

FFLP is an England wide programme open to primary, secondary and special schools. Key elements of the programme include involvement of children in cooking, growing, farm visits and SNAGs. In addition schools focus on improvements in quality of school food provision, food education and increasing the inclusion of local, seasonal and organic foods within their provision. provides a summary overview of the programme.

Schools are encouraged to work towards bronze, silver and gold mark awards based upon criteria in four strands:

- (1) Food leadership: promoting the programme aims through an action group with student, teacher, catering staff and parent representatives.
- (2) Food quality and provenance: work with school meal caterers to procure more local, seasonal, organic, marine stewardship council and higher welfare foods. It also includes reforms of the kitchen and school dining room to enable, for example: greater use of freshly prepared foods, advertising of ingredient origins, and a pleasurable mealtime experience.
- (3) Food education: reform of practical and skills based food education, particularly with regard to raising issues of environmental and social sustainability through gardening, cooking, visits to farms and local food producers, and classroom projects.
- (4) Food culture and community involvement: engagement with parents and the wider community on the use of healthier and more sustainably sourced ingredients.

The focus in this paper is the evaluation of 75 primary schools selected as flagships for the programme. These were schools eligible for an enhanced level of support from a programme officer. Each school was allocated a specialist FFLP Food Policy Officer who assisted the school to develop its SNAG over the first three months of the programme. The detail of the function of the SNAG, supported by the FFLP Food Policy Officer is summarised below:

- (1) enable a process of consultation with pupils, parents/guardians, staff and the wider community;
- (2) support the active participation of pupils and other stakeholders in identifying improvements in all aspects of food in school;
- (3) support a review of flagship school's current level of relevant activities and potential for change;
- (4) develop a school food policy with an emphasis on sustainable foods and wider engagement with producers and the local community;
- (5) establish a whole school food policy that enables schools to develop and maintain a shared philosophy on all aspects of food and drink;
- (6) act as an information and advice resource for Flagship schools; and
- (7) support a review of the progress and achievements of Flagship schools.

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### *Quantitative data collection*

In all 75 schools, the lead teacher contact, usually a member of the senior management team was asked to complete a comprehensive questionnaire on programme-related activities at the point of enrolment and again after 18-24 months. These consisted of closed questions on student participation in school food policy and the extent of consultations of food-related issues. In addition, we also used school documentation to record student participation in SNAG-related activities.

### *Qualitative data collection: staff*

At the point of review, the lead staff representative in each of the schools was asked to give written responses to open questions on their perceptions of the role of students in the implementation of the programme. Of these a random selection of 24 staff supplemented their responses through an audio-recorded semi-structured interview with a member of the research team.

Of the 75 schools, six took part in interim staff interviews 12 months following enrolment with the programme. These were selected on a list basis to include a geographical spread of two in the north, two in the midlands and two in the south of England. The semi-structured interviews covered a similar set of topics to the final interviews at review.

### *Qualitative data collection: students*

In the six schools selected for interim staff interviews, we undertook focus group interviews with students. For each school, this consisted of a focus group drawn from SNAG student members, Year 3 class and Year 5 class. The focus groups ranged in size from three to six individuals. A total of 77 students took part in focus groups across the six schools. The semi-structured interview topic guides explored perceptions of the implementation of the programme in schools and personal involvement.

### *Data analysis*

All quantitative data were entered onto SPSS Version 17, a statistical software package. Quantitative data were used to generate the frequencies and cross-tabulations. Qualitative data were transcribed and analysed thematically (Mason, 1996). In order to validate the research, preliminary analysis was checked with lead staff in participating schools and lead programme officers (Creswell and Plano Clark, 2007).

### *Ethical issues*

The evaluation protocol was approved by the Research Ethics Committee of the University of the West of England, Bristol. School head teachers were asked to give written consent based upon written and verbal information provided by the researchers. Students were informed of the purpose of the study and schools provided parents with standard written information on the study, data protection and right of withdrawal. All participants were informed about the anonymity and confidentiality of the data collected. The benefits of to participants' of their involvement were seen as being to improve the experience for future SNAG participants and encourage active citizenship and empowerment and enable participants' voices to influence policy development in this area.

## **Findings**

### *Quantitative findings*

*School and SNAG characteristics.* Schools established SNAGs during the first month of participation in the programme. A SNAG, or its equivalent, was a new structure for

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77 per cent (58/75) of the schools. With a modal average of six individuals (mean 6.3; SD 2.1), members of SNAG groups were more likely to be older members of the school (Year 4-6) and reflected representation from a range of mixed ability classes. The majority of SNAGs had a balance of boys and girls. In total, 81 per cent (60/74) had parent representatives, 90 per cent (66/74) had cooking staff or other catering staff representative and 66 per cent (49/74) had more than one staff representative.

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After three months all schools had conducted a whole school consultation, and established an action plan. Whilst there were regional variations, the majority of SNAGs chose to adopt a standard programme format for these documents. Local variations reflected school level decisions on the priorities for change. Otherwise all schools sought to address the areas for reform set out in the programme guidance.

At the point of review, the majority (83 per cent, 62/75) of schools were continuing to maintain SNAG meetings approximately every three months. These included pupils and would normally include a caterer or cook along with the school staff lead. Parents (72 per cent, 54/75) were somewhat less likely to attend regularly. In total, 69 per cent (52/75) were continuing to maintain a food action plan, although only 41 per cent (31/75) had conducted a formal whole school student consultation on food in the previous six months.

At review (18-24 months later) head teachers and senior management staff were very positive about the role of the programme in promoting a participatory approach. In total, 92 per cent rated the programme as “effective/very effective” in supporting forums for leadership, inclusion and action on school food. In total, 95 per cent rated the programme “effective/very effective” in promoting student involvement in food issues. In total, 80 per cent gave the programme a similar rating for promoting parental involvement.

#### *Qualitative findings: staff perspectives*

Data analysis of interim and review interviews and from written reports produced a similar set of results. Unless otherwise stated, this section therefore reports these qualitative findings as a single set of themes.

At the outset of the programme, school leads were asked to set out their vision for their school food policy development. Many schools set high ambitions, for example with regard to staff leads engaged in developing growing activities, 85 per cent ( $n = 64/75$ ) included reference to the following in their vision statements:

- making the link between food growing and healthier eating;
- promoting learning about food and environmental sustainability;
- promoting active child learning and high levels of engagement and fun; and
- promoting greater community engagement and parental interest in the school.

These ideals were, on the whole, clearly congruent with the mission statement of the FFLP. This is not surprising since schools had to demonstrate a commitment to the programme goals as part of the selection and enrolment process. Nevertheless, the interest and motivation of staff and the wider school community is a strong prerequisite for successful project delivery. For example, one school had almost no track record in garden education before enrolment. Their initial vision was certainly ambitious:

We'd like to see a growing area that is run by children and supported by parents. We'd like a school where the produce is being used in the kitchen. Growing-related events would be

planned and run by the children – and parents are working with the children to produce the food (Teacher, School 2).

Over the course of 18 months, this school transformed the garden area, established a volunteer led garden group and increased tenfold the involvement of pupils in this area of school life. The school also made connections between the garden and cookery in the classroom.

Reflecting on her original vision, one school lead explained the ongoing role of the group:

The SNAG group continues to be instrumental in making decisions and planning action, for example, tasting our new hot dinners to give the chef feedback, visiting local farmers' markets to buy and prepare food to share with the rest of the school. The children are involved in encouraging others to have hot meals next half term. The SNAG group will need to continue meeting to monitor the new meals, the dining hall environment and to take suggestions from the rest of the children so that we can constantly improve (Teacher, School 2).

Ongoing involvement of students in decision making was perceived to be a real benefit and strength of the programme:

Teacher, School 5: I think the big thing that's established is the involvement of the children and the staff actually having to listen to what their opinions are.

SNAG Chair, Teacher, School 4: The children have loads of ideas. The SNAG feels like it [the programme] is part of the school as a whole rather than just me or another member of staff.

Teacher, School 4: I think it's good that everyone comes together and shares ideas: children have very different ideas compared to the adults. It gives the children part ownership in what's going on.

Of the schools that did not hold SNAGs or maintain an action plan, those that provided further information tended to report that the format had either been indefinitely suspended or subsumed under a wider group such as the student council. These schools often adapted the format over time:

SNAG meetings have helped to involve children and parents in thinking about our food culture. They have been very successful in this. However, we have found that it is best to see SNAG meetings as exploratory (e.g. collecting ideas, comparing organic and non-organic produce) rather than focusing on strategic planning or policy development directly (Teacher, School 6).

There were also some tensions in the promotion of student involvement through SNAGs. Staff reported that the process involved managing expectations, freeing up administration time, developing an age-appropriate focus, devoting additional energy to feedback and support, and stamina to facilitate sometimes long term reforms. Yet, whilst good quality pupil involvement was reported to carry "resource costs", teachers also noted "resource efficiencies" associated with student involvement, for example, SNAG pupil representatives could be effective advocates and monitors of changes to rules on food in schools.

#### *Qualitative findings: student perspectives*

This section reports the views of students from Years 3-6 on their involvement as SNAG members and the role of the SNAG within the school environment.

*SNAG membership and roles.* Membership of SNAGs. In all cases, pupils clearly recognised that they were members of the SNAG and all linked the SNAG to improving food in the school. Children were able to identify a number of adults who were members of the SNAG, including: the head teacher, staff, parents and others, although children were often vague about who these others were. In some cases, children were unsure exactly how many other children were members of the SNAG.

A variety of mechanisms were used to choose pupil members of the SNAG; in general, members reported being chosen by the head teacher or class teacher, rather than having a direct pupil election. In some schools, SNAG membership was linked to participation in the school council. Many children were uncertain about the duration of their responsibilities as SNAG members, for example whether they would remain on the SNAG in the following school year:

Male pupil, age 8, School 4: I got picked by Miss because I was on packed lunches.

Male pupil, age 10, School 1: Um I was a school counsellor [...] well I think we are all school counsellors and then that' show we first got involved.

Female pupil, age 10, School 1: I am not a school counsellor though.

Role of the SNAG and SNAG pupils. In terms of the role of the SNAG, the most commonly reported theme was one of coming up with ideas for activities that would improve school food or make the school healthier. Pupil SNAG members focussed on generating the ideas themselves, although there were also mechanisms for other children to feed ideas to SNAG members:

Female pupil, age 9, School 1: We sort of had to come up with ideas. The school cook and I came up with this idea to make smoothies. We only did it once it was meant to be quite a regular thing but we only ended up doing it once.

Female pupil, age 8, School 6: What happens when we want to address issues is that we write it down. We take it to the SNAG and Miss XX will look at it and [the Head Teacher] can take it from there.

Female pupil, age 7, School 4: We've got suggestions boxes [...].

Students on the SNAG also played a role in gathering information from other children in the school. This focused on issues that the children would like to see changed, such as changes to school dinners. However, this also potentially had some overlap with the role of the school council and this could lead to confusion amongst children regarding their role:

Male pupil, age 11, School 6: So we have a different subject. Then we go around and ask. Like we just went and asked every class to put their hands up and tell us what they thought about school meals. Even if it's not a very good idea, we still write it down, because it's their idea.

Schools also gave the SNAG a particular role or task. For example, at one school, SNAG children were involved in a "food tasting task force" with the cook. These children tasted new foods that the cook had prepared before the food was offered as part of the regular school dinner menu. This group also lobbied for specific foods to be included in school dinners:

Female pupil, age 8, School 2: We get to taste food and then we have to report back to our cook and see what we think.

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In all the SNAGs, members had been active in promoting and monitoring healthier packed lunches. Work by members of one SNAG illustrated this:

Female pupil, age 10, School 4: We asked people what they have in their packed lunches and we made a display in the entrance area showing what healthy and unhealthy lunches are. We tell people who are having packed lunch that they shouldn't be bring in coke or chocolate bars if we see them [...] But some people are still bringing them in.

Occasionally children seemed confused as to whether they were participating in particular activities because they were on the SNAG or for some other reason. For example, in the extract below, the school trips referred to are for specific year groups rather than the SNAG:

Interviewer: Do you go on trips just as a SNAG?

Male pupil, age 8 School 1: Yeah, there's one coming up.

Male pupil, age 8, School 1: I've been on two trips.

Female pupil, age 8, School 1: I haven't been on one yet.

Female pupil, age 8 School: I've been on more than one.

*SNAG management and communication processes.* Decision making. Most students reported that decisions about whether to implement ideas put forward by the SNAG rested with adults within the school, either the head teacher or adult members of the SNAG:

Female pupil, age 11, School 4: We've done a survey once so far and it came up with a good result. One of the questions was "Would you like a reward table?" I think it was Miss's idea. Miss decides what the SNAG does.

Male pupil, age 8, School 5: We would suggest the idea and then they [adult members] would write it down and then they check with everyone who is related to that idea, like the kitchen staff. And then they decide.

Continuity of involvement. The continuity of involvement of SNAG groups varied across schools but several groups reported that it had been some time since the SNAG had met. There was some evidence that SNAG groups were highly active early on but, as the year progressed, children perceived that they became less active:

Male pupil, age 9, School 1: We sort of haven't been as involved – well I haven't anyway this year.

Interviewer: So that was more last year?

Female pupil, age 9, School 1: This is our first meeting in Year 4.

Male pupil, age 9, School 1: Yeah it was the first meeting that we had this year. So the other people who were like elected as a school counsellor we sort of got a bit shoved out of the way.

Male pupil, age 10, School 2: I feel a bit stuck at the moment because we haven't had a SNAG group in about two months.

At some schools children could contribute ideas directly to teachers who then had a meeting separate from the children to discuss these ideas. However, in other schools,



full group meetings occurred more regularly. In one school, for example, meetings took place every two to four weeks. This school, like several others had a formal approach to SNAG meetings, with minutes, agenda items, voting and so forth. Children also reported enjoying the SNAG position:

Male pupil, age 8, School 5: It's really good because you are more involved in more things and also you are like one of the first people to know and so you feel like you are more into things [...].

Information flow to and from SNAG. Children not part of the SNAG could contribute ideas to SNAG pupils and/or teachers using a variety of mechanisms; these included talking to SNAG members, suggestions boxes and gathering information from whole class groups on topical issues. In several cases, SNAG pupils mentioned that suggestions boxes were not well used or had been abandoned. There was also evidence of SNAG members seeking permission directly from the head teacher to undertake an activity, i.e. by passing the SNAG itself:

Female pupil, age 8, School 1: Yeah, it's me and [school cook] that sort of had the idea [...].

Interviewer: [...] and then she would say?

Male pupil, age 9, School 1: [...] then we spoke to the Head Teacher just to make sure it was all right.

SNAG pupils also identified a number of ways that they could communicate information back to the class, such as mini diaries, speaking to the whole class, the school newsletter and personal communication with friends. Having a specific role, such as the food-tasting group at one school gave children a reason to talk to other children both formally, during school assemblies and to their classes, and informally to friends. Similarly other groups undertook special projects to report back to their peers:

Male pupil, age 7, School 6: We had the cooking bus and we went on and made a three course healthy meal. Then we told everyone in our class.

*Perceptions of the benefits of the SNAG process.* The primary theme was that the FFLP activities had helped schools to be healthier, happier and encouraged children to feel more involved in decision making about food related matters. SNAG pupils felt that they had helped make improvements to school meals and the dining room environment. Students participating in SNAGs played a number of roles which included acting as “activists”, “conduits”, “catalysts”, “bonders” and “bridgers” in the development of ideas for school food reforms. Furthermore, SNAG students were also able to act as “monitors”, “scrutinisers” and “legitimators” of planned actions. These roles were reported to be personally rewarding and, in themselves, of educational value for participants. Members also reported that they felt they had helped make the whole school aware of food-related environmental issues:

Teacher (a), School 2: I think we've changed the attitude of the children. Like at assembly we're doing interesting things about [food] and the children are taking it all in and going back their classroom. They are really impressed because they've been pulled in to it all.

Teacher (b), School 2: Before we didn't have any people trying new foods and now with the SNAG group we're like changing the attitude of people to trying new foods. So the dinner menu now has red and green options, so now most of the people will try new foods.

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## Discussion

The study examined primary school student participation in the FFLP flagship programme using a range of data sources. It was clear that schools, staff and students readily adopted the SNAG format as a structure for promoting participation, and largely maintained the forum beyond the externally facilitated start up period. Overall it was perceived to help embed and operationalise the whole school approach taken by the programme. Food is a highly tangible and emotive subject for many children and lent itself well as a topic for developing the student voice agenda. Given the abstract quality of children's participation rights, it was notable that staff were readily able to envisage concrete scenarios for engaging students from the outset.

The specific character of participation took a variety of forms. It has been highlighted that students participating in SNAGs played a number of different roles which included acting as "activists", "conduits", "catalysts", "bonders" and "bridgers" and also played an important part in furthering school food reforms. In addition, SNAG students were also able to operationalise, monitor and scrutinise their planned actions. Students reported that these roles were personally rewarding and, in themselves, of educational value for participants. As other research has found (Lyons and Freedman, 2002; Taylor and Johnson, 2002) the work helped students develop transferable skills in terms of research, communication, action planning and decision making. Having students acting in these capacities lent additional dynamism to the programme's implementation and helped cement a mandate for the more ambitious and contentious goals.

Given that these roles relate to multiple dimensions of agency, any effort to typify the SNAG format as one step on any particular categorisation of levels of participation (e.g. Hart, 1997; Shier, 2001 – list above) would be an over-simplification. Clearly also, forms of participation varied between schools and, in some cases, changed over time. Nevertheless the findings suggest that the basic model was that of an adult-initiated process in which the roles of the students were supported to express their views and to assist with programme goals. Students often had a limited role in selecting SNAG members, although most staff recognised the importance of equality of opportunity in their selection process. Shared decision making took place within the confine of specific domains and was, not surprisingly, very age specific. Intensive participation focused on a relatively small circle, although most schools had mechanisms for extending dialogical exchange to the wider student population.

The participatory aspects of the programme were not necessarily straightforward at a practical level. As other studies report (Shier, 2010; Lyons and Freedman, 2002) students were not always clear about the parameters of their role and, from the perspective of staff, the use of a stakeholder forum could introduce complexity, unpredictability and additional resource implications. Approximately 20 months from inception, the trends suggest that fewer schools maintained the formal processes of action planning, whole school consultations and cycles of SNAG member recruitment. However, both the qualitative and quantitative data suggest that many schools did continue elements of a participatory process, at least in the form of a standing item or working party connected to an established forum for staff-student-parent dialogue.

Embedding a vision of participation in a school setting can be difficult, but at primary school level with a focus on food and healthier eating, SNAG groups illustrate one mechanism by which a multi-layered approach can be achieved. The format is realisable and represents one approach to the national and international policy agenda on participatory rights for children. Food represents an accessible and engaging focus

and schools looking to promote student voice (in general as well as for health promotion) may want to draw upon this, not least in the development of students as active citizens.

*Directions for future research*

The mixed method approach taken in this evaluation highlights the importance of drawing upon different perspectives of different stakeholders alongside quantitative records. There would, however, be further value in exploring the views of other parties peripheral to formal consultative forums such as the wider student body, teaching staff who were only indirectly engaged and parents. Further research on longer term sustainability and health impact (Shaya *et al.*, 2008) is also needed to determine the added value of the participative elements of schools health promotion activity.

*Limitations of the study*

Whilst the study collected data in schools participating in the programme, there is no external comparison with schools outside the evaluated initiative. There was also an element of self-selection amongst the study schools. In order to achieve the programme goals, staff had a strong interest in adopting a positive view on the process of student participation. This may have led to an under-reporting of some of the difficulties associated with the programme model.

**Conclusions**

The involvement of students during the course of the FFLP food health and sustainability initiative has taken place on many different levels. The importance of promoting student voice in programme development and implementation has been clearly demonstrated through the central role of SNAGs. FFLP's whole school approach has been extensive and wide ranging and allowed student participation and involvement to be exercised in diverse ways. The pivotal role of the SNAG model in catalysing and embracing a whole school approach must be seen as an important mechanism for any health promotion work done in a complex school environment. By focusing on the working and sustainability of the SNAG itself, a more sustainable whole school approach is more likely to be achieved.

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# Whole school food programmes and the kitchen environment

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## Abstract

**Purpose** – The purpose of this paper is to describe the impact of the Food For Life Partnership (FFLP) whole school food programme on kitchen staff employment and professional development.

**Design/methodology/approach** – This exploratory research involved baseline and follow-up interviews with 74 kitchen staff (51 primary and 23 secondary English schools) enrolled onto the FFLP programme. Empirical data were collected using a semi-structured questionnaire between 2007-2010 with an average of 20 months between baseline and follow-up. Data were collected on the perceived programme impact on school cook professional experience and employment and their role in health promotion.

**Findings** – Numbers of kitchen staff and mean job satisfaction grew. Kitchen staff reported significant investment in their kitchen environment. They felt a greater degree of involvement and broader integration with the rest of the school's educational mission. However, towards the end of their involvement, kitchen staff became increasingly cognizant of the growing challenges posed by broader economic conditions emerging at the time of follow-up.

**Practical implications** – Kitchen staff can play an important role in the promotion of healthy eating and school cohesion. However, there are significant organisational and employment-based barriers to fulfilling this potential.

**Originality/value** – This paper outlines the role of kitchen staff in whole school food programmes and illustrates the key dimensions and barriers that need to be overcome to enhance their role through the delivery of improvements in school food uptake and the promotion of healthier and more sustainable food consumption.

**Keywords** England, Primary schools, Secondary schools, Catering, Cooking, Employees development, Engagement, Food For Life, Partnership, School cooks, Whole school approach, Profession

**Paper type** Research paper



## 1. Background

Following the reintroduction of National Nutritional Standards for English school meals in 2001 and Jamie Oliver's School Dinners television campaign in 2005 the downward spiral of school food quality has seemingly been checked. Growing political

backlash and public interest in school food coupled with a moral panic surrounding obesity, fears around declining physical activity and the development of initiatives like Healthy Schools have contributed to a School Food Revolution (Morgan and Sonnino, 2008, p. 21). UK standards are now amongst some of the most detailed and comprehensive in the world (Rees *et al.*, 2010). Studies provide evidence that the re-introduction of such standards is having a positive impact on school meal provision, including food choice and the nutritional profile of school lunches (Evans and Harper, 2009; Rees *et al.*, 2010).

Several school food programmes have contributed to improvements, building on new standards to improve things like fruit and vegetable uptake. Such programmes often engage parents, teachers and pupils, for example: Sahoti *et al.* (2001) study of a health promotion programme reducing risk factors for obesity. However, few adopt a whole school approach in which consistent messages are promoted in both the classroom and the dining room (Harper and Wells, 2007). Key themes identified by schools involved in whole school approaches include: leadership, management and managing change, linking the curriculum with the dining room; involving pupils and parents; improving the design and environment of the dining room and collaborating with the school's caterers. Through such initiatives, the European Network of Health Promoting Schools argue, schools should have an improved potential to make a significant contribution to positive dietary change and health (Barker *et al.*, 1998).

Whilst some programmes adopt a whole school approach, less appear to consider the role that kitchen staff can play to promote healthy eating. Yet their involvement has been increasingly seen as pivotal to achieving success in school health programmes. Critics argue that the role of kitchen staff in school meal provision has progressively reduced over recent decades as cost/productivity pressures have led to the rationalisation of school food production processes resulting in a reorganisation of work tasks towards preparing pre-processed food and an associated "de-skilling" of staff (Leppänen *et al.*, 2008; Morgan and Morley, 2003). In a US context, Cho and Nadow (2004) suggest that lack of support and training for food service staff is one of the main barriers to "quality" lunch provision. This view is supported by the School Food Trust who are specialist advisors to the UK Government; and report that kitchen staff are inadequately supported to improve skills or market their activities (School Food Trust, 2009). Moore *et al.* (2010) identify the role of caterers and school cooks along with lunchtime supervisors and children themselves, as critical in efforts to improve the nutritional content and uptake. Their involvement in decision making has been seen as indicative of reported increase in uptake (Wood *et al.*, 2011); and their relative permanence in school life can be crucial to developing trust in healthy food. Leppänen *et al.* (2008) report that a combination of formal training and participative approaches successfully improved work process knowledge across a sample of Finnish kitchen workers. The same study also found increases in well-being among participants (Leppänen *et al.*, 2005). Biltgard (2008) argues that habitual trust is key to promoting confidence in quality food in late modern societies. Given that few packed lunches meet school meal standards (Evans *et al.*, 2010) the role of kitchen staff may be regarded as crucial to sustaining trust in school meals and health programmes.

This paper focuses on the Food for Life Partnership (FFLP) whole school programme. It is led by the Soil Association in partnership with Focus on Food Campaign, Garden Organic and the Health Education Trust. Its mission is:

[...] to reach out through schools, to give communities access to quality, local and organic food, and to the skills they need to cook and grow for themselves. We want all young people and their families to rediscover the pleasure of taking time out to enjoy good food that makes them feel healthy and connected to the changing seasons (Soil Association, 2011).

Initiated in 2007, it received five years funding from the UK Big Lottery Wellbeing Fund to deliver a programme of whole school food reform. Alongside a focus on healthy eating, the programme emphasised the value of organic and sustainable food consumption. Participating schools worked towards Bronze, Silver and Gold FFLP marks: each representing a level of achievement with regard to over 50 criteria in four domains: food leadership, food quality and provenance, food education and food culture and community involvement.

Over 3,600 primary, secondary and special schools have enrolled. 180 schools were selected to be “flagship schools”. These had a diverse range of school and catering settings, and reflected a mixture of demographic characteristics. For approximately 18 months, flagship schools received a package of support from a team of programme officers specialising in areas of food procurement, food education, stakeholder facilitation and catering. This paper focuses on the catering element of the programme. The objectives for caterers included:

- (1) Equip staff with skills and knowledge to achieve the FFLP’s criteria for food provenance and quality (e.g. increased use of locally sourced food).
- (2) Ensure schools operate government school food standards menus.
- (3) Raise take up.
- (4) Develop catering staff networks locally and regionally.
- (5) Engage with multiple aspects of the programme (e.g. food education activities).

These were to be achieved through training courses, one-to-one advice and mentoring, facilitated meetings with senior decision makers in schools and catering organisations, facilitated action planning meetings with students (called School Nutrition Action Groups or “SNAGS”), and a small budget to improve facilities.

## 2. Methods

To understand the impact of the FFLP on school cooks; semi-structured interviews were conducted with kitchen staff at enrolment. The interview schedule included open and closed questions. The interview format was piloted by the research team and the interviews were conducted by a member of the research team or, following training, a lead FFLP officer. A similar follow-up interview was sought after 18 months. In each school, the same respondent was sought for the follow-up interview. These two data collection exercises form the analytical basis of this article. All the data was analysed using SPSS Version 17.

The study list sampled the first 92 schools (65 primary and 27 secondary) that enrolled with the FFLP flagship programme. Information collated from school census data suggest their catchment areas were predominantly urban with only 10 per cent of schools from areas defined as “village and isolated hamlet”. All 92 completed the baseline interview, however only 74 (51 primary and 23 secondary schools) satisfactorily completed the follow-up. Thus, the analysis presented draws upon the 74 schools with matched baseline and follow-up data: an 80 per cent response rate. For 72 per cent of

these cases, the same member of staff participated in both the baseline and follow up. The average length between baseline and review was 20 months (SD: 4.18; min. 13, max. 29). All respondents were adults and they were largely female (93 per cent,  $n = 69$ ).

Non respondents included six schools that had withdrawn from the programme, eight schools where the cook was unavailable and six schools where the interview was either incomplete or conducted too late for inclusion in the analysis.

### 3. General school and catering characteristics

Schools were evenly distributed across English regions. Indicators of social deprivation suggest participating schools had an above average national representation of schools in catchment areas with high child poverty. 19 per cent ( $n = 14$ ) of the primary schools and 12 per cent ( $n = 4$ ) of the secondary schools were in the top quintile for free school meal entitlement. The schools also had a similar proportion of pupils from black or minority ethnic backgrounds as the national school census profile for English schools.

At baseline, the average pupil roll for the primary schools was 278 (SD: 128; min. 51, max. 671) and 984 for secondary schools (SD: 226; min. 570, max. 1428). Overall, school meal uptake increased amongst the participating schools. In a comparison of the 12 months preceding baseline interview with the 12 months preceding the follow-up interview, primary school meal uptake increased from 45.7 to 49.2 per cent (at follow up SD: 17.4; min. 13.2 per cent, max. 100 per cent), and secondary school meal uptake increased from 50.3 to 56.0 per cent (at follow up SD: 17.4; min. 21.1 per cent, max. 77.0 per cent). As the standard deviations indicate, there was considerable variation in numbers of children attending school dinners.

In terms of catering provider types, 35 were local authority, 33 in-house and six private. Average ingredient spend/meal reported by primary schools rose from 70.1 to 78.8 per cent during the programme, an increase of 12.4 per cent. This can be compared with the latest national average of school meal ingredient costs at primary level of 68 per cent (School Food Trust, 2011). Among this group, the number of local suppliers involved in school procurement rose by 73 per cent. Organic suppliers (a programme focus) increased by over 50 per cent. Overall, schools made considerable progress with respect to FFLP criteria. Thus, no school was sufficiently developed for an award at baseline, but at review 29 schools had been awarded the Gold or Silver award, 34 Bronze award. 13 had no award, but had made progress in terms of specific criteria.

#### 3.1 Interview results

The items from the interview questionnaire covered a broad range of issues. In this article we concentrate on the impact on school cook/catering leads employment and professional development. Specifically:

- facilities;
- staffing;
- professional skills;
- staff development;
- encouraging school meal uptake; and
- job satisfaction.

### 3.2 Facilities

When asked to rate the standard of their kitchen equipment and facilities on a scale from 0 to 10 (where 0 – very poor, 5 – average, 10 – exceptional), the mean rating increased from 6.6 to 6.84 during FFLP participation ( $n = 62$ ). Both figures represent an above average perception of the standard of kitchen equipment and facilities, with a clear increase in perceived standards being recorded. At baseline respondents were asked what improvements they thought were needed in their kitchen environment and equipment. 93 of 107 baseline sampled kitchens responded to this question. Of these 68 (73 per cent) identified improvements needed whilst the remaining 25 (27 per cent) were content with current provision. Among the kitchens needing improvement, space related issues were the most frequently identifiable category (32 per cent,  $n = 22$ ). New flooring (16 per cent,  $n = 8$ ) and ventilation (13 per cent,  $n = 12$ ) also featured. When asked specifically about pieces of equipment (31 per cent,  $n = 29$ ) stated that they had no requirements.

At follow-up they were asked to detail improvements. Of the 74 kitchen respondents that completed baseline and review stages, 77 per cent ( $n = 57$ ) gave details of improvements to their kitchen environment/equipment since enrolment. Improvements ranged from the purchase of small pieces of equipment to new work surfaces and complete refurbishments. No trends in terms of types of equipment purchased could be identified. However, 47 respondents gave details of future improvements desired to either the kitchen environment or equipment. Of these 12 (26 per cent) had not experienced any perceived improvements during FFLP involvement. The clearest theme among those still in need of improvement specifically regarding the kitchen environment was the desire for more space. 40 per cent ( $n = 19$ ) of respondents mentioned space issues. Absolute kitchen space was the most common theme, followed by the need for more storage and lastly more dining space. Clearly space issues are a school infrastructure issue faced by catering leads in the daily delivery of their work.

### 3.3 Staffing

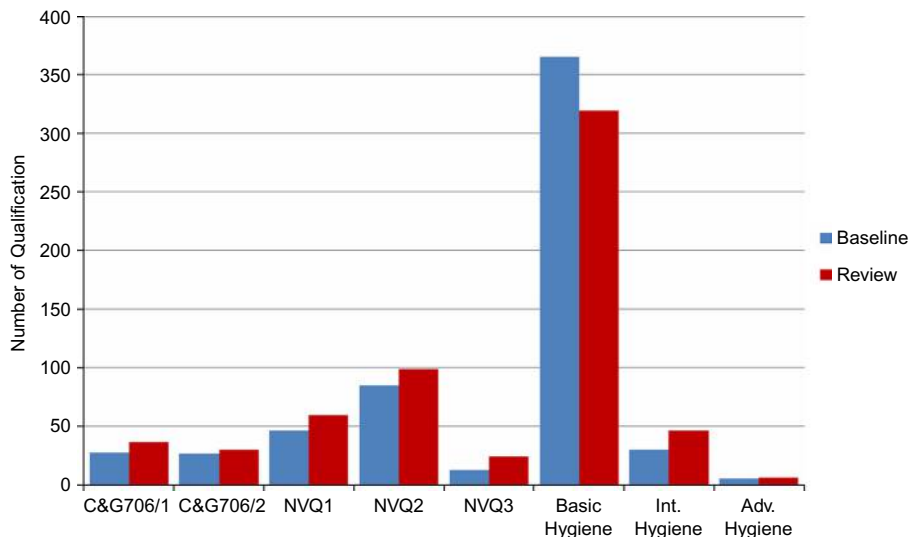
The total number of kitchen employees across the sample ( $n = 63$ ) rose from 356 to 377.21 new employees in total, an average increase of 0.34 employees per school (SD: 3.64). However, as many respondents reported experiencing decreases in kitchen staff numbers as increases. The total number of hours worked per week by catering staff ( $n = 59$ ) rose from 6,631 to 7,032. This equates to 401 extra hours, an average increase of 6.8 hours per school (SD: 63.12). The data submitted for this question corresponds to official paid hours per week rather than actual hours. Kitchen cooks report working longer than their paid hours.

### 3.4 Professional skills

The percentage of kitchen staff who access to formal programmes of continuous professional development rose from 60 to 65 per cent. During the same period, respondents rating of uptake of training opportunities among staff increased from 6.24 to 6.47 out of ten. The number of formal qualifications among staff grew from 597 to 620. Figure 1 shows qualification type. All qualification types increased except for basic and advanced food hygiene.

### 3.5 Encouraging meal uptake

A key focus of FFLP was to increase school meal uptake. Among respondents, 45 per cent ( $n = 13$ ) stated that uptake had increased, 14 per cent ( $n = 4$ ) observed a decrease with



Whole school  
food  
programmes

**761**

**Figure 1.**  
Formal qualifications  
among kitchen staff

the remainder reporting no increase. Respondents were asked to qualitatively describe the key steps the catering team had initiated to increase uptake. Responses varied, however the steps frequently reported included:

- (1) Improving dining environment.
- (2) Changing menus.
- (3) Increasing marketing/promotion of catering services.
- (4) Organising tasting sessions for parents and/or pupils.
- (5) Other types of direct consultation with parents and/or pupils.

Other initiatives in terms of frequency of reference included: promoting free school meal uptake, introducing cashless ordering systems and organising cooking lessons. Interestingly, increasing the quality of the food was only explicitly mentioned by four respondents, although the notion was probably within general statements about changing menus. Similarly, five respondents reported increasing fresh food usage, which again could be deemed synonymous with quality food. In terms of meal numbers the perception of the caterers is that the number of meals they serve on average increased from 204 to 245 meals per sitting, an increase of 22 per cent. Lastly, a high level of interaction between staff and pupils (84 per cent,  $n = 61$ ) was reported, which continued to increase at follow-up (95 per cent,  $n = 69$ ).

### 3.6 Job satisfaction

Overall ratings on job satisfaction remained high and unaffected over the programme. Respondents were asked to rate staff's job satisfaction where: 0 – very poor, 5 – average and 10 – exceptional. At baseline the mean satisfaction score was 7.45 (SD: 1.93) and at follow-up it was slightly lower at 7.25 (SD: 2.03). Generally most people who were positive about their staff's satisfaction at the start remained positive at the end and those who rated it negatively at the start remained negative at the end of the programme

( $r = 1.86, n = 60$ ). Respondents were asked to recall what measures were taken to enhance job satisfaction. 67 per cent ( $n = 49$ ) could identified a reason. Two schools specifically cited the FFLP programme.

However, it is individual aspects of FFLP that were more frequently identified as being important for enhancing staff satisfaction. Table I shows that one in five schools cited involving staff in decision making or giving staff more control as the main change to enhance satisfaction.

Using better ingredients and improved menus also clearly made an important contribution to staff satisfaction. Very few schools cited negative changes as contributing to deteriorating staff satisfaction, however 8.2 per cent ( $n = 6$ ) cited different reasons including: difficulties in recruiting, increased workload and threat of redundancy.

Respondents reported that the whole school approach had enabled them to increase links and networks with staff in their school and external partners, enhancing the quality of the work they experienced and embedding their presence in the community life of the school. Clearly the biggest improvement has been in terms of formal discussions with pupils. At baseline, the kitchen staff attended student forums for decision making – such as a school council – in only six schools.

Table II suggests major changes in the formal contacts kitchen staff have with other stakeholders. Overall the catering representatives report that they are talking more to senior managers, teachers and parents. However, with the local authority there was a small decline in contact. They also report speaking to suppliers more often. Also, significantly, the growth in contact with pupils also increased on an informal basis, as Table III shows.

**Table I.**  
Aspects of FFLP contributing towards staff satisfaction

	Percentage of schools	Number of schools
Greater control/decision making/involvement	20	11
Promoting/encouraging team spirit/work	17	9
Increased or new training	15	8
Working with fresh ingredients	13	7
Working with new menus	7	4
New kitchen/equipment	7	4
Overall FFLP experience	4	2
More/new staff	4	2
Increased pay	2	1
Seeing happier children	2	1

**Table II.**  
Frequency of formal discussions between kitchen staff and other stakeholders about food or catering issues

Discussed with	Baseline		Follow up		Difference (%)
	Often (%)	Regular (%)	Often (%)	Regular (%)	
Senior management team	13	30	32	45	19/15
Teachers	3	18	21	46	18/28
Mid-day supervisor	7	13	32	15	25/2
Pupils	2	60	58	18	56/- 42
Parents	2	13	10	22	8/9
LA contact	43	14	25	32	- 18/18
Suppliers	4	23	19	24	15/1
Other schools	11	56	11	35	0/- 21



It was clear that the interaction now takes different forms:

We don't stop! Talking about what is for dinner, encouraging them to try new things, offering seconds, helping the lunch buddies carry out their duties (School 27).

Catering staff have also been able to discuss with pupils the values underpinning the FFLP philosophy. The proportion of kitchen staff who feel able to talk about seasonal, local or organic food increased from 77 to 93 per cent. These positive attitudes are reinforced by respondent understanding of the importance of staff involvement in active discussion around food and catering policy. Table IV shows how catering leads rated their feelings on two questions (where 0 – strongly disagree, 5 – neither agree nor disagree, 10 – strongly agree).

This data suggests that levels of staff confidence to be able to express their views about catering issues and school food policy was always high and remained high, however, they now feel they are significantly more involved in school discussions ( $p = 0.002$ ,  $t = 3.43$ ,  $df = 53$ ). Several respondents reported that there were no or very little discussion prior to FFLP but now there was more. It is clear that as the programme progressed more heads became supportive of catering staff being involved with the delivery of food education beyond the dining hall. Perceived support levels from heads and catering management for staff to get involved in food education activities beyond the dining hall rose from 51 to 77 per cent.

Catering staff also reported being involved with delivering assemblies, helping cooking clubs, delivering classroom cookery, working in the community garden, developing matched menus for themed days and catering around “out of school” clubs and events. FFLP schools have also organised and become involved with high profile external events such as food festivals.

Catering respondents were asked whether they anticipate any problems that might affect the success of FFLP within their school. 44 per cent of respondents identified issues at baseline while 57 per cent articulated problems at follow up. It is clear that despite the broad consensus on the enjoyment of the programme and the extent to which FFLP had enhanced job satisfaction and contributed to job enlargement the challenges faced in the future are regarded as considerable.

	Baseline (%)	Follow-up (%)
Yes	84	95
No	16	5

**Table III.**  
Are kitchen staff encouraged to informally interact with pupils during meal times?

	Catering staff are fully involved in school discussions about catering and school food policy	Catering staff feel confident about expressing their views about catering issues and school food policy
Baseline	5.41 ( $n = 69$ , $SD = 3.7$ )	8.30 ( $n = 66$ , $SD = 2.19$ )
Follow up	7.53 ( $n = 59$ , $SD = 2.5$ )	8.10 ( $n = 63$ , $SD = 2.13$ )
Difference	+2.12	-0.2

**Table IV.**  
Catering staff involvement in school discussions about catering and school food policy

Table V shows that at the start of the programme their main concern about the FFLP programme was the costs involved and people's attitudes, particularly parents. There were some concerns about food sourcing and in particular procuring organic vegetables and meat and some anxiety about the equipment and kitchen facilities (e.g. appropriate plates and kitchen size). Almost one in ten respondents had a concern around their staff citing issues around keeping them involved.

However, as the programme progressed their fears were allayed. Reported anxieties about food sourcing, equipment and buildings, attitudes and training decreased. However, these have been superseded by fears concerning costs, spending cuts, redundancies and local authority policy:

Financial constraints and lack of support from LA catering team (School 87).

Cost concerns were not just baseline anxieties around expensive organic food and staffing. These existed at the start of the programme and were apparent at follow-up. Despite the concerns about costs and cuts catering respondents reported that they had benefited from their experience with FFLP (Table VI).

At the start of the programme catering respondents anticipated potential benefits from FFLP involvement. The top three were: specific benefits for children; new training/education/knowledge and improvement in food quality:

To see the children happy with what they are getting on their plate (School 15).

**Table V.**  
Summary of perceived future challenges for kitchen staff

	Baseline ( <i>n</i> = 33) (%)	Follow-up ( <i>n</i> = 35) (%)
Costs	42	51
Cuts, redundancies and local authority policies	0	17
Attitudes, education and training issues	21	14
Sourcing	12	6
Equipment or building issues	9	6
Non-economic sustainability issues	3	3
Non-cost staffing issues	9	3
Time involved in delivery or training	3	0

**Table VI.**  
Personal benefits from FFLP involvement

	Baseline ( <i>n</i> = 66) (%)	Follow-up ( <i>n</i> = 43) (%)
Training/education or new knowledge	18	30
Job and/or individual satisfaction	9	26
Partnership working, networking, linking the senior management team	0	14
Individual or personal benefits and or achievement	9	9
Improved quality of food including health	14	6
Increased take-up of school meals	11	5
Do not know or other	12	5
Benefits specifically for children	26	2
Being part of the FFLP	8	2
Using local and/or garden sourced food	3	0
New equipment or buildings	2	0

At follow-up, although new training, education or increased knowledge was one of the top three benefits identified the other two were absent. Perceived personal benefits for children was virtually absent at follow-up. Instead respondents reported: improved job and/or individual satisfaction and an opportunity for increased partnership working, networking and/or linking into the senior management team. These sentiments increased over time, with over twice as many catering respondents reporting these themes. In addition, closer cooperation with other school stakeholders was reported. Many feel that this had raised their profile.

Clearly training, education and the gaining of new knowledge was seen as being a potential benefit at the start of FFLP involvement and also an acknowledged benefit at follow-up. There were several citations of new skill attainment and specific benefits from things like training and recipes. Many things have now become embedded in caterer delivery in the kitchen and were acknowledged as providing added value to their work:

A lot of enjoyment and a good learning curve with food sourcing and visits to producers [...] very interesting. Now do talks and presentations (School 12).

The issue of increased uptake of meals also became less important for the catering respondents as the programme progressed. Thus, Table VI indicates that respondents have shifted away from perceived personal benefits for themselves and their children to more professional benefits.

#### 4. Conclusion

This article has provided insight into the challenges faced by kitchen staff involved with the whole school FFLP programme. There are some potential weaknesses to the data and its analysis. Clearly, these are inherently subjective responses that could have been influenced by perceived pressures from other stakeholders (including FFLP) to attribute positive impacts to the programme. However, this research offers a unique longitudinal insight into the experience of catering staff within a whole school programme.

Overall, this analysis highlights perceivable improvements to the school catering function. This study indicates that schools increasingly worked with their catering teams to develop measures to increase school meal uptake. This “market reorientation” within the catering and kitchen environment was tied to measures that promote the integration of kitchen staff and the catering function in general to the wider school and its stakeholders.

Kitchen staff report a general level of satisfaction regarding the standard of their kitchen environment, equipment and progress, but the impact of FFLP on staff numbers and hours worked appear mixed. Both numbers of employees and hours worked showed modest increases. Within these figures there were as many kitchens whose staff numbers and hours worked decreased as increased.

Both the provision of continuous professional development schemes and uptake of formal training opportunities for kitchen staff increased. There was some reported decrease in hygiene training, but high staff turnover coupled with delays in providing training due to the other developments could account for this; but generally staff with formal qualifications increased.

Overall job satisfaction was high at the start of the programme and remained high at follow-up. Most importantly one in five schools catering staff cite getting involvement in decision making or having more control as the main programme change introduced to have enhanced their satisfaction. They are now involved in a broader range of activities in and outside of the school since enrolment. Several catering leads reported no discussion before FFLP but now they are involved in discussions with other members of staff and particularly the SMT.

Follow-up interviews reveal a rise in anxiety concerning issues outside of the FFLP. This included concerns about the long term sustainability of FFLP related kitchen improvements. Unsurprisingly cost issues dominated concerns. This reflects both long term cost pressures on the service reported in the background section of this article and current issues around cuts in public service budgets and wider economic issues.

Our findings indicate that catering staff became more formally integrated and better equipped as a result of FFLP involvement. Although this cannot be linked directly to overall programme success or higher school meal uptake, the centrality of the dining experience within the programme suggests that these factors contributed towards these goals. The data also indicates that the relationship between improvements in food and the physical kitchen environment and the experience and job satisfaction of kitchen staff is complex and contingent on factors such external funding pressures, staff hours and salary. It also demonstrates how a whole school approach can serve to integrate an often ignored but important partner in delivering health benefits to children: kitchen staff and caterers.

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## **Take Home Messages on Sustainable Food: Surveying Parent Perceptions of the Effects of a Primary School Programme**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author DS was responsible for the field work, data collection, statistical analysis and co-authored final manuscript. Author MJ was responsible for study design, data collection, literature review and co-authored final manuscript. Authors EW, RK and JO (Principal Investigator) undertook data collection and commented on all drafts of the final manuscript. All authors read and approved the final manuscript.*

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### **ABSTRACT**

**Aims:** Parents are important stakeholders in school-based health promotion programmes. This study aimed to understand the perceptions of parents of a primary school-based healthy and sustainable food programme. It specifically sought to examine the perceived effects of the programme on the home environment and on parental engagement with schools.

**Study Design:** A cross-sectional parent survey and a before-and-after school activity survey.

**Place and Duration of Study:** Primary schools in England taking part in the Food for Life Partnership programme, between January 2008 and January 2011.

**Methodology:** In 35 schools a pre-programme enrolment survey on parental involvement was completed and repeated at 18-24 months. In the same schools 740 parents responded to a cross-sectional survey on perceptions and effects of sustainable food education.

**Results:** Parental involvement increased across a number of areas of food-related school

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activities. Parental respondents were active in school harvest celebrations (42%), cooking events (37%) and homemade food events (33%). Parents reported raised interest of their child in food origins, fair trade foods, organic foods, animal welfare, food packaging and food miles. 40% reported their children talked more about new fruit and vegetables in family discussions. 43% reported changes in buying patterns and 45% reported they were eating more vegetables. Reported changes in home food consumption included: more seasonal food (33%), more locally sourced food (26%), more fair trade food (25%), more free range eggs (25%), and more organic food (11%). Under 5% of parents raised reservations connected to the affordability of sustainable foods and the relevance of the programme to educational goals.

**Conclusion:** Parents perceived programme-related effects on their family including discussion and purchases of healthier sustainably sourced foods. Health promotion programmes can enhance their impact and sustainability through reinforcing the processes by which parents become engaged and can adopt programme messages in the home environment.

*Keywords: Health promotion; food sustainability; cooking; gardening; farming; fair trade; animal welfare; organic food.*

## 1. INTRODUCTION

Parental engagement and impact on the home environment are important goals for many schools-based health promotion and behaviour change programmes [1]. This is particularly the case in food, diet and nutrition based initiatives where the parental buy-in and the domestic context are a central focus [2]. However, relatively little research has been concerned with parental perceptions of such initiatives. This paper reports on a before-and-after school survey and a cross-sectional parental survey of primary schools taking part in the Food for Life Partnership 'flagship' programme.

Parental involvement in children's schooling is associated with better educational outcomes for their children [3,4,5] and can produce benefits for the entire school community [4]. Karther and Lowden [6] reported gains in student attainment, increased parent self-confidence and satisfaction with schools, and overall school improvement as benefits of parental involvement. Moreover parents are also a key influence on their children's diets and general health, and they can have an effect that over-rides school influences in primary school settings [7,8,9,10,11].

Parental involvement is therefore perceived to be a highly important element of school-based health promotion programmes [5,10] especially those that seek changes in the home environment. The National Institute for Health and Clinical Excellence guidelines [13] for dietary interventions in school settings state that "where possible, parents should be involved in school-based interventions through, for example, special events, newsletters and information about lunch menus and after-school activities".

However, there are wide number of barriers to successful involvement. Garcia-Dominic et al's [14] review of studies found that key reported obstacles to involvement in schools included, but were not limited to, "transportation, negative attitudes toward or bad experience with schools, cultural or language barriers, economic and/or time constraints, parents' inflexible work, schools, blaming parents for their children's difficulties in school, parents'

negative attitudes toward the school or vice versa, unmatched expectations between school's policy and practices and parents' concepts of parental involvement and the school's inability to adapt to societal change" [14 p:703]. Such barriers may be exacerbated by socio-economic disadvantage, although this has been a matter of some debate [15].

Even when there is parental involvement in the design of the initiative, involvement can tail off over the duration of a programme's implementation [16] or simply may not be forthcoming from the outset [17]. Story et al [17] have concluded that "finding effective and feasible ways to involve a large number of families remains a major challenge in school-based health promotion intervention programs" [17 p:199]. According to Sallis and Glanz [18] difficulties associated with the development of effective strategies and methodological issues in research have meant that there is a lack of evidence that schools based programmes influence children's eating habits at home.

We should note that there are different types of parental involvement, each with potentially very different sorts of outcomes. Feuerstein's study [19] characterised a range of variables that were associated with involvement, although he concluded that many school-level variables do not easily influence the home environment. Moreover parents are by no means a homogeneous group, given that families and households have a variety of parental and care arrangements, differing age and gender profiles of children as well as other socio-demographic variables associated with parents, guardians and carers. For simplicity, this paper uses the term 'parents' to include adults who have a parenting or major care responsibility for a child in a school setting.

The aim of the study was to understand the perceptions of parents of primary school children participating on a schools-based healthy and sustainable food programme called the 'Food for Life Partnership' (FFLP). We specifically sought to examine the perceived effects of the programme on the home environment and how the initiative affected parental engagement with schools.

## **2. INTERVENTION AND METHODS**

### **2.1 Food for Life Partnership Programme**

The Food for Life Partnership is an England-wide scheme that consists of a group of charities that aim to promote food-based learning in schools. The initiative evolved out of a concern that obesity and the climate change impact of food cannot be addressed unless "individuals and communities are reconnected to how their food is produced, and regain the skills and knowledge needed to take active control over what they eat" [20]. FFLP organises its work with schools around four strands:

1. Food leadership: promoting food reform through an action group with student, teacher, catering staff and parent representatives.
2. Food quality and provenance: working with school meal caterers to procure more local, seasonal, organic, marine stewardship council and higher welfare school meals.
3. Food education: reforming practical food education, particularly with regard to raising issues of environmental and social sustainability through gardening, cooking, visits to farms and local food producers and classroom projects.

4. Food culture and community involvement: engaging with parents and the wider community on the use of healthier and more sustainably sourced food in school and at home.

Schools are encouraged to work towards Bronze, Silver and Gold FFLP Mark awards based upon criteria in each strand. In the period 2008-2011, over 3600 primary, secondary and special schools signed up to take part in the programme. All received printed and online resources and tailored support in the form of, for example, brokering links with local farms that could host educational visits. This paper concentrates on a sub-group of FFLP 'flagship' primary schools that received enhanced levels of support in the form of 18 months of bi-weekly contacts with FFLP officers for training, advice and mentoring. These schools were also entitled to approximately £1500 to help fund trips, equipment and events for the programme.

## **2.2 Methods**

### **2.2.1 Study design**

The study design consisted of two elements: a before-and-after survey of nominated lead teachers assessing parental related activities in participating schools, and a cross sectional survey of parents. Research on the perspectives of students and non-teaching school staff is reported elsewhere [21,22].

### **2.2.2 Before-and-after school survey: sampling and recruitment**

75 primary schools enrolled with the FFLP flagship programme during the research period 2008-2011. Using the enrolment list, we contacted those schools listed as an odd number to participate in the study. This represented just over half the schools (38). The list-based sampling approach reduced the risk of bias in the selection process. Of the 38 contacted, 35 agreed to participate in the study. Each school participating in the FFLP programme had a nominated lead teacher. These teachers were asked to complete a questionnaire on a number of aspects of parent and wider community involvement in their schools. This information was collected on enrolment with the FFLP programme and after 18-24 months participation in the programme. On both occasions, lead teachers were asked to provide supporting evidence based upon their programme monitoring file and school office records.

### **2.2.3 Cross-sectional parent survey: sampling and recruitment**

The parent survey was conducted in the same 35 primary schools as the before-and-after survey. The survey took place after 18-24 months participation in the FFLP programme. Participation of parents of children in three classes for each school – selected in liaison with the lead teacher was obtained. On average 75 questionnaires were distributed per school, although this number varied according to the class size. A second wave of reminders and questionnaires were sent out in order to obtain a minimum of 24 responses per school. The average number of completions was 21 with a range of 10 to 38. Low returns (10-16) for four schools reflected the small pupil roll (under 100). Low response rates from other schools may be associated with the high level of consultation requests in these settings. Data from OFSTED (the official body for inspecting schools in the UK) suggests that survey response rates from parents are consistently low in schools, so this was not an issue specific to this study [23].

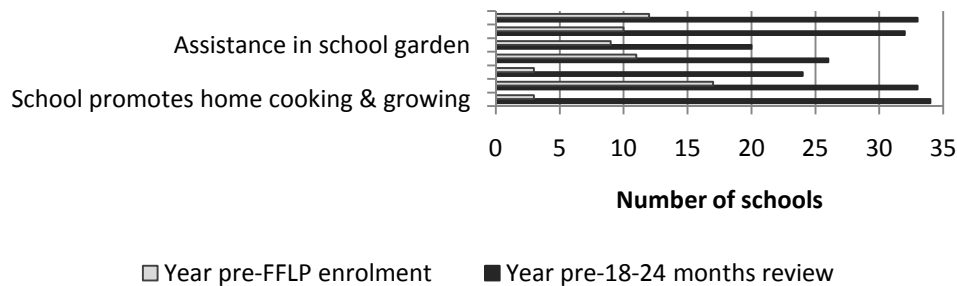
### **2.2.4 Parent questionnaire measures, topics, development and analysis**

Questions focused on perceptions of school meals; school food improvement; children’s involvement in FFLP activities; the impact of FFLP on discussions at home; and subsequent food choices and shopping behaviours. Open ended questions covering the same areas allowed respondents to provide additional written comments. The questionnaire was developed through interviews and piloting with 12 parents in six of the study schools 12 months before the administration of the survey. The measures were bespoke to the study, although the format drew upon the national Low Income Diet and Nutrition Survey [22]. Quantitative data were analysed using SPSSv.17. All written data were transcribed and analysed thematically [23].

## **3. RESULTS**

### **3.1 Before-and-after School Survey: School Engagement with Parents**

Comparison between pre-enrolment and post-enrolment periods shows that schools considerably increased their engagement with parents across a number of indicators (Fig. 1).



**Fig. 1. School reports on parental engagement (N=35 schools)**

### **3.2 Parent Respondents: Child Profile**

In total 740 parents completed questionnaires. Parents reported the ages of their children; this was to establish that parents with children across all Year groups were included. Parents were asked to state the ages of their first, second and third children. The age profile of the first child were: Reception (2%), Years One (7%), Two (10%), Three (13%), Four (17%), Five (27%) and Six (22%). The final 2% were missing data or reports of older first children at secondary school. In terms of gender, 47.7% of the first children were boys and 51.2% were girls with missing data on the remaining 1.1%.

### **3.3 Parental Awareness and Involvement in School Food Activities**

81% of respondents said they had heard of the Food for Life Programme prior to the questionnaire, 19% said they had not. Within the survey parents described a number of different types of involvement in school life particularly related to the aims of the programme. These included harvest celebrations (42%), cooking events such as barbecues (37%), food festivals (14%) and food related activities such as events with homemade food (33%). Often

events were connected to growing, with 32% of parents' surveyed attending school gardening sessions, or evening taster sessions where school produce and school meal menus were the focus. While this may suggest food-related activities constituted a significant route for involvement, 77.5% of respondents also reported involvement in other school activities such as sports day or drama performances in the last year. These results are outlined in Table 1.

**Table 1. Parental involvement in school related activities**

	<b>Number of respondents (n=740)</b>	<b>% of total respondents</b>
Harvest celebrations	310	42
Barbecues	274	37
Food festivals	104	14
Events with homemade food	244	33
School gardening sessions	237	32
Involvement in other types of school activities not related to food	570	77

*\*Parents could identify more than one activity; therefore percentages do not total 100*

### 3.4 Perceptions of School Meals

Parents were asked 'over the last year, has your child had school meals'? All parents responded to this, with 44% of the sample reporting that their child had school dinners every day, or nearly every day. An additional 41% also reported their child had dinners on some days of the week or sometimes, only 15% reported that their child never had school dinners. 11% reported free school meal take up, but data were missing for 14.7% of the sample. Parents were asked questions about the level of consultation they had received both in relation to school meals and food issues across the school more generally. The majority of parents (61%) reported that they had been consulted about school dinners, 27% said they had not, 11% could not remember or did not know. Most parents also felt they had been consulted more generally (67%), 24% said they had not, 8% did not know and non-responses made up 1%.

Parents were also asked to assess the quality of school meals and the degree to which they had improved over the previous twelve months. The results highlighted in Table 2 demonstrate there was a positive perception of school meal quality and levels of improvement with over 82 % of parents surveyed reporting school meals as either excellent or good.

**Table 2. Parental views on the quality of school meals in the last year**

<b>Quality of meals</b>	<b>Frequency of response</b>	<b>Percentage of total sample</b>
Excellent	222	30
Good	385	52
Neither good or bad	96	13
Poor	22	3
Very poor	8	1
No response	7	1
Total	740	100

As highlighted in Table 3 for the majority of respondents, there was marked improvement over the last year (60%) and for some (13%) that the improvement was very significant. Parents were less positive about the degree to which the school dining area had improved with 51% reporting that it had stayed the same or become slightly worse. Nevertheless, 40% did report improvements, with a significant percentage (8%) reporting dramatic improvements over all.

**Table 3. Parental views on school meal improvement in the last year?"**

<b>Change in school meals</b>	<b>Frequency of response</b>	<b>Percentage of total sample</b>
Improved enormously	96	13
Got better	350	47
Stayed the same	221	30
Got worse	19	3
No response	54	7
Total	740	100

### **3.5 Children’s Involvement in School Based Food Related Activity**

In relation to parental perception of children’s involvement with food related activities associated with the FFLP, most parents (77%) reported knowing that their children were involved. As a result of this involvement parents were asked about whether their child had raised discussions about healthier food choices at home with other family members. There was a strong endorsement to this question with 77% reporting that they had. Forty two per cent reported this was focused on the issue of fair-trade and 27% locally grown food. Some children had been able to connect this with the concept of food miles with 15% of parents reporting this had been discussed at home as a consequence of the programme. A key element of the programme was the development of food culture that encouraged children to cook and try new foods. Although this had often happened at school as part of the programmed activities, a number of parents (40%) reported their children were also becoming more adventurous at home, talking about new fruit and vegetables in family discussions. This extended to an interest in shopping with 21% reporting that their children were more interested in local shopping, including where food came from, and animal welfare. Twenty five per cent of parents reported that their child had raised the issue of organic food and 23% highlighted free range eggs as something specific that had been discussed. In terms of the environment, 20% of parents reported their children had raised the issue of food packaging and its negative environmental impact.

### **3.6 Content and Perceived Impact of Parent-Child Discussions**

Cooking was a dominant area of reported conversation, in particular trying out new recipes and excitement about the development of new skills. Seventy two per cent of parents reported conversations at home on this topic alongside sharing of experiences of growing fruits and vegetables (75%). The degree to which the children’s involvement in FFLP and subsequent family discussions resulted in changes in eating behaviour were also a focus of the evaluation. Parents were asked to rate the degree to which they ate more, the same or less of particular food types. These included: organic, seasonal, fair-trade, and locally produced food. In addition parents were asked about changes in relation to the consumption of free range eggs and organic meat. Table 4 highlights parents’ self-reported increases in buying seasonal, locally grown and fair trade foods. 25% of parents also said they were

buying more free range eggs, though reported a smaller increase in organic meat purchases. Interestingly there was a much higher non-response rate to this question. These non-responders were also less likely to report that they were aware of the FFLP programme in their school. As demonstrated above the numbers of parents buying less of the identified food groups since the programme introduction were very low.

**Table 4. Parental perception of changes in sustainable food consumption**

<b>Type of food</b>	<b>More</b>	<b>Same</b>	<b>Less</b>	<b>No response</b>
Organic food	81 (11%)	511 (69%)	22 (3%)	126 (17%)
Seasonal food	244 (33%)	444(60%)	0 (0%)	52(7%)
Fair trade food	185 (25%)	437(59%)	7 (1%)	111 (15%)
Local food	193 (26%)	459(62 %)	7 (1%)	81 (11)
Free range eggs	185 (25%)	474 (64%)	7 (1%)	74(10%)
Organic meat	52(7%)	511 (69%)	22 (3%)	155 (21%)

Parents were also asked to complete a five point Likert scale against a number of statements connected to their perception of how their child’s involvement had changed family knowledge, attitudes and behaviours around a number of key areas. These areas included school involvement; cooking from scratch; growing; attitudes to food, food buying and consumption. Table 5 below summarises the main findings from the 740 parents who took part. From a parental perspective children’s involvement in the project had resulted in take home messages that influenced food culture at home. For example, children’s discussions had influenced cooking and food consumption with 38% reporting that they either strongly agreed or agreed with a statement suggesting family attitudes to food had changed. In addition, 43% reported changes in buying patterns and 45% reported eating more vegetables as a result of FFLP. For many (53%) these increases were also connected to learning more about growing fruit and vegetables.

### **3.7 Perceived Home Impact: Written Responses**

Many parents (60%) completed the open-ended section of the questionnaire in some depth. Content analysis identified the following categories: radical impact of FFLP on family decision making; take home messages that directly influenced others; impact of take home message on family members; positive impact on family and child’s attitudes and behaviour; an increase in the number of family related food activities taking place; no impact and those who felt that FFLP had a positive impact with some reservations. These are summarised in Table 6.



**Table 5. Parental perception of changes in school involvement, growing, cooking and food purchasing N=740**

<b>“As a result of my child’s involvement with Food for Life we have...”</b>	<b>Strongly agree (n) (%)</b>	<b>Agree (n) (%)</b>	<b>Neither (n) (%)</b>	<b>Disagree (n) (%)</b>	<b>Strongly disagree (n) (%)</b>	<b>No response (n) (%)</b>
Got more involved in school life	67(9)	177(24)	370 (50)	67(9)	15(2)	44(6)
Learned more about cooking from scratch	96(13)	296(40)	222(30)	74(10)	22(3)	30(4)
Learned more about growing fruit & vegetables	96(13)	296(40)	222(30)	74(10)	22(3)	30(4)
Changed some of the foods we buy	67(9)	259(35)	252(34)	81(11)	22(3)	59(8)
Changed our family attitudes to food	52(7)	230(31)	296(40)	81(11)	22(3)	59(8)
Eaten more fruit and vegetables	81(11)	252(34)	274(37)	74(10)	22(3)	37(5)
<b>Not</b> changed our level of involvement in school life	52(7)	170(23)	259 (35)	118(16)	30(4)	111(15)

*Figures over .5 were subject to rounding up and under.5 down*

**Table 6. Parent perceptions of take home influences: content analysis themes for written responses**

<b>Theme based on content analysis</b>	<b>Examples of the types of issues raised</b>	<b>Frequency (n=740) &amp; percentage</b>
Radical impact on family decision making	Strongly reported changes, for example, in family food purchases, healthier choices. Increased family involvement in buying or choosing foods	11 (1.5%)
Take home message directly impacted on others	Child reported to have directly influenced others. Examples provided.	9 (1%)
Positive impact on family and child's attitudes and behaviour	Some changes in child or family attitudes to food, some possible changes to behaviour. For example child more willing to try varied or new foods, cooking or growing at home.	286 (39%)
Positive impact on family activities	More practice of cooking or growing at home as a result of FFLP or involvement in shopping. More parental involvement or connection with school.	56 (8%)
No impact (positive, negative and neutral)	No negative comments. No example of behaviour or attitude change given. No specific evaluative comment, but general positive comment about the programme overall	73 (10%)
Positive with reservation(s)	Positive but negative aspects reported such as the affordability of organic foods.	6 (1%)
No comment or not applicable	Nothing written	299 (40%)
<b>Total</b>		<b>740 (100%)</b>

The most common theme was connected to parental reports of the positive impact on family and child attitudes and behaviour as a result of the FFLP. Parents focused in particular on an increased interest in food that included trying new foods and attempts to cook as the following reports demonstrate:

*"My child has shown more interest in cooking at home and is now more understanding as to why we choose to cook from scratch. Also [she asks about] why we choose foods with less air miles, so although it has not changed our way of cooking it has changed her attitude". (Q 84:15)*

In some instances the ability of children to influence family discussions about food was felt to lead to changes in parental buying, growing and food preparation behaviour. At home children had articulated strong views about the importance and implications of buying fair trade, free range products and the consequences of excessive packaging on the environment:

*"My child now tells me to buy more fair trade and free range products which I am happy to do. She also tells me what ingredients she wants me to buy for things she likes to cook". (Q 57:04)*

For a minority of parents this had led to radical and significant changes in life style. As a result of the discussions children initiated at home parents identified becoming more aware and more proactive around food in their relationships with their children. In the following quotes parents illustrate this with, instances of regular meal planning; discussions about shopping and reductions in convenience food consumption:

*"Every Sunday we discuss which meals to have for the following week so I can compose a shopping list. My son has used his knowledge from school to help with this and make suggestions in relation to vegetables and healthy dishes such as vegetable lasagne and pasta dishes". (Q 73:06).*

However, alongside positive comments a number of parents raised reservations, connected to issues of affordability:

*"My children each make one meal per week and usually decide what ingredients they need. However, as a single parent on a low income, I feel it is important for them to use what is available at home and be creative". (Q 49:11).*

For a small number of parents although their children had enjoyed the school activities it was difficult to determine the impact of the programme. Others were more critical suggesting that the programme was a distraction from more important learning, or that the messages communicated were inappropriate. Some parents were particularly concerned about healthy eating messages, particularly around their daughters and the consumption of saturated fat.

#### **4. DISCUSSION**

Data from parents indicated a high level of awareness of the programme. These parents reported significant impact on discussions at home around the activities children had been involved with and the learning that had taken place. These had focused on the core aspects of the programme connected to food production and preparation, healthy eating, school food culture and the environment. In a significant number of families these discussions had

resulted in raised family awareness and changes in patterns of purchasing and consumption. Parents also reported that their children were now trying more new foods and were more enthusiastic about cooking and growing at home. Children wanted to practise the skills they had learnt at school with other family members, for some children this extended to active engagement with family shopping and menu planning. The before-and-after school survey broadly supported the findings from the parental survey.

Given the challenge of generating change in food and health behaviours across home school boundaries, the FFLP programme did appear to create increased opportunities for families to discuss food, its relationship to family health and developed innovative ways of improving food related behaviours and activities in home settings. These findings demonstrate from a parental perspective that there were behavioural outcomes that could be attributed to the programme. There are a number of routes through which the programme could influence food related practices in the home environment; some key processes are likely to include:

1. Children raised awareness at home and motivated families to change shopping and cooking habits.
2. Children practised their practical food learning with relatives at home.
3. Fuller engagement with parents on school food issues and school meal improvements helped set an agenda for change for families and the wider local community.
4. School events with parents and the local community offered direct experiences for growing, purchasing and cooking healthier and sustainable foods.

School health promotion literature has highlighted the importance of understanding the social context of parental engagement [14,15]. This is particularly important when messages raise complexity or dilemmas for their recipients. Our study indicates that children conveyed ideas home about eating more healthily and sustainably. However, some parents were concerned about the impact on their shopping budget and family cooking routines. This raises issues for programme developers about how to create programmes that can flexibly engage children in school contexts but also within their family and community contexts. There are particular challenges for schools in areas of high socio-economic disadvantage and for low income families.

Parents clearly saw the connection between food-based activities, children's wellbeing and wider educational goals in primary school settings. Perceptions of these links form an important mandate for programme developers and for policy makers seeking to embed public health and social citizenship activities into mainstream schools. However, the study also suggests the need for more strategic and theoretically informed school-home communications in order to develop two-way dialogue and for the positive reinforcement of messages. It is possible parental reporting of outcomes can be improved when parents, a sub-group within this population, are clearly identified as target audiences alongside their children [17].

Further work is also required for researchers to develop robust methods for assessing the impact of health promotion programmes on parents and the home environment [18]. To aid greater adoption they also need to be resource-efficient and operable at small scale to be

accommodated into routine evaluations. There is a need for longer term evaluations given the challenge of maintaining sustained parental engagement over time [16].

A number of limitations of the study need to be considered. Only the parents of selected class groups were approached to participate in the study. Although the programme was directed at the whole school community, it is possible that the recruitment approach could have captured a wider range of parent and carer perspectives within participating schools. Capturing more detailed data about the characteristics of the participating parents would have supported a more rigorous analysis of possible influences on parent's perceptions; unfortunately this was not possible, so remains a limitation of the research. The use of a single questionnaire per household is likely to mask differences of view between parents and to obscure the perspectives of other household members with a role in dietary practices. In addition, parents who completed the survey were possibly more inclined to be sympathetic to the programme's aims. Consequently these data may not fully reflect negative or disengaged views. To off-set this possibility, the questionnaires were administered independently from the programme team and parents posted their returns directly to the researchers – avoiding the use of the school as intermediary.

## **5. CONCLUSION**

Health promotion programmes are likely to enhance their reach and impact through parental communications either directly or through children. Programmes also embed action through formal and informal school activities in which parents have a significant role. Parental engagement can provide a mandate and help provide feedback on the role of health and wellbeing initiatives in supporting core educational goals, such as raising attainment. This is particularly important for initiatives, such as those concerned with food, diet and nutrition, where there are direct implications for the home environment – as well as the school setting. For food sustainability programmes, additional challenges exist with regard to the complexity and ambition of the objectives and the social and economic implications for households.

## **CONSENT**

School head teachers were asked to give written consent based upon written and verbal information provided by the researchers. Children were asked to take home a sealed questionnaire to their parents or carers. This included information on the study, assurance of the voluntary nature of participation, confidentiality of responses and anonymity of data management. Parents returned questionnaires via a stamped addressed envelope directly to the University, and not via the school. Respondents were offered the opportunity to enter a £24 prize draw per each school.

## **ETHICAL APPROVAL**

The protocol for this research study was approved by the University of the West of England Research Ethics Committee in October 2007.

## **ACKNOWLEDGEMENTS**

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## **COMPETING INTERESTS**

This work was supported by the Big Lottery Fund and was commissioned as an independent evaluation by the Soil Association. The authors declare that no competing interests exist.

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**Paper 10**     **Jones M,** Pitt H, Orme J, Bray I, Gray S, Kimberlee R, Means R, Oxford L, Powell J, Salmon D & Weitkamp E (2016) Evaluation of Food for Life 2013-15. Summary and Synthesis Report. UWE Bristol.

Available at Eprints <http://eprints.uwe.ac.uk/29454>

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# **Evaluation of Food for Life**

## **2013-15**

### **Summary and Synthesis Report**



# Evaluation of Food for Life 2013-15

## Summary and Synthesis Report

February 2016

This study has been led by Mat Jones with support from Hannah Pitt, Judy Orme, Liz Oxford, Selena Gray, Debra Salmon, Robin Means, Emma Weitkamp, Richard Kimberlee and Jane Powell from the Public Health and Wellbeing Research Group at the University of the West of England, Bristol (UWE Bristol).

We would like to acknowledge and thank all the people engaged in the Food for Life programme for their support and assistance in undertaking this evaluation. We are very appreciative of the feedback from members of the Food for Life Evaluation Advisory Group on drafts of this report.

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## Executive Summary

This is the final report of the phase two evaluation of Food for Life undertaken by the University of the West of England, Bristol 2013-15.

The research encompassed five workstreams:

- 1. Long term impacts and durability** - understanding how and why the Food for Life approach is embedded in schools for the medium to long-term.
- 2. Review of local commissions** - understanding strategic support for Food for Life, and recommending monitoring and evaluation systems.
- 3. Cross sectional study of pupil's diets in FFL local commissions** - evaluating Food for Life's impact on healthy eating behaviours in schools in local commission areas.
- 4. New settings** - exploring innovative approaches to extending the Food for Life whole setting approach beyond schools.
- 5. Social value of Food for Life in local authority commissions** – understanding the social, health, economic and environmental value of Food for Life commissions.

The report presents summaries of the findings of each workstream, discusses themes emerging across the research, and sets out recommendations for Food for Life and associated evaluation activity.

Further details of the research findings and methodologies are available in the full reports for each workstream (see Appendix 1).

*Key Terminology:*

**Food for Life** refers to the whole family of activity associated with this brand, including programme and awards in all settings and the Catering Mark.

**Food for Life principles** refer to the over-arching ethos and approach of work under the banner 'Food for Life', centred on the aim to transform food environments and food culture in settings across the life course.

**Food for Life Partnership (FFLP)** refers to the organisations and activity related to whole settings approaches in schools and communities between 2007 and early 2015. Since mid-2015 this settings based work is referred to more simply as **Food for Life**.

**Food for Life Catering Mark (FFLCM)** refers to the specific activity, associated infrastructure and award focused on catering quality.

**FFL (whole settings) frameworks** refer to multi-component visions for a whole setting approach underpinned by Food for Life principles. Catering quality is one aspect of this.

## Evaluation Highlights

### *Food for Life Phase 2*

- 1.** Food for Life continues to have a positive impact on food cultures within and beyond schools. It is becoming embedded in a range of sectors, gaining recognition within a range of local and national policies and organisations.
- 2.** Food for Life (FFL) has demonstrated that its whole setting approach can bring healthy, sustainable food to varied communities, and is appreciated as a mechanism facilitating change.
- 3.** This evaluation provides evidence that Food for Life has made good progress in ensuring 'good food for all' by enabling change in more places and organisations.
- 4.** This has been achieved through:
  - a continuing contribution to school hospital food policy and practice;
  - a reputation for reliability, forward thinking and cutting edge practice in relation to healthy, sustainable food cultures;
  - a nationally recognised standard for quality in catering;
  - innovation which has tested approaches for working with institutions and local commissioners; and
  - stimulating and informing high-level debates about food sustainability and health.
- 5.** Activity during Phase 2 represents a considerable development in terms of scaling up and out, taking Food for Life beyond its original niche of school food. Work with local commissions and in new settings are complementary strategies which can be effectively connected and combined, with potential for positive synergies and further scaling.
- 6.** The programme has succeeded in taking good food to more communities through a combination of:
  - greater geographic coverage of its core programme,
  - diversifying opportunities for participation across multiple settings, and
  - influencing strategic drivers for standard practice around food.Central to these are its ability to drive ambition, measure progress and evidence impact.

7. Within the context of schools there is evidence of continuing impacts and long-term change beyond the phase of initial engagement. If this experience is replicated in other contexts then there may be enduring outcomes for numerous beneficiaries.
8. Through Food for Life's advocacy and work to influence policy it has shaped the context for school food and hospital food. As a result it is arguable that the principles of Food for Life's whole school approach are becoming the norm for all schools.
9. Food for Life works through multiple routes to achieve change: local area strategies, settings approaches, commissioning and targeting particular sectors. Each approach brings dividends. What is not yet clear is what additional benefits are accrued through combining and connecting them to create a strategic approach capable of driving systemic change. This is the next challenge for Food for Life's ambition to scale up and out, one it is well placed to tackle.

#### *Long term impacts and durability in schools*

1. The Food for Life's programme remains relevant to schools and for some it has become fully embedded in their life and ethos.
2. There is evidence that Food for Life has long-term impacts in schools, beyond an initial period of intensive support and engagement or the enthusiasm associated with initiating a new project.
3. The Food for Life framework is appropriate to facilitating sustained engagement in school food activities.
4. Leadership commitment, a school food policy, whole school discussions about food, partnership work and parental involvement all contribute to a sustained approach
5. Some schools struggle to retain momentum with Food for Life related activity and would benefit from tailored support.
6. There are particular challenges associated with engaging secondary schools and maintaining their commitment to food related activity in schools.
7. Although Food for Life can influence a school's level of food related activity, those demonstrating the most sustained impact and progress may be schools with a pre-existing commitment to this food-related priority.

## *Review of local commissions*

- 1.** Commissioners express a high degree of satisfaction with Food for Life and its achievements to date in commissioned areas. The programme is seen as having unique benefits, is well regarded and trusted.
- 2.** Food for Life offers a flexible model with potential for commissioners to adapt it to their objectives. In practice most commissions have been designed to suit the budget available. This places pressure on the capacity of Food for Life to meet levels of need. This is compounded by the challenge of securing commitment to commission beyond an annual grant cycle.
- 3.** Food for Life's local delivery has developed iteratively with each successive commission. The characteristics of later commissions show innovations in terms of scale, duration, structured delivery, collaborations and reporting practices. Nevertheless both commissioners and Food for Life staff emphasise the need to further define the programme as a locally commissionable package of work.
- 4.** A clear theme from discussion with commissioners is that it will become increasingly important to be able to demonstrate the public value of programmes like Food for Life through effective communication and a sound evidence base. This is closely linked to the role of evidence of the impacts of Food for Life in the short, medium and long term.
- 5.** Commissioners emphasised the importance of capturing multiple forms of value, including educational, health, economic and environmental value of the Food for Life programme.
- 6.** Within local authorities strategic approaches to health and wellbeing are not well established, and work on school food is not linked across portfolios. This means opportunities for delivery are being missed, for example linking health and environment, or connecting different aspects of children's lives.
- 7.** The evaluation research has been used to inform work by UWE and Food for Life to develop good practice systems for monitoring and evaluation of local commissions. The resulting Local Commissioning Toolkit provides a standardised framework for monitoring and evaluation informed by good research practice.

### *Cross sectional study of pupil diets in Food for Life local commissions*

- 1.** Pupils in Food for Life (FFL) schools reported consuming almost one third more fruit and vegetables than those in comparison schools.
- 2.** After adjusting for free school meal eligibility, gender and local authority variation, pupils in schools engaged with the FFL programme were twice as likely to eat five or more portions of fruit and vegetables per day. They were about 60% more likely to eat more than the national average of 2.55 portions per day.
- 3.** For fruit and vegetable intake there was a significant difference between pupils in bronze and silver schools (bronze, mean=1.97; silver, mean=2.18,  $p=0.028$ ). Pupils in silver FFL award schools were over twice as likely to eat 5 or more portions of fruit and vegetables compared to pupils in schools with no FFL award.
- 4.** The proportion of pupils who reported eating no fruit and vegetables in the day prior to the survey was one third lower in FFL schools: 24% of pupils in FFL schools, 34.5% of pupils in comparison schools.
- 5.** School meal take up, based upon pupil reported of meals in the week prior to the survey, was 56.1% in FFL schools and 49.9% in comparison schools, a 6.2 percentage points difference that was significant ( $p=0.045$ ). In FFL schools, 6.0% more pupils had had at least one school meal in the week prior to the survey (FFL: 70.0%, Comparison: 64.0%,  $p=0.008$ ).
- 6.** School meal take up was associated with higher fruit and vegetable consumption for pupils in FFL schools. By contrast, fruit and vegetable consumption was not associated with school meal take up in the Comparison schools. This could be a reflection of greater provision of fresh fruit and vegetables in school meals in FFL schools than Comparison schools.
- 7.** After adjusting for gender, FSME and local authority differences, pupils in FFL schools were about 40% more likely to 'like' or 'really like' school meals:  $OR=1.43$ ,  $p=0.00$ ,  $CI (1.71, 1.75)$ . Pupils in FFL schools were also significantly more likely to give a positive rating of school lunchtime in their school ( $p = 0.005$ ).
- 8.** Supplementary dietary analysis was conducted for the local commission C survey sample. The analysis found no difference in the consumption of sweet snacks and savoury (salty) snacks in school or out of school. Pupils in comparison schools

consumed significantly more servings of high energy drinks out of school compared to pupils in FFL schools ( $p=0.002$ ) while differences in consumption of high fat food only just reached significance ( $p=0.045$ ).

- 9.** Whilst it is important to recognise possible residual confounding by socio-economic and other factors, the study suggests that schools engaged in the FFL programme provide an important opportunity for 8-10 year olds to consume fruit and vegetables.
- 10.** Fruit and vegetable consumption for pupils in FFL schools was not only higher within school time; it was also higher at home. FFL and commissioners can draw upon this finding to examine the potential 'spill over' of the programme from the school to the home, and the extension of impact into the wider community.
- 11.** The FFL schools award framework is an indicator of fruit and vegetable consumption: progression to a bronze and silver award is linked with higher fruit and vegetable consumption.
- 12.** The findings indicate that achievement of the FFL Catering Mark is a driver for improving fruit and vegetable consumption.
- 13.** There are differences in specific outcomes at the level of each local commission. These provide a base for valuable learning across commission areas and add to our understanding of how external factors can limit the progress of local commissions.
- 14.** The Day in the Life Questionnaire (DILQ) is a practical tool for assessing fruit and vegetable consumption and has the potential to be used in future evaluation of FFL commissions.

### *New Settings*

- 1.** The case studies demonstrate that there is clear potential for a Food for Life approach to work with people across their life course. The new settings programme has made good progress in establishing this in the sectors prioritised to date, and learning how best to achieve this.
- 2.** All of the organisations involved as pilots and case studies demonstrate that a significant engagement with the Food for Life approach can be generated within the new settings. With the move from schools into new settings, Food for Life has worked to adapt their programme to suit. This has entailed flexibility to respond to



the needs of each sector, whilst retaining commitment to core principles to retain the programme's integrity.

- 3.** Where Food for Life has worked to influence strategic drivers related to food in particular sectors this has clearly facilitated the process of securing commitment to a whole setting approach. In particular, recent changes in policy related to food in hospitals has helped engage actors within the NHS with food issues, and demonstrated the value of using Food for Life's whole setting framework.
- 4.** Each of the case study organisations felt that they had made achievements through their involvement and see potential to make further positive changes with Food for Life's support. Case study organisations suggested that engagement with Food for Life was helping to improve the quality of food served, with associated benefits for recipients (patients, residents and children).
- 5.** Through working as a Food for Life case study organisations became more ambitious about what they might achieve around food and took a more strategic approach. The sector specific frameworks contributed to these processes with all participants finding them valuable for encouraging integration, coordination, and scoping opportunities for action.
- 6.** There is clear evidence that the Food for Life whole settings frameworks, adapted for each sector, facilitated a focus on healthy and sustainable food within the new settings. The frameworks helped organisations to 'pull together' existing activity, and 'push out' with their level of ambition.

### Early Years

- 1.** Working with Food for Life has undoubtedly enhanced the food cultures of organisations involved in the development project. The case study sites are supportive of the final FFL Early Years (FFLEY) award framework. Managers of the case study sites were positive about Food for Life and its aims, and felt that staff listened to their recommendations about the scheme's development.
- 2.** At organisations involved in developing the FFLEY award staff gained ideas about how to involve children in food related activities such as cooking and growing.
- 3.** One nursery was able to introduce hot meals through facilitation by Food for Life. Two others made changes to their catering to meet standards for ingredients and suppliers. This resulted in staff and parents being confident that children received quality, healthy meals.

4. At two sites kitchen staff began engaging more with children during meal times, and in cooking sessions. Staff appreciated achieving an FFLEY award, and believed it would be beneficial to promote this to parents and organisations such as Ofsted.
5. For the large private provider the focus of being involved with Food for Life was achieving recognition of its high quality catering through FFLCM accreditation.

### Care Homes

1. Both organisational case studies, Milestones Trust and HC-One, underlined that a Food for Life approach can be translated into the 'new setting' of care homes despite the challenges involved. Achieving a FFLCM is a realistic aspiration for many care homes.
2. The case study organisations have shown that there is potential to embed activity around catering quality into a broad 'whole care homes' approach reflecting Food for Life's whole setting framework. Milestones Trust found the framework especially useful as a conceptual model for drawing together different strands and then attempting to enhance their food and food related offer.
3. Both case studies have developed action plans that draw heavily upon the Food for Life whole settings framework in their organisations. Some progress has been made with activity such as involving residents in food growing.
4. Support from Food for Life has provided additional impetus for work on food which has helped drive progress. In particular the FFLCM standards provide a benchmark and common understanding of what quality is, and what standards to aim for. This allows care homes to understand their baseline and how to progress, and provides an objective mechanism for evaluating success. This was felt to be particularly important due to the lack of specific standards and guidance for the care sector.
5. As a result of working with Food for Life and FFLCM, care home staff identified important changes that have been facilitated. These included better understanding of purchasing processes, more efficient procurement, greater control over standardised costs, being able to measure impact across different homes, reducing complaints and knowing what is in the food served.
6. Food now receives extensive attention within the case study organisations so resident's nutritional wellbeing is a clear priority. Care home managers and staff are more committed to Food for Life's principles for good food.

- 7.** Staff felt that changes made to resident meals are making a difference to their satisfaction, with signs that they are also eating more and enjoying meals. At one site staff suggested this had resulted in them no longer needing to provide supplements to treat constipation. Staff also suggested that less food is being wasted as residents find it more appealing.
- 8.** There have also been positive impacts for staff as they have enjoyed learning about food, nutrition and health. Some of this learning has transferred to habits at home. Staff enjoy the process of cooking from scratch and gain satisfaction from the results, and the recognition represented by achieving FFLCM awards.
- 9.** Another outcome has been to demonstrate that the demands of the FFLCM can be met within the care home sector and that 'going for the Catering Mark' can be easily embedded within a broader approach to improved dining along the lines of HC-One's Dignity in Dining. These achievements have included showing that a national care chain can source key foods. It has also shown that a move to fresh sustainable food free from additives does not have to be prohibitively expensive.
- 10.** As a result of achieving the Bronze FFLCM, over 100 HC-One homes were already able to objectively make a series of impressive claims regarding the quality, nutritional standards, freshness and sustainability of the meals they serve at the time of this research. HC-One is confident that the result of this will be improved health and wellbeing for residents. They are already able to point to reduced costs and variability and reduced food complaints from residents and relatives. The process has also resulted in development of a sausage meeting FFLCM standards, available on the Approved Buying List for HC-One homes.

### *Hospitals*

- 1.** On-going work by the Soil Association had helped put hospital food on the agenda, and informed key national drivers such as the establishment of a CQUIN for patient food. A high-profile event at Clarence House inspired key figures to support Food for Life. Through their membership of the Hospital Food Standards Panel, Food for Life were also influential in the introduction of a national requirement for hospital food and drink strategies.
- 2.** Food for Life has provided a useful framework for working on food in hospitals which helped structure activity, identify gaps and provided a model for an integrated approach. It stimulated the establishment of high-level multidisciplinary steering

groups, and sign-posted aspects of food in hospitals that might not have been considered otherwise, e.g. growing food on site, finger foods for patients with dementia, healthier vending, and communal ward dining.

3. Food for Life brought experience and knowledge to which NHS Trusts could turn for advice and assistance. Food for Life facilitated contact and exchange with other organisations which allowed them to learn from experience elsewhere and adopt good practice. Being a pilot working with Food for Life led to a wider perspective and opportunities to think differently.
4. Engagement with Food for Life stimulated a review of contracts covering patient, staff and visitor food and has significantly influenced the specifications for future contracts. It has helped to move contract discussions beyond whether the service is being delivered to a more sophisticated approach to contract monitoring. It has led directly to the specification of Bronze and Silver FFLCM food for staff and visitors in contracts. It has led to the identification of the quality of the vending offer as a key issue for staff food. External expert input into the contract and procurement discussions has been very helpful.
5. Work with catering companies to introduce FFLCM for staff and visitor food has had effects beyond individual Trusts. For example, one catering contractor has committed to all their retail outlets achieving FFLCM Bronze status by the end of 2015 as a result of working with a Food for Life Pathfinder Pilot.
6. A key aim emerging from hospitals' Food for Life action plans was recreating communal dining areas which had completely disappeared from wards. This has been introduced or is being developed at all three pilot sites.
7. The energy and enthusiasm of the Food for Life staff and the introduction of a perspective from outside their own organisation and the NHS was valued. The accessibility, knowledge, polite constructive input and challenge from the Food for Life team were seen as very valuable. On-going support from Food for Life provides useful momentum, drive and challenge, and external scrutiny.

### *Universities*

1. Collaboration with Food for Life has helped Lancaster University progress its whole university approach to healthy and sustainable food. Engagement with Food for Life has ensured that the university's food and drink policy, FFLCM and its Edible Campus initiative continue to drive their commitment to food, health and wellbeing.

2. Food for Life has provided a useful framework for working on food in universities which helped structure activity, identify gaps and provided a model for an integrated approach to healthy and sustainable food. Additional sections have been integrated into the model as a result of the Pathfinder Pilot such as the university as a home.
3. The University established a cross-institution Food for Life steering group which embraced the FFL university framework and has driven forward key initiatives around cooking, growing and sustainability education.
4. The University has developed a detailed action plan drawing heavily upon the Food for Life whole settings framework in the organisation. Some progress has been made to consider staff health and wellbeing as part of the framework.
5. Food for Life brought experience and knowledge to the university and supported its link with the Sustainable Food Cities Network. Consistent support from Food for Life over the period of the Pathfinder Pilot provided useful momentum, drive and challenge. This external scrutiny helped the university to embed their current sustainable food innovations within a whole university framework and supported the link to health and wellbeing. An excellent relationship was established between the Executive Chef and the FFLCM team which has helped to support further Catering Mark activity, goals and achievements.
6. Lancaster University became part of the UK Healthy Universities Network during the pilot initiative which will facilitate effective dissemination of their experiences and findings to other universities.
7. Food can be a strong part of a sustainability agenda within the university environment but is not often recognised as such. The potential additional health, economic, educational and social benefits include increased onsite meal uptake, increased staff and student engagement and wellbeing, increased knowledge and awareness of food provenance. These can all contribute to a healthier and more sustainable university setting in the longer term.

### *Social Value of Food for Life in Local Authority Areas*

1. The Social Return on Investment analysis of two Food for Life local commissions found that £4.41 of social value was created for every £1 of investment.

- 2.** The analysis covered a two year period of investment between April 2013 and March 2015 and involved interviews with 47 stakeholders and analysis of 78 written statements. We identified a total investment of £395,697 which comprised of costs to local authorities (Public Health divisions) and local NHS (Clinical Commissioning Groups), the Big Lottery and Department for Educations. Small costs were identified for staff time linked to FFL award applications in schools, catering agencies and other organisational settings.
- 3.** The scale and reach of the programme, particularly in schools, in the two local authority areas were notable. Out of a total of 295 schools, 179 had enrolled with Food for Life. This represented over 60,000 children and young people, 2,500 teaching staff and almost 1000 catering staff having potential exposure to the Food for Life programme.
- 4.** After accounting for the role of other factors and changes that might have occurred without the commissions, the analysis found a total combined value of £1,743,046 over a three year period for the Food for Life programme in the two case study areas.
- 5.** This value fell to a range of stakeholders and sectors of interest. Consistent with previous research on the Food for Life catering model, a significant share of the value is experienced by local suppliers (farmers, processors and wholesalers), caterers and their employees in the form of new or enhanced business opportunities, business security and work creation.
- 6.** Other stakeholders gained from improvements to the dietary health of primary school children, the role of Food for Life in enhancing the quality of children's educational experiences and readiness for learning and associated benefits to the working practices of teaching and catering staff. The analysis also allocated value to the role Food for Life in stimulating parental, community and local voluntary sector engagement in schools and other settings.
- 7.** During the evaluation period Food for Life was in the developmental stages of work with hospitals, care homes and early years settings in the two case study areas. The SROI analysis identified value to these agencies through staff training, expert support and change management support.
- 8.** Improvements in reduced food wastage and reduced transportation were the main environmental benefits that we were able to quantify.

9. Using the standard approach in SROI analysis, we tested the result by adjusting or removing factors from the analysis. This assessment produced a lowest value of £2.21 and a highest value of £6.29 for every £1 of investment. The results suggest that even when significant changes are made to the analysis the results still show evidence of social value being created.

## Ensuring Good Food For All

Food for Life's recent experience demonstrates that there are still numerous barriers which make it difficult to ensure good food for all: **healthy, sustainable food is not the norm in many contexts central to daily life in the UK.** Several challenges have to be addressed in order to achieve further progress with changes required to make it such:

1. **How to ensure that those in most need of good food can access it.** Healthy sustainable food can help tackle health inequalities providing those with the greatest need, including nutritionally vulnerable groups, are able to secure it. But those with the greatest need are often the same people least able to access or afford good food. A settings approach works to address these issues of accessibility.
2. **Good food is not a leading priority for those who lead change.** Too often the will to drive change starts from personal interest or passion around food. Even leaders keen to see a more positive food culture in their organisation can find it difficult to maintain commitment in face of multiple, competing priorities. The potential for food to contribute to some of these is not always well understood, whilst food does not often feature as a strategic priority in its own right.
3. **Partial delivery of a whole setting approach may prevent wholesale benefit.** The power of a whole setting approach is that it is a holistic model which drives integrated change, and results in benefits beyond the sum of its parts. But it is sometimes interpreted as a list of optional activities, of which only the most desirable or achievable are delivered. There is a risk that the flexibility organisations welcome from programmes like Food for Life results in a 'pick and mix' rather than a truly whole setting approach.
4. **Choosing healthy, sustainable food is not always an option.** Good food is not yet the norm, or always the cheapest option. The choices on offer can be edited but providers are reluctant to move to choice removal. In contexts including commercially driven operations it is particularly difficult to challenge the prevalence of high fat, high sugar, high salt foods. A legacy of catering systems driven by low

cost provision leaves an infrastructure inhibiting a switch to freshly cooked local produce.

- 5. Complex problems with complex solutions.** Challenges like health and sustainability are a result of many complex processes; the pathways for tackling these 'big problems' are multifaceted and take time. An expectation of immediate, measurable impact can be to the detriment of initiatives with a long-term perspective and/or of complex nature.

In response to these challenges it is important that Food for Life **reaffirms clear, achievable outcomes** to ensure that future activity is appropriately focused and founded on a sound theory of change.

Food for Life should work to **communicate the value of a whole setting approach** to healthy, sustainable food and the importance of a holistic programme. Food for Life should also work to **communicate how good food contributes** to goals which are priorities in target sectors.

There is a clear need for **continued advocacy for food to be a priority** in organisations and sectors responsible for feeding society's most nutritionally vulnerable people. Food for Life should seek to replicate their success in shaping strategic drivers for hospital food in other sectors.

This should be supported by **continued monitoring and evaluating** to increase understanding of the benefits. There is a need to **investigate the health impacts** of providing good food in settings across the life course to address gaps in the evidence base, and to understand potential for a focus on food to contribute to priorities in various settings.



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## 1. Introduction

### 1.1. Background

Since 2007 Food for Life has grown in scale, scope and influence to become a leading England-wide movement for promoting greater access to healthy and more sustainable food. With this 'good food for all' message and the support of the Big Lottery, Food for Life launched with a national programme for improving food in schools and to make food a central part of children's education. Subsequently Food for Life has developed greater depth of collaboration with local authorities and branched into other settings, such as early years children's centres. This report brings together an account of an evaluation led by the University of the West of England, Bristol (UWE) of the latest phase of the Food for Life programme between 2013 and 2015.

Food for Life is a collaboration between charities, led by the Soil Association together with Focus on Food, Garden Organic, the Health Education Trust and the Royal Society for Public Health. Schools, councils and other agencies are local partners in this greater partnership. The Food for Life Catering Mark (FFLCM) – an award scheme for all caterers – developed out of the Food for Life programme and has become a leading delivery agency in the School Food Plan and the Universal Infant Free School Meals Programme.

Food for Life uses an awards scheme as a central framework for change when working with partners. First developed with schools it reflects a 'whole settings approach', that is in order to promote good food for all a school needs to make changes in many parts of the institution and to look for opportunities to change people and the environment within and beyond the school gates. Schools work towards Bronze, Silver and Gold Food for Life Awards in a process that actively involves pupils, staff, parents and the wider community in growing and cooking food and linking with farms to learn where their food comes from. To date 1087 Food for Life awards have been achieved by schools.

There are limits to the power of schools to change food cultures and this is where the Food for Life Catering Mark can have particular value. Led by the Soil Association, food procurement experts work closely with in-house and larger school caterers to improve the quality and provenance of meals. Caterers, in a similar manner to school FFL Awards, use the FFLCM as a framework for change and progress from Bronze, Silver to Gold award levels as they meet criteria that cover both ingredients and the wider catering workplace. Synergy between the Catering Mark and the FFL award has rapidly extended the provision of FFLCM accredited school meals. Today over a million FFLCM meals are served each weekday, totalling more than 178 million meals a year. These meals are served in over 7,400 schools and – because the Catering Mark is applicable for most catering settings - in 290 nurseries, over 30 universities, 20 hospitals and 75% of London boroughs.

In 2011 UWE and Cardiff University reported on the phase one evaluation of FFL, having been commissioned by the Soil Association to evaluate the programme (Orme *et al.*, 2011). The evaluation concluded by saying that the FFL Schools Award "can act as a proxy for outcomes across school meal take up, parental engagement, sustainable food attitudes and healthier eating. These outcomes relate to schools in diverse settings, including those with indicators of higher social deprivation or

lacking in infrastructure or staff skills at the outset. Achievement in these circumstances provides a strong case for multi-level and holistic food reform programmes in schools settings” (Orme *et al.*, 2011:15).

In 2013 Food for Life secured funding from the Big Lottery Fund to support two further years of work, or phase 2 of Food for Life, with a focus developing a whole settings approach into areas beyond schools, and commissioning of schools programmes by local authorities. UWE’s Public Health and Wellbeing Research Group was appointed as independent evaluator for this phase.

This summary report presents findings from the five workstreams comprising the evaluation research between 2013 and 2015. It provides a synthesis discussion that analyses issues across the project. Full reports of each aspect of the evaluation are available and are signposted as appropriate here (Appendix 1).

The phase two evaluation is divided into five workstreams:

1. **Long term impacts and durability** - understanding how and why the Food for Life approach is embedded in schools for the medium to long-term.
2. **Review of local commissions** - understanding strategic support for Food for Life, and recommending monitoring and evaluation systems.
3. **Pupil survey in local commissions**- evaluating Food for Life’s impact on healthy eating behaviours in schools in local commission areas.
4. **New settings** - exploring innovative approaches to extending the Food for Life settings approach beyond schools.
5. **Social Return on Investment of local commissions** – calculating the social, economic and environmental value of FFL commissions.

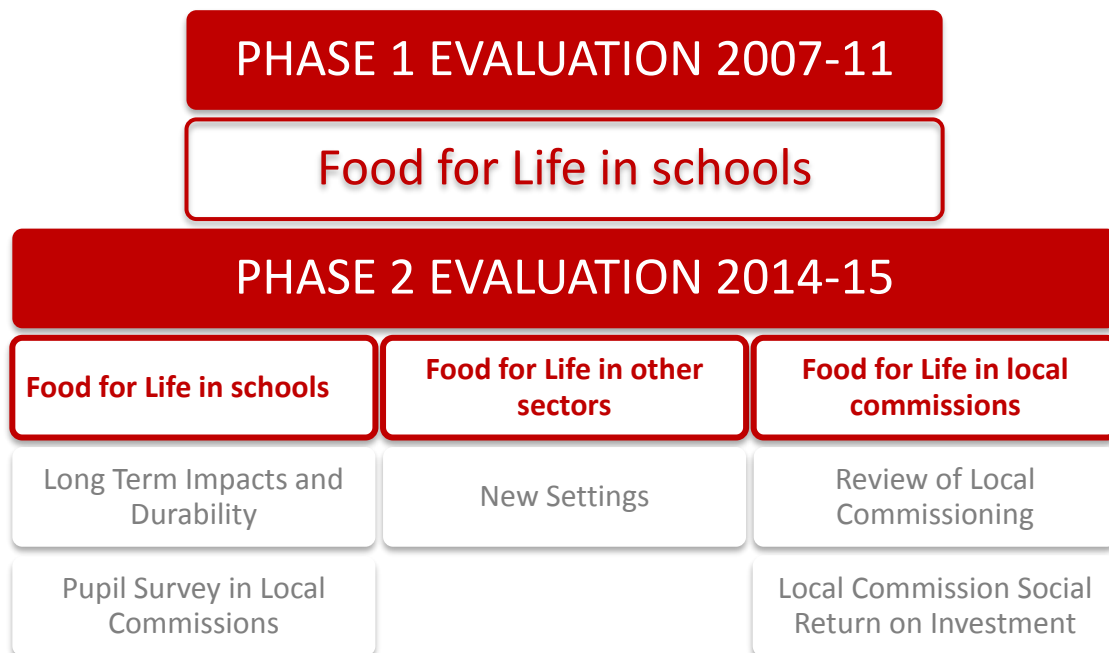


Figure 1 Evaluation of Food for Life

## 2. Context

### 2.1. Food, health and sustainability

The challenges for the global food supply system are multiple and complex as it faces pressure to feed a growing global population without damaging natural resources and systems (Ambler Edwards *et al* 2009). Human health is writ large in this global food transition with rising over-nutrition alongside persistent under-nutrition and micro-nutrient deficiency, or 'hidden hunger' (FAO 2014). In the UK there is continued concern that too many people do not have a healthy diet, with those from disadvantaged communities particularly vulnerable to the negative repercussions of poor diets (Currie *et al* 2008). Governments have responded by promoting healthy lifestyles and wide ranging initiatives tackling the causes of dietary related poor health (Department of Health 2010). Health and sustainability are inextricably linked, with strong healthy communities being one pillar of sustainable development. There are opportunities to combine promotion of public health with sustainability, through taking an ecological approach (Rayner and Lang 2012). In many places around the world action on human wellbeing and environmental sustainability are brought together in local food strategies (Marsden and Sonnino 2012).

In recent years various actors in the UK have responded to these big food challenges in the context of food in schools. Driven by the moral responsibility to provide good food to society's most vulnerable, and the potential to harness the purchasing power of public bodies there has been something of a revolution in school food (Morgan and Sonnino 2010). Children's regular school attendance presents an opportunity to address low levels of fruit and vegetable consumption, high levels of salt, fat and sugar consumption, and high levels of childhood obesity, with the expectation that establishing a healthy diet at this stage will influence habits in later life (Orme *et al* 2011). Ensuring pupils have a healthy lunch is also found to enhance their learning (Public Health England 2014, Storey *et al* 2011). The significant benefits this has for young children led to the introduction of universal infant free school meals in 2014. This formed part of a wholesale plan for better school food across England which seeks to make food education and healthy meals the norm (Department for Education 2013). As such the multi-faceted success of the Food for Life Partnership (Orme *et al.* 2011), can be seen to have influenced the national landscape for food in schools. The introduction of a national School Food Plan suggests that healthy sustainable food is on the cusp of moving beyond the confines of isolated examples of good practice (Morgan and Sonnino 2010).

Despite this progress which will benefit a key sector of the UK's population, other dimensions of the public plate remain driven by the imperative to provide at low-cost rather than a duty to provide healthy sustainable food (Morgan 2014). Publicly funded mass-catering in institutions such as prisons and hospitals can lever change through the scale of its investment, and in doing so provide good food to groups who are often nutritionally and socially vulnerable (Allen and Guthman 2006, Morgan and Sonnino 2008). This suggests a need and potential for changes like those achieved in schools in other settings, with the aim of ensuring good food for all.

## 2.2. Whole settings approach

A focus on settings has been a feature of health promotion for more than 30 years and has become increasingly popular, representing a shift in attention from individuals to systems or organisations as agents of behaviour change (Dooris 2006, Whitelaw *et al* 2001). Whilst there is considerable diversity in what is taken to be a setting, and how a settings approach is delivered there are common characteristics:

- 1) An ecological model of health promotion which recognises that health is determined by environmental, organisational and personal factors which interact in complex ways.
- 2) Recognition that settings are dynamic as inputs, throughputs, outputs and impacts interact in complex ways.
- 3) A focus on introducing change across a whole organisation or system by seeking organisational change (Dooris 2005).

Despite its popularity and perceived benefits, evidence for the effectiveness of settings based approaches is “relatively poorly developed” due to a lack of research into whole-system approaches, and the difficulty of measuring impacts within complex systems (Dooris 2005: 57). The evidence regarding schools is better developed than that in contexts such as workplaces and hospitals (Dooris 2006: 57).

In schools the whole setting approach is represented by the model of a health promoting school, as championed in the UK as the Healthy Schools programme. A recent systematic review of the effectiveness of a whole school approach to health promotion found that it can have a positive influence on certain pupil behaviours, including diet (Langford *et al* 2014). Food for Life’s whole school approach applies the principles of a settings approach, achieving synergies which results in impacts ‘greater than the sum of the parts’ (Orme *et al* 2011). A key factor in achieving this is establishing mechanisms for all school stakeholders to be involved, including a strong pupil voice in relation to food (Orme *et al* 2013).

Looking beyond schools, there is relatively little evidence of initiatives comparable to Food for Life with its focus on whole systems and food culture, as research is dominated by interventions oriented towards individuals with a focus on nutritional and weight outcomes. Dooris (2005) suggests that the weak evidence base is in part due to the complexity of evaluating whole settings approaches which require assessment of how numerous interrelationships interact. To overcome this and in order to fully capture the value of a systemic approach he suggests the need for a theory of change approach. This should consider both processes and outcomes in order to gain an understanding “not only [of] whether something works, but also of why and how it works or does not work in particular situations” (Dooris 2006: 61).

With a focus on achieving cultural change across an institution Food for Life is akin to what Whitelaw *et al* (2001) categorise as the ‘organic model’ of delivering a settings approach, meaning that achieving an enhanced culture within the setting is equally important as delivering tangible health gains. In such models activity includes efforts to build capacity for participation from the bottom up (*ibid.*). Food for Life’s evolution into a programme delivering beyond schools presents an opportunity to understand how this applies in a range of settings, and whether it is successful in taking healthy, sustainable food into more communities. By targeting institutions which feed large

numbers of people each day there is potential to make a difference to people at all stages of their life course.

### *2.3. Scaling up and out*

Programmes like Food for Life which take a settings approach to healthy sustainable food have been effective in the contexts where they have been delivered. Food for Life has been described as one of the most inspirational social experiments of our time and needs to be lauded as such because it addresses pressing societal challenges through a sustainable food programme that integrates the multiple goals of public health, ecological integrity and social justice (Morgan 2015). But like other initiatives led by civil society actors such programmes have been relatively niche, achieving change only in select locations or organisations rather than at a systemic level (Marsden and Morley 2014; Marsden and Sonnino 2012). Sustainable healthy food is not available to all. It is suggested that to reverse this requires programmes like Food for Life to scale up and out, to extend their reach beyond local niches to enable more widespread change (Friedmann 2007; Marsden and Morley 2014; Mount, 2012).

The recent growth of Food for Life can be seen as an attempt to scale up and out as it moves into new sectors and locations. The new settings programme can be interpreted as an attempt to scale out from schools into other sectors. As such it involves replication of the programme in new contexts, whilst adapting it to suit the conditions in each specific setting. In turn there will be opportunities to scale up Food for Life's work in each sector so that more organisations of each type engage with the programme. In combination these expansion and diversification strategies seek to ensure good food for all.

### *2.4. Evaluation aims*

The overarching aim of the evaluation is to present a robust and transparent account of the impacts of FFL for participants and wider stakeholders, to document how these impacts are achieved and to assess the wider social return on investment created.

The evaluation is intended to meet the needs identified in Food for Life's application for funding and is informed by the Big Lottery's approach to evaluating its wellbeing programme. It draws upon learning from the phase one evaluation of the Food for Life programme (Orme *et al* 2011), building on and extending this successful approach to evaluating a complex intervention. The evaluation provides evidence of the programme's impact, and analyses its delivery processes. It recommends how Food for Life can monitor outputs and evaluate outcomes, and draws lessons to inform future delivery. This phase of Food for Life activity includes considerable developmental activity, so the evaluation research has evolved to reflect emergent priorities.

### *2.5. Evaluation Design*

The research team took a staged approach to developing the evaluation design, building on dialogue with Food for Life and responding to emerging developments. As noted previously (Orme *et al.* 2011: 35) initiatives like Food for Life present some widely reported challenges for evaluation including:

- Multiple levels of change - at individual, group, organisational and policy levels,
- Longer term outcomes that may be achieved at a point beyond the lifetime of the programme,
- Emergent programmes of delivery and goals that develop in response to changing circumstances,
- Multiple and diverse goals that reflect the range of stakeholders involved in the programme,
- 'Open systems' that promote active partnership and engagement with other initiatives in related fields of activity.

In response to this UWE adopted a 'theory of change' (Connell and Kubisch, 1998) approach informed by 'realistic evaluation' (Pawson and Tilley, 1997). The advantage of this approach is the potential to estimate a programme's effects on interim and longer-term outcomes, and to provide audiences with information on how and why a programme produces outcomes. This approach provides for capturing interim measures of progress for aspects of Food for Life in a developmental phase, or where impact may not be measurable in the timescale afforded to the evaluation.

The research sets Food for Life in context within the international arena of innovative food and sustainability initiatives. The initial research questions for the whole evaluation programme are:

1. What are the impacts of Food for Life on healthy eating behaviours in a range of settings?
2. How are these impacts achieved?
3. How is the Food for Life approach sustained?
4. What is Food for Life's wider social return on investment?
5. How can Food for Life become embedded in a range of settings?

These are supplemented by specific research questions for each of the four areas of work as outlined in the subsequent research plans.

The theory of change is a methodological 'approach' but does not specify research methods. The research used qualitative and quantitative research methods as appropriate to generate the necessary data, and includes case studies across the work streams.

## **2.6. Report Content**

The next sections (3-4) provides contextual information on the Food for Life programme and achievements from this phase of activity. This is followed by sections (5-10) which summarise in turn the findings of each evaluation workstream. The final section (11) looks across the project to discuss cross-cutting themes, highlight some challenges and potential actions for the future.

Detailed reports are available for each evaluation workstream on request.

The findings of the phase one evaluation are published as *Food for Life partnership evaluation: full report* available at <http://eprints.uwe.ac.uk/14456/>.

### 3. Food for Life

#### 3.1. Introducing Food for Life

Food for Life (FFL) is a coalition of five national charities led by the Soil Association, working with Garden Organic, Focus on Food, the Health Education Trust and, since 2013, the Royal Society for Public Health. Food for Life seeks to promote a good food culture through supporting practical delivery and influencing public decision making. For Food for Life a ‘good food culture’ means: re-engaging with where our food comes from, with how we farm, grow, cook and eat. Good food has the power to build healthy, happy communities; it can connect us with family and friends, with the people and places that produce our food, and with the natural world on which we depend. Food for Life works to create meaningful partnerships between schools, nurseries, hospitals, care homes, food providers and the wider community, using food to stimulate whole systems change. A good food culture, which begins by nurturing a simple love for good food, can have a far-reaching impact, supporting local enterprise and sustainability, and having impacts on education, inequalities, and health. Simply put, FFL’s ambition is to ensure good food for all.

FFL began as a school focused initiative, working to promote a ‘whole school approach’ to healthy sustainable food taking a settings approach to health promotion. The primary focus of FFL is school related work where there are the following four objectives:

- i) To support and facilitate schools, the wider school community and caterers to have the opportunity, confidence and ability to access healthy and sustainable food;
- ii) To provide the skills and knowledge for the school community to make informed food choices leading to healthy and sustainable food behaviours;
- iii) To enable change in food culture within school settings through a whole school approach;
- iv) To enable change in food culture across wider health, education, and school meal systems through influencing stakeholders and strategy at local and national levels to adopt the FFL framework and ethos.

These four objectives have been translated into an action framework for schools relating to food leadership, food quality, food education, food culture and community involvement. Schools can achieve Bronze, Silver or Gold awards within the Food for Life Partnership Award Scheme according to the degree of progress made against these four areas. A parallel award for early years settings was recently introduced.

A distinct but related programme is the Food for Life Catering Mark (FFLCM), an independent audit of caterers. This offers food providers accreditation for:

“taking steps to improve the food they serve, using fresh ingredients which are free from trans fats, harmful additives and GM, and better for animal welfare (FFL 2015b).

The mark is recognised as a sign of food quality and sustainability “(Morgan and Sonnino 2008, Morgan 2010), with three award levels - Bronze, Silver, Gold- promoting continued improvement. Caterers are required to meet the standards set out in the FFLCM criteria, and pay a fee for annual inspection against the standards. FFLCM is operated by a dedicated team within the Soil Association, which frequently interacts with FFL staff. The catering mark also links to FFL awards as accreditation demonstrates that an organisation meets the award’s food quality requirements. The FFLCM is open



to any caterer; hence it has worked with organisations in a wide range of sectors. In 2014 FFLCM achieved the landmark of one million meals being served to its standards each day.

Organisations engaged in this research are involved in different ways with parts of the Food for Life family, with many but not all working with both with the Food for Life Catering Mark and the Food for Life settings schemes. This makes it difficult to distinguish impacts of each programme, or to specify the source of support. On occasions stakeholders have not always been clear in their own minds as to the distinction between aspects of the Food for Life family and its various processes.

### *3.2. Results of the phase 1 evaluation*

The phase one evaluation focused on key programme goals between 2007 and 2011:

- increasing school meal take-up
- promoting healthier eating habits amongst pupils
- improving school performance, pupil attainment and behaviour
- improving pupil awareness of food sustainability issues
- influencing food habits at home and parental engagement in school life, and
- developing sustainable food sourcing and school meal provision.

The research found that the programme was having positive impacts on pupils and schools with regard to healthy, sustainable food.<sup>1</sup> There was evidence that participation in the programme resulted in:

- increases in school meal take up above national trends for both paid and free school meals,
- extensive reform in experiential food education, awareness of food, sustainability, and healthy eating,
- positive trends in school performance, pupil attainment and behaviour,
- perceived changes to children's food attitudes and behaviour outside school, and
- commitment to provision of better quality school catering,

In addition, it was concluded that Food for Life's whole school approach produced benefits that would be less evident in a single component programme.

See Appendix 2 for a summary of outputs from the Phase 1 evaluation.

### *3.3. Developments since 2011 - Phase 2*

Since 2012 Food for Life has been operating a commissioning model through which they can support English local authorities to deliver their health and wellbeing priorities. To date 21 areas have commissioned the programme, largely through local authority public health funds, but with some additional investment, for example, through clinical commissioning groups (CCG). Each area operates the commission differently and Food for Life offer flexible delivery. Although centred on

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<sup>1</sup> This research focused on 111 schools receiving a model of intensive support from FFL which is no longer offered.

schools, some commissioners have requested engagement in other settings such as early years provision and hospitals.

In 2013, the Big Lottery Fund made an additional £40 million available to continue the activities of its wellbeing portfolios. Their overall aim is to continue to support communities in need in order to create healthier lifestyles and improve their wellbeing. The initiative is focused on three areas - mental health, physical activity and healthy eating - with an increased emphasis on enabling access to opportunities to increase and enhance wellbeing, increased social contact, local food growing and children's mental health and physical activity. These are highlighted as a result of emerging, current and increasing need identified by wellbeing portfolio holders and also by national evaluation of this portfolio.

Food for Life secured funding to deliver a further phase of the programme. Alongside a continued focus on transforming food culture in schools, this supports Food for Life to extend its work into 'new settings' such as hospitals, workplaces, care homes and universities. In the context of localised services and programmes for public health and wellbeing, it also enables Food for Life to enhance its engagement with local authority commissioning groups and to advocate at national level with, for example, Department for Education and Public Health England (PHE).

During phase two Food for Life has been working beyond schools, piloting a parallel whole setting approach with organisations in a range of sectors: hospitals, care homes, universities and early years. This involves close cooperation with the FFLCM team, and in some areas, connects with commissioned programmes.

## 4. Food for Life Phase 2 achievements

### 4.1. Outputs

Over the course of the phase two Big Lottery funding Food for Life has delivered a broad range of activity across England.<sup>2</sup> The organisation now has 17 locally based staff (FTE 12.7) and a national team of 30 (FTE 25.2). This team has supported the following key activities and outputs:

- A total of **5208** schools are enrolled with FFL.
- Of these **654** are schools newly enrolled during the funded period.
- A total of **1087** schools Awards have been achieved, of which 863 are Bronze, 197 Silver and **27** Gold.
- More than **170** training events have been delivered to teachers, school cooks and other staff.
- A total of **21** local authorities have commissioned an FFL programme, with **13** areas currently operating a commission (see Figure 2).
- A total of **8117** sites serve FFLCM accredited meals, of which **3886** are at Bronze, **2818** Silver and **1413** Gold.

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<sup>2</sup> All figures in this section based on totals at June 2015.

- **7437** schools are serving FFLCM accredited meals.
- **291** early years settings are serving FFLCM accredited meals.
- **126** food outlets within universities are serving FFLCM accredited meals.
- **31** workplaces are serving FFLCM accredited meals.
- **20** hospitals are serving FFLCM accredited meals.
- **2** care home groups are serving FFLCM accredited meals.

#### 4.2. Key strategic developments

In addition to delivering practical activity and support to organisations, FFL has worked to influence strategic drivers which influence food in schools and other settings. During the funded period this has resulted in the following key achievements in which FFL have played a part:

- School Food Plan published to cross-party backing (July 2013).
- Hospital food CQUIN citing the FFLCM introduced by the Department for Health (Dec 2013).
- FFLCM cited in Patient Led Assessment of Care Environment indicators for the NHS by Department for Health (Dec 2013).
- FFL and FFLCM commended at NHS Sustainability Day by Maya de Souza, Head of Sustainable Procurement and Operations at Defra (March 2014).
- FFL and FFLCM cited by UN Special Rapporteur on the Right to Food, Olivier de Schutter, as an example of best practice procurement in the UK (May 2014).
- Defra's Plan for Public Procurement cites FFLCM as framework within which to score 'good' or 'excellent' against the plan (June 2014).
- Scotland's National Food and Drink Policy *Becoming a Good Food Nation* cites the FFLCM as "driving real change" (June 2014).
- Hospital Food Standards Panel cite the FFLCM as rewarding excellence in hospital food (August 2014).
- Hospital Food Standards Panel cite FFL pilot with South Warwickshire NHS Trust as exemplar food and drink strategy (August 2014).
- Schools Minister David Laws commends the FFLCM to all schools nationally (Nov 2014).
- New School Food Standards cite FFL and FFLCM as independent verification frameworks with call for fresh, local, sustainable food (Jan 2015).
- Additional hospital food CQUIN citing the FFLCM introduced (March 2015).
- New hospital food standards and food and drink strategy mandated through the NHS Standard Contract (April 2015).

A key stream of activity has been involvement in delivery of the School Food Plan (Department for Education 2013). Food for Life's involvement in the steering group and other associated activity has contributed to the following changes:

- Healthy Eating incorporated into Ofsted Guidance (Sept 2013, revised June 2015)
- Cooking introduced to the curriculum for Key Stage 1-3 (Sept 2014)
- Universal Infant Free School Meals introduced for Key Stage 1 (Sept 2014)
- New School Food Standards Introduced (Jan 2015).

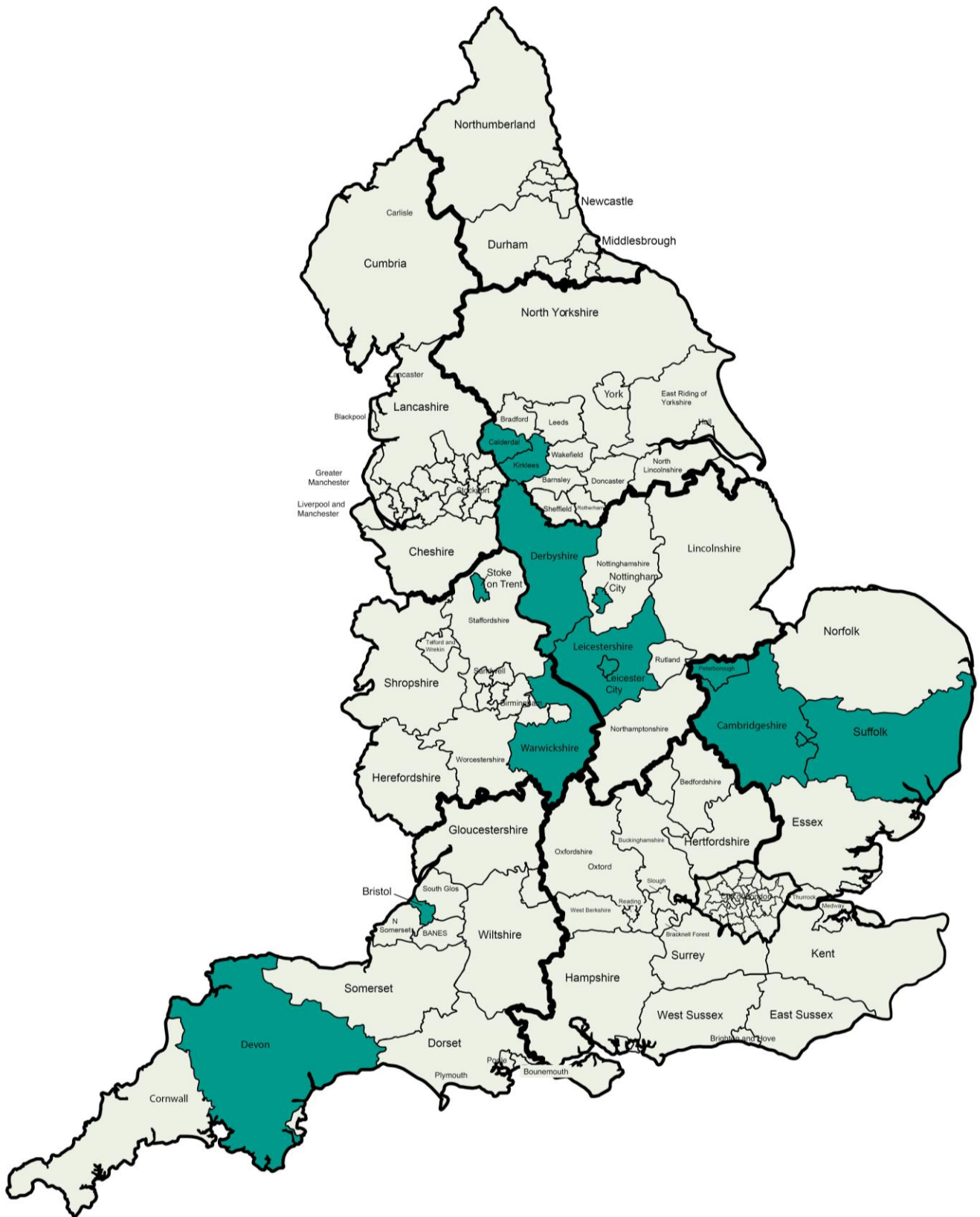


Figure 2 Map of FFL Local Commissions active June 2015

### *4.3. Future monitoring and evaluation: Local Commissioning Toolkit*

Food for Life recognises the need for robust data on its impacts and outcomes, and is required to provide this to funders and partners. Only by understanding the results of its activity can the partnership and its stakeholders ensure that they remain effective and efficient. Throughout the period of the phase two evaluation, the research team at UWE have been liaising with FFL to advise on monitoring and evaluation practice. This has culminated in the production of a monitoring and evaluation toolkit for FFL's core activity in schools and early years settings, with a focus on commissioned areas.

The *Local Commissioning Toolkit* will support FFL by providing a standardised framework for their key operations and liaison with commissioners. It brings together the programme's evidence base, monitoring and evaluation tools, and examples of recommended practice. It draws on on-going evaluation activity, and experience of operating commissions to date to set a framework for monitoring and evaluation informed by good research practice. This will:

- Standardise monitoring and evaluation processes for FFL local commissions by providing a recommended approach and minimum expectations.
- Streamline monitoring and evaluation by bringing together existing tools and guidance.
- Guide Commissioning Managers towards good practice and issues to consider when establishing a commission.
- Identify options for various levels of monitoring and evaluation activity according to commission scale and duration.
- Clarify what can be expected by way of evidencing change resulting from a local commission.

The Toolkit does so whilst allowing for the flexibility commissioners have said they appreciate from FFL. Adhering to the good practice presented in the Toolkit will also help FFL evolve its evidence base through robust, efficient monitoring and evaluation.

## 5. Summary of evaluation findings

### 5.1. Long term impacts and durability

#### Context

The focus of this aspect of the evaluation is to understand how schools' engagement in food related activities change over time. It is a chance to see what has happened in schools which became active in food related activities some time ago, whether school food culture has remained important to them, and whether engagement with Food for Life continues to influence their approach to school food culture. For Food for Life it provides a picture of how they can support schools to remain engaged in work to create a positive school food culture. More broadly, it addresses a lack of research into the long-term effects of school food programmes.

The interim report *Food for Life Partnership Long term impacts on schools: Exploration of context and case study identification*, Pitt, Weitkamp et al. 2014 presented results of a survey of schools engaged with FFL for at least 2.5 years. The second report *Food for Life Partnership Long term impacts on schools: Case Study Report*, Weitkamp and Pitt 2015 presented the findings of case study research in schools which have successfully sustained their activity around a whole school approach to food.

#### Research aims and questions

This aspect of the evaluations has the following aims:

- To analyse how and why the Food for Life approach is embedded and sustained.
- To understand the processes and characteristics involved in sustained Food for Life approaches.
- To identify the wider benefits of the Food for Life approach in schools.

These aims are met through considering the following research questions:

- Which aspects of food related activity in schools are likely to persist over time?
- What enables schools to continue engaging in food related activity over time?
- What prevents schools from continuing to engage in food related activity over time?
- How does school engagement with Food for Life change over time?
- Does the nature of engagement with Food for Life influence whether a school continues to deliver food related activity over time?
- Which benefits of Food for Life engagement persist over time?

Together these questions interrogate the resilience of Food for Life and associated activities in schools, and the factors which influence this.

#### Research methods

The first stage of the research was a review of relevant literature exploring what is known about the long-term durability of programmes similar to Food for Life and how this has been measured. This was followed by a review of policy changes with an impact on food in schools from 2007 when Food for Life formed to the present.

In order to understand how engagement in food related activities changes over time data available from Food for life on enrolled schools were analysed. This was followed by a survey sent to all schools which had enrolled with Food for Life before 2012; 210 responses were received. The survey was designed for schools to report on their current food related activity, how this has changed over time, reasons for any change, and how they engaged with Food for Life. It was written to allow completion by schools which have ceased to engage with Food for Life and/or food education. Complete survey responses were entered into the statistical software package SPSS for analysis. Descriptive statistics were used to analyse data, with statistical tests used to examine strength of association between variables as appropriate. Text responses were analysed thematically.

Themes for case study research were identified through discussing the survey results with Food for Life, with four priority themes selected. Schools representing these themes were identified from survey responses, with additional candidates proposed by local Food for Life staff. Of the 12 schools invited to participate, 4 responded positively. Data were collected from these by in-depth interview with key staff, (head teachers, Food for Life leads, catering staff) as appropriate to the school setting. In addition, requests were made for documentary evidence, such as school action plans and meeting minutes.

### Summary of findings

The **literature review** identified a lack of research considering whether impacts of school food programmes endure once an intervention ceases, or looking at trends in behaviour change over time, particularly considering impacts as the time post-intervention increases. The review identified no studies looking at how interventions change over time and whether this has an effect on pupil level impacts. The literature also suggests that a period of two or more years is appropriate when questioning the longer-term impact of an intervention.

The **policy review** identified key changes in education policy directed at primary and secondary schools from 2007 to the present time in England that might affect the durability and delivery of Food for Life. Together, changes made between 2007 and 2013 offer a mixture of incentives and disincentives for taking a whole school approach to food.

The **survey of schools** provided information to begin to characterise the kinds of schools in which commitment to Food for Life and its ethos is likely to persist over time. Analysis focused primarily on the effects of different levels of engagement with Food for Life on delivery of aspects of food education relevant to Food for Life. The analysis provided a good basis on which to identify case studies to pursue certain issues in greater depth, and highlighted several issues warranting further investigation.

#### Key findings from the school survey:

- Broadly speaking the survey suggests that schools which engage with Food for Life show on-going commitment to working to improve school food culture. Many activities promoted by Food for Life persist as part of school life over time, although some are more likely to be sustained than others.

- Differences emerge in the pattern of delivery of food education between primary and secondary schools, with secondary schools less likely to provide extra curricular cooking activities. Secondary schools are also less likely to offer opportunities for pupils to engage with growing activities. Farm visits are an aspect of the programme which both primary and secondary schools find challenging to deliver.
- Food for Life Flagship schools continue to be distinct from those which have not had such intensive support from the partnership. This reflects the broader pattern that schools which have engaged more with the programme have higher levels of food education delivery. Not surprisingly, more recent contact with Food for Life is linked to the perception that the programme is influencing a school.
- There are some signs of schools becoming disengaged from Food for Life and reducing the intensity of their food related activities. However, in most cases some degree of food education is continuing, and there are signs that once a school has embraced Food for Life's ethos it retains an influence.

The case study research found that:

- Food for Life's programme remains relevant to schools and for some, it has become fully embedded in their life and ethos.
- There is evidence that Food for Life has long-term impacts on schools, beyond an initial period of intensive support and engagement, and the enthusiasm that comes from initiating a new project.
- The Food for Life framework is appropriate to facilitating sustained engagement in school food activities.
- Leadership commitment, a school food policy, whole school discussions about food, partnership work and parental involvement all contribute to a sustained approach.
- Some schools struggle to retain momentum with Food for Life related activity and would benefit from tailored support.
- There are particular challenges to engaging secondary schools and maintaining their commitment to good food in schools.
- Although Food for Life can influence a school's level of food related activity, those demonstrating the most sustained impact and progress may be schools with a pre-existing commitment to this priority.

Evidence from the case studies and the survey suggest that the **Food for Life programme remains relevant to schools**, despite changes in the education landscape. The case studies highlight that **for some schools Food for Life becomes fully embedded and part of their school ethos**. This does not mean that schools do not face continued challenges in relation to school food provision, but it does mean that some schools have so embedded the programme that they no longer feel the need for significant support from FFL.

Elements that facilitate on-going involvement with FFL include **staff commitment**, ideally throughout the school. This is best facilitated by **commitment from school leaders** as this enables staff to dedicate time to food activities. Schools that have **embedded the Food for Life ethos** felt that this added to their resilience in the face of staff change. **Maintaining a forum for discussing food** – such



as a School Nutrition Action Group (SNAG) – and engaging people from across the school helps maintain a whole school approach and ensures a team approach to delivery. **Partnerships** between the school and its wider community, were an important aspect of programme durability. It seems more difficult for **secondary schools** to maintain FFL related activity, and they may require distinct modes of support.

From the data available for all FFL enrolled schools it is difficult to identify broader trends in long-term engagement with the programme and how contact with training or staff support affects progression through award levels. In order to monitor this, the partnership might consider whether it can **capture data that better tracks individual school's involvement with the programme.**

Where the FFL approach is fully implemented, and where schools commit to the whole school approach it stands a good chance of enduring over time and becoming a long-term feature of a school. This suggests that **the FFL framework is appropriate to facilitating a sustained engagement in school food activities.**

### Recommendations & looking ahead

For FFL to enable schools to retain a long-term commitment to school food activity there are ways it could tailor the support it offers; some specific forms of engagement might be beneficial:

- Supporting a network of **ambassador schools** willing and able to showcase a whole school approach to food, and facilitating exchange of learning between these schools.
- Providing **advice tailored to schools 2-3 years into their engagement** with Food for Life, highlighting challenges which are common at this point (e.g. staff change, loss of initial enthusiasm) and how to respond (e.g. succession planning).
- **Targeting secondary schools** whose feeder primaries have a strong Food for Life ethos to seek engagement or develop follow-on activities for pupils as they transfer between schools.
- **Revisiting schools** which have been active but where progress seems to have stalled (e.g. lapsed awards, those not progressing from Silver to Gold) to maintain a relationship with them and offer targeted support.
- **Highlight the benefits** to schools of a whole school approach to food. All the schools explored as case studies had recognised that the Food for Life approach provided them with unique benefits and helped make them distinctive (and so appealing to some parents).

These recommendations are based on the findings from the case studies research in schools which *have been able* to maintain a long-term commitment to Food for Life. The experience of schools which *have struggled to do so* may also be enlightening, but was not a focus of this research. We therefore **recommend that FFL consider additional case study research with schools whose engagement with FFL has declined over time** to understand if there are ways they could have been supported to avoid this.

This research and that reported in the interim evaluation report provide **evidence of Food for Life's long-term impacts on schools.** If FFL continues to offer the framework and support available at present there is every likelihood that this will be the case for other schools in future. Responding to the lessons highlighted here might help FFL support even more schools to achieve an enduring commitment to a whole school approach to good food.

## 5.2. Review of Local Commissions

### Context

Since 2012 Food for Life has been operating a commissioning model through which they can support English local authorities to deliver their health and wellbeing priorities. At the time of review fieldwork (early 2014), 11 areas had commissioned the programme and 10 were active. The core elements of an FFL commission are:

- A dedicated programme manager to liaise with and support school staff, plan a training programme and facilitate a local network of engaged schools.
- A programme of training workshops available to school staff to enable them to lead practical food education and engage the wider community.
- A contribution to national coordination of the Food for Life Award and associated operations.

Although centred on schools, it is also possible for commissioners to request engagement in other settings such as early years provision and hospitals. In the commissions at least half have done so, with most expressing interest in this area of work for the future.

The full review is presented in the report *Local Commissioning of the Food for Life Partnership Programme Review of Current Practice*, Pitt and Jones et al. 2014.

### Research aim/questions

The aim of this research was:

- To review current practice in Food for Life commissioning and to draw implications for the development of the programme and its associated evaluation.

The research aim is met through the following objectives:

- To review current practice in Food for Life commissioning to determine what works and why.
- To characterise a successful and sustainable Food for Life commission.
- To assess the strengths and weaknesses of current commissioning practices.
- To identify issues and cases for further research.

### Research methods

This review focused on current commissioning practices and the processes involved. It provided an opportunity for key stakeholders to reflect on Food for Life commissioning and its achievements. The review comprised the following activities:

- A review of commission documentation (e.g. annual reports, specifications, monitoring and evaluation tools) to understand the context and background to commissions and how they operate.
- Scoping discussions with Food for Life leads to provide further contextual information and help identify interview topics.

- Semi-structured interview with key stakeholders (local programme managers, representatives of commissioning bodies) from each commissioned area to explore in detail the nature of the commission, its impacts and operation.
- An analysis of interviews and project documentation to identify key themes, patterns, anomalies, good practice and issues for further research.
- Discussion of findings with Food for Life leads.

### Summary of findings

- Commissioners express a **high degree of satisfaction with Food for Life** and its achievements to date in commissioned areas. The programme is seen as having unique benefits, is well regarded and trusted.
- Food for Life **offer a flexible model** with potential for commissioners to adapt it to their objectives. In practice most commissions have been designed to suit the budget available. This places pressure on the capacity of FFL to meet levels of need. This is compounded by the challenge of securing commitment to commission beyond an annual grant cycle.
- Food for Life local delivery has developed iteratively with each successive commission. The characteristics of **later commissions show innovations** in terms of scale, duration, structured delivery, collaborations and reporting practices.
- Nevertheless both commissioners and Food for Life staff emphasise the **need to further define Food for Life** as a locally commissionable package of work.
- A clear theme from discussion with commissioners is that it will become increasingly important to be able to **demonstrate the public value of programmes like Food for Life** through effective communication and a sound evidence base. This is closely linked to the need for more **evidence of the impacts of Food for Life in the short, medium and long term** through the development of a **Food for Life local commission evaluation toolkit**.
- Within local authorities **strategic approaches to health and wellbeing are not well established**, and work on school food is not linked across portfolios. This means opportunities for delivery are being missed, for example linking health and environment, or connecting different aspects of children's lives.
- Commissioners emphasised the **importance of capturing multiple forms of value**, including educational, health, economic and environmental value of the FFL programme, through the use of methods such as Social Return on Investment.

### Recommendations and looking ahead

As the programme diversifies it will be important to retain **clarity of purpose and an agreed theory of change for the programme**. Clearly communicating the programme's aims and how they are achieved would help to promote its benefits whilst ensuring continued focus on core priorities and realistic expectations of their impacts. This should include what outcomes can be expected in the short, medium and long term, as a basis for indicators to monitor progress. Alternative delivery models can then be developed and selected according to their potential to meet the core priorities.

Food for Life should **consider alternative and complementary funding routes and commissioning models** to support local programmes. This will require greater emphasis on the wider benefits of FFL

such as the role of the programme in promoting a positive learning environment in schools, or local development of the food economy. It will also require new relationships with potential funders beyond the current focus on public health commissioners.

A priority for immediate action is to **generate further evidence of the public benefits** of Food for Life local commissions through the use of Social Return on Investment analysis. This information is sought by commissioners and will help Food for Life to secure support from new funding sources by demonstrating the value of investing in the programme.

Food for Life should consider whether they **need to better understand potential commissioners** who have not engaged with Food for Life and the reasons for this. This could be an area for further research in order to identify how the partnership can secure further commissions.

### *5.3 Cross sectional study of pupil fruit and vegetable consumption in Food for Life local commissions*

#### **Context**

This research examined the impact of Food for Life local commissions on the diets of primary school pupils. It focused on fruit and vegetables as national surveys show that children in the UK do not consume the recommended number of portions (Health Survey for England 2013), and daily intake is a well-recognised indicator of healthy diets. In the evaluation of phase 1 of Food for Life, the research found an increase in children's fruit and vegetable consumption in Food for Life flagship schools (Jones *et al* 2012). An important question is whether there is similar evidence of impact with the FFL programme as it scales up and further integrates with local strategic work.

The full details of the study are reported in *Pupil Survey in Food for Life Commissioned Areas: Food for Life's impact of primary school children's consumption of fruit and vegetables*, Jones *et al.* 2015.

#### **Research aim/questions**

This research was designed to answer the following research question:

*Do students eat more fruit and vegetables in schools engaged with Food for Life than students in schools not actively engaged with Food for Life?*

Supplementary analysis sought (a) to determine whether the Food for Life programme is associated with other outcomes, including perceptions of food in school and experiences of food preparation (b) to test whether specific elements of the Food for Life programme, such as progressing from the Bronze to Silver FFL Award, are predictive of outcomes and (c) to identify outcomes for each locally commissioned area.

#### **Research methods**

The research design was a cross sectional study in which schools engaged with Food for Life were compared with schools not engaged in the programme. Food for Life schools and Comparison

schools were matched in the same local authority area by Free School Meal eligibility quintile and size. The survey covered pupils in Years 4 and 5. Pupil diets were measured using the Day in the Life Questionnaire (DILQ), a validated questionnaire specifically designed to measure fruit and vegetable consumption in children in a school setting. DILQ is identified as a suitable tool in Public Health England's Standard Evaluation Framework for Dietary Interventions (PHE, 2013). Additional measures in the questionnaire asked pupils about their perceptions of food in school and related food activities.

The survey took place in four FFL Local Commission areas. The survey had a total of 47 schools (FFL schools=24; Comparison schools =23) and 2411 pupils (total FFL pupils =1265; total Comparison pupils=1146). Pupils in the FFL and Comparison school groups, showed similar characteristics in terms of age, gender, the total number of children on roll and Free School Meal Eligibility (FSME) at school level.

### Summary of findings

- Pupils in **FFL schools consumed more portions of fruit and vegetables** than pupils in comparison schools (FFL mean=2.03; comparison mean=1.54; p=0.000). Pupils in FFL schools therefore reported **consuming almost one third more** (2.03/1.54) than pupils in Comparison schools.
- Pupils in FFL schools ate significantly more fruit and vegetables in school (FFL mean=1.24; comparison mean=0.89; p=0.000). They also ate significantly more fruit and vegetables **at home** (FFL mean=0.79; comparison mean=0.65; p=0.000).
- After adjusting for FSME, gender and local authority variation, pupils in **schools engaged with the FFL programme were twice as likely to eat five or more portions of fruit and vegetables per day** OR=2.07, p=0.000, CI (1.54, 2.77), they were also about 60% more likely to eat more than the national average of 2.55 portions per day; OR=1.66, p=0.000, CI (1.37, 2.00).
- Across the whole survey, a **large proportion of pupils reported eating no fruit and vegetables** in the day prior to the survey. However the groups were different: 23.4% of pupils in FFL schools and 33.9% of pupils in comparison schools were recorded as eating no fruit and vegetables.
- For fruit and vegetable **intake there was a significant difference between pupils in bronze and silver schools** (bronze, mean=1.97; silver, mean=2.18, p=0.028). Pupils in silver FFL award schools were over twice as likely to eat 5 or more portions of fruit and vegetables compared to pupils in schools with no FFL award, i.e. both Engaged schools with no award and Comparison schools (15.6% compared to 6.7%).
- School meal take up, based upon pupil reported of meals in the week prior to the survey, was 56.1% in FFL schools and 49.9% in comparison schools, a 6.2 percentage points difference that was significant, p=0.045. **In FFL schools, 6.0% more pupils had had at least one school meal** in the week prior to the survey (FFL: 70.0%, Comparison: 64.0%, p=0.008).

- **School meal take up was associated with higher fruit and vegetable consumption for pupils in FFL schools.** By contrast, fruit and vegetable consumption was not associated with school meal take up in the Comparison schools. This could be a reflection of greater provision of fresh fruit and vegetables in school meals in FFL schools than Comparison schools.
- After adjusting for gender, FSME and local authority differences, pupils in **FFL schools were about 40% more likely to 'like' or 'really like' school meals:** OR=1.43, p=0.00, CI (1.71, 1.75). Pupils in FFL schools were also significantly more likely to give a positive rating of school lunchtime in their school ( $p = 0.005$ ).
- Analysis at the level of local commissions showed a **positive impact on the primary study outcome measure i.e. self-reported portions of fruit and vegetables (FV) consumed and related sub-measures in local commissions C and E. This impact was evident for most of the same measures in local commission B.** Positive outcomes for **local commission D** were found when the analysis focused on the differences between schools that had an FFL award and schools with no award. In **local commission A** analysis produced mixed findings with respect to associations of the FFL programme with pupil reported school meal take up, perceptions of food in school and experiences of cooking.
- Various factors may explain the inconsistent evidence of positive outcomes at local commission level. While it was not possible to evaluate these three factors appear important; infrastructure based factors; social factors and; resources available to each commission.
- While the DILQ was used in accordance with the author's instructions, it is recognised fruit and vegetable consumption could be under recorded since composite foods are not included. This could be relevant to FFL given the focus on including fruit and vegetables as part of composite dishes in school meals. Further research is needed to investigate if an adapted DILQ tool can assess composite dishes and/or have access to recipes used in school meals.
- Supplementary dietary analysis was conducted for the local commission C survey sample. The analysis found no difference in the consumption of sweet snacks and savoury (salty) snacks in school or out of school. Pupils in comparison schools consumed significantly more servings of high energy drinks out of school compared to pupils in FFL schools ( $p=0.002$ ) while differences in consumption of high fat food only just reached significance ( $p=0.045$ ).

## Recommendations & looking ahead

Whilst it is important to recognise possible residual confounding by socio-economic factors, this study found that the mean for daily fruit and vegetable consumption was significantly higher for Year 4 and 5 pupils (aged 8-10) in FFL schools compared to pupils in schools not engaged with the programme.

This study suggests that **schools engaged in the FFL programme provide an important opportunity for 8-10 year olds to consume fruit and vegetables.**

**Fruit and vegetable consumption for pupils in FFL schools was not only higher within school time; it was also higher at home.** FFL and commissioners can draw upon this finding to examine the potential ‘spill over’ of the programme from the school to the home, and the extension of impact into the wider community.

**The FFL schools award framework is an indicator of fruit and vegetable consumption:** progression to a bronze and silver award is linked with higher fruit and vegetable consumption.

The findings indicate that **achievement of the FFL Catering Mark is a driver for improving fruit and vegetable consumption.**

**There are differences in specific outcomes at the level of each local commission.** These provide a base for valuable learning across commission areas and add to our understanding of how external factors can limit the progress of local commissions.

The Day in the Life Questionnaire (DILQ) is a **practical tool for assessing fruit and vegetable consumption and has the potential to be used in future evaluation of FFL commissions.**

## 5.4 New Settings

### Context

The new settings workstream focused on innovative approaches to extending the FFL portfolio, and the programme’s development beyond schools into other sectors. This workstream considers FFL’s work to promote a whole setting approach to good food in sectors in which organisations engage with people across the life course. The research focused on case studies in four sectors:

- early years
- care homes for older people
- hospitals
- universities.

In addition organisations in each of these sectors were considered as workplaces with potential to promote a good food culture to their staff. Some of the case study research, notably that linked to the early years settings, was based upon **pathfinder pilots** – agencies that had agreed to co-develop and test out models for Food for Life practice in these settings.

An interim report presented findings of reviews of relevant literature and policy, together with an outline of the proposed approach for primary research *Evaluating Food for Life in New Settings: First Interim Report Pitt, Orme et al. 2014*. The Final Report presents the findings of the primary research, including detailed case studies from four sectors which FFL have targeted for development *Evaluating Food for Life in New Settings: Final Report, Gray, Means et al. 2015*.

### Research aim/questions

The overarching aim of this research was to understand:

How can an FFL approach work with people across their life course?

This aim was addressed through considering the following research questions:

1. What is the process for establishing an FFL approach in a new setting?
2. What barriers are encountered in establishing an FFL approach in a new setting?
3. What facilitates establishment of an FFL approach in a new setting?
4. What is the role of the FFLCM in achieving change in new settings?

These questions are considered within the context of FFL as an example of a whole setting approach. FFL were also interested in understanding how they might facilitate activity in relation to workplaces.

## Research methods

The first stage was a literature review focused on food provision in each of the sectors considered as new settings. This informed the design of the second stage of empirical research which was informed by a theory of change approach (Connell and Kubisch, 1998). This took a case study approach focused on six organisations piloting Food for Life's approach in the four sectors listed above. Data were collected from each case study using qualitative methods. The primary method used was semi-structured interviews with key stakeholders. Interview schedules were prepared to elicit information regarding the process of working with Food for Life, and reflections on perceived outcomes.

Interviews were audio recorded and either transcribed in full, or analysed from the audio recording. Additional data collection was through analysis of relevant documents such as meeting notes, reports and action plans. Data were analysed thematically by members of the research team. Regular discussion between the research team ensured a consistent approach was being applied, and that analysis considered the research aims and theory of change approach.

## Summary of findings

The case studies demonstrate that there is clear potential for the Food for Life approach to work with people across their life course. The new settings programme has made good progress in establishing this in the sectors prioritised to date, and learning how best to achieve this. There are, however, barriers to encouraging organisations in these sectors to commit to a whole setting approach to healthy, sustainable food. These barriers often reflect the complexity of contemporary food systems and the wider societal context. The Food for Life approach to change in settings across the life course therefore needs to be recognised as a hugely ambitious undertaking, particularly within the context of the programme's resources over the last two years.

- All of the organisations involved as pilots and case studies demonstrate that **a significant engagement with the Food for Life approach can be generated within the new settings**. With the move from schools into new settings, the Food for Life has worked to adapt their programme to suit. This has entailed flexibility to respond to the needs of each sector, whilst retaining commitment to core principles to retain the programme's integrity.



- Where Food for Life has worked to **influence strategic drivers** related to food in particular sectors this has clearly facilitated the process of securing commitment to a whole setting approach. In particular, recent changes in policy related to food in hospitals has helped engage actors within the NHS with food issues, and demonstrated the value of using Food for Life's whole setting framework.
- Each of the **Pathfinder Pilots felt that they had made achievements** through their involvement and see potential to make further positive changes with Food for Life's support. Case study organisations suggested that engagement with FFL was helping to improve the quality of food served, with associated benefits for recipients (patients, residents, children).
- Through working as a Food for Life Pathfinder Pilot **organisations became more ambitious** about what they might achieve around food and took a **more strategic approach**. The sector specific frameworks contributed to these processes with a majority of participants finding them valuable for encouraging integration, coordination, and scoping opportunities for action.
- There is clear evidence that the Food for Life whole settings frameworks, adapted for each sector, facilitated a focus on healthy and sustainable food within the new settings. The frameworks **helped organisations to 'pull together' existing activity, and 'push out' with their level of ambition**.

### Recommendations & looking ahead

Food for Life are promoting a whole setting approach to good food, and have developed frameworks to help establish this in new settings. The case studies and findings across the settings suggest several issues for Food for Life to consider if they are to deliver successful programmes in these sectors, and encourage a truly whole setting approach to healthy, sustainable food. Moving from a programme of pilots to long-term delivery, and a financially self-sufficient model requires Food for Life to consider various questions arising from this evaluation.

In each of the sectors organisations have embraced Food for Life in different ways and to different degrees. The learning across the settings is still in development but it is anticipated that the evaluation case study reports will facilitate sharing and transfer of ideas and experience between the settings.

The contemporary food system and societal context present a **hugely challenging context** for Food for Life's efforts to achieve change in settings across the life course. This is an ambitious undertaking, particularly within the resources available for the work to date.

#### *Working with communities*

Ensuring access to healthy and sustainable food can be a route to working with the wider community in terms of support for growing, cooking in families, procurement, changing needs through the life course, social and economic benefits. The concept of 'Good Food for All' is underpinned by accessibility to affordable, healthy and sustainable food for whole communities. An

**explicit acknowledgement of how FFL addresses inequalities** and examples of how this is being achieved need to be more clearly visible in each of the new settings.

Food for Life and related programmes currently work with communities in their various forms: geographic, of interest, within institutions and professions. Further thought might be devoted to **how work in specific sectors connects with other levels of activity which engage communities** with food such as Sustainable Food Cities, and local area food strategies. In this way Food for Life might look beyond a whole setting approach to **whole food systems**.

#### *Whole settings, systems and the Food for Life Framework*

Food for Life has introduced a whole setting approach to new settings through **comprehensive, sector specific frameworks**. The future role of these frameworks is important to consider. It is suggested that each is re-worked as a result of the evaluation findings and re-presented to key stakeholders. It is also important to ensure that the frameworks' terminology is accessible for everyone within a complex organisation.

To ensure that the Food for Life frameworks are utilised and progressed in each setting requires **clear, accessible guidance and support for each group of stakeholders**. This will help them to understand the **valuable contribution that a whole setting approach** can make to big challenges around healthy, sustainable food, and the benefits of working in this way. To broaden the appeal of the FFL whole setting approach across the wider sectors, **clear links need to be made to existing corporate priorities and drivers**. This should acknowledge that **each setting is unique**, whilst keeping a **central vision** of a settings approach.

The feasibility of having **a whole system approach by starting from individual organisations** is difficult to judge over the limited timescale of the evaluation but there are indications that a multi-directional approach is needed. There has not yet been full consideration of **how to link between action in different settings** to develop a full systems approach across an area. FFL could take the next step in scaling up and out to bring good food to whole communities by moving from intra-setting learning to inter-setting learning, placing greater emphasis on connections between settings, and facilitating a good food culture across a local area.

#### *Engaging more organisations*

There is a need for Food for Life to continue working to **promote the significance of better food** in the sectors where it is not currently a priority. They have helped put hospital food on the national and policy agenda, other sectors would benefit from similar activity as they currently lack comparable drivers.

Where food is not a priority within an organisation or sector, there is a need to demonstrate how healthy, sustainable **food contributes to core outcomes** such as patient care or student experience and to provide evidence of how Food for Life can help deliver these goals.

The **distinction between FFLCM and the Food for Life settings awards has been confusing** for some organisations. Visibility and understanding of the added value of the latter as a whole setting approach needs to be enhanced. The relationship between FFLCM and FFL can become clearer to an organisation over time, but outside schools a stronger image for the latter is still required. A

**stronger brand advantage for Food for Life** should help attract organisations. FFLCM is one route into a settings approach but caution is needed to ensure that the vision does not remain too restricted, making it harder to engage with the *whole* setting framework. To establish FFL in new sectors it needs a more visible presence with a **clear offer aligned closely to public understanding of its relationship with the Soil Association**. Communication of the principle ‘fresh, local, seasonal and where possible organic’ needs to freely percolate to key stakeholders in these sectors.

#### *A self-sustaining programme*

Food for Life’s desire to **tackle health inequality** has to become compatible with the need to operate a financially sustainable model. A ‘scaling up and out’ agenda can ensure that healthy and sustainable food is accessible and affordable by increasing take-up and engagement to a level which represents a financially viable model. **Benefits to the most nutritionally vulnerable** need to be factored into cost-benefit modelling to demonstrate medium and longer-term gain for health service costs.

The cost for some organisations to embark on FFLCM accreditation is prohibitive, or perceived to be. **Alternative payment systems** may be considered which make the scheme affordable, particularly for third sector organisations, and cost-constrained sectors.

For organisations to maintain their engagement and relationships with Food for Life a range of **accessible expertise, bespoke support, communications and networking opportunities** could be offered. This should be mindful of ways of working in each sector, including working cultures which do not easily accommodate time for learning and development.

The **evidence base** for interventions in all these settings should be translated and promoted to engage organisations. This should communicate the **short, medium and long-term gains** in terms of health, wellbeing, sustainability, organisational reputation, responding to public health, economic, social and environmental drivers within organisations.

#### *Issues for the future of Food for Life in new settings*

- The Food for Life settings framework would benefit from further development focused on the **interrelationships** between its constituent parts and their relationships to a whole setting. It is this integrated whole setting approach which is challenging in large and complex organisations.
- Food for Life will need to consider how to operate alongside guidance, drivers and programmes established in each of the settings. The **aim should be synergy rather than duplication**, to avoid confusion and frustration within the sectors. It is also important that stakeholders are informed about these synergies and see the benefit of them.
- When working across varied settings it is important that FFL and FFLCM continue to take account of their specific characteristics. The level of **diversity and complexity** within and between settings may limit the potential for a consistent and credible offer. Organisations in each setting need to feel that Food for Life is receptive to their needs, and understands their sector.

- There is a **lack of understanding** of the distinction between Food for Life's Catering Mark and its other aspects. For the Pathfinder Pilots catering quality has been the focus of activity and a clear priority, but this is only one aspect of Food for Life's whole setting frameworks. To gain broader commitment to a whole setting approach to food it will be important to articulate what this means and how it can benefit an organisation.
- The appeal of the Food for Life Catering Mark (FFLCM) is evident in many of the new settings, but it is possibly more appealing for providers who see a **financial advantage** in being able to demonstrate the quality of the food offered. Such motivation may not operate in the same way in the non-profit sector, or for organisations which are less able to make short-term investments in order to secure dividends in the longer-term.
- The case studies and Food for Life's wider experience suggest that following their principles for healthy, sustainable food need not cost an organisation more. However, some perceive that this is the case hence a need for targeted communication addressing this issue. This should acknowledge that the **challenge is one of affordability in its broadest sense**: not just the costs of fees and purchases, but the investment an organisation makes in time and effort.
- Food for Life's work in schools is focussed on supporting them to gain an award as an objective marker of what has been achieved which can be promoted externally. A similar award is available specifically for early years providers. It may prove difficult to 'sell' the whole setting framework rather than a more narrow focus on catering quality unless some equivalent **system of recognition** can be developed and is affordable for other sectors.
- The FFLCM is a developmental model in which one progresses through levels Bronze to Gold. This is fully understood in the school sector and by some hospitality and catering functions in other sectors. However, it is almost certainly relatively unfamiliar to senior managers in some new settings (e.g. the care and higher education sectors). There is a danger of 'Bronze' being seen as little more than a food hygiene rating of three. Targeted publicity might be needed for each sector, **explaining why a Bronze FFLCM award should be a great source of pride.**
- Those involved in the case studies may not be representative of their sectors as a whole. FFL should consider what **additional support** they may need to offer organisations less able to engage with a healthy, sustainable food culture.
- The case study organisations generally had a **high-level champion** with a personal commitment to food. These individuals have to some extent mobilised multi-disciplinary groups to systematically consider food issues across their organisation. In some cases key individuals had to drive change in the absence of a strategic commitment to food within the wider organisation. This raises questions about the extent to which change reliant on individuals can be sustained, or imitated elsewhere.

- Food leadership within some settings (e.g. hospitals, universities) can be steered from different sections (e.g. facilities, HR, Academic) but **senior management buy-in** and drive is essential to achieve a sustainable whole setting approach which engages all parts of the organisation. Governance and management of this endeavour needs to be clear.
- Not all of these sectors are used to **sharing development and learning** between organisations. Food for Life needs to consider how best to develop communication and support systems to spread practice across complex and sometimes fragmented sectors.
- Strategic work to **influence the policy context** has made a significant impact in relation to food in hospitals and schools. Similar high-level attention to food quality and food education in other sectors is currently lacking. Addressing this would help to drive progress and embed good food as a priority.
- Where good food is seen to directly contribute to core functions and corporate priorities, and to meet the needs of priority groups (e.g. patient care and recovery, student wellbeing, children's nutrition) this is a strong driver. To capitalise on this, Food for Life should **align closely with health, wellbeing and sustainability priorities** in strategies for each settings. Examples include the sustainability strategy for the NHS, social care and public health sector;<sup>3</sup> the Early Years Foundation Framework;<sup>4</sup> Social Care Institute for Excellence work on embedding sustainability in this sector;<sup>5</sup> and the HEFCE report on Sustainable Development in Higher Education<sup>6</sup>
- Widespread use of local and organic produce and meals cooked on site is **perceived to be difficult, or even unattainable in hospital catering for patients**. The nature of hospital infrastructure, particularly the lack of on-site kitchens, is seen by stakeholders to be a real barrier to progressing initiatives such as the FFLCM. Food for Life might address this by sharing examples of patient food delivered to FFLCM standards. The model of provision by a large external catering organisations presents a significant challenge for FFL to consider.
- It is likely that organisations in some of the sectors would **welcome continued support** from FFL and FFLCM to enable them to secure contracting arrangements which deliver healthy, sustainable food that is part of an agreed economic model. Staff do not always have the skills to achieve this, particularly given the scale and complexity of the catering systems in hospitals and universities.
- **Communication about food can be overlooked** within an organisation. Innovative promotion of healthier food, food provenance and the variety and accessibility of food is an

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<sup>3</sup>[http://www.sduhealth.org.uk/documents/publications/2014%20strategy%20and%20modulesNewFolder/Strategy\\_FINAL\\_Jan2014.pdf](http://www.sduhealth.org.uk/documents/publications/2014%20strategy%20and%20modulesNewFolder/Strategy_FINAL_Jan2014.pdf)

<sup>4</sup> <https://www.gov.uk/government/publications/early-years-foundation-stage-framework--2>

<sup>5</sup> <http://www.scie.org.uk/publications/reports/report35.pdf>

<sup>6</sup> <http://www.hefce.ac.uk/pubs/year/2014/201430/>

important part of engagement. Consideration needs to be given to how to promote healthy sustainable food offers to all target audiences within an organisation to ensure provision of an informed choice and to increase uptake of healthy food.

- **Further research** is needed to establish the impact of food related activity in the different sectors. Evaluation is needed to assess what impact different aspects of this work have on the wide range of groups and communities involved in new settings.

## 5.5 Social Return on Investment of Food for Life Local Commissions

### Context

Food for Life offers to deliver a wide range of activities that have a positive and lasting influence on people's lives, our social institutions and the natural environment. Whilst the integrity and principles underpinning Food for Life's whole system approach are well recognised, it is more difficult to draw together and summarise the total impact of the programme. Social Return on Investment (SROI) is a method for systematically creating an account of the resources (or investments) that go into a programme and the outcomes (or social returns) that are plausibly created. SROI is therefore well suited to develop an understanding of the value of Food for Life's locally commissioned programme – and to communicate this learning to a variety of stakeholders.

SROI, both in terms of its application and methods, has been gathering pace in recent years. Much of this development has enhanced the rigour of the approach and established precedents for good practice. In the context of the Food for Life evaluation this workstream builds upon this work and the wider evidence base. Previous SROI research focused on Food for Life procurement practices and similar schemes internationally has identified substantial value to the local economy and the natural environment. Less is documented about the health, wellbeing, educational and wider social 'returns' of Food for Life and related programmes. Our Review of Food for Life Local Commissions (see section 5.2) found that commissioners needed this type of information in order to make a '360 degree' assessment and to have better dialogue with partner agencies about options for service development.

Full details of the study are reported in *The Social Value of Food for Life: an SROI analysis of Food for Life programmes in local authority areas Jones et al, 2016*.

### Research aims and questions

The central aim of the research was to examine the social value of the Food for Life locally commissioned programme. This involves addressing a number of key questions:

- What are the multiple forms of investment that stakeholders make in order to deliver the Food for Life programme in local commission areas?
- What do stakeholders perceive to be the outcomes, both positive and negative, of Food for Life local commissions?
- What evidence and financial proxies can be drawn upon to quantify the programme outcomes?
- What is the social value expressed in the form of an SROI ratio?

## Research methods

This study followed the SROI methodology as set out by Social Value International. The scope of the work covered two Food for Life local commissions: Kirklees and Calderdale for the financial years of 2013/14 and 2014/15 and a logic model for the local commission programme was developed with Food for Life staff. We interviewed 47 **stakeholders** to provide perspectives on the outcomes of the programme. These individuals included school teaching staff, school cooks, catering managers, catering suppliers, staff from local food business and producers, hospital staff, programme delivery staff, commissioners and advisors to the programme. Additional sources of information about stakeholders' perceptions of outcomes were available through programme records. A total of **78 written statements were analysed** from training feedback forms, FFL and FFLCM award application forms, pupil survey teacher questionnaires, case study reports and press releases.

## Summary of findings

### *Outputs and evidencing outcomes*

Although SROI is not centrally focused on outputs, a notable feature of the programme was the scale and reach of the initiative, particularly in primary and special schools in the two areas. For example, over the 24 month period of the commission:

- in Kirklees 56 schools out of a total of 182 had enrolled with FFL or achieved an FFL award.
- in Calderdale 27 schools out of a total of 113 had enrolled with FFL or achieved an FFL award.
- in both areas FFL continued to support schools (40 in Kirklees and 43 in Calderdale) that had already enrolled with the programme prior to the commission.

These data indicate that **over 60,000 children and young people, 2,500 teaching staff and almost 1000 catering staff were exposed to the FFL programme** for the two areas combined.

Stakeholders reported a wide range of outcomes that we grouped thematically, assessed in terms of supporting evidence and availability of financial proxies to estimate the impact of these perceived outcomes. We used data from a cross-sectional evaluation survey of Key Stage 2 pupils; staff training feedback evaluations; FFL programme monitoring and evaluation records; and stakeholder questionnaire responses.

### *Overall SROI results*

The social return is expressed as a ratio of present value divided by value of inputs. Although there are likely to be impacts of the programme over many years, we calculated the value of the impacts only up to three years. This was intended to provide funders with an understanding of the social value of the programme over the shorter term of a local planning cycle.

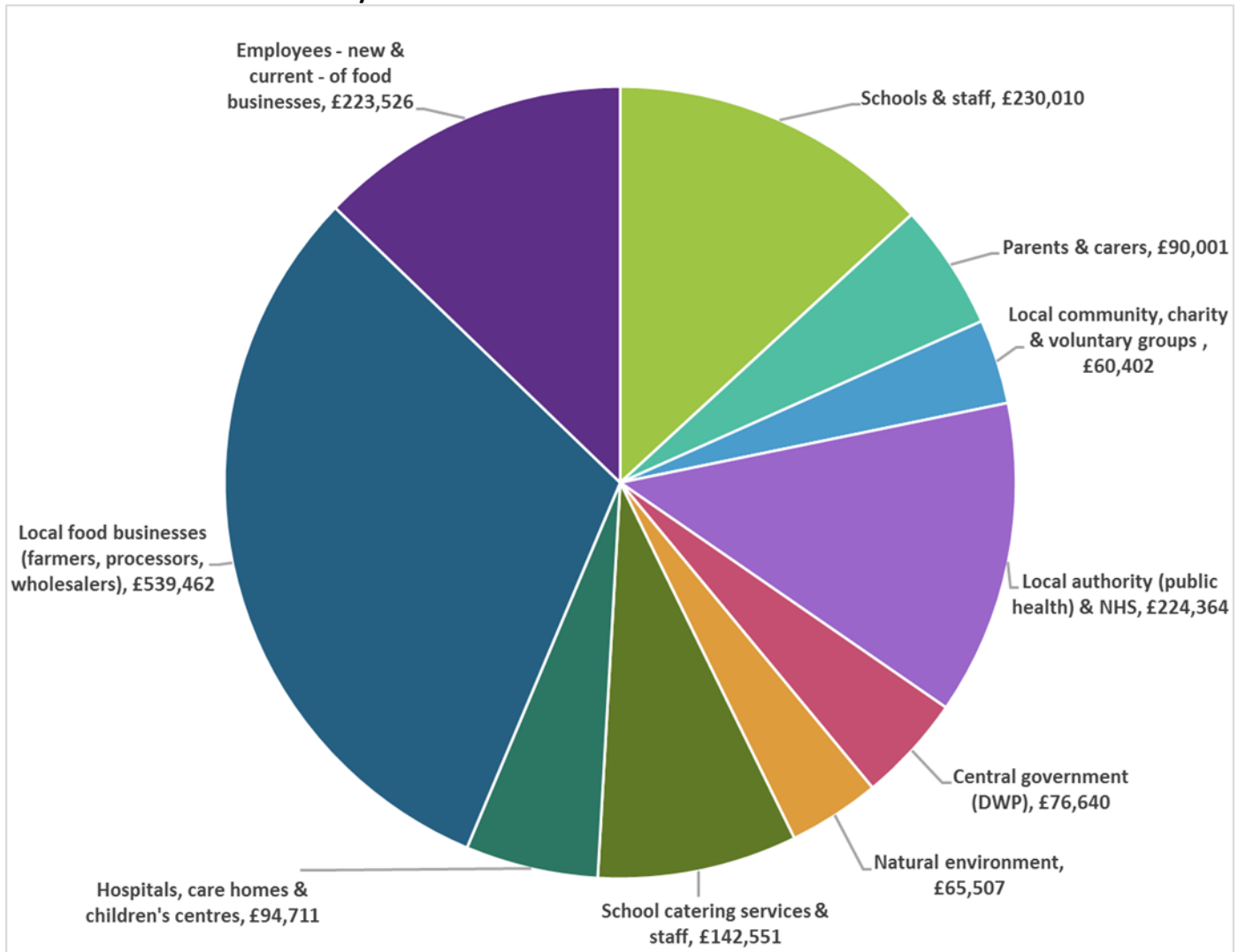
Stakeholders in the two case study areas identified a similar range of outcomes and data sources. This was not surprising given that the commissions had similarities in programme design and delivery. Stakeholders also reported synergy and collaboration between the two local commissions with regard to staff training, food procurement and hospital settings work. We therefore produced a SROI ratio based upon the combined findings of the two case studies.

The total financial value of the inputs for the two case studies was £395,697 and the total present value was £1,743,046. **This provided a SROI ratio of £4.41 of social value created for every £1 of investment.**

*Share of value by stakeholders and interest sectors*

The value of the programme can be expressed with regard to different stakeholders or sectors of interest. A breakdown is provided in chart below.

**Chart 1: Share of Value by Stakeholders and Interest Sectors**



**Local suppliers (farmers, processors and wholesalers)** retained or gained new sales through contracts with caterers. The stability of large ongoing contracts lent greater business security, contributed towards new local job opportunities, job security and increased sales of goods direct to the public through farm shops, market events and other outlets. These changes are also beneficial to **central government** in the form of local employment creation, tax revenues and reduced welfare spending.

**School catering services** benefited from the FFL Catering Mark in terms of business security, retention of contracts, improved staff performance and increased capacity to develop and implement procurement of sustainable foods. Small increases in school meal sales over the 24 month period could be attributed to Food for Life in some schools, although the evidence was mixed in this respect. Cooks and other catering staff benefited from training opportunities, peer networking and improved job satisfaction.



Perhaps one surprising finding was the role of Food for Life in supporting the **working practices of teaching and catering staff**. Some of this took the form of curriculum support, skills development, expert support and networking opportunities. Other outcomes - albeit less tangible - were reported to carry equal weight, including the role of Food for Life in promoting enjoyment and a sense of accomplishment at work. Some senior leaders in schools, catering agencies and other settings felt that the link between positive food culture and staff wellbeing was not a peripheral benefit, rather it underpinned a productive and high performing education workplace.

**Local Authority Public Health and the local NHS** are likely to have benefited from improvements to the dietary health of children. Research in Kirklees and Calderdale found that Year 4-5 pupils in schools engaged with Food for Life were twice as likely to eat five or more portions of fruit and vegetables compared to pupils in schools not involved in the programme. We used this data to estimate the short term and longer term impact on reduced healthcare use.

Food for Life is a popular programme in schools and other settings and acts as a bridge with local communities. **Parents and carers** benefited through improved relationships with school, volunteered at FFL school events, which in turn support children's readiness to learn and overall wellbeing. Rather than duplicating the work of other **community and charitable agencies**, FFL largely helped stimulate local voluntary activities through, for example, market events and community visits. The proactive approach of the FFL programme teams in partnership work with other agencies was a theme running through the stakeholder interviews.

New settings work with **hospitals, care home and children's centres** were in the early stages during the 24 month commission period. The main benefits took the form of staff training and expert support to caterers and senior management in changing organisational practices. Work in hospital settings had advanced quickly, despite major challenges in terms of the organisation scale, and there was some evidence of a positive impact on food waste and patient satisfaction with hospital food.

Improvements in reduced food wastage and reduced transportation were the main environmental benefits that we were able to quantify. As has been reported in other research, other outcomes for the **natural environment** and sustainability were more difficult to evidence at level of a local authority study. A scaled up SROI analysis of the national Food for Life initiative, and particularly the FFLCM, would provide an evidence platform to examine more clearly the impacts of, for example, improved biodiversity from organic food production methods, reduced consumption of meat and dairy products and higher animal welfare standards.

#### *The case study areas: similarities and differences*

Kirklees and Calderdale case study areas illustrate important features of Food for Life local commissions including the role of grass roots networks, coordinated local food strategies and different catering models. They show how benefits can be created through extending work from schools into other settings such as hospitals, early years and care homes. As adjacent local authorities the two areas also acted as a basis for understanding the social value of Food for Life at a sub-regional level.

The SROI ratio for Calderdale (£1:3.70) was lower than that for Kirklees (£1:5.12). A number of reasons could account for these differences:

1. The pupil and other populations of Kirklees are about twice those of Calderdale. This means that potential reach and scale of the programme in Kirklees was significantly greater than that of Calderdale.

2. The catering systems are very different. The local authority caterer in Kirklees has contracts with nearly all schools in the authority and holds the Silver Food for Life Catering Mark. Large numbers of stakeholders are therefore affected by changes in FFLCM-related practices. By contrast reforms to school catering in Calderdale are more heterogeneous and less systemic across all schools.
3. It is possible that the Calderdale programme creates similar value to the Kirklees programme. However the availability of evidence, suitable indicators and appropriate financial proxies was more difficult to locate in the case of Calderdale than in Kirklees.

These factors show that it is not advisable to make crude comparisons between the two areas, without first taking into account the different local contexts.

#### *Sensitivity analysis: testing the results*

Sensitivity analysis is a method for testing the extent to which the SROI results would change if we adjust estimates or removed factors from the analysis. The lowest estimate, based on halving the value of all outcomes, produced a ratio of £1:2.21. The highest estimate, based on reducing drop-off for all outcomes, produced a ratio of £1:6.29. **The majority of sensitivity analyses found SROI ratios between £1:3.06 and £1:4.46.**

**Table 1: Sensitivity Analysis**

Sensitivity Analysis	Calderdale	Kirklees	Two case studies combined
Findings from analysis	£3.70	£5.12	£4.41
Increasing deadweight to 50%	£2.33	£3.16	£2.75
Increasing displacement to 50%	£2.89	£3.18	£3.04
Increasing attribution to 50%	£3.06	£3.60	£3.33
Changing drop-off to 10% for all outcomes	£6.91	£7.51	£6.29
As above, drop-off 75%	£3.48	£4.03	£3.75
Halving all values of outcomes/ beneficiary numbers	£1.85	£2.56	£2.21
Removing all dietary health-related outcomes	£3.18	£4.56	£3.87

Overall, multiple changes to the estimates of deadweight, attribution and drop-off indicates that substantial changes would have to be made to the assumptions in order for the ratio change from positive to negative. These calculations show that even when significant changes are made to the analysis the results still show clear evidence of social value being created up to 3 years after the FFL intervention.

Subsequent consultation on the SROI results with key stakeholders in the case study areas provided further validation of the results. Notably some stakeholders emphasised that it was important to place value on the wellbeing aspects of the programme for children, young people, families and staff in organisational settings.

#### **Recommendations & looking ahead**

This study found that FFL is valued by schools, civil society, local business and wider stakeholders as a locally commissioned programme in local authority areas. The SROI provides a financial measure of this value: that for every £1 spent on FFL there is social value of £4.41 created over a three year period. In the analysis, multiple adjustments to the role of different outcomes and other factors shows that the social value is likely to fall between a lowest estimate of £2.21 and a highest estimate

of £6.29. The clustering of values around a narrow range of £3 to £4 lends confidence to the validity of the results.

The methods and findings from this research are significant for other Food for Life local commissions, the Food for Life Catering Mark and other area-based food programme, such as the Sustainable Food Cities initiative, both in the UK and internationally. In many instances, the bottom-up research method places limits on the generalisability of SROI results. However in this study the close correspondence with other SROI studies in terms of methodology and findings suggests that a similar range of outcomes can be anticipated in other areas where a Food for Life programme model is implemented, especially where the programme is directed at schools and public service catering - and engages with other settings such as children's centres and hospitals.

## 6. Discussion

### *6.1. Food for Life –good food for all*

It is clear that Food for Life continues to have a positive impact on food cultures within and beyond schools. Food for Life is becoming embedded in a range of sectors, and gaining recognition within various local and national policies. The partnership has demonstrated that its setting approach can bring healthy, sustainable food to varied communities, and is appreciated by institutions as a mechanism facilitating change.

This evaluation provides evidence that Food for Life has made good progress in ensuring 'good food for all' by enabling change in more places and organisations. This has been achieved through:

- a continuing contribution to school food policy and practice;
- a reputation for reliability, forward thinking and cutting edge practice in relation to healthy, sustainable food cultures;
- a nationally recognised standard for quality in catering;
- innovation which has tested approaches for working with institutions and local commissioners; and
- stimulating and informing high-level debates about food sustainability and health.

During phase two, FFL has devised frameworks to promote a whole setting approach to healthy, sustainable food in contexts where this had not been a focus. The partnership has also learned how to meet commissioners' needs for locally focused delivery. Together these workstreams present a **considerable development in terms of scaling up and out**, taking Food for Life beyond its original focus on school communities. There are indications that these two represent complementary strategies which can be effectively connected and combined, with potential for positive synergies.

The phase two evaluation provided an opportunity to assess how benefits secured through engagement with Food for Life extend beyond immediate, short-term effects. Within the context of schools there are **signs of continuing impacts and long-term change** beyond the phase of initial engagement. If this experience is replicated in other contexts then there may be enduring outcomes for numerous beneficiaries.

However, experience within schools suggests that enduring commitment to the principles of a good food culture is not an inevitable result of engagement with Food for Life. It seems that the degree of long-term change depends on the original motivation for engaging with the programme. Motives such as the will to gain an award may be weaker drivers for a commitment to continued delivery of a whole setting approach compared to the role of leadership commitment and an embedded school food policy.

Through its activities Food for Life fulfils various roles with regards to supporting communities to achieve a good food culture. Central to these are its **ability to drive ambition, measure progress and evidence impact**. As a result the programme has succeeded in **scaling up and out, taking good food to more communities** through a combination of:

- greater geographic coverage of its core programme,
- diversifying opportunities for participation, and
- influencing strategic drivers for standard practice around food.

This is supported by **Food for Life's reputation** as a valued partner with a track record for delivering and evidencing success. Through the partnership's advocacy and work to influence policy it has shaped the context for school food in particular, as a result it is arguable that the **principles of Food for Life's whole school approach are becoming the norm for all schools**.

Through its recent activity FFL has identified other potential activities and ways of working which it could pursue. Whilst these could present opportunities to further scale up and out, there is a **risk that ambition exceeds capacity to deliver, particularly given the challenging context presented by the current agri-food system**. Further growth and diversification could lead the partnership to lose sight of its core goals and how they are best achieved, or confuse stakeholders as to the purpose and value of Food for Life.

FFL has identified and is working with multiple routes for achieving change: local area food strategies, settings approaches, commissioning models and targeting particular sectors e.g. The National Pathfinders Advisory Group. This evaluation shows that each approach brings dividends. What is not yet clear is **what additional benefits are accrued through combining these forms of engagement**, or whether connecting them creates a strategic approach capable of driving systemic change. As FFL continues to scale up and out the partnership might seize opportunities to exchange learning between the communities with which it works, seeking further synergies between its different modes of engagement: **connecting area to area, area to setting, setting to setting**. An organisation like FFL which has developed mechanisms for scaling up and out is well placed to facilitate these connections.

## *6.2. Challenges – why good food is not reaching all*

As revealed by this evaluation, Food for Life's recent experience demonstrates that there are still numerous barriers which make it **difficult to ensure good food for all**: healthy, sustainable food is not the norm in many contexts central to daily life in the UK. Several challenges have to be addressed in order to achieve further progress with changes required to make it, such as:

- i) **How to ensure that those in most need of good food can access it.** Healthy sustainable food can help tackle health inequalities providing those with the greatest need, including nutritionally vulnerable groups, are able to secure it. But those with the greatest need are often the same people least able to access or afford good food. This includes organisations in the public and voluntary sectors which support people in most need of social support and health promotion. These bodies are under considerable financial pressure which limits their ability to invest in programmes like FFL, or to incur any costs associated with providing better food.
- ii) **Good food is not a leading priority for those who lead change.** Too often the will to drive change starts from personal interest or passion around food. As a result progress is tied to individuals, making it vulnerable to changes in personnel, whilst resulting in inertia within institutions which lack such a key figure. Even leaders keen to see a more positive food culture in their organisation can find it difficult to maintain commitment in face of multiple, competing priorities. The potential for food to contribute to some of these is not always well understood, whilst food does not often feature as a strategic priority in its own right.
- iii) **Partial delivery of a whole setting approach prevents wholesale benefit.** The power of a whole setting approach is that it is a holistic model which drives integrated change, and results in benefits beyond the sum of its parts. But it is sometimes interpreted as a list of optional activities, of which only the most desirable or achievable are delivered. Yet those aspects which can be more difficult to implement - such as a cross-institution steering group with senior management endorsement - are also those which help to ensure deep seated, long-term change. There is a risk that the flexibility organisations welcome from programmes like FFL results in a 'pick and mix' rather than a truly whole setting approach.
- iv) **Choosing healthy, sustainable food is not always an option.** In many contexts where people in the UK consume food, healthy sustainable options are not the easiest or most appealing ones. Good food is not yet the norm, or always the cheapest option. The choices on offer can be edited but providers are reluctant to move to choice removal. In contexts including commercially driven operations it is particularly difficult to challenge the prevalence of high fat, high sugar, high salt foods. A legacy of catering systems driven by low cost provision leaves an infrastructure – most notably in hospitals – which similarly inhibits a switch to models centred on freshly cooked local produce.
- v) **Complex problems with complex solutions.** What a child eats at school is only one of many factors influencing whether their weight is healthy; where a hospital sources milk is only one of many contributors to its environmental footprint. Challenges like health and sustainability are a result of many complex processes, and the pathways for tackling these 'big problems' are by necessity multifaceted and take time to achieve visible results. It is difficult therefore, to demonstrate that actions - such as implementing FFL in a school - result in positive outcomes which contribute towards the desired change. An expectation of immediate, measurable impact can be to the detriment of initiatives with a long-term perspective and/or of complex nature.

### 6.3. Future actions

In light of this evaluation and the challenges identified above there are actions for FFL, its partners and wider stakeholders could take to make further progress in ensuring good food for all.

#### *Food for Life:*

- Reaffirm **clear, achievable outcomes** to ensure that future activity is appropriately focused and founded on a sound theory of change.
- **Communicate the value of a whole setting approach**, the benefit of harnessing connections between different food related activity and the importance of a holistic programme.
- **Explore potential synergies and differences** of connecting activity in different settings, and between settings and local areas.
- **Continue monitoring and evaluating outcomes** to increase understanding of the benefits of its whole settings approach.
- **Continue to refine the FFL programme delivery and framework** based upon understanding which mechanisms and processes are most clearly linked to outcomes.
- **Communicate how good food contributes to goals** which are priorities in target sectors.
- **A focus on 'healthy care' is timely and much needed.** Food for Life is in a pivotal position from which to engage with and influence key stakeholders around healthy and sustainable food, in particular the Care Quality Commission (CQC) and the Social Care Institute of Excellence (SCIE). FFL input could influence the sector to **see food in its wider holistic context** and not just in terms of (mal)nutrition, hydration and avoiding constipation.

#### *Practitioners and decision makers:*

- Programmes and actors that promote good food should consider **how they can address social inequalities**, and seek financial models which ensure that benefits are not restricted to people or organisations able to invest.
- There is a need for continued **advocacy for food to be a priority** in organisations who feed the most nutritionally vulnerable or which act as role models for healthy sustainable food cultures.
- Food can become a higher organisational priority if **healthy sustainable food is embedded in quality indicators** which drive core activity in public bodies including hospitals.
- A complete **update on nutritional and food guidance for older people in care homes** and in receipt of community meals is now needed. The second edition of the Caroline Walker Trust guidelines came out in 2004 as update on work initially completed in 1995. It is now time to help establish a new expert committee.

#### *Further research:*

- There is a need to **investigate the health impacts of providing good food in settings across the life course** to address gaps in the evidence base, and to understand potential for a focus on food to contribute to priorities such as reducing constipation for older people in hospitals and care homes.

- There is an opportunity to **co-develop research on the social value of Food for Life's area-based** at the city and city-regional levels **and large-scale catering initiatives** with leading national providers. This will need to take place in dialogue with key stakeholders in order to validate methods and to facilitate translation of findings into practice.
- Expanding **activity in early years settings enables new opportunities for research on the educational benefits of Food for Life**. The emphasis on holistic and experiential learning in these environments also applies in school settings and promotes an educational research agenda that is not limited to debate around the links between nutrition and attainment.
- Following pilot work that has shown how Food for Life can link with programmes promoting physical activity and mental wellbeing, the next stage would be to **develop research to run alongside integrated projects**, particularly those that fit well with 0-19 integrated children's service strategies in local authority areas.

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## Appendix 1: Phase 2 Evaluation Reports

### *Long term impacts and durability*

- *Food for Life's long term impacts on schools: Exploration of context and case study identification, Pitt, Weitkamp et al. 2014*
- *Food for Life's long term impacts on schools: Case Study Report, Weitkamp and Pitt 2015*

### *Review of local commissions*

- *Local Commissioning of the Food for Life Programme Review of Current Practice, Pitt and Jones et al. 2014.*
- *Local Commissioning Toolkit, Food for Life and University of the West of England, Bristol 2015*

### *Pupil Survey in local commissions*

- *Year 4-5 Student Survey in FFL Commissioned Areas Final Report, Jones et al. 2015.*

### *New settings*

- *Evaluating the Food for Life in New Settings: First Interim Report, Pitt and Orme et al. 2014.*
- *Evaluating the Food for Life in New Settings: Final Report, Gray and Means et al. 2015.*

### *Social Return on Investment of local commissions*

- *The Social Value of Food for Life: an SROI analysis of Food for Life programmes in local authority areas, Jones et al. 2015*

## Appendix 2: Phase 1 Evaluation Outputs

- *Food for Life Partnership Evaluation: Full Report, Orme et al 2011*  
<http://eprints.uwe.ac.uk/14456/>
- *Food for Life Partnership Evaluation: Summary Report, Orme et al 2011*  
<http://eprints.uwe.ac.uk/14453/>
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**Paper 11**     **Jones, M.,** Pitt, H., Oxford, L., Bray I., Kimberlee, R. and Orme J. (2007) Association between Food for Life, a whole setting healthy and sustainable food programme, and primary school children's consumption of fruit and vegetables: a cross-sectional study in England. *International Journal of Environmental Research and Public Health*, 14, 639. [doi:10.3390/ijerph14060639](https://doi.org/10.3390/ijerph14060639) ISSN 1660-4601

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Article

# Association between Food for Life, a Whole Setting Healthy and Sustainable Food Programme, and Primary School Children's Consumption of Fruit and Vegetables: A Cross-Sectional Study in England

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**Abstract:** The promotion of dietary health is a public health priority in England and in other countries. Research shows that the majority of children do not consume the recommended amount of fruit and vegetables (F&V). There has been relatively little research on the impact of programmes, such as Food for Life, that (a) integrate action on nutrition and food sustainability issues, and (b) are delivered as commissions in a local authority area. The study sought to assess pupil F&V in schools engaged with the Food for Life (FFL) programme. The design was a cross-sectional study comparing pupils in FFL engaged ( $n = 24$ ) and non-engaged ( $n = 23$ ) schools. A total of 2411 pupils aged 8–10 completed a validated self-report questionnaire. After adjusting for confounders, pupils in schools engaged with FFL consumed significantly more servings of F&V compared to pupils in comparison schools ( $M = 2.03/1.54$ ,  $p < 0.001$ ). Pupils in FFL schools were twice as likely to eat five or more portions of F&V per day (Odds Ratio = 2.07,  $p < 0.001$ , Confidence Interval = 1.54, 2.77). Total F&V consumption was significantly higher ( $p < 0.05$ ) amongst pupils in schools with a higher level FFL award. Whilst limitations include possible residual confounding, the study suggests primary school engagement with the FFL programme may be an effective way of improving children's dietary health.

**Keywords:** fruit and vegetables; diet; primary school children; sustainable food

## 1. Introduction

The promotion of healthy child weight and dietary health is a national public health priority in England [1] and in other countries. Evidence shows that fruit and vegetable consumption is an important part of a healthy diet, protects against diet-related disease, and contributes towards healthy weight [2–7]. Food-related ill health is responsible for about 10% of deaths and illness, costing the National Health Service about £6 billion annually in the UK [8]. The vast majority of this burden is due to unhealthy diet. Cross-sectional population surveys have shown that the majority of children do not consume the recommended amount of fruit and vegetables [9]. According to a recent national survey [9], only 16% of boys and 17% of girls consume five or more portions of fruit and vegetables a day in England. The same survey also reports children 8–10 years old eat an average of 2.55 portions of fruit and vegetables a day, with the mean number of portions declining from the highest to lowest income quintile [9].

Dietary habits acquired in childhood tend to be maintained into adulthood [10,11]. Schools are important for influencing the dietary behaviour of children given that children consume a significant

proportion of their diet and develop many nutrition behaviours in this environment [12]. Initiatives in schools also have the potential to reach large and diverse populations and are therefore an obvious focus for universal and equitable public health strategies. A wide variety of interventions have been directed at promoting consumption of fruit and vegetables in schools [13]. Interventions, building on the WHO's influential Whole Settings model [14], the Whole School Approach [15], and the Health Promoting Schools framework [16], include several components that are intended to generate an effect through interdependent and systemic actions [17]. Van Cauwenberghe et al.'s [18] systematic review of studies in the European Union found evidence of effectiveness of such multi-component programmes in promoting a healthy diet in school-aged children, although a subsequent review found that the evidence is less clear [13]. This work suggests that further evaluative research is needed on whole setting programmes that employ innovative components and design characteristics. The focus of the present study is a scheme that combines a focus on dietary health with wider aspects of food and sustainability. While there is research on the role of specific aspects of food sustainability, such as the role of organic food policies supporting a healthier school food environment [19,20] or school meals as an integrative learning platform for healthy and sustainable food behaviour [21], less is reported on whole setting healthy and sustainable food programmes. The present study focuses on one such programme entitled Food for Life. The aim of the study was to examine the association between primary school engagement in the Food for Life programme and the consumption of fruit and vegetables by children aged 8–10 years. The objectives of the study were (1) to assess fruit and vegetable intake for pupils in schools engaged with Food for Life and for pupils in similar schools not engaged in the programme; and (2) to assess fruit and vegetable intake amongst pupils in schools with different levels of Food for Life awards. A subsidiary objective of the study was to explore further individual and school level variables that contextualise and potentially interact with the association between the programme and fruit and vegetable consumption in pupils.

## 2. Methods

### 2.1. The Food for Life Programme

The focus of the present study is the Food for Life programme. This is a whole school setting multi-component intervention delivered by national charities in England and Wales, with a related scheme in Scotland [22]. The main elements are described in Box 1 and further details are available at: [www.foodforlife.org.uk/schools](http://www.foodforlife.org.uk/schools). The programme is organised around the thematic areas of (1) "food education"; (2) "food and catering quality"; (3) "food leadership and school food culture"; and (4) "community and partnerships". Each theme links to criteria to create a comprehensive framework for changing food culture in schools. Schools that demonstrate meeting a set of criteria are eligible for Food for Life awards graded bronze, silver, and gold.

A central thread that links the different components of the programme is the relationship between dietary health and sustainable food systems. Thus, educational cooking includes learning about using locally grown fresh produce and the environmental aspects of food origins. School cooks develop menus with reduced meat content and make greater use of fresh and minimally processed foods, including fruit and vegetables. School caterers shift their procurement to suppliers that meet higher ethical or welfare standards, and source ingredients from local sources, including, when available, their school garden.

All schools in England and Wales can enrol with the Food for Life scheme and make use of resources (online and print) to support them to implement the programme. By the end of 2015, 5208 schools had enrolled with the programme, of which 1087 had obtained a Food for Life award. The present study focuses on schools that are eligible for a greater level of support offered as part of a locally authority area-based scheme. This is where local government authorities, usually through public health departments, have commissioned Food for Life to deliver additional training, technical advice, and capacity building activities to eligible schools. Food for Life local programme coordinators,

alongside national programme experts, deliver these services to teaching staff, school caterers and cooks in clusters of schools. These networks are intended to have an important role in the transfer of best practice between schools and caterers, and to help broker partnership support from, for example, local food suppliers and voluntary groups. The first development phase (2007–2012) of Food for Life found that the programme was associated with a positive impact on fruit and vegetable consumption for children in primary schools [23]. However, this was based upon an intensive model of support with individual Food for Life schools selected to act as national flagships for the programme. It is important to understand the potential effects of the more recent development of the programme (2013 onwards) as it rolls out as a less intensively resourced and area-based initiative.

**Box 1.** The Food for Life Programme.

In the Food for Life programme, schools work towards bronze, silver, and gold mark awards based upon criteria grouped in relation to four programme themes:

**(1) Food education**

Food for Life provides teacher manuals, lesson plans, and project activity packs covering food origins and environmental aspects of farming, growing in school, cooking with unprocessed fruit and vegetables, and sustainably sourced ingredients. Food for Life staff provided guidance on how to integrate these educational resources into the school curriculum such that food sustainability issues would be addressed as a regular element of lessons. Training for school staff covers skills for food growing, cooking, and food based preparation using sustainably sourced ingredients. Food for Life staff advise developing a school garden area, whole-class cookery facilities, and educational links with food producers such as farms and community gardens.

**(2) Food and catering quality**

This component focuses on school food procurement and standards. Food for Life staff deliver training and support for catering teams (cooks and food procurement staff) to make greater use of sustainable food in school meals. Food for Life interprets sustainable foods to include: in-season produce, high animal welfare standards meat, free range eggs, marine conservation certified fish, locally sourced produce, Fair Trade certified produce, produce from a certified organic source, and diets high in fruits and vegetables. All such ingredients are used in menus that comply with or exceed national guidelines on healthy lunch menus.

**(3) Food leadership and school food quality**

This component provides the basis for coordinating the whole school approach. Schools are supported to create a food action group consisting of student representatives, lead school staff and caterers, and parents or other community members. This group sets up consultations with students, parents, staff, and the wider community to identify improvements in all aspects of food in school. As an outcome of this consultation, the group develops a school food policy and action plan that provide reference points for improving the provision of healthier foods including an emphasis on sustainability and wider engagement with food producers and the local community.

**(4) Community and partnerships**

This component establishes formal engagement with parents by means of consultation questionnaires and interactive meetings. This covers strategies for promoting fruit, vegetables, and sustainability issues in school at lunch time, break times, lessons, and after school groups. Parents are provided with written information on the aims of the programme, ideas for using healthy and sustainably sourced ingredients in home cooking projects with children, and ideas for growing fruit and vegetables at home. Parents and wider community members are invited to take part or actively deliver Food for Life-related school activities such as cooking clubs, farm visits, and harvest celebrations.

## 2.2. Study Design and Sampling Strategy

The research followed a cross-sectional design and compared pupils in schools engaged with Food for Life with pupils in schools not engaged with the programme. The study followed a similar approach developed by Keyte et al. in a local authority evaluation of the National Healthy School Programme [24]. The intention was to recruit five Food for Life schools and five Comparison schools in each of five local authority areas with a Food for Life local commission that had been running for at least 24 months. The target respondents were children aged 8–10 years in school Years 4 and 5. Keyte et al. [24]’s study, working with a similar questionnaire tool, target population, and outcome measures, estimated that a sample of 50 children in each school recruited to the study would provide acceptable levels of precision for measuring the associations required in this study.

Selection and recruitment of schools followed a systematic process. Local programme managers in each local authority commissioned area were asked to provide a list of all 'Food for Life schools' defined as those that met at least four of the following criteria: (1) delivering cooking, growing, food sustainability, and/or farm visit activities for pupils within class teaching within the last year; (2) consulting with pupils and/or parents about school food and catering quality at least termly; (3) having a food policy and action plan written or revised within the last 3 years; (4) participating in at least one Food for Life community and partnership training session within the last year; (5) having a designated Food for Life co-ordinator; (6) holding a current Food for Life award (bronze, silver, or gold). In almost all cases the clearest indicator of engagement was a current Food for Life award. In two of the five local authority areas, local programme managers nominated schools that had not achieved an award, but had been a focus for engagement in the local commission contract and achieved other stated criteria.

From this group of Food for Life schools, five were selected by list number for each local commission area. A letter was sent to the headteacher of each school by email, detailing the study and requesting participation of one class from both Years 4 and 5. Where a school declined, the next school listed was invited to participate. Comparison schools were selected from a list of all remaining primary schools in the local authority by finding a best match in terms of (a) national tertile for school size, as measured by number of pupils on the school roll; (b) national quintile for the proportion of pupils with free school meal eligibility (FSME). FSME was used as a proxy measure of socio-economic status [25]. Despite a number of limitations, in UK educational research FSME is widely used as a proxy for family socio-economic status; a predictor for individual and school level attainment at Key Stage 2; and is linked to other school-level variables such as those of special needs, first language, living in care, and school mobility [26,27]. FSME has also been assessed as having a number of advantages over area-based measures, such the Index of Multiple Deprivation, as a parameter by which to compare schools [27]. Where multiple similar matches were available, a school was selected using an online number randomizer (<https://www.randomizer.org>). Sampling therefore followed a process that sought to reduce sources of selection bias and optimise the match between two groups. Headteachers (or a nominee) who consented to participate completed a brief questionnaire regarding their school's Food for Life related activity in order to confirm the school's engagement in the Food for Life programme against the criteria.

### 2.3. Data Collection with Pupils

Data collection in participating schools took place in one of two waves, either October–November 2014 or February–April 2015, and took place on school days between Tuesday to Friday. The researcher arranged a time and date to visit each school. During each class visit a checklist was used to ensure a consistent approach during questionnaire completion. This had been developed following piloting and lunchtime observations with Year 4 and 5 pupils in four schools not included in this study. Pupils were eligible for the study if they were aged between 8–10 years and in school Years 4 and 5. Before completing the survey, pupils were asked whether they were happy to complete the questionnaire or whether they would prefer to do an alternative activity, such as reading a book. The questionnaires were completed as a whole class activity with the teacher, teaching assistant, and researcher present. Pupils were advised that they could ask for help reading the questions, or for clarification of their meaning at any time, and individual pupils received additional support as necessary. The questionnaire was completed, without exception, within 30 min for each class visit. Of total eligible pupils, 3% did not complete the questionnaire due to class absence or withdrawal of consent, giving a pupil response rate of 97%.

### 2.4. Questionnaire

The Day in the Life Questionnaire (DILQ) is a validated questionnaire, utilising the 24 h recall method of collecting dietary information, specifically designed to measure fruit and vegetable consumption in primary school aged children [28]. DILQ is identified as a suitable tool in Public Health England's Standard Evaluation Framework for Dietary Interventions [29]. The questionnaire



asks the respondent to recall everything that they had done the day before and, to minimise recall bias, does not focus solely on food and drink consumed. Respondents are asked to list all items of food and drink consumed and, to aid recall, draw all items for main meals.

### 2.5. Summary of Ethical Issues

Ethical approval for this study was obtained in May 2014 through the Research Ethics Committee of the Faculty of Health and Applied Sciences, UWE [Ref: HAS/14/05/79]. Headteachers (or a nominee) were assured school anonymity and asked to provide informed written consent. Headteachers were provided with the following information to distribute in advance to parents/guardians of children: a letter of introduction, copy of the questionnaire, information sheet, and an opt-out form. Before taking part, pupils were advised about the confidentiality and anonymity of the questionnaire, publication of the research, and asked whether they were happy to complete the questionnaire or whether they would prefer to do an alternative activity, such as reading a book.

### 2.6. Data Processing and Analysis

Data written on the questionnaires was coded and then inputted manually into Excel and exported to SPSS, Version 20 (IBM, 2015, New York, NY, USA). The following decisions were made: a total of 45 respondents were excluded due to being either outside the 8 to 10 year age bracket or providing a largely incomplete questionnaire; for 26 respondents, missing data for gender and age were imputed using the rule of replacing the missing data with the modal value for the school of the respondent. The latter approach was used because the order of questionnaire retrieval followed the grouping of pupils in the classroom. Research shows that pupil grouping tends to be clustered by age and gender in UK primary school classroom settings [30].

Following the DILQ guidance, all discrete items fruit and vegetables were recorded (for coding details, see Edmunds and Ziebland [28]). We recorded up to one serving of fruit juice although, given the potential for pupils to confuse fruit juice with added sugar fruit drinks, these data were treated and reported on separately from the main analysis. The DILQ does not at the point of coding attempt to quantify the consumption of fruit and vegetables in terms of portion size. Rather, its main utility is in determining differences in fruit and vegetable intake at group level [28]. In this study, we interpreted counts of fruit and vegetables as 'servings' at the point of reporting following the convention of other studies [31]. When interpreted as total daily servings, the results might be considered conservative because they do not include some dietary sources of fruit and vegetables, for example, as a constituent of composite foods.

Coders and inputters were blinded to condition of the school. A 5% random sample was inter-rater reliability tested and found a good agreement ( $\kappa = 64$ ,  $p < 0.001$ ) [32]. The assessment of outcome variables was achieved using an Independent Samples T test, Pearson's Chi Squared test, or Kruskal-Wallis H test where appropriate. Binary logistic regression was used, where indicated, to determine odds ratios after controlling for potential confounders. All reported  $p$  values are from two-sided statistical tests and differences with  $p \leq 0.05$  were considered significant. The dataset generated during and analysed during the current study are available in the figshare repository [33].

### 2.7. Characteristics of Participating Schools and Pupils

Table 1 shows that the five local authority study settings included both rural, urban, and mixed areas. Of those approached, 72.7% ( $n = 24/33$ ) of Food for Life schools and 41.8% ( $n = 23/55$ ) of Comparison schools approached agreed to take part in the study. Further details of the study schools are provided in Table 1. Table 2 shows that there were no significant differences in the size of school, that is, the total number of pupils on roll, or percentage for Free School Meal Eligibility (FSME) between Food for Life and Comparison schools, suggesting the groups were matched with reference to these parameters. The mean FSME for Food for Life schools and Comparison schools was 18.9% (SD 13.6) and 17.2% (SD 13.0), respectively. In addition, there were no significant differences between the local authority area groups in terms of school size or FSME.

**Table 1.** Characteristics of the study population by local authority area commission.

Local Authority Commission	Local Authority Urban-Rural Description	Totals for Primary Schools in Local Authority			Food for Life Schools			Comparison Schools			Total Pupils
		Food for Life Schools in LA (n)	Schools not Engaged in Food for Life in LA (n)	Total Primary Schools in LA (n)	Total Schools Contacted (n)	Total Study Schools (n)	Pupils (n)	Total Schools Contacted (n)	Schools (n)	Pupils (n)	Pupils (n)
A	Urban conurbation	44	45	89	7	5	296	14	3	132	428
B	Mixed: small town/rural	24	142	166	7	5	267	11	5	288	555
C	Urban conurbation	38	102	140	6	5	258	12	5	229	487
D	Mixed: small town/rural	26	42	68	8	5	215	10	5	230	445
E	Mixed: large town/rural	18	94	112	5	4	229	8	5	267	496
Total		150	425	575	33	24	1265	55	23	1146	2411

The total number of children included in the study was 2411. All the children were in Year 4 or 5. The age range was 8 to 10 years old and with a similar proportion of boys and girls (Table 3). FSME% was used as a proxy measure for socio-economic status. The sample of pupils broadly reflected the national distribution of FSME quintiles, although there were fewer in the second FSME quintile (11.8%).

**Table 2.** Characteristics of school sizes (pupil roll) and school level Free School Meal Eligibility (FSME).

	No. Pupils on School Roll			Free School Meal Eligibility FSME%		
	Mean No.	Min/Max (Range)	Standard Deviation	Mean FSME%	Min/Max (Range)	Standard Deviation
By Status						
Food for Life (n = 24)	276	67–618 (551)	131.9	18.9	2.7–46.7 (44.0)	13.6
Comparison (n = 23)	236	110–390 (280)	83.2	17.2	2.7–42.2 (39.5)	13.0
<i>T</i> test result	<i>p</i> = 0.232			<i>p</i> = 0.654		
By Local Authority Commission						
A (n = 8)	275	108–502 (394)	133.1	13.5	3.1–19.9 (16.8)	6.7
B (n = 10)	287	110–618 (508)	152.2	24.2	2.7–45.6 (42.9)	14.1
C (n = 10)	275	174–390 (216)	85.4	23.6	7.1–46.7 (39.6)	16.2
D (n = 10)	256	67–323 (256)	92.3	15.9	2.7–42.2 (39.5)	14.4
E (n = 9)	253	136–361 (225)	73.0	11.6	2.7–23.5 (20.8)	7.1
<i>T</i> test result	<i>p</i> = 0.380			<i>p</i> = 0.113		
Total		37–618 (581)	111.3	18.1	2.7–46.7 (44.0)	13.2

**Table 3.** Characteristics of pupils in the whole study sample (n = 2411).

		Pupils Participating (n)	Pupils Participating (%)
Gender	Boy	1240	51.4
	Girl	1171	48.6
Age	8	762	31.6
	9	1161	48.2
	10	488	20.2
Socio-economic status (FSME quintile) *	Top quintile (41.6%+)	438	18.2
	2nd quintile (25.5–41.5%)	285	11.8
	3rd quintile (15.7–25.4%)	606	25.1
	4th quintile (9.3–15.6%)	484	20.1
	Bottom quintile (0–9.2%)	598	24.8
Attending a school engaged with Food for Life?	Yes	1265	52.5
	No	1146	47.5
Attending a school with Food for Life award?	No award	1293	53.6
	Bronze	632	26.2
	Silver	486	20.2

\* Socio-economic status as defined by percentage of free school meal eligibility of school (FSME %). FSME quintiles are calculated nationally by ranking the FSME% data for all schools and then splitting this data into five sub-groups, each representing approximately 20% of all schools.

### 3. Results

#### 3.1. Fruit and Vegetable Consumption of Pupils

##### All Schools

Table 4 shows that the mean number of servings self-reported for ‘total fruit and vegetables’ was 1.80. More than half (59%) of fruit and vegetables were consumed in school. Fruit made up the greater share (59%) of total fruit and vegetables in reported consumption.

The mean number of fruit and vegetable servings consumed in this survey was less than the mean of 2.55 portions recently reported nationally [9]. This is likely to be due to the measurement

characteristics of the DILQ tool that does not take into account fruit juice and fruit and vegetables in composite foods. If fruit juice is included in the analysis, up to a maximum of one serving, the mean fruit and vegetable consumption increases from 1.80 to 2.37 servings. This is closer to the national survey average.

**Table 4.** Mean number of servings of fruit and/or vegetables consumed by pupils in Food for Life schools and Comparison schools.

Servings	All Schools		Food for Life Schools		Comparison Schools		Significance
	n = 2411		n = 1265		n = 1146		
	Mean	SD	Mean	SD	Mean	SD	<i>p</i>
Fruit and vegetables in school	1.07	1.17	1.24	1.22	0.89	1.08	0.000
Fruit in school	0.69	1.01	0.78	1.06	0.59	0.94	0.000
Vegetables in school	0.38	0.60	0.46	0.63	0.30	0.55	0.000
Fruit and vegetables out of school	0.73	0.94	0.79	0.99	0.65	0.88	0.000
Fruit out of school	0.38	0.68	0.44	0.73	0.33	0.62	0.000
Vegetables out of school	0.34	0.59	0.36	0.60	0.32	0.58	0.174
Total fruit and vegetables	1.80	1.83	2.03	1.93	1.54	1.68	0.000
Total fruit	1.07	1.52	1.21	1.61	0.92	1.41	0.000
Total vegetables	0.76	0.94	0.86	0.97	0.65	0.90	0.000
Total fruit and vegetables including one serving juice (max.)	2.37	1.95	2.64	2.04	2.07	1.79	0.000

National guidelines recommend that five plus portions of fruit and vegetables are consumed each day. Table 5 shows that, using the unadjusted DILQ servings, 9.5% (n = 230) of pupils reported eating five plus servings of fruit and vegetables per day. Additionally, 28.4% (n = 684) reported eating no fruit or vegetables at all during the preceding day. Supplementary analysis showed that 51.7% of children reported eating no fruit or vegetables before school (at breakfast or before arrival) or after school (in the period from the end of school to an evening meal, at an evening meal, or during the evening/before bed).

**Table 5.** Servings of fruit and vegetables consumed by pupils.

Servings	All schools		Food for Life Schools		Comparison Schools	
	n	%	n	%	n	%
0	684	28.4	296	23.4	388	33.9
1	654	27.1	345	27.3	309	27.0
2	396	16.4	214	16.9	182	15.9
3	262	10.9	140	11.1	122	10.6
4	185	7.7	114	9.0	71	6.2
5+	230	9.5	156	12.3	74	6.5
Total	2411	100	1256	100	1146	100

We tested the association between the mean number of fruit and vegetable servings consumed and other variables in order to understand their potential interactions with the main study objectives. Age was not significantly associated with fruit and vegetable consumption ( $p = 0.082$ ). Girls reported eating significantly more fruit and vegetables than boys (girls:  $M = 2.10$ ; boys:  $M = 1.52$ ;  $p < 0.001$ ). Fruit and vegetable consumption was associated with FSME% ( $p < 0.001$ ): pupils in schools with a higher FSME% consumed less fruit and vegetables than those in schools with a lower FSME%. The mean

number of fruit and vegetable servings reported varied between local authority areas. It was highest in local authority commission B ( $M = 2.10$ ) and lowest in local authority commission D ( $M = 1.50$ ,  $p = 0.003$ ) (Data not reported in a separate table).

### 3.2. Food for Life Schools and Comparison Schools

Pupils in Food for Life schools were significantly more likely to consume more servings of fruit and vegetables than pupils in Comparison schools: for total fruit and vegetable consumption, pupils in Food for Life schools reported consuming nearly a third (31.8%) more than pupils in Comparison schools ( $M = 2.03/1.54$ ;  $p < 0.001$ ). This significant difference is also evident for all sub-measures for fruit and vegetable consumption, apart from vegetable consumption out of school (see Table 4).

There was also a difference in the number of pupils in Food for Life and Comparison schools reporting five plus servings of fruit and vegetables; 12.3% of pupils consumed five or more servings in Food for Life schools and 6.5% of pupils consumed five or more servings in Comparison schools (Table 5). In addition, 23.4% of pupils in Food for Life schools and 33.9% of pupils in Comparison schools were recorded as eating no fruit and vegetables. Further analysis across the course of the day showed that 49.6% of pupils in Food for Life schools reported eating no fruit and vegetables at home, whereas this figure was 54.4% for pupils in Comparison schools.

Pupils were grouped into categories of (a) five or more servings of fruit and vegetable consumed and less than five servings, and (b) 2.55 servings or more of fruit and vegetables consumed and less than 2.55 servings. As shown in Table 6, the association previously seen between fruit and vegetable intake and engagement with Food for Life persisted in this analysis.

**Table 6.** Numbers of pupils consuming five or more servings and 2.55 or more of fruit and vegetables according to school engagement with Food for Life.

<b>Fruit and Vegetable Intake</b>	<b>Five Servings or More n (%)</b>	<b>Less than Five Servings n (%)</b>	<b>Significance p</b>
All pupils (n = 2411)			
Food for Life schools	156 (12.3%)	1109 (87.7%)	0.000
Comparison schools	74 (6.5%)	1072 (93.5%)	
<b>Fruit and Vegetable intake</b>	<b>2.55 Servings or More n (%)</b>	<b>Less than 2.55 Servings n (%)</b>	<b>Significance p</b>
All pupils (n = 2411)			
Food for Life schools	410 (32.4%)	855 (67.6%)	0.000
Comparison schools	267 (23.3%)	879 (76.7%)	

Using binary logistic regression, we sought to test the effect of Food for Life on pupil consumption of five or more servings of fruit and vegetable per day. The model controlled for FSME, gender, and local authority area as potential confounders. We found that pupils in schools engaged with the Food for Life programme had double the odds of eating five or more servings of fruit and vegetables per day compared to pupils in Comparison schools (OR (Odds Ratio) = 2.07;  $p < 0.001$ ; CI (Confidence Interval) 1.54, 2.77).

National survey data reports that pupils aged 8–10 years eat an average of 2.55 portions of fruit and vegetables per day [9]. After adjustment for FSME and gender, the odds of reporting eating 2.55 or more servings of fruit and vegetables a day were 60% higher for pupils in Food for Life schools (OR = 1.66;  $p < 0.001$ ; CI = 1.37, 2.00).

### 3.3. Schools and Food for Life Award Status

This section of the findings reports on the relationship between the main outcome and the level of Food for Life award that schools achieved. Preliminary analysis found that silver Food for Life award

schools were over twice as likely to eat five plus portions of fruit and vegetables compared to pupils in schools with no Food for Life award (15.6% and 6.7%, respectively). Pupils in schools with no Food for Life award were almost twice as likely to consume no fruit or vegetables compared to pupils in silver Food for Life award schools (34.1% and 18.1%, respectively). Approximately one and a half times more pupils in Food for Life silver award schools ate five plus portions or more a day of fruit and vegetables compared to those in Food for Life bronze award schools (15.6% and 10.3%, respectively).

Table 7 shows the means and standard deviations for each of the three groups of (1) schools with no award; (2) bronze award schools; and (3) silver award schools with respect to total fruit and vegetable consumption, and the other sub-measures of fruit and vegetable consumption. A Kruskal-Wallis H test was conducted to compare the effect of Food for Life award status on pupil total fruit and vegetable consumption. The result showed that there was a statistically significant difference in total fruit and vegetable consumption between Food for Life award status of schools,  $\chi^2(2) = 51.242, p < 0.001$ , with a mean rank score of 1116.31 for no Food for Life award schools, 1281.21 for Food for Life bronze award schools, and 1346.82 for Food for Life silver award schools. Post hoc comparisons were conducted to determine which pairs differed significantly. Table 7 shows the results found that pupils in silver award schools consumed more fruit and vegetables ( $M = 2.18, SD = 1.20$ ) than those in bronze award schools ( $M = 1.97, SD = 1.86$ ), who in turn consumed more than those in schools with no award ( $M = 1.57, SD = 1.72$ ), Adj.Sig.  $p < 0.05$  for all pairs. A similar test procedure was conducted for selected sub-measures. A test of fruit and vegetable consumption in school found the same pattern of results, Adj.Sig.  $p < 0.05$  for all pairs. Fruit and vegetable consumption out of school was higher for pupils in schools with any Food for Life award than in schools with no award (Adj.Sig.  $p < 0.05$ ), but there was no statistical difference between pupils in silver award schools and those in bronze award schools, Adj.Sig.  $p = 0.965$ .

**Table 7.** Mean number of servings of fruit and/or vegetables consumed by pupils by Food for Life award status.

	No Food for Life Award		Bronze Award		Silver Award		Adjusted Significance
	n = 1293		n = 632		n = 486		
	Mean	SD	Mean	SD	Mean	SD	
Total fruit and vegetables	1.57	1.72	1.97	1.86	2.18	1.20	All pairs: $p < 0.05$
Fruit and vegetables in school	0.91	1.12	1.19	1.17	1.37	1.24	All pairs: $p < 0.05$
Fruit and vegetables out of school	0.66	0.88	0.78	1.01	0.82	1.00	No award vs. FFL award: $p < 0.05$ Bronze vs. silver award: $p = 0.965$

## 4. Discussion

### 4.1. Fruit and Vegetable Consumption

This study found that the mean number of servings of fruit and vegetables self-reported by Year 4 and 5 pupils (aged 8–10 years) in Food for Life engaged schools was significantly higher than the number of servings reported by pupils in Comparison schools. Whilst recognising the limitations of the Day in the Life Questionnaire methodology in assuming that fruit and vegetable servings are equivalent with portion sizes, it is possible that this difference could be approximately 0.5 portion or 40 grams difference between the two groups. This finding is consistent with a recent meta-analysis of school-based interventions that found an improvement of 0.25 portions of fruit and vegetables if fruit juice was excluded and 0.32 portions if fruit juice was included [34].

For all pupils, mean daily fruit and vegetable consumption was well below the public health five-a-day guidelines, although this is consistent with evidence from other research studies with this

age group in Europe, the USA, and Australia [35–37]. The study found that a high proportion (28.4%) of participants reported eating no fruit or vegetables at all during the 24 h prior to the survey. This proportion was lower in Food for Life schools (23.4%) than in Comparison schools (33.9%). The wide gap between guidance and practice underscores the importance of improving dietary behaviours of children. It highlights the importance of the school environment given that, for many children, there are limited or no opportunities to eat fruit and vegetables at home. In this context, evidence of a difference in diet is notable given that fruit and vegetable consumption in Food for Life schools was not only higher within school time, it was also higher at home. This finding is consistent with the Food for Life programme aspiration to have an impact that spills over from the school to the home, and suggests an extension of the programme's impact into the wider community.

As a whole setting-based model, the Food for Life programme has a range of processes and mechanisms that may contribute towards a positive impact on dietary behaviour. The focus on freshly prepared and minimally processed foods, including fruit and vegetables, in Food for Life school meal standards, combined with measures to promote school meal take up (as opposed to packed lunches from home) appears to have a plausible, direct impact. More systemically, the scheme aims to coordinate the role of educational and food catering activities, staff training, and stakeholder participation in multiple areas of school life. Measures seeking to promote both the nutritional health and the sustainability aspects of food may interact to produce effects greater than those that would occur through uncoordinated action. The exchange of best practice between school and catering staff within local geographical areas represents a further mechanism for driving change. Positive outcomes for the programme were more consistent in some local authority areas than others in this study than others. This highlights the need to build upon formal learning of what works in each area and to enhance programme elements that are likely to have the greatest impact.

The Food for Life award framework, from bronze to silver to gold, aims to promote incremental changes across a wide range of food related activities. Although the potential of this model is widely recognised in the literature on healthy school settings [38], evidence on the effects of specific programme mechanisms is less clear [18]. The clearest evidence of an association between mechanisms and outcomes was with respect to the award status of schools; the study found that pupils in Food for Life silver award schools ate more fruit and vegetables than those in Food for Life bronze schools or schools without an award, although the differences between bronze and silver award status were clearer for fruit and vegetable consumption in school than out of school. At the time of undertaking the research, only a small number of schools, nationally, had achieved the Food for Life gold award, and none took part in the present study. Outcomes for schools achieving this higher level of award could be a focus for research in the future.

#### *4.2. Study Strengths and Limitations*

Strengths of the study include the large number of schools recruited to the study in five local authority areas, the large pupil sample size, the measures taken to control for confounders and self-selection in the school recruitment process, and the use of a well-recognised validated tool for dietary assessment with this age group [28,29].

A number of study limitations need to be recognised. There was possible residual confounding by socio-economic factors. For each local authority area, we were not able to achieve complete matches for each Food for Life school in terms of the FSME quintile and the number of students on roll. Nevertheless FSME% at school level was adjusted for in our analyses. Other indicators could have been drawn upon, such as those linked to attainment and local area deprivation, to assist with matching Food for Life and Comparison schools. However, FSME was used as a key indicator due to its widespread use regarding issues of equity in educational policy and practice [26]. The sampling approach may also have been affected by a selection bias: schools that agreed to participate were perhaps more highly engaged in healthy food related activities. However, it is not clear how this would have systemically affected two groups in different ways.

Seasonality may have had an effect on the study, given that surveys for two local authority areas had to be conducted in two waves: autumn and spring during the school year. However, initial piloting that included repeat surveys over two seasons identified no evidence of seasonality.

Whilst it is a validated tool, the DILQ does not measure fruit and vegetables within composite foods, such as pizzas or pies. The explanation given is that interventions that encourage an increase in fruit and vegetable consumption do not usually include composite foods [28]. It would also be too difficult to estimate their contribution to the diet [39]. In the Health Survey for England, fruit and vegetables are included only if they are a main constituent of the food such as stewed fruit or vegetable curry [9].

Composite foods could be potentially significant in the context of the Food for Life programme, given that the initiative includes a focus on including fruit and vegetables as part of composite dishes in school meals. We were not able to directly assess the contribution of these dishes towards student diets. Further research is needed to assess the feasibility of using an adapted version of the DILQ tool for the assessment of composite dishes, or to validate an alternate tool appropriate to the Food for Life programme context and have access to the recipes used in school meals.

It would have been desirable to undertake further dietary assessment through, for example, school mealtime observations and analysis of food plate waste [28], however, this would have involved a considerably more intensive programme of research that was beyond the resources available to the team. The study did not assess consumption of dietary components apart from fruit and vegetables, such as sweets or soft drinks. Although an exploratory and inconclusive assessment was made of sweet snack and savoury (salty) snack consumption with a subset of the data, these dietary aspects fell outside the original research protocol and are not reported on in the current article.

#### 4.3. Policy and Practice Implications

There are a number of policy and practice implications arising from this study. The design of school food programmes might incorporate components that have a focus on sustainable food issues as an additional and complementary focus on the dietary health aspects of food. Schools and partner agencies may seek strategic support from specialist programme agencies to enhance their implementation of award schemes such as Food for Life, although further research is warranted on the link between implementation and health outcomes. Primary school programmes delivered on an area-basis, such as across a local authority area, may offer the basis for reaching large pupil populations.

## 5. Conclusions

This is the first study of Food for Life, when commissioned as a local authority area-based programme, to evaluate dietary behaviour using a cross-sectional school-matched comparison approach. Whilst limitations of the study design and its implementation need to be recognised, the study found evidence of a positive impact of a multicomponent school settings-based programme. Given the challenges of promoting nutritional and food change at a population level, Food for Life appears to have a role as part of an area-based approach to coordinate dietary improvements through schools and catering agencies. For schools participating in the programme, progression from bronze towards silver Food for Life award status appears to be an important part of the process in improving dietary outcomes.

**Supplementary Materials:** The dataset generated and analysed for this study is available at figshare <https://dx.doi.org/10.6084/m9.figshare.3749457.v1>.

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**Author Contributions:** Mat Jones conceived and designed the study, led piloting and data analysis, and undertook some of the fieldwork. Mat Jones produced the first and final drafts of the manuscript. Hannah Pitt organised and



undertook fieldwork, and assisted with drafts of the manuscript. Liz Oxford undertook fieldwork, data analysis and assisted with drafts of the manuscript. Issy Bray provided statistical advice and analysis. Richard Kimberlee undertook fieldwork. Judy Orme assisted with specific elements of the research and manuscript production.

**Conflicts of Interest:** The authors declare no conflict of interest.

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# Food for Life

A Social Return on  
Investment Analysis of the  
Locally Commissioned  
Programme  
Full Report

## Food for Life: a Social Return on Investment Analysis of the Locally Commissioned Programme. Full Report

The study has been led by Mat Jones with support from Hannah Pitt, Liz Oxford, Judy Orme, Selena Gray, Debra Salmon, Robin Means, Emma Weitkamp, Richard Kimberlee, and Jane Powell from the Public Health and Wellbeing Research Group at the University of the West of England, Bristol (UWE Bristol).

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# EXECUTIVE SUMMARY

## Introduction

With a focus on healthy and sustainable food culture, Food for Life delivers a wide range of activities that aim to have a positive and lasting influence on people's lives, social institutions and the natural environment. Food for Life originated as a school and catering settings initiative, and has evolved as a local authority-wide programme that can involve a range of settings including hospitals, children's centres and care homes – as well as schools. The aim of this study is to evaluate the impact of Food for Life's programme activities in local authority areas using the Social Return on Investment (SROI) methodology.

## Food for Life locally commissioned programme

Food for Life is led by the Soil Association and works in partnership with Garden Organic, Focus on Food, the Health Education Trust and the Royal Society for Public Health. Food for Life seeks to promote a "good food culture" through supporting practical delivery and influencing public decision making.

Food for Life (FFL) operates a programme of schools awards to support work to embed food within the curriculum and the wider setting, and have recently introduced a parallel award for early years settings. FFL have also established a programme specifically for hospitals, to support NHS trusts to deliver a health-promoting approach to food. A distinct but related programme is the Food for Life Catering Mark (FFLCM), an independent audit of caterers. This offers food providers accreditation for "taking steps to improve the food they serve, using fresh ingredients which are free from trans fats, harmful additives and GM, and better for animal welfare" (FFLCM 2015).

A number of local authorities in England have commissioned FFL to support delivery of their priorities, with some areas now looking beyond their initial focus on schools to connect with food in other settings. FFL locally commissioned programmes involve a coordinated approach between networks of schools, food producers, food suppliers, caterers and other agencies. In order to examine the social value created by the FFL local commissions we selected two local authority areas of Calderdale and Kirklees for case study analysis.

## Social Return on Investment

Social Return on Investment (SROI) is a framework for measuring and accounting for change in ways that are relevant to the people or organisations that experience or contribute to it. It provides an assessment of whether value is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. SROI captures value often left out of more traditional methods of economic evaluation such as cost benefit analysis. A number of SROI studies have been conducted on FFL and similar initiatives. These have mainly identified benefits to the local economy. Little research has examined the health, educational and wider benefits of programmes such as FFL when delivered at the local authority level.

## Methods and research process

The study followed the standard stages of SROI analysis. Approval for the research was obtained through the UWE HAS Research Ethics Committee. For the two case study areas we focused on a 24 month period and sought to reflect all aspects of commissioned work. **Forty seven stakeholders were interviewed** to provide perspectives on the outcomes of the programme. These individuals included school teaching staff, school cooks, catering managers, catering suppliers, staff from local food businesses and producers, hospital staff, programme delivery staff, commissioners and advisors to the programme (see box below). Additional sources of information about stakeholders' perceptions of outcomes were available through programme

records. A total of **78 written statements were analysed** from training feedback forms, FFL and FFLCM award application forms, teacher questionnaires completed as part of pupil survey research, case study reports and press releases.

### **Stakeholders report on the outcomes of Food for Life**

#### **Examples of feedback from 47 interviewees**

“The skills one of our students got [from cooking skills in school] directly helped him get an apprenticeship with a caterer.” [Calderdale, Secondary Head Teacher #1]

“I’ve found we’ve been able to do some quite difficult topics through food-based lessons, for instance cooking lessons have been a great opportunity to compare food origins and learn about carbon footprints.” [Kirklees, Primary Teacher, #3]

“Parents have said to me that their children are asking lots of questions about where food comes from. It’s been a good project for getting whole families involved” [Calderdale, Primary Teacher, #4]

“We have had well attended events with the majority of parents and the local community attending. We’ve got to meet people from local groups we didn’t know about, like the bee keepers club and the allotment society.” [Calderdale, Primary Teacher #2]

“I now have a very active role in cooking club, tasting sessions...I’m getting listened to... I’m very proud of my kitchen.” [Kirklees, Primary Cook #3]

“Business has been good. With me and the rest that’s six jobs and I’d say most of them are off the back of our schools [and local authority] contracts...

[These contracts are] helping us get over the ‘stigma’ about organic - that organic is time-consuming to process, expensive or unreliable. They’re learning. We’re learning too about what orders we can and can’t do.” [Kirklees, Supplier #4]

“For us the [FFL] catering mark has given us a structure. We’ve got a very good relationship with FFL. We need to continuously promote the service and FFL helps with this... If we hadn’t been working together the [school meal] take up might not have been as high as it is.” [Kirklees Caterer #2]

The research sought to make **a comprehensive assessment of costs**. In addition to local authority and clinical commissioning group funds, we factored in funds from the Big Lottery, the Department for Education and the cost of some staff time in school, hospital and catering settings.

Although SROI is not centrally focused on outputs, a notable feature of the programme was the scale and reach of the initiative, particularly in primary and special schools in the two areas. For example, over the 24 month period of the commission:

- in Kirklees 56 schools out of a total of 182 had enrolled with FFL or achieved an FFL award.
- in Calderdale 27 schools out of a total of 113 had enrolled with FFL or achieved an FFL award.

- in both areas FFL continued to support schools (40 in Kirklees and 43 in Calderdale) that had already enrolled with the programme prior to the commission.

These data indicate that **over 60,000 children and young people, 2,500 teaching staff and almost 1000 catering staff were exposed to the FFL programme** for the two areas combined.

Stakeholders reported 55 outcomes that we grouped thematically, assessed in terms of their potential overlap, and examined their viability for inclusion in the next stage of analysis. This involved the identification and collection of potential sources of evidence to estimate the impact of these perceived outcomes. We used data from a cross-sectional evaluation survey of Key Stage 2 pupils; staff training feedback evaluations; FFL programme monitoring and evaluation records; other survey data, for example on hospital food; questionnaire returns from food suppliers and caterers; and direct reports from interviewees. **The study examined both negative and positive outcomes**, and sought to locate appropriate financial proxies to support monetary valuation.

### Overall SROI results

The social return is expressed as a ratio of present value divided by value of inputs. Although there are likely to be impacts of the programme over many years, we calculated the value of the impacts only up to three years. This was intended to provide funders with an understanding of the social value of the programme over the shorter term of a local planning cycle.

Stakeholders in the two case study areas identified a similar range of outcomes and data sources. This was not surprising given that the commissions had similarities in programme design and delivery. Stakeholders also reported synergy and collaboration between the two local commissions with regard to staff training, food procurement and hospital settings work. We therefore produced a SROI ratio based upon the combined findings of the two case studies.

The total financial value of the inputs for the two case studies was £395,697 and the total present value was £1,743,046. **This provided a SROI ratio of £4.41 of social value created for every £1 of investment.**

### Share of value by stakeholders and interest sectors

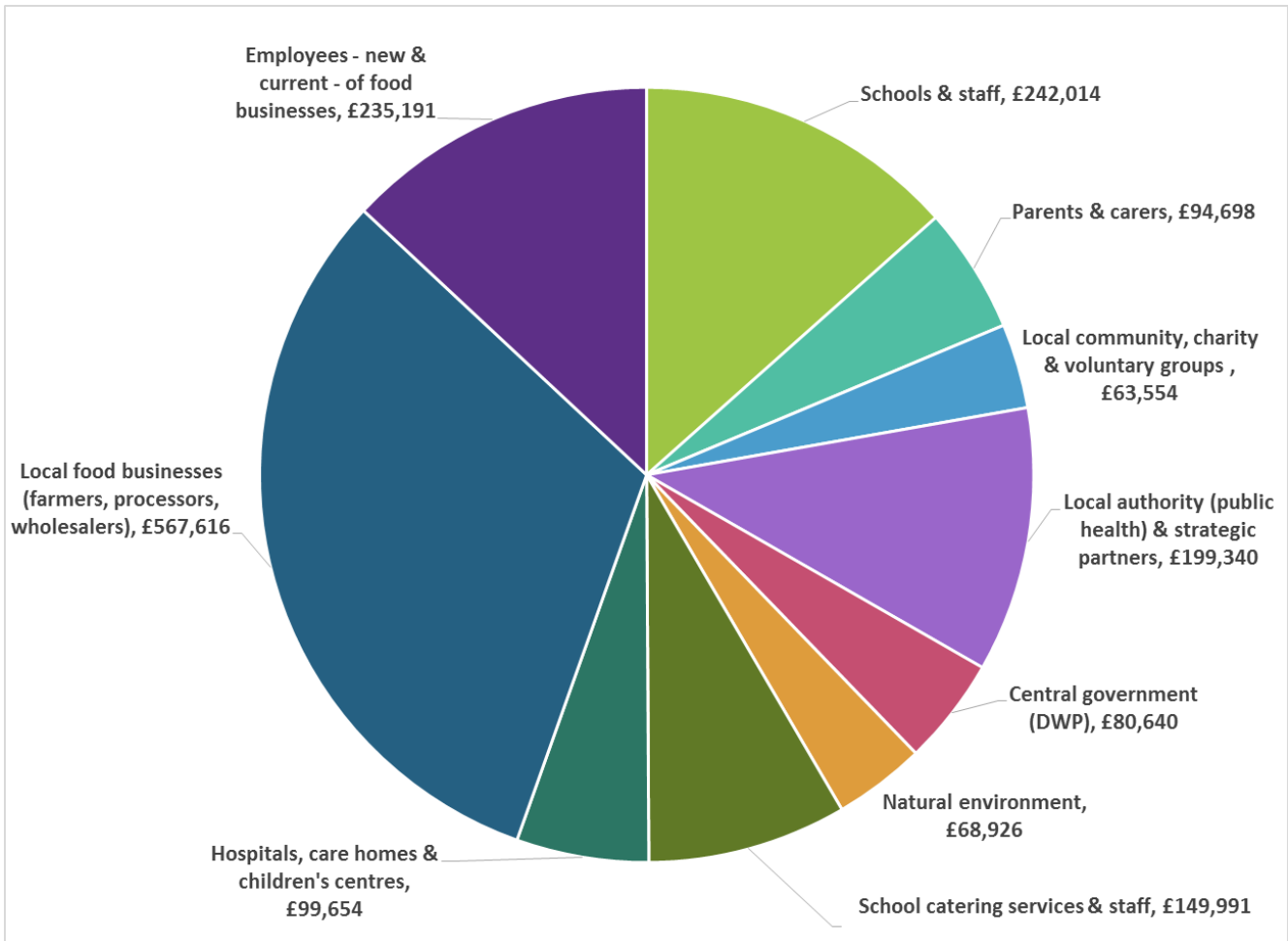
The value of the programme can be expressed with regard to different stakeholders or sectors of interest. A breakdown is provided in the chart below.

**Local suppliers (farmers, processors and wholesalers)** retained or gained new sales through contracts with caterers. The stability of large ongoing contracts lent greater business security, contributed towards new local job opportunities, job security and increased sales of goods direct to the public through farm shops, market events and other outlets. These changes are also beneficial to **central government** in the form of local employment creation, tax revenues and reduced welfare spending.

**School catering services** benefited from the FFL Catering Mark in terms of business security, retention of contracts, improved staff performance and increased capacity to develop and implement procurement of sustainable foods. Small increases in school meal sales over the 24 month period could be attributed to FFL in some schools, although the evidence was mixed in this respect. Cooks and other catering staff benefited from training opportunities, peer networking and improved job satisfaction.

Perhaps one surprising finding was the role of Food for Life in supporting the **working practices of teaching and catering staff**. Some of this took the form of curriculum support, skills development, expert support and networking opportunities. Other outcomes - albeit less tangible - were reported to carry equal weight, including the role of FFL in promoting enjoyment and a sense of

accomplishment at work. Some senior leaders in schools, catering agencies and other settings felt that the link between positive food culture and staff wellbeing was not a peripheral benefit, rather it underpinned a productive and high performing education workplace.



**Local Authority Public Health and the local NHS** are likely to have benefited from improvements to the dietary health of children. Research in Kirklees and Calderdale found that Year 4-5 pupils in schools engaged with FFL were twice as likely to eat five or more portions of fruit and vegetables a day compared to pupils in schools not involved in the programme. We used this data to estimate the short term and longer term impact on reduced healthcare use.

Food for Life is a popular programme in schools and other settings and acts as a bridge with local communities. **Parents and carers** benefited through improved relationships with school and volunteered at FFL school events, which in turn support children's readiness to learn and overall wellbeing. Rather than duplicating the work of other **community and charitable agencies**, FFL largely helped stimulate local voluntary activities through, for example, market events and community visits. The proactive approach of the FFL programme teams in partnership work with other agencies was a theme running through the stakeholder interviews.

New settings work with **hospitals, care homes and children's centres** were in the early stages during the 24 month commission period. The main benefits took the form of staff training and expert support to caterers and senior management in changing organisational practices. Work in hospital settings had advanced quickly, despite major challenges in terms of the organisation scale, and there was some evidence of a positive impact on food waste and patient satisfaction with hospital food.

Improvements in reduced food wastage and reduced transportation were the main environmental benefits that we were able to quantify. As has been reported in other research, other outcomes for the **natural environment** and sustainability were more difficult to evidence at level of a local authority study. A scaled up SROI analysis of the national FFL initiative, and particularly the FFLCM, would provide an evidence platform to examine more clearly the impacts of, for example, improved biodiversity from organic food production methods, reduced consumption of meat and dairy products and higher animal welfare standards.

Towards the end of the SROI study Food for Life and Age UK started a pilot intergenerational project in the case study areas. This was directed at supporting socially isolated older people to help with growing and cooking activity in FFL schools. Although it was too early for us to collect evidence of impact for this study, it is plausible that the pilot would add further social value to schools and volunteers involved in the Food for Life locally commissioned work, arising from new partnerships and economies of effort between volunteers, agency staff, caterers and members of the local community.

### The case study areas: similarities and differences

Kirklees and Calderdale case study areas illustrate important features of FFL local commissions including the role of grass roots networks, coordinated local food strategies and different catering models. They show how benefits can be created through extending work from schools into other settings such as hospitals, early years and care homes. As adjacent local authorities the two areas also acted as a basis for understanding the social value of FFL at a sub-regional level.

The SROI ratio for Calderdale (£1:3.70) was lower than that for Kirklees (£1:5.12). A number of reasons could account for these differences:

1. The pupil and other populations of Kirklees are about twice those of Calderdale. This means that potential reach and scale of the programme in Kirklees was significantly greater than that of Calderdale.
2. The catering systems are very different. The local authority caterer in Kirklees has contracts with nearly all schools in the authority and holds the Silver Food for Life Catering Mark. Large numbers of stakeholders are therefore affected by changes in FFLCM-related practices. By contrast reforms to school catering in Calderdale are more heterogeneous and less systemic across all schools.
3. It is possible that the Calderdale programme creates similar value to the Kirklees programme. However the availability of evidence, suitable indicators and appropriate financial proxies was more difficult to locate in the case of Calderdale than in Kirklees.

These factors show that it is not advisable to make crude comparisons between the two areas, without first taking into account the different local contexts.

### Sensitivity analysis: testing the results

Sensitivity analysis is a method for testing the extent to which the SROI results would change if we adjust estimates or removed factors from the analysis. The lowest estimate, based on halving the value of all outcomes, produced a ratio of £1:2.21. The highest estimate, based on reducing drop-off for all outcomes, produced a ratio of £1:6.29. **The majority of sensitivity analyses found SROI ratios between £1:3.06 and £1:4.46.**

Sensitivity Analysis	Calderdale	Kirklees	Two case studies combined
Findings from analysis	£3.70	£5.12	£4.41
Increasing deadweight to 50%	£2.33	£3.16	£2.75
Increasing displacement to 50%	£2.89	£3.18	£3.04

Increasing attribution to 50%	£3.06	£3.60	£3.33
Changing drop-off to 10% for all outcomes	£6.91	£7.51	£6.29
As above, drop-off 75%	£3.48	£4.03	£3.75
Halving all values of outcomes/ beneficiary numbers	£1.85	£2.56	£2.21
Removing all dietary health-related outcomes	£3.18	£4.56	£3.87

The role of the programme in improving the dietary health of children was a challenging area for valuation due in part to the lack of well-established financial proxies. Removing the value of all dietary health-related outcomes for children reduced the SROI ratio by a relatively small amount overall, from £1:4.40 to £1:3.87. Overall, multiple changes to the estimates of deadweight, attribution and drop-off indicates that substantial changes would have to be made to the assumptions in order for the ratio change from positive to negative. These calculations show that even when significant changes are made to the analysis the results still show clear evidence of social value being created up to 3 years after the FFL intervention.

### **Strengths and limitations of this study**

This study builds upon the principles and methods adopted in previous SROI research. We gathered the perspectives of a large number and variety of stakeholders and used this information to underpin the analysis of outcomes. We took into account a considerable body of evidence from evaluation fieldwork and external research and the study benefited from the availability of well recognised and established financial proxies for many of the outcomes. In order to avoid over-claiming on the role of the programme in creating change we factored in the role of other initiatives and changes in the national policy environment such as the introduction of Universal Infant Free School Meals. The validity of the findings has been explored with key stakeholders and further assessment will be made as the findings of the study are disseminated.

One of the challenges concerned creating an account that adequately captured the scope and breadth of the impacts. This placed limits on the resources available to collect comprehensive data across all outcomes. Some stakeholders declined or were unable to provide detailed supporting data. We focused on short term outcomes rather than those that might result over a longer period beyond three years.

### **Conclusion**

This study found that FFL is valued by schools, civil society, local business and wider stakeholders as a locally commissioned programme in local authority areas. The SROI provides a financial measure of this value: that for every £1 spent on FFL there is social value of £4.41 created over a three year period. In the analysis, multiple adjustments to the role of different outcomes and other factors shows that the social value is likely to fall between a lowest estimate of £2.21 and a highest estimate of £6.29. The clustering of values around a narrow range of £3 to £4 lends confidence to the validity of the results.

The methods and findings from this research are significant for other Food for Life local commissions, the Food for Life Catering Mark and other area-based food programmes, such as the Sustainable Food Cities initiative, both in the UK and internationally. In many instances, the bottom-up research method places limits on the generalisability of SROI results. However in this study the close correspondence with other SROI studies in terms of methodology and findings suggests that a similar range of outcomes can be anticipated in other areas where an FFL programme model is implemented, especially where the programme is directed at schools and public service catering - and engages with other settings such as children's centres and hospitals.

# INTRODUCTION

## Background, aim and objectives of the study

With a focus on healthy and sustainable food culture, Food for Life (FFL) delivers a wide range of activities that aim to have a positive and lasting influence on people's lives, social institutions and the natural environment. Originating as a school and catering settings initiative, Food for Life has evolved as a local authority-wide programme that can involve a range of settings including hospitals, children's centres and care homes – as well as schools. Whilst the integrity and principles underpinning FFL's whole system approach are well recognised, it is a greater challenge to draw together and assess the total impact of the programme. Social Return on Investment (SROI) is a method for systematically creating an account of the resources (or investments) that go into a programme and the outcomes (or social returns) that are plausibly created. The holistic framework of SROI makes it well suited to develop an understanding of the value of the Food for Life local authority commissioned programme.

The aim of this study is to evaluate the impact of FFL's programme activities in local authority areas using a case study focus with the authorities of Calderdale and Kirklees. The objectives are:

- To examine the wide range of outcomes of the programme and to develop a framework for collecting evidence of the effects of the programme.
- To identify suitable indicators that enable the measurement of outcomes and to express the social value of the programme.
- To place these findings in the context of the wider evidence base and to show how the social value of the programme can be interpreted by stakeholders.

There is a particular need for an SROI analysis to inform audiences about the costs and benefits of the locally commissioned FFL programme and to support the development of area and settings-based food strategies. Previous SROI research focusing on FFL procurement practices and similar schemes internationally has identified substantial value to the local economy and the natural environment. Less is documented about the health, wellbeing, educational and wider social returns of FFL and related programmes.

## Food for Life and locally commissioned programmes

Food for Life is led by the Soil Association and works in partnership with Garden Organic, Focus on Food, the Health Education Trust and, since 2013, the Royal Society for Public Health. Food for Life (FFL) seeks to promote a "good food culture" through supporting practical delivery and influencing public decision making. According to Food for Life:

*The programme is about more than just food on the plate; it considers where food comes from and how it's grown, cooked and experienced. We provide practical advice and support, and reward and celebrate success (FFL 2015).*

FFL operates a programme of schools awards to support work to embed food within the curriculum and the wider setting, and have recently introduced a parallel award for early years settings. FFL have also established a programme specifically for hospitals, to support NHS trusts to deliver a health-promoting approach to food.

A key focus of FFL is locally commissioned programmes for schools where there are the following four objectives:

- i) To support and facilitate schools, the wider school community and caterers to have the opportunity, confidence and ability to access healthy and sustainable food;
- ii) To provide the skills and knowledge for the school community to make informed food choices leading to healthy and sustainable food behaviours;
- iii) To enable change in food culture within school settings through a whole school approach;
- iv) To enable change in food culture across wider health, education, and school meal systems through influencing stakeholders and strategy at local and national levels to adopt the FFL framework and ethos.

Schools can achieve bronze, silver or gold awards within the Food for Life Award Scheme according to the degree of progress made against four areas: food policy and leadership, food quality, food education, community and partnerships.

A distinct but related programme is the Food for Life Catering Mark (FFLCM), an independent audit of caterers. This offers food providers accreditation for “taking steps to improve the food they serve, using fresh ingredients which are free from trans fats, harmful additives and GM, and better for animal welfare” (FFLCM 2015). The catering mark has three award levels - bronze, silver, gold. Caterers are required to meet the standards set out in the FFLCM criteria, and pay a fee for annual inspection against the standards. FFLCM is operated by a dedicated team within the Soil Association, which frequently interacts with FFL staff. The catering mark is also linked to FFL awards as accreditation demonstrates that an organisation meets the award’s food quality requirements. The FFLCM is open to any caterer, hence it has worked with organisations in a wide range of sectors.

A number of local authorities in England have commissioned FFL to support delivery of their priorities, with some areas now looking beyond their initial focus on schools to connect with food in other settings. FFL locally commissioned programmes include a focus on developing a coordinated approach between networks of schools, food producers, food suppliers, caterers and other agencies that can contribute towards a food strategy. The FFL Catering Mark is an important aspect of the local commissions, particularly where there are influential catering providers that can take up the scheme, for example in school and hospital settings.

In order to examine the social value created by the FFL local commissions we selected two local authority areas for case study analysis. Since 2012/13 FFL has been independently commissioned to deliver services in the two local authorities Kirklees and Calderdale. The commissions built upon earlier engagement between local agencies – notably schools and caterers – and both FFL and the FFLCM. Both local authority (LA) areas have areas of high social deprivation and feature inequalities in health, diet, economic and educational outcomes. In Calderdale the LA Public Health department and the Clinical Commissioning Group had commissioned FFL to work both in school and additional settings. In Kirklees commissioning was also led by the Public Health team as part of a wider coordinated local food strategy that brought together a range of stakeholders, and also involved delivery in schools and additional settings.

### **Context: economic studies of FFL and similar programmes**

Increasingly decision makers and the wider public not only want to be informed about the effects of interventions, but also on their costs and cost-effectiveness. Wide ranging and comprehensive programmes - such as FFL - are likely to have impacts across a range of the different areas and



can address a number of social priorities. This suggests that the costs and benefits of such programmes need to be understood in their broadest sense. It is also important to appreciate how programmes can achieve their objectives in collaboration with other initiatives and how their effects may take many years before they come to fruition.

A number of SROI studies have been conducted on FFL and similar initiatives. Lancaster et al's SROI analysis (2008) examined the impact of a Food for Life pilot programme on primary school meals provision in East Ayrshire, Scotland. Over a four year period the initiative covered 26 of the authority's 43 primary schools. Lancaster et al concluded that the Food for Life initiative provided £6 in environmental, economic, health and other benefits and for every £1 invested. Much of this value was linked to the value of contracts to local food suppliers and their employees – and to the environmental benefits of reduced food transportation. Health outcomes were assumed on the basis of long term dietary changes, however it was beyond the resources of the study to clearly evidence this claim.

A subsequent SROI study of Food for Life was led by the New Economics Foundation on school catering in Nottinghamshire and Plymouth (Kersley & Knuutila, 2011). This study was primarily focused on the local economic impact of changes to procurement practices by local authority caterers, and drew upon some of the conventions for SROI analysis established in the Ayrshire study. After examining catering reforms that were consistent with FFLCM's food procurement framework, Kersley & Knuutila's study found an SROI ratio of £3 for every £1 invested. They concluded that "the results...suggest that there are substantial economic and social benefits to be gained from public procurement practices which focus on a sustainable agenda around seasonal and local produce". The authors also noted that:

*"the full benefits of an FFL approach be significantly higher than this however. The analysis presented in this report is only partial. It does not take into account any of the health, educational or cultural benefits of a whole school approach to food which are primary objectives of FFL".*

More recently commentators such as Stein (2012) have drawn attention to FFL's gold award, and how its emphasis on reducing meat and dairy consumption is directly linked to substantial forms of value to the environment. An SROI study conducted by CCRI (2013) of the Big Lottery funded Local Food programme examined a wide range of outcomes including benefits to the local economy, community life, environmental sustainability and health and well-being. Elements of this research are relevant to FFL because the Local Food programme also had a focus on community diet and food sustainability goals.

Wider economic evidence shows that poor diets and obesity negatively impact individuals, healthcare systems, employers, and the economy as a whole (Lehnert et al, 2013; Park et al, 2012). Joint FSA/DoH analysis the Cabinet Office Strategy Unit in 2008 estimated that 42,200 deaths could be avoided each year if the UK population met 5 a day guidelines for fruit and vegetable intake. Recent studies have sought to extrapolate health effects over the life course of childhood programmes directed at health promotion. This is on the basis that there now exist adequate longitudinal data as well as established models to make credible predictions particularly with regard to weight-related poor health (e.g. Pil et al, 2014; Tran et al, 2014). For example a recent European study (Sonntag et al, 2016) estimated that overweight and obesity during childhood resulted in an excess lifetime cost per person of €4,209 (men) and €2,445 (women).

The potential diet-related benefits of programmes aimed at children are likely to be long term in character. As Lehnert et al note "in the prevention of obesity, health benefits may slowly accumulate over time and it can take many years before an intervention has reached full effectiveness" (ibid.). Research on short term economic impact has largely focused on healthcare

utilisation (John et al, 2012). Solmi and Morris (2015) report that evidence of an association between obesity in childhood and adolescence and healthcare use and costs is mixed: the link has been found in some, but not all, primary research studies on the subject. One Australian study (Au, 2012) found that children who were obese at age 4–5 had higher prescription expenditures over 5 years. Solmi and Morris’s (2015) longitudinal study of children over three time-points aged 5, 7 and 11 in the UK found that obese children are more likely to use regular medications and have comorbid conditions. There was some evidence of a socioeconomic gradient in this association, suggesting that the medication costs are higher with respect to lower income groups. Lehnert et al (2012) note that short term impacts are unlikely to be limited to children’s use of healthcare services: “school-based programmes...may exhibit substantial spillover effects (also called multiplier effects), i.e. generate (health) benefits in the family or broader community” (ibid.) such as changes in dietary behaviour of parents and other family members (see also Basu & Meltzer, 2005).

Whole settings interventions that include a focus on environmental changes are likely to be most cost effective both in the short and long term. A review of interventions to promote fruit and vegetable consumption found that those based on dietary counselling or similar one-to-one interventions are not highly cost effective (Cobiac et al, 2010). The authors recommended further evaluation on programmes that address whole populations. Lehnert et al’s review (2012) of obesity prevention programmes found that the majority of interventions offered good value for money – with those that focus on environmental changes (for example to the price or availability of healthy foods) being most cost-effective. The authors conclude that community interventions – or those that offer a combination of behavioural and local environmental interventions “may be crucial if a meaningful impact on the population level is aspired.”

The FFL local commissions include work with new settings in addition to schools. Whilst there has been little research on the economic impacts of reforming food and nutrition in early years and care home settings, the Independent Panel on Establishing Food Standards in Hospitals undertook a cost benefit analysis of implementing a food and drink strategy in compliance with five sets of guidelines. The panel concluded that there were significant potential benefits:

*“When fully implemented, these guidelines are expected to cost the NHS approximately £7m (£4.9m - £9.1m) each year. However, through reducing length of stay and improving catering efficiency, savings of £9.6m (£5.0m - £11.9m) may be realised. This results in an overall annual saving to the NHS of approximately £2.55m. In addition to this a further £1.5m (£0.8m - £2.4m) is expected in terms of health benefits to staff and patients.”*  
(Hospital Food Standards Panel, 2014)

Overall then, a growing body of research is establishing both the methods and the evidence of health and wider social cost effectiveness of early interventions on diet. This is complemented with other research that has examined the wider societal and local economic impacts of food reform programmes. From this research, the Social Return on Investment framework has emerged to provide a useful basis for investigating the multiple impacts and the valuation of complex initiatives commissioned in local authority settings.

## **SOCIAL RETURN ON INVESTMENT**

### **The Social Return on Investment methodology**

*The SROI methodology provides a platform to systematically account for broader outcomes of interventions and the value for money of such interventions. SROI is very*

*relevant and applicable, especially as the global focus shifts from “output” to “impact” and from “generous giving” to “accountable giving.” (Banke-Thomas et al, 2015, 600)*

Social Return on Investment (SROI) is a framework for measuring and accounting for change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them.

SROI is one approach to economic evaluation of which there are many others including cost-effectiveness analysis (CEA), cost-utility analysis (CUA) and cost-benefit analysis (CBA). SROI is often advocated as a methodology well suited to give a more ‘holistic’ picture of value for money than other forms methods of economic evaluation (Arvidson et al, 2010).<sup>1</sup> SROI is perceived to have increasing relevance for understanding the non-health outcomes of public health interventions (van Mastriht et al, 2015).

SROI measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated. For example, a ratio of 3:1 indicates that an investment of £1 delivers £3 of social value. SROI is about value, rather than money. Money is simply a common unit and as such is a useful and widely accepted way of conveying value.

SROI can help to:

- understand the social, environmental and economic value created by your work;
- maximise the positive change you create and identify and manage any negative outcomes arising from your work;
- reconsider which organisations or people you should be working with, or improve the way you engage with your stakeholders;
- find ways to collect more useful, better quality information.

There are seven principles of SROI that underpin how it should be used:

1. **Involve stakeholders.** Stakeholders should inform what gets measured and how this is measured and valued.
2. **Understand what changes.** Articulate how change is created and evaluate this through evidence gathered, recognising positive and negative changes as well as those that are intended and unintended.
3. **Value the things that matter.** Use financial proxies in order that the value of the outcomes can be recognised.
4. **Only include what is material.** Determine what information and evidence must be included in the accounts to give a true and fair picture, such that stakeholders can draw reasonable conclusions about impact.
5. **Do not over claim.** Organisations should only claim the value that they are responsible for creating.
6. **Be transparent.** Demonstrate the basis on which the analysis may be considered accurate and honest and show that it will be reported to and discussed with stakeholders.
7. **Verify the result.** Ensure appropriate independent verification of the account.

### **The six stages of SROI analysis**

Carrying out an SROI analysis involves six stages:

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<sup>1</sup> <http://www.thesroinetwork.org/sroi-analysis/the-sroi-guide>

1. Establishing scope and identifying key stakeholders.
2. Mapping outcomes through engagement with stakeholders to develop an impact map (also called a theory of change or logic model) which shows the relationship between inputs, outputs and outcomes.
3. Evidencing outcomes and giving them a value. This stage involves finding data to show whether outcomes have happened and then giving them a monetary value.
4. Establishing impact. Identifying those aspects of change that would have happened anyway or are a result of other factors to ensure that they are taken out of the analysis.
5. Calculating the SROI. This stage involves adding up all the benefits, subtracting any negatives and comparing the result with the investment. This is also where the sensitivity of the results can be tested.
6. Reporting, using and embedding. This last step involves verification of the report, sharing findings with stakeholders and responding to them, and embedding good outcomes and processes.

Banke-Thomas et al's (2015) systematic review of studies between 2005 and 2011 found that health promotion was the field of public health in which the SROI methodology has been most applied. Further relevant research has been conducted on child health and nutrition. Of 19 studies identified the SROI ratios ranged from 1.10 to 11.00 although, as the authors emphasise

*“because of the heterogeneity in the manner of conduct of the SROI studies and indeed the economic theory that underpins the SROI methodology itself, it is not appropriate to compare the ratios to identify the most impactful or the intervention with the most value-for-money.” (p586)*

With respect to the SROI methodology, Banke-Thomas et al noted the following good practice arising from the studies reviewed:

- Triangulation of primary and secondary data sources
- The perspectives of programme beneficiaries should be central to all monetary valuations or financial proxies, although other stakeholders such as implementers, funders and promoters also bring an important perspective.
- Establishing the counterfactual should be objectively done, in order for example to determine what would have happened anyway
- Ensuring transparency throughout the SROI research process

## **STAGE 1: Establishing Scope and Identifying Key Stakeholders**

### **The scope of the SROI analysis**

The purpose of this SROI analysis is to evaluate the FFL Locally Commissioned programmes in Kirklees and Calderdale local authority areas. The analysis focuses on the 24 month period from 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2015.

For the Kirklees local commission, FFL had a 'start up' period from 1<sup>st</sup> February 2013 to 31<sup>st</sup> March 2013, and had been actively involved in the area since the development of phase 1 FFL programme from 2007. Similarly in Calderdale FFL had worked with schools and other stakeholders since the inception of the programme in 2007. This history of engagement meant that a decision was needed on the period to select as the baseline for the SROI. The focus of this study is primarily on the added value of the FFL locally commissioned model, therefore the 12

month period prior to the start of the main commission is taken as the baseline. Later in this report we examine the influence of earlier work by FFL and the FFL Catering Mark teams in the area.

Research on the Kirklees FFL programme provided the initial framework for the SROI analysis; this framework was then applied to the Calderdale FFL programme, with adjustments to account for the different context and programme format. These differences mean that caution needs to be exercised when making comparisons between the two commissions and the SROI findings for each area.

## ***FFL Locally Commissioned Programme in Kirklees***

In 2013 NHS Kirklees commissioned FFL over 3 years to deliver the programme across all schools in the area. With the incorporation of public health services into local authorities, the commission passed over to Kirklees Council in 2013. An FFL Local Programme Manager coordinates the programme and a Steering Group, with a variety of local partner organisations, supports delivery of the FFL programme. Under the commission FFL offers a range of training opportunities for school staff in cooking, growing food, food leadership and farm links. There is also a strong focus on training for school cooks, which includes teaching cooking skills for children, understanding food quality and FFL criteria for food provenance, and composting at school. In 2014 Kirklees Council extended the commission to include development work in hospitals, care settings and early years settings.

### **Summary of the FFL Local Commission in Kirklees**

<b>Commissioner</b>	Initially NHS Kirklees, then Kirklees Council with the incorporation of public health into local authority provision
<b>Pre-commission FFL activity</b>	50 schools enrolled, with 29 bronze awards, including 1 FFL flagship school.
<b>Settings (and target populations)</b>	All grant maintained schools (all pupils, staff, parents/carers); Pilot work in new settings – hospitals, care homes, early years (all participants).
<b>Catering</b>	Kirklees Council Catering holds contracts with the majority of schools in Kirklees and has held the silver FFLCM award prior to the FFL commission of 2013. Huddersfield Hospital is engaged with FFL’s hospital catering mark pilot work

Under the local commission a number of service outcomes have been specified as follows:

#### **Schools**

- The development of key life skills in growing and cooking and in understanding where food comes from amongst young people and their families

- The establishment of healthier behaviours around food via improved school food culture, with key messages travelling home to parents and wider communities
- Improved nutrition in the most disadvantaged pupils (through an increase in free school meal take up)
- Improved community and parental engagement in school activities
- Sharing learning with other areas

#### **Care Settings/Domiciliary Care Settings**

- Development of a contact list for care settings and domiciliary care in Kirklees
- All care settings in the area contacted by letter/phone/email to offer support to achieve the Catering Mark
- The set-up of a Cooks Network for care settings caterers
- At least one Catering Mark training session for caterers from care settings

#### **Hospitals**

- Engagement of Calderdale and Huddersfield NHS Trust in the FFL Steering Group
- The enabling of additional support/signposting for the whole setting approach in hospitals as appropriate including sharing learning with other settings
- Hold a Catering Mark training session for catering/serving staff

#### **FFL Early Years Settings**

- The set-up of a Cooks Network for early years caterers
- At least one Training Session held for early years settings staff
- Engagement of an Early Years representative in the FFL Steering Group

The FFL commissioned work in Kirklees closely fits together with the local strategic picture. The Kirklees Health and Wellbeing Board have identified food and nutrition as one of its four main priorities within the Joint Health and Wellbeing Strategy (Kirklees Health and Well-being Board, 2013) and this has led to the development of a Food Strategy Action Plan for Kirklees. Kirklees Food Partnership convenes a range of stakeholders with a shared interest in promoting healthier, more sustainable food and the role of food in local economic development. This is expressed in the Kirklees Food Charter that advocates for “Food that's good for people, good for places, good for our health and good for the planet” (Food Kirklees, 2015). Food strategy work is also part of the wider ‘community commitments’ of Kirklees Council that are concerned with supporting local businesses, community participation and social inclusion.

With respect to FFL’s school focused activity, the commissioned programme connects to the Kirklees Children and Young People Plan 2013-16 (Kirklees Council, 2013a). In this context the programme is intended as a universally available service to all publicly funded schools in Kirklees. Other work, notably that led by the Food Initiative and Nutrition Education (FINE) Project, delivers more targeted healthy eating training with disadvantaged groups (Kirklees Council, n.d.).

Kirklees School Catering Service is a key partner in this commission and has a history in supporting FFL activity in schools across Kirklees. It is the second largest local authority caterer

in the country and operates in 81% of middle and high schools and 99% of primary and special schools in the area (Kirklees Council, 2013b). Kirklees Catering Service holds the Food for Life Silver Catering Mark Award and is recognised as having a leading role in promoting school meal take up (ibid.).

## ***FFL Locally Commissioned Programme in Calderdale***

In 2012, NHS Calderdale (now Calderdale Council) commissioned FFL to build a sustained network of schools and communities committed to transforming food culture. A FFL Local Programme Manager has the role of establishing and facilitating the network, encouraging schools and local partner organisations across the borough to raise their current level of commitment to FFL. Training for teachers and other school staff is being provided for schools in food leadership, growing, cooking and farm links. Catering and food sourcing support is provided and a local Cooks Network has been developed (which aims to be self-sustaining) to provide a platform for sharing and networking, along with running workshops focusing on how to achieve FFL food quality and provenance criteria. The programme delivery is supported by a FFL Catering Mark Manager who is budgeted to work one day a week during school term times.

In October 2013 Calderdale CCG and Calderdale Council (Public Health) funded FFL for a further 2 years. Under this commission additional work includes in early years, care settings, and hospitals.

### **Summary of the FFL Local Commission in Calderdale**

<b>Commissioner</b>	Initially NHS Calderdale and Calderdale Council, followed by Calderdale CCG and Calderdale Council
<b>Start Date</b>	July 2012
<b>Programme length</b>	1 year initially followed by 2 year extension
<b>Pre-commission FFL activity</b>	36 schools enrolled, with 6 bronze and 1 silver awards, including 1 flagship school.
<b>Catering</b>	A variety of types of catering provision. About 80% of schools provide catering in-house, in some cases as part of a schools consortium. Several private catering companies provide a service to small numbers of schools. The local authority schools meals service closed in September 2014 with provision to 18 schools going in-house or to a private provider. ISS Facilities Services provides catering for the Royal Calderdale Hospital and the retail section was awarded the FFLCM bronze award in 2015.

<b>Settings (and target populations)</b>	All grant maintained schools (all pupils, staff, parents/carers); pilot work in new settings – hospitals, care homes, early years (all participants)
<b>Intervention</b>	<u>Staff training</u> : developing a coordinated policy, food procurement, food growing, cooking in the curriculum, whole settings approach, running a farm visit and a farmer’s market  <u>Support</u> : 1:1 visits, tailored support, curriculum linked resources, specialist partners, pilot work with new settings

The programme works within an Outcomes Based Accountability (OBA) framework – a set of performance based measures that the CCG and council use for commissioned services. FFL report against 22 performance measures that are grouped around the themes of:

- How much did we do? For example: number of teaching staff attending training.
- How well did we do it? For example: percentage of trainees reporting being confident to lead food related activities.
- Is anyone better off? For example: percentage of pupils eating 5-a-Day.

The FFL local commission is intended to contribute to local Public Health strategies to reduce and prevent obesity in the school environment, and is integrated with other programmes also commissioned locally, focusing on this priority. Drawing upon the local Joint Strategic Needs Assessment, Calderdale Public Health and CCG have shared focus on helping people to maintain healthy lifestyles and the need to address health inequalities across the authority. A particular concern has been the rising annual cost of diseases related to overweight and obesity in Calderdale. In 2003 this was £53 million, £55 million in 2010, and is estimated at £58.8 million in 2015. The prevalence of diabetes has been rising sharply. The Yorkshire and Humber Public Health Observatory estimates that 7.5% of people aged 16 years or older had diabetes in Calderdale in 2012. If current population change and obesity trends persist, the total prevalence of diabetes is expected to rise to 8.4% by 2020 and 9.3% by 2030 (YHPHO, 2012).

Both local commissions are engaged with Calderdale and Huddersfield NHS Foundation Trust (CHFT), which runs hospitals in Huddersfield and Halifax plus local outreach services. CHFT became one of the Big Lottery funded FFL hospital pathfinder pilots in 2014, and adopted the new food quality CQUIN. The two hospitals operate very different catering systems and this has influenced implementation of FFL activity. The catering service at Huddersfield hospital provides a bulk cook-chill service for patient food. A contractor runs retail outlets for staff and visitors. CRH has a different contract caterer for both patient food and retail outlets. Patient food is provided as plated meals which are regenerated on trolleys at ward level; the hospital was designed for such a system so has minimal kitchen space. As part of the national evaluation of FFL, UWE undertook a case study of CHFT’s catering (Gray et al, 2015).

### **Key stakeholders: sampling and data collection**

Stakeholders are people or organisations that experience change - positive and negative - as a result of an intervention. Their experience makes them well placed to describe the change. The purpose of stakeholder involvement is to help identify the most important outcomes to the project and to set out an understanding of those outcomes that has been informed by stakeholders.



A list of stakeholders who experience change or affect the FFL LC programme was prepared in consultation with the FFL National Commissioning Manager together with the Local Programme Managers. We were also able to build upon our initial reviews of FFL local commissions to identify key interest groups (Pitt et al, 2014; Pitt & Jones, 2014). A table outlining this initial list and reasons for inclusion in qualitative interviews is included in Appendix 1. These individuals included school teaching staff, school cooks, catering managers, catering suppliers, staff from local food business and producers, hospital staff, programme delivery staff, commissioners and advisors to the programme. In total 43 in-person and telephone interviews were undertaken with stakeholders. An additional 4 people responded by email correspondence, giving a total of **47 stakeholder participants**. Details of qualitative interview schedules and tools used to collect quantitative data are included in Appendix 2 and 3.

Additional sources of information about stakeholders' perceptions of outcomes were available through programme records. A total of **78 written statements** were analysed from training feedback forms, FFL and FFLCM award application forms, pupil survey teacher questionnaires, case study reports and press releases. Using these different data sources, we organised a thematic analysis of the programme outcomes as perceived by stakeholders. These are set out in the next stage of the analysis.

The main intended beneficiaries of the programme are school children and, in the case of the new settings work, hospital patients, care home residents and children in nurseries. Others, notably the parents of school children, have a clear interest. Due to the limited resources of the study, we decided not to interview these groups directly. However other sources of information were able to provide an understanding of the experiences of these groups. This was particularly the case for primary school settings where there is previous evaluation research, surveys and consultations (Jones et al, 2012; Salmon et al, 2013; Weitkamp et al 2013; Kimberlee et al 2013).

## **STAGE 2: Mapping inputs, outputs and outcomes**

SROI is an outcomes-based measurement tool. The aim of this stage is to map outcomes to develop an impact map, also called a theory of change or logic model, which shows the relationship between inputs, outputs and outcomes. Sections of the impact map are included throughout this chapter however the report is best understood when read together with the full impact map in Appendix 5.

### **Mapping inputs**

In SROI, the investment refers to the financial value of the inputs. Inputs are what stakeholders are contributing in order to make the activity possible and are used up in the course of the activity – money or time, for example.

For both Kirklees and Calderdale the principle inputs are in the form of local commission funds from the local authority and, in the case of Calderdale, the Clinical Commissioning Group. In addition the local commissions benefited from resources made available to FFL from a grant to the Soil Association and partner agencies as part of the BLF Phase 2 Wellbeing Programme. A small amount of funds through the Department for Education's School Food Plan has also helped support FFL's work with schools in the two authorities.

Many FFL linked activities are integrated into the routine delivery of school activities. These include the provision of school meals and teaching of food-related education in class time. Such activities have not been included as programme costs because in most cases they would have occurred without the programme. However school staff stakeholders reported that the FFL programme was linked to some areas of additional time, and therefore costs to the school, for

completion of award applications. Similarly caterers reported that most aspects of taking up the FFL Catering Mark could be considered as part of a normal updating of practice. However we did include costs for additional time connected to completing the mark application and for the fee associated with the application.

With respect to hospital activity, the inputs for Calderdale & Huddersfield NHS Foundation Trust (CHFT) were staff time for steering group meetings and associated work, including time for communicating plans across the organisation to gain wider buy-in. External stakeholders also contributed staff time, including Healthwatch time to administer the patient survey. To meet FFLCM Bronze criteria the relevant catering operation had to increase sourcing of farm assured meat and MSC certified fish, and provide more customer information on the provenance of ingredients. These changes had some cost implications which had to be accommodated within the agreed budget.

Aside from the commission funds and Big Lottery funds, we identified no tangible inputs through the pilot work with care homes and early years staff. Further information on how the financial value of the inputs were calculated can be found in Appendix 4 Calculating Inputs.

### **Mapping outputs and reach of activities**

Stakeholders identified a wide range of outputs. In the main, these can be organised in relation to the commissioned activities such as the numbers of schools enrolling with FFL or achieving awards, the delivery of training events and the numbers of children, staff and other beneficiaries engaged in programme activities.

When summarising the outputs, a notable feature of the local commissions in the two case study areas is the potential scale of the reach of FFL activities. For example in Kirklees over the 24 month period of the commission, 56 schools out of a total of 182 had enrolled with the programme or achieved an FFL award. In Calderdale 27 schools out of a total of 113 schools had enrolled with the programme or achieved an award in the same period. Meanwhile in both areas FFL had continued to work with schools (40 in Kirklees and 43 in Calderdale) that had already enrolled with the programme prior to 2013.

FFL local commissions potentially impact on a wide range of social groups. In terms of absolute numbers, the main intended beneficiaries of the FFL local commissions are school pupils and their families. School teaching and catering staff are also the intended beneficiaries of the school based programme. Tables 1 and 2 summarise the population reach of the schools-based programme in the two case study areas. For the two areas combined these data indicate that over 60,000 children and young people, 2,500 teaching staff and almost 1000 catering staff were exposed to the FFL programme.

**Table 1: Kirklees school pupil population and intended beneficiaries of the FFL programme**

Estimates for March 2015 based upon DfE Edubase (2014); Kirklees ONS data (2013 and 2015 projection); Yorkshire and Humberside Observatory Population Profiles (2015); Kirklees Council Education and Leisure Factsheet (2014); Schoolsnet (2015). "FFL Schools" defined as schools achieving Bronze or Silver FFL Mark status and/or part of Kirklees School Catering Service Silver FFLCM by March 2015

	All Schools				"FFL Schools"			
	Total schools	Total teaching staff <sup>2</sup> (FTE)	Total catering staff (FTE)	Total pupils	Total enrolled or awarded schools	Total teaching staff	Total catering staff	Total pupils
Primary schools and nursery units	140	1,727	700	39,981	77	950	385	21,990
Middle schools	2	53	240	28,550	11	484	106	12,562
Secondary schools (LEA and Academies)	25	1048						
State sixth form & FE colleges	6	383	54	10,350	3	191	27	5,175
Special / Pupil Referral Units	9	132	45	1,294	5	66	22	718
<b>Total</b>	<b>182</b>	<b>3,343</b>	<b>1,039</b>	<b>80,175</b>	<b>96</b>	<b>1691</b>	<b>540</b>	<b>40,445</b>

**Table 2: Calderdale school pupil population and intended beneficiaries of the FFL programme.**

Estimates for March 2015 based upon DfE Edubase (2014); Calderdale ONS data (2013 and 2015 projection); Yorkshire and Humberside Observatory Population Profiles (2015); Schoolsnet (2015) "FFL Schools" defined as schools achieving Bronze or Silver FFL Mark status by March 2015

	All Schools				"FFL Schools"			
	Total schools	Total teaching staff (FTE)	Total catering staff (FTE)	Total pupils	Total enrolled or awarded schools	Total teaching staff (FTE)	Total catering staff (FTE)	Total pupils
Primary schools and nursery units	89	760	445	17,570	72	614	360	14213
Secondary schools (LEA and Academies)	16	670	162	17,000	7	260	63	6611
State sixth form & FE colleges	2							
Special / Pupil Referral Units	6	60	20	570	5	48	16	456
<b>Total</b>	<b>113</b>	<b>1490</b>	<b>627</b>	<b>35,140</b>	<b>70</b>	<b>922</b>	<b>439</b>	<b>21280</b>

### **New Settings: early years, care homes and hospitals**

New settings work in care homes and early years nurseries and children’s centres was in its early stages at the time of this study. The FFL programme was one year into its commission by the final point for collecting information for the SROI analysis. By this stage the main outputs concerned training events for staff in these agencies and introductions to the FFL catering mark scheme. FFL staff were engaged in developmental meetings with steering groups to plan the implementation of future work.

Activity in hospitals at Huddersfield and Halifax was more advanced. By early 2015 the catering provider was finalising the FFLCM bronze application. This followed work by a local steering group and support from the national FFL hospital pilot programme.

### **Mapping outcomes**

As might be expected from a wide ranging and complex programme, the stakeholders we interviewed identified a wide range of outcomes. There are a number of options for grouping these outcomes. Given that the SROI methodology emphasises the involvement of stakeholders, the following outcomes are organised in relation to the main intended beneficiaries of the programme. Table 3 summarises main stakeholders and maps these against the outcomes identified through qualitative data collection.

**Table 3: Mapping stakeholders to outcomes**

<b>Stakeholder</b>	<b>Outcomes</b>
<b>Schools (school children)</b>	Curriculum development linked to local issues
	Improved behaviour of children in school
	Enriched school activities for children with SEN
	Children's improved wellbeing in school and readiness to learn
<b>School teaching staff</b>	Improved job satisfaction
<b>Parents, carers and guardians</b>	Improved relationship to school
	Improved health, wellbeing and readiness to learn of children
	Greater understanding and appreciation of the local environment
	Improved cooking skills at home - greater control and independence to make informed choices.
<b>Community and voluntary groups / Local school community</b>	School staff have an improved relationship to school community
	Parents & members of community support local social events
	More active, effective and efficient community and voluntary sector services
<b>Local authority (Public Health), in partnership with NHS CCG under Health &amp; Wellbeing Board</b>	Habits established for good dietary health
	Children educated about healthy diets
	Reduced diet related inequalities in health
	Improved dental health of school pupils
<b>School catering staff</b>	Increased job opportunities or earning potential
	Improved workplace wellbeing and job satisfaction
<b>LA Catering Traded Service</b>	Improved reputation for professionalism, innovation and quality of school meals
	Better contract retention with schools
	Improved staff performance
	Secure investment (extra funding put into service to sustain long term service standards)

	Increased capacity to develop and implement sustainable procurement
	More secure business
<b>Local suppliers (farmers, processors and wholesalers)</b>	More secure businesses
	Greater access to other contract opportunities
	Profile in the local community
<b>Local employees of suppliers</b>	Local employment opportunities
	Increased job security
	Improved workplace wellbeing and job satisfaction
<b>Central Govt (Dept. Work &amp; Pensions)</b>	Reduction in payment of unemployment welfare benefits
<b>Environment</b>	Reduced negative environmental impact of school food
	Reduced damage from carbon emissions
	Improved externalities from organic production, such as greater biodiversity
<b>Early Years</b>	Greater staff awareness of role of higher food and nutrition standards
<b>Care Homes</b>	Greater staff awareness of role of higher food and nutrition standards
<b>Hospitals</b>	Greater staff awareness of role of higher food and nutrition standards
	Communications plan and strategy for staff and patients on hospital food improvements
	Budget saving through reduced food waste
	Improved patient satisfaction with hospital food

### **Outcomes for school children: learning, behaviour in school, food habits, wellbeing**

The outcomes for school children were a focus for interviewees although other parties, such as schools, were also perceived to benefit from the same changes in some cases. These ‘chains of events’ that link outcomes with different stakeholders are discussed later in this report.

While teachers, catering staff and those working in schools were able to provide a lot of specific examples, other interviewees such as food producers and suppliers and staff from local voluntary sector agencies also specified changes for children through the FFL programme. Most interviewees talked about ‘big picture’ outcomes such as better attitudes to healthy food, better behaviour in school – although others also identified quite specific changes in terms of skills and knowledge, for example for children with special educational needs. Some of the main themes are illustrated as follows:

“You know I think “Food for Life” says it all: it’s about giving children good food habits that last a lifetime.” [Calderdale, Primary Teacher #3]

“We are providing children with incredibly high standards of healthy, nutritious meals. Supporting our local schools in addressing children’s health and classroom attainment is at the core of what we do and [the silver FFLCM] is testament to that.” [Kirklees, Councillor 1, written statement]

“The children are really pleased to have their ideas listened to. [Through the SNAG] I’ve seen children grow in confidence in talking to other children.” [Kirklees, Primary Teacher 4]

“I’ve found we’ve been able to do some quite difficult topics through food-based lessons, for instance cooking lessons have been a great opportunity to compare food origins and learn about carbon footprints.” [Kirklees, Primary Teacher, 3]

“[The school garden and kitchen] are fantastic resources for the whole curriculum. They help bring subjects alive for some pupils.” [Giving an example of teaching French in the garden] [Kirklees, Secondary Teacher 1]

“The skills one of our students got [from cooking skills in school] directly helped him get an apprenticeship with a caterer.” [Calderdale, Secondary Teacher 1]

Because of the short duration of FFL work in some schools, some interviewees felt that they could not confidently identify outcomes for children, particularly with respect to dietary health or educational performance.

### **Outcomes for Schools and the Education Sector: benefits for children also bring benefits to schools**

A key theme running through the feedback of teaching staff was that the benefits of the programme for children were similar to those for schools and the education sector more generally. That is, in cases where children obtain improved knowledge, attitudes and behaviour with respect to healthier and sustainable foods, the programme is also addressing the priorities of schools. However in some instances interviewees highlighted that these outcomes had distinct implications for schools as institutions, for example in terms of helping implement change, promoting the school’s public profile, or building school networks:

“We’ve been consulting children and that’s helped us make all sorts of changes [in a range of areas in the school not limited to food issues].” [Calderdale, Primary Teacher #5, written statement]

“Having FFL bronze has helped us prepare for Ofsted. It is an award that helps us tell a story about the educational culture of our school.” [Calderdale, Primary Teacher #3]

“We’ve invited visitors from the wider community to talk to the children and we now have links with another school who we are working along-side to develop a whole school understanding of sustainability.” [Kirklees, Primary Teacher #2]

### **Outcomes for teaching staff: improved job satisfaction**

Most teachers we interviewed had a direct role in leading the FFL scheme within their school. For teachers themselves, the main theme to emerge was overall improved job satisfaction. This reflected the opportunity for some teachers to build upon their skills and interests in, for example, gardening or cooking. Others felt that FFL opened up alternative and creative opportunities for teaching their subjects through for example taking a practical and project based focus. The benefits for these teaching staff were general and pervasive through, for example, making work ‘more interesting’, ‘more fun’ or ‘less like hard work.’ Some interviewees felt that FFL helped with staff bonding and motivation for change:

“It has helped us bring staff together” [talking about teaching staff, assistants, caretakers and cooks] [Kirklees, Primary Teacher #1]

“FFL [award framework] has given staff confidence to lead change” [Calderdale, Primary Teacher, #3]

We explored potential negative aspects as well as positive outcomes of the programme. Less positive outcomes included additional work and responsibility associated with activities or the overall coordination of FFL across the schools:

“It feels like there is always something else to do and I’m a one man band. But paper work for FFL isn’t too onerous and they give lots of helpful pointers so I’d say I have to do about 15 minutes a month paperwork.” [Kirklees, Primary Teacher #1]

### **Outcomes for parents, carers and guardians: better relationships in school and home environments**

Although we did not interview parents and the families of children, teaching and catering staff reported a range of outcomes for this group. Overall interviewees in primary school settings said that FFL was well regarded by parents. For example, FFL highlighted the importance of eating a healthy diet, cooking skills in the home, and understanding of food origins – all of which helped parents talk about or negotiate food choices in and out of school:

“Parents have said to me that their children are asking lots of questions about where food comes from. It’s been a good project for getting whole families involved” [Calderdale, Primary Teacher, #4]

“Practical activities like gardening are good for getting kids engaged in school. I think that does have a big knock on effect back at home” [Kirklees, Primary Teacher, #2]

Interviewees also identified better understanding and relationships with school through opportunities to take part in school food activities:

“We invited parents in to taste school meals week... This allowed space for the parents to sit and eat with the other children.” [Kirklees, Primary Teacher #5]

Other outcomes identified included the benefit to parents of the wellbeing and readiness to learn of their children. This contributed towards greater enjoyment of school – particularly during lunchtime periods – and willingness to attend school.

### **Outcomes for community and voluntary groups, and the local school community**

FFL was reported to act as a useful framework for developing and cementing links between schools and local community and voluntary sector groups. These links arose out of food celebration events, school projects, local visits, food markets in schools and other efforts. Local groups and agencies benefited from these activities through funding donations, dissemination opportunities, and new connections– through for example introductions to parents willing to support local good causes:

“We have had well attended events with the majority of parents and the local community attending. We’ve got to meet people from local groups we didn’t know about, like the bee keepers club and the allotment society.” [Calderdale, Primary Teacher 2]

“[Work with FFL and] the William Henry Smith joint venture allows us to take food to the wider community with the pop up bistro as well as our parents visiting it at school.” [Calderdale, Primary Teacher #7, written statement]

“We’ve had local groups, business and farm shops invited in [to school] to sell their produce. It’s a good way to raise funds for a good cause.” [Kirklees, Primary Teacher #3]

### **Outcomes for the Local authority (Public Health), in partnership with NHS CCG**

As commissioners and funders, members of the local authority public health teams in Calderdale and Kirklees had a number of outcomes that they anticipated from their FFL commission. At the point of the SROI fieldwork, evidence against performance indicators was emerging from 6 or 12

monthly monitoring and evaluation reports. These data are reviewed later in this report. Apart from specific outcomes linked to, for example school meal take up, the main observations from this group of stakeholders concerned the importance of systems, culture and population-based changes. These were expressed as both actual and anticipated outcomes:

“Food for Life is a vehicle into schools for other work we are doing – and this helps us promote other public health priorities.” [Kirklees, PH1]

“There is interest in embedding and going ahead with new frameworks for different settings.” [Calderdale, PH2]

“We are trying to get over the role of culture change for food in general, not just a narrow five-a-day message or the school meal take up message.” [Kirklees, PH1]

Other important public health priorities include action on reducing the prevalence of obesity and overweight in children and reducing the prevalence of dental decay, particularly for children in Early Years and Key stages 1 and 2. It was anticipated that the FFL commissions would support these goals however, in the short term, improvements such as changes in diet, were felt to be more appropriate outcomes linked to programme activities.

### **Outcomes for school cooks and catering staff: improved working conditions**

School cooks participating in a FFL school cooks network, FFL training events or specific school FFL activities identified a range of outcomes. Those most commonly raised concerned the quality of working relationships, peer networking and the overall working environment:

“I now have a very active role in cooking club, tasting sessions...I’m getting listened to... I’m very proud of my kitchen.” [Kirklees, Primary Cook #3]

“[The training events are] really useful to hear other ideas.” [Kirklees, Primary Cook #1]

“Regular meetings with the management team and the food for life co-ordinator has been useful in helping all the staff understand the new school food standards and what is being included on the menu.” [Calderdale, Primary Cook #2]

“It’s just the sheer pleasure you see in the faces of children growing, cooking and then eating proper food.” [Kirklees, Primary Cook #2]

Some of these activities were perceived to have value in terms of professional development, respect in the workplace, improved pay and career opportunities. There was evidence that work pressures had increased, particularly since the middle of 2014, however it appears that much of this was linked to the introduction of the Universal Infant Free School Meals programme and associated working practices.

### **Outcomes for caterers**

Changes for Kirklees Council Caterers are significant not least because of the scale of the catering operation and the numbers of schools and other contracts affected. Interviewees emphasised that the service has had considerable experience of innovation and quality improvement in school meals. This work preceded the adoption of the FFLCM at bronze and silver levels. Therefore it is important to carefully distinguish between those changes led by the catering team and those that can be attributed to FFL (both the schools award programme and the catering mark) in the period since 2012. Considering patterns of school meal take up, one interviewee highlighted the challenge:



“It’s difficult to pin point the role that FFL has had in improving take up in Kirklees. For us the catering mark has given us a structure. We’ve got a very good relationship with FFL. We need to continuously promote the service and FFL helps with this... If we hadn’t been working together the take up might not have been as high as it is.” [Kirklees Caterer #2]

This extract illustrates the role of the FFLCM scheme for reputational benefit, retention of custom and overall business security. Similarly the FFLCM was perceived to have a role in driving forward changes in procurement practices over the SROI evaluation period:

“These changes included sourcing Farm Assured meat, introducing Free Range eggs and Fairtrade products, and minimizing bought-in products and convenience items to ensure our menus reach at least 85% freshly prepared. We started using more seasonal items, and using organic pasta, oats, flour, yoghurts and carrots.” [Kirklees Caterer #1]

It is important to note that interviewees from the Kirklees Catering team also found that some in-house standards were higher than those originally adopted through the FFLCM. Nevertheless, as a nationally recognised set of standards, the FFLCM was reported to enhance the profile of the business and to maintain a competitive advantage over other catering businesses.

The large number of catering providers in Calderdale presented a challenge for research through the SROI interviews. However, the Calderdale Cooks Network and teacher interviews offered a basis for understanding the impacts of FFL on catering staff in schools and local supplier interviews offered a basis for documenting changes in procurement.

### **Outcomes for local suppliers (farmers, processors and wholesalers): business growth and opportunities**

The food supply picture for Calderdale and Kirklees is complex due to the volume and changing dynamics of transactions, suppliers and purchasers. Commercial sensitivity and limited capacity to respond to research enquiries also put limits on the depth of the SROI analysis in this area. A number of farmers, processors and wholesalers did respond to requests for an interview and questionnaire survey. Most of the local suppliers were able to identify some important and tangible impacts on their business. These included new contracts, retention of contracts, overall improved business opportunities and wider social engagement:

“We now supply to 12 schools. They’re a maximum radius of 5 miles....All this is new business since the last 3 years....We’ve got the business through a link in the Calderdale school cooks network. It is about one third of our business.” [Calderdale, Supplier #1]

“We’re able to sell our mince beef to local schools at a price that can compete with the other big suppliers [in West Yorkshire] – whose mince might come from anywhere.” [Calderdale, Supplier #3]

“We’re starting to go from being ‘price takers’ to ‘price makers’ model for retail businesses. But it’s also not just about making money – it’s about making healthy food and seeing the bigger picture. So we supply free milk to breakfast clubs. We’ve hosted 250 free school trips [for children] to see a real farm in operation. I’m interested in the links that Food for Life have to offer my farm.” [Calderdale, Supplier #2]

“We’ve been able to cooperate better with the big suppliers – they are the experts and work at scale. [Although organic product lines are] in practice a small element of their

business, it's important for them because it means they can provide the whole package.” [Kirklees, Supplier #4]

“As demand has gone up we've had to invest in new facilities, warehouse, meeting hygiene standards.” [Kirklees, Supplier #6]

“[Larger scale contracts are] helping us get over the 'stigma' about organic. That organic is time-consuming to process, expensive or unreliable. They're learning. We're learning too about what orders we can and can't do.” [Kirklees, Supplier #4]

One area where suppliers reported having quite a limited impact concerned their opportunities to use school contracts to market their services to parents. Two suppliers to large caterers noted that school contracts were often 'secretive' – presumably on the grounds of commercial sensitivity – which in turn meant that parents and students were not informed about the identity of the supplier. This was less of an issue for small and highly local suppliers.

### **Outcomes for local food sector employment**

Outcomes linked to local employment are closely linked to those for employers. However we have made the distinction in order to highlight the potential benefits of the FFL commissions for those not in employment, changing job or changing their working hours. All three of these areas were identified as outcomes by food sector employers and other parties, although we did not interview employees directly. Those employers willing to provide details were able to give specific information and a judgement of the extent to which changing employment patterns could be attributed to FFL activity:

“Business has been good. With me and the rest that's six jobs and I'd say most of them are off the back of our schools [and local authority] contracts.” [Kirklees, Supplier #4]

### **Outcomes for the environment**

FFL seeks to have a positive impact on the environment through the adoption of sustainable farming and food production practices and reduced negative environmental impacts of school food and other catering provision. More specifically these changes are intended to lead to a variety of benefits such as enhanced animal welfare, reduced food wastage, reduced packaging, and reduced carbon emissions.

School staff interviewed were able to point to environmental practices taking place for example in terms of school meal waste monitoring and composting.

“We have four compost bins and try and recycle waste paper and fruit peelings from school. We are working towards our Eco School award so children are made aware of the importance of recycling.” [Calderdale, Primary School Teacher #6]

As this quotation illustrates, there was a good synergy between FFL and the objectives of the Eco Schools scheme in this area.

In terms of larger scale changes, the main area identified by caterers and suppliers was reduced transportation of food through local contracts. Other potential areas such as reduced meat and dairy consumption were a potential source of value for schools obtaining FFL's gold award – but were not clearly evidenced by interviewees reflecting on school menus in silver and bronze FFL settings.

### **Outcomes for early years and care homes**

Early years work started in the second year of the SROI period of analysis. This is intended to further develop after the SROI period and, according to the FFL delivery team was not anticipated to deliver major outcomes for young children and their families in the start-up period. The main beneficiaries identified were early years staff who had attended FFL policy awareness and training sessions. These events proved popular and written evaluation feedback indicated that those attending gained useful professional development.

“So far we’ve focused on training and awareness raising. There has been massive interest 70 managers coming to a meeting led by us.” [Kirklees, FFL Staff 1]

Similarly with care home settings, FFL’s work has concentrated on training events and awareness raising activities. Work has also included an inter-generational initiative concerned with bringing together older people (through age UK) with children in schools. Whilst there has been important learning for FFL, this pilot work was not anticipated to deliver tangible outcomes for a substantial number of participants.

### **Outcomes for hospitals**

Full details on the outcomes identified by hospital stakeholders can be found in our case study evaluation report on FFL’s new settings activity (Gray et al, 2015). There was consensus within CHFT that they have made good progress in several areas which had been identified as the immediate priority, but that there is much left to do. Areas where changes had been perceived were:

- Changes to menus and patient food service leading to improved quality of the meals consumed, particularly around quality of soups and sandwiches, and meal temperatures.
- Improved patient satisfaction, with fewer complaints about food.
- Improved training, morale and job satisfaction for catering staff.
- Reduced plate waste, particularly at Huddersfield hospital with the introduction of lighter menu options
- A structured plan in place to review contracts with suppliers, which is an important stage in making changing procurement practices.
- A strategy for communicating actions and progress with staff and patients

However interviewees emphasised that change would be a slow process. The most significant barrier to better food in hospitals was summarised by one stakeholder:

“Just the size and pace of a hospital environment, and the fact that food’s not always the most important thing; [there are] competing priorities.” [Calderdale, Hospital Steering Group 1]

The coincidence - in terms of timing and goals - of CQUIN and FFL pilot made it difficult to attribute impacts to either. One interviewee felt that whilst changes to food within the hospitals may have happened anyway, the adoption of the CQUIN and FFL pathfinder pilot has reaped wider benefits and accelerated change. Stakeholders felt that, while there were important potential rewards, new ways of working inevitably involved time, commitment and responsibility.

### **Summary and conclusions from the stakeholder interviews**

Interviewees identified a large number of outcomes linked to the FFL local commissions. At this stage in the SROI analysis, it is worth noting their range and diversity. Some – such as the dietary changes - are more closely connected to the aims of the FFL programme, whilst others – such as

the changes to working practices for staff - are perhaps given less prominence in the programme blueprint.

Two further observations are, firstly, that some perceived outcomes are more short term and tangible than others and, secondly, that many outcomes are closely related or sequentially linked. These points feed through the next section that establishes which outcomes to include in the SROI analysis and identifies the evidence of outcomes.

The case study areas of Kirklees and Calderdale suggest some differences in terms of the outcomes for the two areas. Changes to the Kirklees catering model indicate impacts to a large number of schools, staff, pupils and suppliers –even in circumstances where the changes are small. In Calderdale, changes to the localised catering system are unlikely to be wide ranging in the authority, although this does not mean that there are not large scale effects for smaller groups. Due to differences in the local contexts, it is worth noting that the process for interviewee selection and data collection was somewhat different for the two case study areas, which makes a simple comparison inadvisable.

## **STAGE 3: Evidencing and valuing outcomes**

Following consultation with stakeholders to identify the perceived outcomes of the programme, this stage involves the collection and identification of underpinning evidence. Where such information is available we then seek to put an appropriate valuation on the outcomes.

### **Sources of evidence**

As discussed above, as an established programme FFL has a wide range of sources of information about delivery and potential outcomes. The following are some of the key data sources:

- FFL uses a CRM system for recording the progress of enrolled schools in relation to the FFL award, the FFLCM. Staff and students in schools record outcomes and report these back to FFL. FFL also keep records on the delivery of activities, such as training, and includes some reported outcomes, such as the perceptions of trainees.
- As part of the local commission, FFL undertake monitoring and evaluation of other aspects of programme delivery and this information is collated in periodic reports to the commissioners. Partner agencies, such as caterers and suppliers are also a source of data relating to the delivery of the programme.
- The hospitals have evidence from Healthwatch’s annual surveys on patient views of the appearance, taste and quality of meals (Healthwatch, 2015). The findings do not include data on improvements to health or nutrition, but are a useful source of information on patient experiences and suggested changes. In addition monthly reports to CHFT Board of Directors provide monitoring evidence against nutrition and hydration targets.
- The UWE-led evaluation undertook a survey of pupils and staff in a sample of FFL and non-FFL engaged primary schools. This assessed differences in diet, school food perceptions, cooking skills and overall school engagement with FFL type activities. This evaluation was supplemented with site visits during the course of the programme delivery and case study work on delivery settings. In addition to the UWE evaluation work, the BLF funded national evaluation led by Ecorys undertook a small scale baseline and follow-up study with two primary schools. This examined the impact of FFL-linked class based activities.

- Qualitative data captured by the perspectives of a range of stakeholders through interviews with project beneficiaries and stakeholders tell the stories of change experienced by project beneficiaries and enable outcomes to be explored further and to be valued.

External evidence of outcomes for the delivery of the FFL programme in other contexts and for the delivery of similar programmes provides a useful additional source of data.

### **Making a judgement on outcomes**

When deciding on which outcomes to include in an SROI there are a number of factors to consider including the project objectives as well as the views of stakeholders. It is also important to consider whether the outcomes identified in the data should be considered as separate or intermediate outcomes in a chain of events – this is what is meant by the theory of change. Table 4 gives an illustration of how long term impacts can be the product of a chain of events.

**Table 4: Example chain of events**

<b>Reasons for engaging with FFL</b>	<b>Immediate outcomes experienced</b>	<b>Outcomes measured through engagement with the programme</b>	<b>Longer term impact</b>
Concern about the poor diets of pupils	Healthier menu options at lunchtime	Higher school meal take up	Improved child and wider family diets
Enriching pupil learning	More cooking lessons in school	Active SNAGs	Improved pupil attainment
Focus for staff development	Cooks feel more involved in school life	Staff positive feedback on training	Highly motivated school staff

At this point in the analysis it is useful to refer to the logic model developed by the FFL programme team during the course of the local commissions. This shows some of the key processes of change anticipated and also their range and diversity (see Appendix 7).

A key decision to make is what outcomes should be valued. This has been done by making a judgement about what is important and what is measurable. Every effort has been made to ensure that the decision process is transparent with explanations provided as to why outcomes have been included and why not.

### **Putting a value on outcomes**

The purpose of valuation is to reveal the value of outcomes and show how important they are relative to the value of other outcomes. All value is, in the end, subjective. In SROI we use financial proxies to estimate the social value of non-traded goods to different stakeholders. By estimating this value through the use of financial proxies, and combining these valuations, we arrive at an estimate of the total social value created by an intervention. This step therefore involves identifying appropriate financial values for the outcomes experienced by project beneficiaries as a result of the FFL programme. Values are thus a way of presenting the relative importance to a stakeholder of the changes they experience.

For some outcomes identifying a value is relatively easy as there are clear, measurable cost savings often with nationally recognised indicators e.g. the cost of staff time. SROI also gives values to things that are harder to value so are routinely left out of traditional economic appraisal. There are several techniques available. For this SROI methods used drew where feasible on external data sources and the precedents established by other research in the field.

### Negative outcomes

An SROI analysis should seek to fully take account of the cost of negative outcomes. A few potentially negative consequences of the programme were identified. These focussed particularly on the short term funding for the commission, and the impact of investing time and effort in developing the initiative. Potential negative outcomes included the following:

- Additional food ingredient cost
- Additional time (and thus cost) associated with new food procurement practices
- Additional costs associated with school-based practical food activities
- Displacement costs in which schools or other agencies are unable to address important issues because they are focusing on FFL related activities

Some of the costs associated with staff time are considered in this analysis as inputs, and have been factored into the analysis in the section above. Some negative outcomes were not clearly linked to FFL specifically and stakeholders highlighted some overlap and uncertainty about the role of multiple factors. This was particularly the case for displacement costs, which are examined further below, and it was therefore difficult to put a value on these concerns.

### Outcomes and proxy values

We identified the final set of outcomes, indicators and financial proxies presented through stakeholder qualitative data analysis, quantitative data sources, and review of published SROI reports and economic analyses of relevance to the programme (see tables 5 and 6). Table 5 shows outcomes that we were not able to include in the SROI analysis due to the absence of evidence or difficulties identifying suitable indicators or financial proxies.

**Table 5: Mapping outcomes, indicators and data sources**

Outcome (by stakeholder)	Indicator	Sources of evidence
<b>Schools and school children</b>		
Curriculum development linked to local issues, such as local food production and services	Staff time spent in curriculum development work	Stakeholder interviews (primary schools only). FFL award applications Primary school pupil survey.
Improved behaviour in school	Reduced hours of staff time in behaviour management	Stakeholder interviews (primary schools only). FFL award applications
Enriched school activities for children with SEN	Number of hours children with SEN take part in FFL activities	FFL award application. Stakeholder interviews (primary and special schools)
Children's improved wellbeing in school and readiness to learn	Number of additional KS2 pupils: 'really liking' school meals + school lunchtime period + eating 5 FV a day + helping to cook	Primary school pupil survey
Improved awareness of healthy eating	-	Valued below under "Habits established for good dietary health"

Improved awareness of environmental sustainability	-	Valued below under “Greater understanding and appreciation of the local environment”
<b>School teaching staff</b>		
Improved job satisfaction and wellbeing at work	Reduced staff absence levels	Stakeholder interviews with primary school staff
<b>Parents</b>		
Improved relationship to school	Number of additional hours volunteering in school	FFL award applications. Phase 1 survey of parental volunteering in schools
Improved health, wellbeing and readiness to learn of children	Total number of days in time off work looking after children	Primary school pupil survey, recording those 'hating' school meals and lunchtime period.
Greater understanding and appreciation of the local environment	Time spent on educational trips to outdoor centres/ farms/children's centres	FFL awards applications
Improved cooking skills at home - greater control and independence to make informed choices.	Hours over one year freed up for parents.	Primary school pupil survey, recording helping to cook at home
<b>Community and voluntary groups / Local school community</b>		
School staff have an improved relationship to school community	Additional hours volunteering in the community (Equivalent to putting something back)	FFL award application. Stakeholder interviews (all schools)
Parents and members community support local social events	Additional hours volunteering in the community (Equivalent to putting something back)	FFL award applications. Phase 1 survey of parental volunteering in schools
More active, effective and efficient CVS services	Reduced CVS staff hours engaged in outreach work	Stakeholder interviews
<b>Local Authority (Public Health), in partnership with NHS CCG under Health &amp; Wellbeing Board</b>		
Habits established for good dietary health	Number of children in KS2 meeting 5-a-day fruit & veg dietary guidelines	Primary school pupil survey
Children educated about healthy diets	Value of FFL LC as a health promotion campaign	Stakeholder interviews
Reduced diet related inequalities in health	Additional number of children in KS2 with FSME meeting 5-a-day fruit & veg dietary guidelines	Valued above under “Habits established for good dietary health”
Reduced deprivation in the LA area	Local economic impact of the FFL LC contract	Not valued separately from value to local suppliers (below)
Improved dental health of school pupils	Reduced dental caries or unplanned dental procedures with school pupils	Not valued. Insufficient data available
<b>School catering staff</b>		
Increased job opportunities or earning potential	Amount of reduced staff turnover valued by reduced recruitment and induction costs	School survey interviews. Training feedback forms. Stakeholder interviews

Increased job opportunities or earning potential	Staff gaining at least level 2 NVQ qualification	School survey interviews. Training feedback forms. Stakeholder interviews
Improved workplace wellbeing and job satisfaction	Number of staff members reporting improved wellbeing in the workplace	School survey interviews. Training feedback forms. Stakeholder interviews. Award applications
<b>Caterers</b>		
Improved reputation for professionalism, innovation and quality of school meals	Costs of a media campaign to achieve similar reputational gain	Stakeholder interviews with catering and service provider staff
Better contract retention with schools	Number contracts retained	Stakeholder interviews with catering and service provider staff
Improved staff performance	Days work lost from school catering staff absence	School survey interviews. Training feedback forms. Stakeholder interviews
Secure investment (extra funding put into service to sustain long term service standards)	Funds invested in service development	Not valued. Assumed to already embedded as part of the business development strategy
Increased capacity to develop and implement sustainable procurement	Avoided costs of staff training to create a similar impact	Stakeholder interviews with catering and service provider staff
More secure business	Number of school meals secured	Stakeholder interviews with catering and service provider staff
<b>Local suppliers (farmers, processors and wholesalers)</b>		
More secure businesses	Core business costs	Interviews and questionnaires with local supply businesses.
Greater access to other contract opportunities	Sales from new contracts to large institutional caterers	Interviews and questionnaires with local supply businesses.
Profile in the local community	Increased sales of goods and services direct to public in farm shops and other outlets	Interviews and questionnaires with local supply businesses.
<b>Local employees</b>		
Local employment opportunities	Number of new job FTE's created through food supply contracts	Interviews and questionnaires with local supply businesses.
Increased job security	Number of existing job FTE's retained through food supply contracts	Interviews and questionnaires with local supply businesses.
Improved workplace wellbeing and job satisfaction	Number of staff members reporting improved wellbeing in the workplace	Interviews and questionnaires with local supply businesses.
<b>Central Govt (Dept. Work &amp; Pensions)</b> Reduction in payment of unemployment welfare benefits	Number of employees who gain employment or job security	Interviews and questionnaires with local supply businesses.
<b>Environment</b>		
Reduced negative environmental impact of school & hospital food	Reduced food waste	FFL / FFLCM applications and interview estimates
Reduced negative environmental impact of school food	Reduced consumption of meat and animal products	Insufficient evidence available



Reduced damage from carbon emissions	Reduction in greenhouse gas emissions, air pollution and congestion from local supply	Survey data from suppliers
Improved externalities from organic production	Savings in costs to environment of externalities	Insufficient evidence available
<b>Early Years</b> Greater staff awareness of role of higher food and nutrition standards in early years	Number of EY staff trained	FFL staff training
<b>Care Homes</b> Greater staff awareness of role of higher food and nutrition standards in care home settings	Number of care home staff trained	FFL staff training
<b>Hospitals</b> Greater staff awareness of role of higher food and nutrition standards in care home settings	Number of hospital staff trained	FFL staff training
<b>Hospitals</b> Communications plan and strategy for staff and patients on hospital food improvements	Achievement of FFCLM Award	FFL staff training
<b>Hospitals</b> Budget saving through reduced food waste	Food wasted (preparation, plate waste, unserved meals) expressed in number of patient meals	CHFT Reports. Caterer reporting on waste
<b>Hospitals</b> Improved patient satisfaction with hospital food		HealthWatch Survey

**Table 6: Outcomes, proxy values and data sources for financial proxies**

Outcome	Indicator	Financial proxy	Data source for financial proxy
Curriculum development linked to local issues	Value of staff time spent in curriculum development work	Cost per head of half day local authority area-based training session, based upon attendance of 10 trainees. Plus teacher cover supply costs	Cost half day in-school training session £30 per head. <a href="http://www.aqa.org.uk/professional-development/in-school-training">http://www.aqa.org.uk/professional-development/in-school-training</a> .
Improved behaviour in school	Reduced hours of staff time in behaviour management	Cost of 1 day a year for one member of staff to address behaviour management issues in school.	£37.1 (average hourly cost of a member of staff to a school) x 7.5 hours = July 2015 <a href="http://www.payscale.com/research/UK/Job=Primary_School_Teacher/Salary">http://www.payscale.com/research/UK/Job=Primary_School_Teacher/Salary</a>
Enriched school activities for children with SEN	Number of hours children with social disadvantage or SEN take part in FFL activities	Hourly equivalent value of pupil premium $\frac{£935}{635} = £1.47$	Pupil premium. £935. Source: DfE 2014 <a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283193/Pupil_Premium_CoG_2014-15.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283193/Pupil_Premium_CoG_2014-15.pdf</a> School tuition hours per annum. 635. Source: OECD 2013 <a href="http://www.oecd.org/">http://www.oecd.org/</a>
Children's improved wellbeing in school and readiness to learn	Number of additional children in KS2: really liking school meals + school lunchtime period + eating 5 a day + helping to cook	Cost to a school of a school-based children's emotional wellbeing course per annum	<a href="http://www.globalvaluexchange.org/valuations/school-based-emotional-learning-programme-(cost-of-delivery-to-schools)/">http://www.globalvaluexchange.org/valuations/school-based-emotional-learning-programme-(cost-of-delivery-to-schools)/</a>
Improved job satisfaction and wellbeing at work	Reduced staff absence levels	Cost of one day's absence to the school. 50% sick pay (Half of £278.25 =£139). Plus teacher supply cover: 7.5hours x£16 = £120. Total: £139+£120 = £259	1 day's absence from work at £37.10 x 7.5 is £278.25. <a href="http://www.payscale.com/research/UK/Job=Primary_School_Teacher/Salary">http://www.payscale.com/research/UK/Job=Primary_School_Teacher/Salary</a>

Improved relationship to school	Number of additional hours volunteering in school	Estimated from Average Hourly Rate £12.92 per hour in England	Based on average weekly wage of £413.59 between 2010 and 2015. ONS 2015
Improved health, wellbeing and readiness to learn of children	Total number of days in time off work looking after children	Cost of a day off work	Child & Family Care Trust (2015) Childcare Costs Survey 2015 For Yorks & Humberside. £64.14 per week & £115.54 based upon £12.84. Source: <a href="http://www.familyandchildcaretrust.org/sites/default/files/files/Childcare%20cost%20survey%202015%20Final.pdf">http://www.familyandchildcaretrust.org/sites/default/files/files/Childcare%20cost%20survey%202015%20Final.pdf</a>
Greater understanding and appreciation of the local environment	Value of more time spent on educational trips to outdoor centres/farms/children's centres	Cost of trip to farm	Cost per child of an educational farm in West Yorkshire. £2 per head <a href="http://www.thebarnemsleys.co.uk/">http://www.thebarnemsleys.co.uk/</a> . Plus vehicle hire At minimum of £68 per day. <a href="https://www.northgatevehiclehire.co.uk/personal-hire">https://www.northgatevehiclehire.co.uk/personal-hire</a>
Improved cooking skills at home - greater control and independence to make informed choices.	Hours over one year freed up for parents through children making independent contributions to cooking at home.	Cost child-minder after-school pick up	Estimated from average hourly wage in England (ONS 2013). <a href="http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2013-provisional-results/stb-ashe-statistical-bulletin-2013.html">http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2013-provisional-results/stb-ashe-statistical-bulletin-2013.html</a> . <a href="http://www.volunteering.org.uk/component/gpb/is-there-any-way-of-measuring-the-economic-value-of-the-work-our-volunteers-are-doing">http://www.volunteering.org.uk/component/gpb/is-there-any-way-of-measuring-the-economic-value-of-the-work-our-volunteers-are-doing</a>
School staff have an improved relationship to school community	(Equivalent to putting something back) value of additional hours volunteering in the community	1 day (7.5 hours) of volunteering per annum. Based upon 2 staff in all 96 schools. 7.5 x 12.92=96.9	Average weekly wage of £413.59 between 2010 and 2015. ONS 2015
Parents and members community support local social events	Value of additional hours volunteering in the community (Equivalent to putting something back)	Hourly cost of volunteering time	Based on average weekly wage of £413.59 between 2010 and 2015. ONS 2015
More active, effective and efficient CVS services	Reduced CVS staff hours engaged in outreach work	Average hourly cost CVS staff time	Based on average weekly wage of £413.59 between 2010 and 2015. ONS 2015. plus 30% overheads and on costs
Habits established for good dietary health	Number of children in KS2 meeting 5-a-day fruit & veg dietary guidelines	Value to NHS, local and central govt. of diets per capita meeting nutritional guidelines	Joint FSA/DoH analysis for the Strategy Unit (2008); benefits of 5-a-day. The gap between estimated intake (HSE 2005) and target based on standard portion size.
Children educated about the healthy diets	Value of FFL LC as a health promotion campaign	Valued to caterers. Cost of a local authority commissioned media campaign	Lancaster et al (2008). No inflation assumed.
Increased job opportunities or earning potential	Reduced staff turnover valued by reduced recruitment and induction costs	Cost of recruiting and inducting a new employee	Institute for Research on Labour and Employment Survey (2012) Costs of Replacing Employees
Increased job opportunities or earning potential	Staff gaining at least level 2 NVQ qualification	Additional income per annum	£28x52 weeks <a href="http://www.globalvaluexchange.org/valuations/earnings-increase-gained-by-moving-from-no-qualification-to-at-">http://www.globalvaluexchange.org/valuations/earnings-increase-gained-by-moving-from-no-qualification-to-at-</a>

			<u>least-level-2-qualification-(as-a-percentage-of-income)/.</u>
Improved workplace wellbeing and job satisfaction	Number of staff members reporting improved wellbeing in the workplace	Cost of a multi-component intervention to promote wellbeing in the workplace.	Cost is estimated at £83 per employee per year. <a href="http://www.pssru.ac.uk/project-pages/unit-costs/2014/">Http://www.pssru.ac.uk/project-pages/unit-costs/2014/</a>
Improved reputation for professionalism, innovation and quality of school meals	Costs of a media campaign to achieve similar reputational gain	Cost of a local authority commissioned media campaign	Based upon Lancaster et al (2008) SROI report on FFL School Meals. No inflation factored in.
Better contract retention with schools	Number contracts retained	Average per annum value of school catering contract.	Kirklees Annual statement of accounts 2013/14. £13825,800 [90% of 2013/14 turnover] / 191 [total no. of schools includes the contract outside Kirklees]
Improved staff performance	Days work lost from school catering staff absence	High Cook /Primary Supervisor 1 day cost	G5 – SCP 15 £8.59 per hr. 1 day at 7.5hours = 8.59x£64.43 plus 30% overheads/on-costs = £83.75 Kirklees Local Authority. Catering Staff Payscales 2015
Increased capacity to develop and implement sustainable procurement	Avoided costs of staff training to create a similar impact	Per capita cost of half day group training	Estimated cost half day training session led by Focus on Food at £45 per head. <a href="http://www.focusonfood.org/school_cook_training">http://www.focusonfood.org/school_cook_training</a> . Basic cooks cover direct cost at £8.59 per hour = 4 hoursx£8.59=£34.36. therefore total per head = £45+£34.36= £79.36
More secure business	Number of school meals secured	Cost of a primary school meal to parents	Kirklees Council Catering Service website
More secure businesses	Core business costs	Aggregate business revenues reported by suppliers and producers accounted for by school meal (or other) FFLCM contract	Data provided by suppliers and producers
Greater access to other contract opportunities	Sales from new contracts to large institutional caterers	Value of new contracts	Data provided by suppliers and producers
Profile in the local community	Increased sales of goods and services direct to public in farm shops & other outlets	Value of new sales per annum	Direct data from suppliers
Local employment opportunities	Number of new job fte's created through food supply contracts	Starting annual salary for job in food industry	Starting salary for work in food industry. Example: baker. Source: <a href="https://nationalcareersservice.direct.gov.uk/advice/planning/jobprofiles/Pages/baker.aspx">https://nationalcareersservice.direct.gov.uk/advice/planning/jobprofiles/Pages/baker.aspx</a>
Increased job security	Number of existing job fte's retained through food supply contracts	Starting annual salary for job in food industry	Starting salary for work in food industry. Example: baker. Source: <a href="https://nationalcareersservice.direct.gov.uk/advice/planning/jobprofiles/Pages/baker.aspx">https://nationalcareersservice.direct.gov.uk/advice/planning/jobprofiles/Pages/baker.aspx</a>
Improved workplace wellbeing and job satisfaction	Number of staff members reporting improved wellbeing in the workplace	Cost of a multi-component intervention to promote wellbeing in the workplace.	Cost is estimated at £83 per employee per year. <a href="http://www.pssru.ac.uk/project-pages/unit-costs/2014/">Http://www.pssru.ac.uk/project-pages/unit-costs/2014/</a>

Reduction in payment of unemployment welfare benefits	Number of employees who gain employment or job security	Housing Benefit and JSA rates for a single person aged over 25 per year	£86.55/ week Housing Benefit & JSA <a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302150/dwp035-apr-14.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302150/dwp035-apr-14.pdf</a>
Reduced damage from carbon emissions	Reduction in greenhouse gas emissions, air pollution & congestion from local supply	Value of reduced greenhouse gas emissions, air pollution and congestion measured by the social cost of carbon	nef (2008) FFL SROI study. No inflation factored in.
Greater staff awareness of role of higher food and nutrition standards in early years	Number of EY staff trained	Cost per head of half day LA area-based training session, rate based on attendance of 50 trainees.	Cost half day training session £20 per head. <a href="http://www.aqa.org.uk/professional-development/in-school-training">http://www.aqa.org.uk/professional-development/in-school-training</a> .
Greater staff awareness of role of higher food and nutrition standards in care homes	Number of care home staff trained	Cost per head of half day LA area-based training session, rate based on attendance of 10 trainees.	Cost half day training session £40 per head. <a href="http://www.aqa.org.uk/professional-development/in-school-training">http://www.aqa.org.uk/professional-development/in-school-training</a> .
Greater staff awareness of role of higher food and nutrition standards in hospitals	Number of hospital staff trained	Cost per head of half day LA area-based training session, rate based on attendance of 10 trainees.	Cost half day training session £40 per head. <a href="http://www.aqa.org.uk/professional-development/in-school-training">http://www.aqa.org.uk/professional-development/in-school-training</a> .

## STAGE 4: Establishing impact

Establishing impact involves identifying those aspects of change that would have happened anyway or are a result of other factors to ensure that this is taken out of the analysis. This is important as it reduces the risk of over claiming and means that the results are more credible. Key concepts within this stage are *deadweight*, *displacement*, *attribution* and *drop off*.

### Deadweight

Deadweight is a measure of the amount of outcome that would have happened even if the activity had not taken place. It is calculated as a percentage.

One approach to calculate deadweight is to look at population level data. There is limited routine data available that is directly relevant to the FFL programme. One source is National Child Measurement Programme data, for the two local authority areas this shows a small decrease in overweight and obesity from 2011/12 to 2012/13, for example the Year 6 obesity level decreased from 19.9% to 18.4% in this period. Although these trends need to be interpreted with caution, it is possible that such population level changes indicate that some improvements in food and diet for beneficiaries may have happened without the FFL programme.

A further approach to estimating deadweight involves making comparisons with non-engaged settings. The implementation of FFL was available to all schools in the local authority area. Some schools have not engaged with the FFL programme and, although they are not strictly a control group, they act as a basis for comparison with actively engaged schools. Lead staff from a sample of 10 FFL engaged and 9 non-engaged primary schools (respectively: 5, 5 in Kirklees; 5, 4 in Calderdale) were asked to report activities related to food reform in schools. These included activities involving cooking, growing, farm visits, school food policies, sustainable food education and the involvement of pupils and students.

The results showed that, for all of these activities non-FFL schools were less likely to show evidence of engagement. The results suggest that practical changes such as training, accessing new providers, changes to food related activities in schools would only have happened to a very limited extent.

In hospital settings there has been ongoing work to improve food and nutrition standards. However national evidence suggests that these initiatives have struggled to make an impact in the sector.

Drawing upon these sources of evidence we have applied a deadweight value of 20% which is a value somewhat higher to that used in other similar SROI evaluations.

### **Displacement**

Displacement is another component of impact and is an assessment of how much of the outcome displaced other outcomes. For example, has the increased school staff and student involvement in FFL meant that they have stopped other educational activities or doing other things with a social value? Interviews with stakeholders and beneficiaries revealed very limited evidence of displacement.

Some stakeholders said that without FFL they would not have been able to effectively organise a coherent set of activities around all aspects of food in school. This implied that rather than displacing other activities, FFL – and the training and framework – helped staff become more active and more effective in their work.

The evaluation did highlight some possible overlap between other aspects of school life including other wellbeing, health promotion and community engagement activities. This did not appear to be too significant in terms of stopping these activities from taking place.

In the context of hospitals, measures to improve catering services are unlikely to have displaced other activities. Although it is possible that action in this area has deflected attention from other hospital improvement priorities.

Given that there is potential for displacement linked to FFL activities, we calculated this at 20% for most outcomes.

### **Attribution**

Attribution is an assessment of how much of the outcome was caused by the contribution of other organisations or people. Attribution is calculated as a percentage (i.e. the proportion of the outcome that is attributable to the organisation).

It shows the part of deadweight for which there is better information and where outcomes can be attributed to other people or organisations. Information was gathered from participating and non-participating schools through questionnaires and interviews.

As described above a range of other services and agencies in addition to FFL support schools in food related activities. However, all these other initiatives are somewhat different from FFL and, for example, target specific at risk groups or have a general focus on healthy lifestyles. Nevertheless, following the local partnership frameworks, there is little doubt that these initiatives are likely to have supported or enhanced the work of FFL, a number of which are listed in Figure 1.

**Figure 1: Activities that may have contributed towards outcomes**

<p>Sustainable Schools Eco Schools Green Flag scheme RHS Grow Your Own Tesco Farm to Food Morrison’s Let’s Grow Vouchers Sainsbury’s Active Kids Voucher Scheme Let’s Get Cooking Universal Infant Free School Meals School Food Plan for school meal take up Hospital CQUIN</p>	<p>Forest Schools Shake Up Wake Up Phunky Foods Incredible Edible Fairtrade Fortnight Healthy Eating week LA Active Leisure scheme FINE (targeted dietary intervention) Catering marketing and promotions LA Capital Investment in Catering Facilities Local awards, e.g. Halliwell Award</p>
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Discussions with stakeholders highlighted the benefits they saw for their services, with many feeling that the FFL programme helped them to engage with other activities, for example schools used their FFL activities support their application for the Halliwell Award. In turn, achieving this local sustainability award helped schools fast track towards the FFL silver award.

In selecting outcomes and financial proxies to include in the SROI we made efforts to take into account what proportion of change it would be reasonable to assign to FFL alone. Given measures to take into account attribution within the proxies themselves, and reflecting on values for attribution used in similar SROI calculations a range from 20 to 50% was estimated for attribution.

**Drop-off and discounting**

Drop-off is used to account for the fact that the amount of outcome attributed to the project is likely to be less or, if the same, will be more likely to be influenced by other factors in future years. It is only calculated for outcomes that last more than one year.

Since FFL is concerned with food *for life* there is no question that the programme seeks to have impacts over the lifespan of pupils. External evidence indicates that behaviours and routines adopted at a young age do carry forward into adulthood. However over time it becomes increasingly difficult to judge the role of a single initiative in the lives of individuals. This report therefore focuses on the shorter term impacts and estimates drop off rate of 50% for most outcomes

In terms of discounting, the HM Treasury Green Book<sup>2</sup> recommends that costs and benefits occurring in the first 30 years of a programme, project or policy be discounted at an annual rate of 3.5%. We followed this discount rate for a three year period where the outcome is anticipated to last more than one year. Further sensitivity testing is applied later in this analysis to assess the implications of this judgement.

**Calculating the impact**

This stage involves adding up all the benefits, subtracting any negatives and comparing the result with the investment.

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<sup>2</sup> The HM Treasury Green Book <https://www.gov.uk/government/publications/green-book-supplementary-guidance-discounting>

Impact for each outcome is calculated as follows:

- Financial proxy multiplied by the quantity of the outcome gives a total value.
- Deduct any percentages for deadweight, displacement or attribution. These outcomes were estimated as follows:
  - Deadweight: 20%
  - Displacement: 20-50%
  - Attribution: 20-50%
- Repeat for each outcome (to arrive at the impact for each)
- Add up the total (to arrive at the overall impact of the outcomes included)

## STAGE 5: Calculating the SROI

The sections above present all the information required to calculate an SROI. This final section summarises the financial information recorded in the previous stages to provide the financial value of the investment and the financial value of the social costs and benefits.

### Net Present Value

The SROI ratio is based on calculations from the outcome data available from the range of beneficiaries who received an intervention in the 24 months of the FFL programme and, similarly, includes information about outcomes for no longer than 36 months after the commissioned work began. SROI allows value of the change in future years to be projected and the value over all projected years totalled.

Analysis of school survey and other sources of data recorded at 24 months after the start of the intervention suggested that for many actors (students, staff, schools, suppliers etc.) the changes had become consolidated. However numbers included in these analyses are all based upon samples and the triangulation of different data sources. It is possible that some of the impacts observed will last in to the future and therefore continue to be of value to participants and the wider community.

### Calculating the Social Return on Investment Ratio

The social return is expressed as a ratio of present value divided by value of inputs.

$$\text{SROI ratio} = \frac{\text{Present Value}}{\text{Value of inputs}}$$

The net social return divides the net present value by the value of the investment.

$$\text{Net SROI ratio} = \frac{\text{Net Present Value}}{\text{Value of inputs}}$$

### Sensitivity analysis

The calculations above are based on a great number of assumptions. Sensitivity analysis allows these assumptions to be tested to assess the extent to which the SROI results would change if some of the assumptions made in the previous stages were changed. The aim of such an analysis is to test which assumptions have the greatest effect on the model.

Repeating the analyses with changes to estimates of deadweight, attribution and drop-off indicates that substantial changes would have to be made to the assumptions in order for the ratio change from positive to negative. These calculations show that even when significant

changes are made to the analysis the results still show clear evidence of social value being created up to 3 years after the FFL intervention.

To develop the sensitivity analysis it is informative to apply the same impact assessment model used by NEF (Kersley & Knuutila, 2011) in the study on FFL catering reforms in schools. The NEF estimates were:

Duration:	5 years
Deadweight:	20%
Displacement:	5%
Attribution:	25%
Drop off:	75%

When these estimates were applied to the data the SROI ratio remained very similar in both Calderdale and Kirklees (see sensitivity analysis tables below). This suggests that our model for assessing impact followed a similar format to that used in the NEF study and, bearing in mind important differences of context and scope, provides some basis for comparisons.

### Outcomes for stakeholders

The outcomes with the relatively highest values relate to the local food economy and local employees. A related outcome concerns the value of the programme for caterers and their employees -including school catering staff. The educational benefits, which are attributed to schools in this analysis but could equally be allocated to school children themselves, account for about a fifth of the value. The partnership of the local authority public health and CCG (NHS) are beneficiaries in terms of the anticipated population health benefits. As with education, children themselves could also be presented as the parties that ultimately stand to gain in this respect.

## ***SROI Calculation for the Food for Life Commission in Kirklees***

### **Inputs, total present value and net present value**

For a 24 month period of the local commission, the value of the total inputs was calculated at £196,803. Deducting the total input provides the Net Present Value (NPV) as set out in the following table.

#### **Net Present Value calculation: 24 months investment, social value created for up to 3 years (36 months)**

<b>Kirklees</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	
Input (24 months)				£196,803
Present value of each year	£617,596	£2696,683	£148,342	
Present value of each year after discounting	£596,710	£276,957	£133,796	
Total Present Value (PV)				£1,007,464
<b>Net Present Value (PV minus the investment)</b>				£810,661

**Social return** *The social return is expressed as a ratio of present value divided by value of inputs.*

$$\text{SROI ratio} = \frac{\text{Present value } \underline{\pounds 1,007,464}}{\text{Value of inputs } \pounds 196,803}$$

For FFL programme the ratio is 1:5.12. This means that the analysis estimates that for every £1 invested in FFL there is £5.12 of social value created.



**Net social return** *The net social return divides the net present value by the value of the investment.*

$$\text{Net SROI ratio} = \frac{\text{Net Present Value } 810,661}{\text{Value of inputs } 196,803}$$

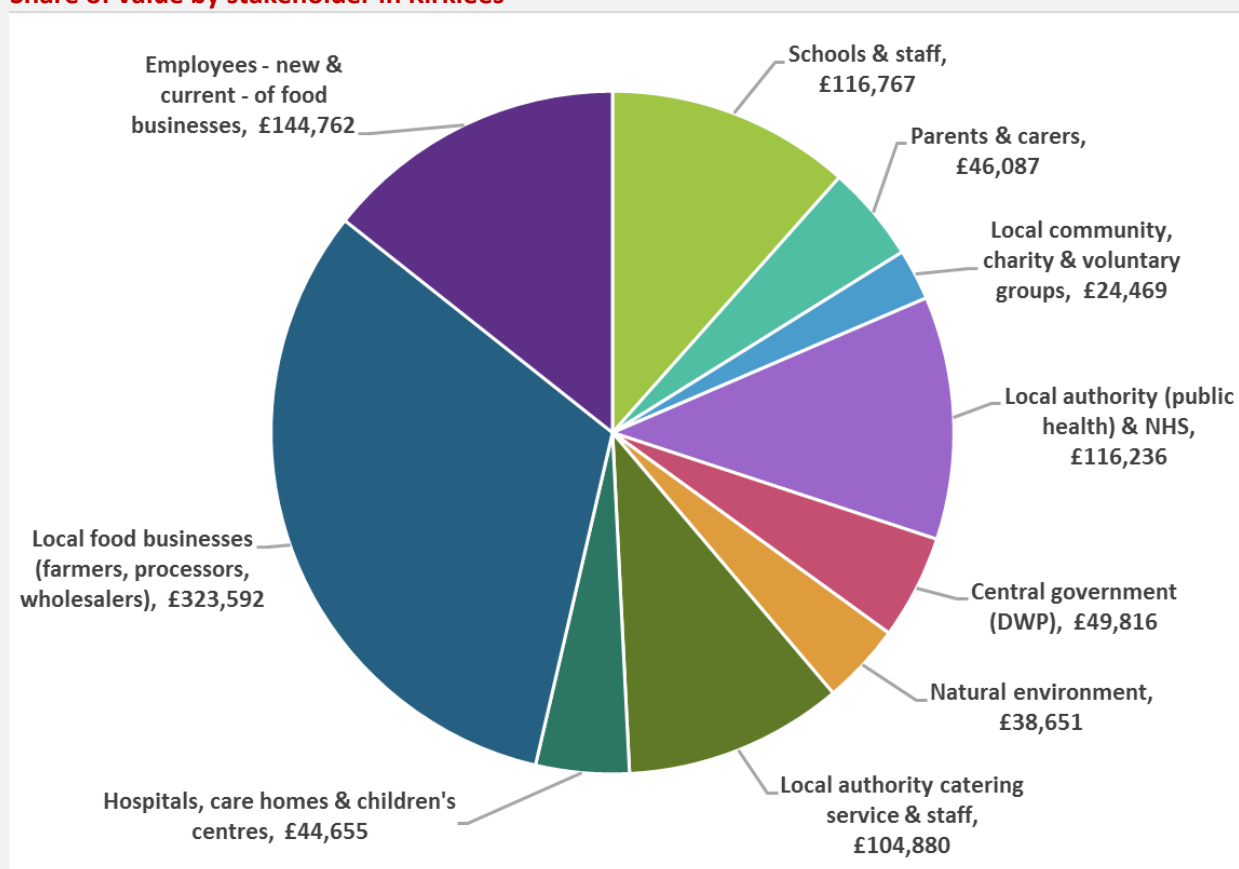
For FFL the ratio is 1:4.12. This means that the analysis estimates that for every £1 spent on FFL there is £4.12 of social value created.

**Sensitivity analyses**

Sensitivity Analysis	Social Return Ratio
Findings from analysis	£5.12
Increasing deadweight to 50%	£3.16
Increasing displacement to 50%	£3.18
Increasing attribution to 50%	£3.60
Changing drop-off to 10% for all outcomes	£7.51
As above, drop-off 75%	£4.03
Halving all values of outcomes/beneficiary numbers	£2.56
Removing all dietary health-related outcomes	£4.56
Impact assessment using New Economics Foundation model* for duration, deadweight, displacement, attribution & drop off	£5.08

\* Kersley & Knuutila, 2011

**Share of value by stakeholder in Kirklees**



## SROI Calculation for the Food for Life Commission in Calderdale

### Inputs, total present value and net present value

For a 24 month period of the local commission, the value of the total inputs was calculated at £198,894. Deducting the total input provides the Net Present Value (NPV) as set out in the following table

#### Net Present Value calculation: 24 months investment, social value created for up to 3 years (36 months)

Calderdale	Year 1	Year 2	Year 3	
Input (24 months)				£198,894
Present value of each year	£453,441	£214,864	£107,432	
Present value of each year after discounting	£438,107	£200,578	£96,898	
Total Present Value (PV)				£735,582
<b>Net Present Value (PV minus the investment)</b>				£536,688

**Social return** *The social return is expressed as a ratio of present value divided by value of inputs.*

$$\text{SROI ratio} = \frac{\text{Present Value}}{\text{Value of inputs}} = \frac{£735,582}{£198,894}$$

For FFL programme the ratio is 1:3.70. This means that the analysis estimates that for every £1 invested in FFL there is £3.70 of social value created.

**Net social return** *The net SROI ratio divides the net present value by the value of the investment.*

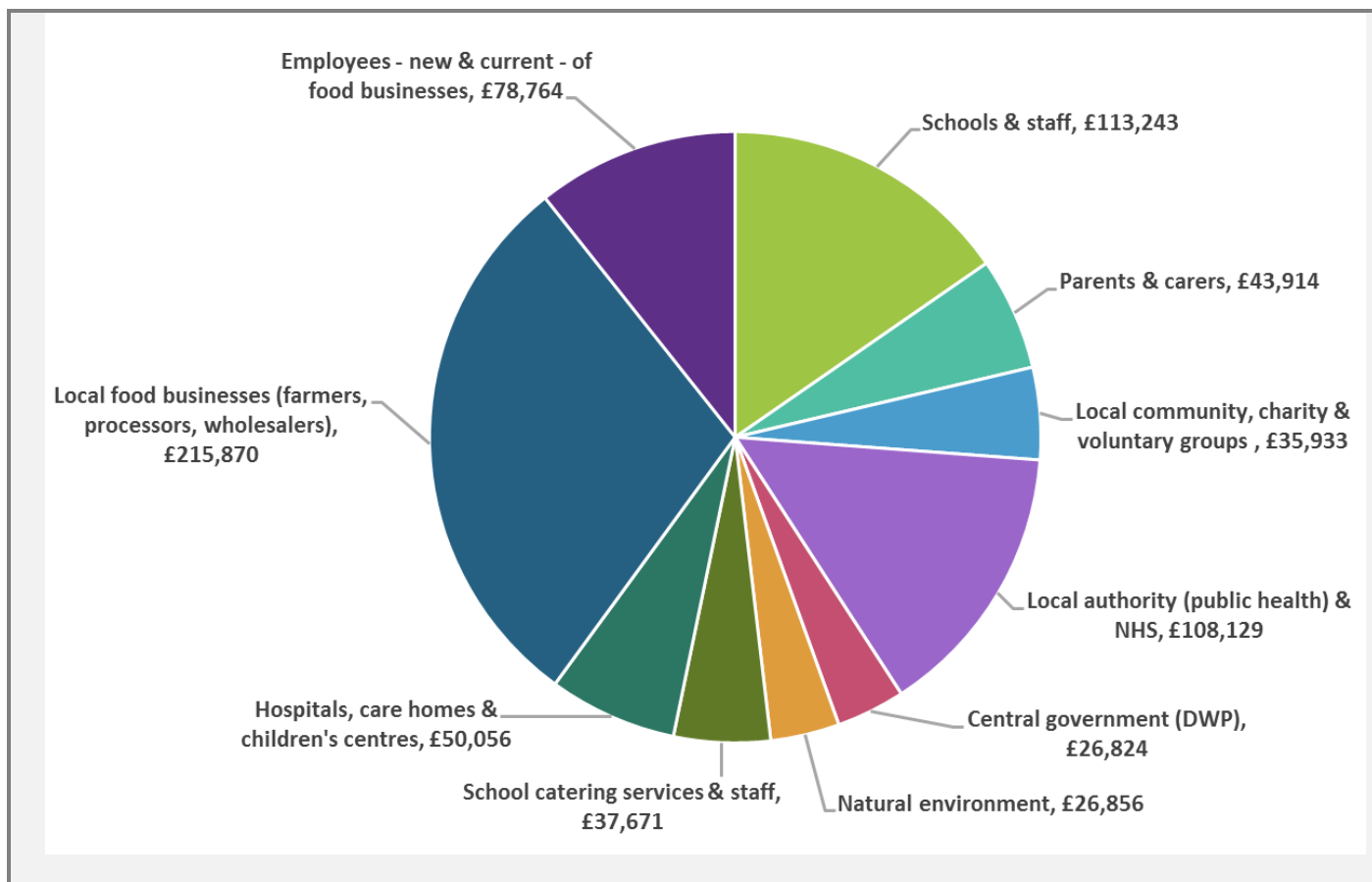
$$\text{Net SROI ratio} = \frac{\text{Net Present Value}}{\text{Value of inputs}} = \frac{536,688}{198,894}$$

For FFL the ratio is 1:2.70. This means that the analysis estimates that for every £1 spent on FFL there is £2.70 of social value created.

### Sensitivity analyses

Sensitivity Analysis	Social Return Ratio
Findings from analysis	£3.70
Increasing deadweight to 50%	£2.33
Increasing displacement to 50%	£2.89
Increasing attribution to 50%	£3.06
Changing drop-off to 10% for all outcomes	£6.91
As above, drop-off 75%	£3.48
Halving all values of outcomes/ beneficiary numbers	£1.85
Removing all dietary health-related outcomes	£3.18
Impact assessment using New Economics Foundation model for duration, deadweight, displacement, attribution & drop off (Kersley & Knuutila, 2011)	£3.75

### Share of value by stakeholder in Calderdale



### Synthesis of the SROI calculations for the two case study areas

It is useful to provide a synthesis of the SROI calculations for the two case study areas given that we adopted the same methodology; identified similar outcomes, data sources and financial proxies; and studied very similar versions of the same programme delivered in two neighbouring local authorities. Stakeholders also reported synergy and collaboration between the two local commissions with regard to, for example, staff training, food procurement and hospital settings work.

The combined financial value of the inputs for the two case studies is £395,697 and the total present value is £1,743,046. This provides an SROI ratio of £4.41 of social value created for every £1 of investment.

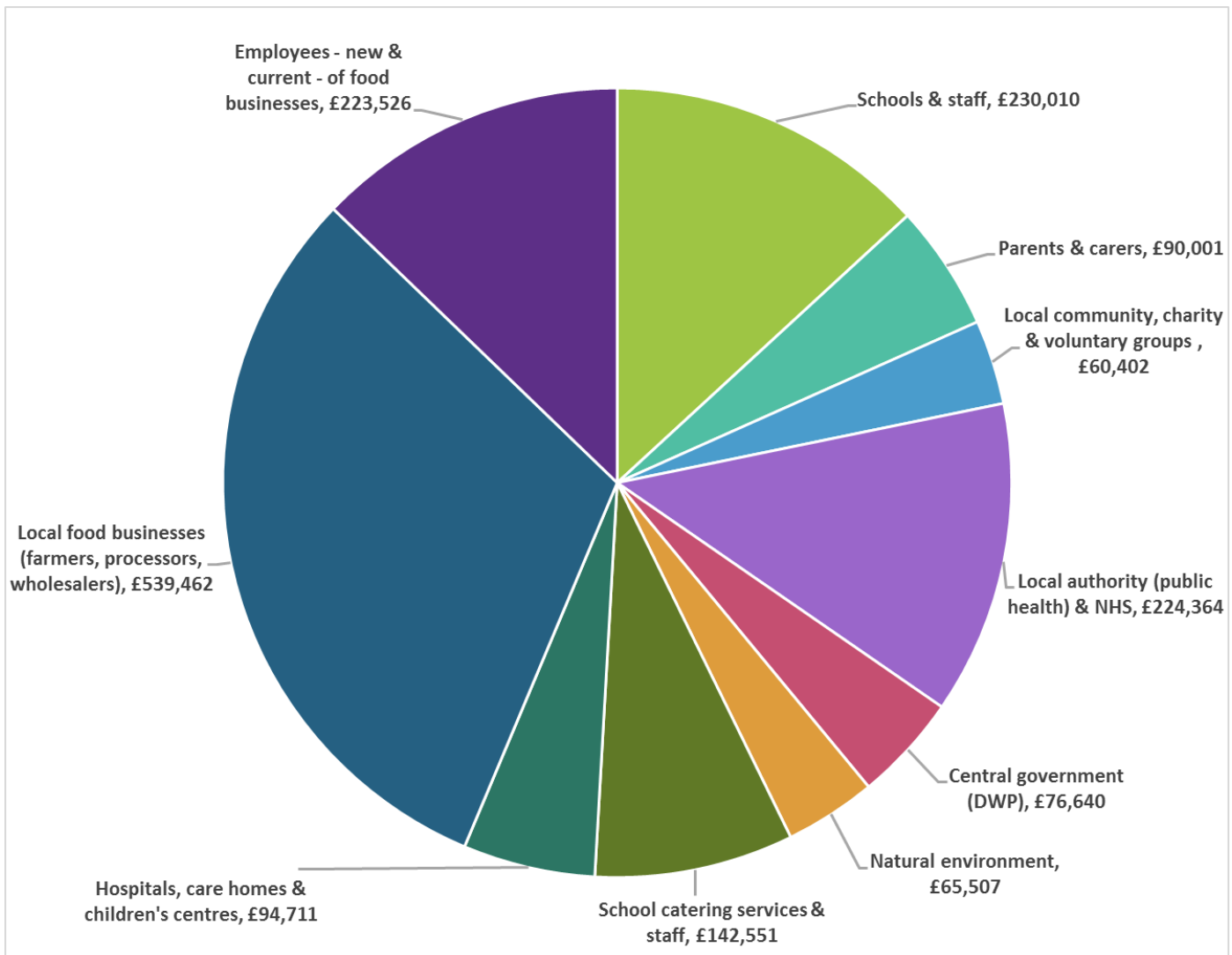
Sensitivity analyses combined for the two studies shows a convergence in the clustering of results in the range of £3 to £4 (see table below).

Sensitivity Analysis	Calderdale	Kirklees	Two case studies combined
Findings from analysis	£3.70	£5.12	£4.41
Increasing deadweight to 50%	£2.33	£3.16	£2.75
Increasing displacement to 50%	£2.89	£3.18	£3.04
Increasing attribution to 50%	£3.06	£3.60	£3.33
Changing drop-off to 10% for all outcomes	£6.91	£7.51	£6.29
As above, drop-off 75%	£3.48	£4.03	£3.75
Halving all values of outcomes/ beneficiary numbers	£1.85	£2.56	£2.21

Removing all dietary health-related outcomes	£3.18	£4.56	£3.87
Impact assessment using New Economics Foundation model	£3.75	£5.08	£4.41

The following chart shows the distribution of value by stakeholder group.

**Share of value by stakeholder for the combined case studies**



## STAGE 6: Reporting, using and embedding

A draft version of the SROI report was presented at meetings in Calderdale and Kirklees, both on the 19/10/15 with three representatives from the local authority public health teams. A further draft was then presented to 13 FFL Local Commission Pathfinders (local authority commissioners and a Big Lottery Fund representative) on 26/01/16.



**Stakeholder consultation workshop on the SROI results. Huddersfield, February 2016**

A larger consultation event was hosted in Kirklees at the University of Huddersfield on 15/02/16 as part of a local food strategy planning event. This was attended by over 40 delegates with backgrounds in food production, supply, retailing, catering, the community and voluntary sector, local government and FFL local programmes. Many delegates had been interviewed as part of Stage 2 in this study. Following a presentation, the report was discussed in two 40 minute workshops. The discussions were stakeholder led with a facilitator. Central areas for discussion were the areas of valuation, the monetisation of value, possible omissions from the report and the implications of the report for local strategy. The report, overall, was very positively received with no major areas for revision suggested. Some examples of the feedback confirm the valuation of less tangible outcomes, and point towards additional sources of value:

“I thought it was really interesting to hear that you put some value against the mental wellbeing aspect of it [FFL]. It could have been something you left out, but it made a lot of sense to include this” [Delegate #1, Kirklees Consultation Event 15/02/16]

Food for Life’s work with the Senior Management Teams in schools has really helped us obtain work with schools – so yes I think these are the sorts of benefits [of FFL] that need to be recognised.” [Local Voluntary Sector Delegate #2, Kirklees Consultation Event 15/02/16]

“I can see that there are other benefits that aren’t included in the report. [For example] improving school gardens gives kids pride in their school and can lead to reduced vandalism.” [Delegate #3, Kirklees Consultation Event 15/02/16]

Delegates were invited to provide feedback after the event. A member of the FFL programme team subsequently identified a further potential input:

"There was an additional project funded through the Big Lottery that took place in Calderdale and Kirklees during this period – it was an intergenerational linking project where Age UK was funded to provide a project officer to create links with schools for older volunteers. Our LPMs in Calderdale and Kirklees supported this project. Should we add some of this cost to the figure [i.e. input]?" [FFL Manager]

We decided that it would not be possible to formally include Food for Life's intergenerational project within the current SROI analysis primarily because, at the point of reporting, it was too early to collect evidence on the impacts of these activities. Nevertheless it is worth noting that the anticipated impacts of the intergenerational project have similarities with those of the wider programme activities in the two case study areas. This implies that the intergenerational project would create similar forms of social value for health and wellbeing of older people, children, volunteers and staff in care homes and schools. Furthermore, the intergenerational project exemplifies how Food for Life addresses food, cooking and growing needs that bridge stages of the lifecourse and agency settings. So we could anticipate that the intergenerational project would support 'systemic' forms of social value derived from, for example, new partnerships and economies of effort between volunteers, agency staff, caterers from different sectors and members of the local community.

This SROI report includes a large amount of qualitative, quantitative and financial information which will be useful to FFL, Big Lottery Fund, commissioners and service providers. The section below sets out conclusions and recommendations based on the learning gained from undertaking this research and should be relevant to all stakeholders. This feedback is part of an ongoing process of embedding learning. In both Kirklees and Calderdale local food partnerships will be drawing upon the report to inform their work.

## **DISCUSSION, RECOMMENDATIONS & CONCLUSIONS**

### **Overview**

This study suggests that FFL is valued by schools, civil society, local business and wider stakeholders as a locally commissioned programme in local authority areas. The SROI provides a financial measure of this value; that for every £1 spent on FFL there is between £3 and £5 of social value created. The sensitivity analysis showed that the range of values was closely clustered around this range, which provides confidence about the validity of the findings.

Stakeholders interviewed identified a number of positive outcomes linked to the local commission. There was little evidence that contact with FFL was displacing contact with other projects, services and agencies. In fact interview findings suggested the opposite; that support from FFL staff helps promote integration with other services in the area. The proactive approach of the FFL programme teams in partnership working were strong themes running through the interviews.

### **Value to stakeholders**

As the charts set out in the previous section illustrate, Food for Life local commissions have an impact on a wide range of stakeholders. This SROI analysis found that Food for Life local commissions deliver tangible benefits to schools (and the educational sector more widely); health agencies and their strategic partners; community groups and other voluntary agencies; and caterers and local food businesses. Children, parents, patients and local communities obtain benefits to their health, educational, personal and economic wellbeing. These benefits can be expressed in terms of a social value between £3 and £5, for every £1 invested by national and local sponsors.

Some of the value created through Food for Life can be anticipated from the contracts set out in the local commissions for the case study areas. These refer to the impacts on food catering, leadership, education and involvement. As discussed below, other forms of value might be expected from previous research – particularly the 2011 SROI study led by the New Economics

Foundation (NEF) – on the role of the FFL Catering Mark in the local food economies. Perhaps one surprising feature of the current SROI study was the role of Food for Life in supporting the working practices of teaching and catering staff. Some of this took the form of curriculum support, skills development, expert support and networking opportunities. Other outcomes - albeit less tangible - were reported to carry equal weight, including the role of FFL in promoting enjoyment and a sense of accomplishment at work. Some senior leaders in schools, catering agencies and other settings felt that the link between positive food culture and staff wellbeing was not a peripheral benefit, rather it underpinned a productive and high performing workplace.

Any summary of these impacts inevitably simplifies a complex picture. Knowledge, skills and activities developed by staff in schools, hospitals and catering agencies are both of personal benefit and contribute towards the effectiveness of their respective organisations – which in turn impact on service users. The links here are interactive and systemic in character so that some benefits, such as those which might be described as ‘capacity building’, are greater than the sum of the parts. This study also shows that a number of outcomes cannot be straightforwardly linked to stakeholders. Most importantly, although children are the central intended beneficiaries of the school and early years Food for Life programme, there are some good reasons to consider them as ‘non-economic actors’ who are not accorded financial value. Therefore children (and other service users for other settings) are best understood as the primary, or ultimate, stakeholder for whom outcomes are mediated by other groups.

Similarly the outcomes for the natural environment can be presented in a number of ways, given that social and economic outcomes will have an indirect impact. In this analysis we have followed the conventions set by earlier research (Kersley & Knuutila, 2011; Lancaster et al, 2008) and separated out some key impacts that relate to ecosystems, biodiversity and climate change. Improvements in reduced food wastage and reduced transportation were the main environmental benefits that we were able to quantify. We did not locate evidence of reduced meat and dairy consumption, although this is a potential area of considerable value where agencies move towards the gold FFL awards. Further forms of value would be linked to sustainable and organic farming methods, such as increased biodiversity. As other SROI studies have found, these are difficult to quantify at the scale of a local authority commission in the long term. A scaled up analysis of the national FFL initiative, and particularly the FFLCM, could provide an evidence platform to examine these impacts more clearly.

### **The case study areas: similarities and differences**

Kirklees and Calderdale case study areas illustrate important features of FFL local commissions including the role of grass-roots networks, coordinated local food strategies and different catering models. They also show how work is extending from schools into the new settings of hospitals, early years and care homes. As adjacent local authorities the two areas also acted as a basis for understanding the social value of FFL across local authorities at a sub-regional level.

There are many similarities between the two case study areas in terms of the outcomes identified and the range of stakeholders benefiting from the programme. Our initial review of all FFL local commissions in England suggests that a similar range of outcomes can be anticipated in other areas, especially where the programme is directed at all schools and engages with other settings such as children’s centres and hospitals.

There are some differences between the two case studies. The SROI ratio for Calderdale (£1:3.70) is lower than that for Kirklees (£1:5.12). A number of reasons could account for these differences:

1. The pupil and other populations of Kirklees are about twice those of Calderdale. This means that potential reach and scale of the programme in Kirklees is significantly greater than that of Calderdale.
2. The catering systems are very different. The local authority caterer in Kirklees has contracts with nearly all schools in the authority and holds the Silver Food for Life Catering Mark. Large numbers of stakeholders are therefore affected by changes in FFLCM-related practices. By contrast reforms to school catering in Calderdale are more heterogeneous and less systemic across all schools.
3. It is possible that the Calderdale programme creates similar value to the Kirklees programme. However the availability of evidence, suitable indicators and appropriate financial proxies was more difficult in the case of Calderdale than that of Kirklees.

These factors show that it is not advisable to make crude comparisons between the two areas, without first taking into account the different local contexts. However the sensitivity analysis provides a useful basis for determining the minimum and maximum returns across the two areas. This shows that the most conservative estimate for both cases produces a positive return on investment of £1:1.85. Meanwhile, the maximum SROI ratio for both cases is £1:7.51.

### **The findings in the context of other SROI research**

Although it is not appropriate to make simple comparisons between SROI studies, some themes emerge from this study when put in the context of other SROI analyses of Food for Life and similar programmes.

This study found a somewhat higher ratio than the NEF study of FFL food procurement by local authority caterers in Nottinghamshire and Plymouth (Kersley & Knuutila, 2011). This might be anticipated given that our research factored in a wider range of educational, health, civil society and organisational outcomes – areas for which evidence was not available at the time of the Kersley and Knuutila study. The NEF study examined impact over a 5 year period, whereas this study primarily focused on impact for 3 years in order to provide evidence of relevance for short term commissioning cycles. Our sensitivity analysis, however, found these differences had little overall effect on the SROI ratios.

Further differences are inclusion of programme commission and staff time costs in this study. We also avoided factoring in general changes that were in line with the FFL approach, such as the procurement changes by caterers that had occurred prior to the commissioning period and could not be clearly attributed to Food for Life. These decisions mean that the current study is likely to present a more parsimonious account of value than that of the NEF study.

Our study contrasts with that of Lancaster et al's SROI analysis (2008) in East Ayrshire in that we used fewer assumptions about the long term economic, health and educational impacts of the programme. We also had access to a greater depth of local empirical data to support judgements on the exposure and scale of the impacts of stakeholders. The combination of longer term forecasting and assessment based on a longer period of programme delivery may account for the higher SROI ratio found by Lancaster et al than that of our research. It is also important to note that Lancaster et al's work took place in a different time and place: the school food context in Scotland between 2003 and 2008 is not the same as that of England between 2013 and 2015.

### **Strengths and limitations of this study**

There are a number of strengths to this research. It builds upon the principles and methods adopted in previous SROI research. We gathered the perspectives of a large number and variety of stakeholders and used this information to underpin the analysis of outcomes. A considerable



body of data was available on the Calderdale and Kirklees Food for Life local commissions, their implementation and context. The study benefited from the availability of well recognised and established financial proxies for many of the outcomes.

FFL delivered the programme alongside a range of other initiatives. In order to avoid over-claiming on the role of the programme in creating change we sought to ensure that we factored in the role of other initiatives such as the School Food Plan and Universal Infant Free School Meals programme, locally authority investments in catering, and a number of national and locally led NGO projects in the areas of nutrition, physical activity and environmental studies. Some potential areas of value were excluded from the analysis because we could not attribute them to the programme with confidence.

Given the complexity of the programme and its delivery context one of the challenges concerned creating an account that adequately captured the scope and breadth of the impacts. This placed limits on the resources available to collect comprehensive data across all outcomes. Some stakeholders declined to provide detailed data, probably due to issues of time, motivation and business sensitivity. Long term health, educational development and the natural environment are all areas of outcome that represent major challenges for valuation. In this report, we have sought to provide estimates for these areas on the basis that their omission simply reinforces a narrow cost-benefit accountancy in commissioning and strategic planning.

### **Recommendations**

To make the most of the SROI findings from this study, it is important to have further dialogue with stakeholders both in the local authority case study areas and with others such as experts in the Food for Life local commission pathfinder group. These parties can advise on the credibility of the results and how they can be used to inform decision making.

With the completion of a number of SROI analyses linked to the FFL programme, there is now the basis for simplifying and refining the model for future SROI evaluations of FFL, the FFLCM and related initiatives. Where resources are available, this would allow SROI reporting on future local commissions and innovative projects. A scaled-up SROI analysis of the FFLCM or multiple FFL local commissions would provide a stronger evidence platform to analyse the environmental outcomes of FFL.

Stakeholders perceive the 'wellbeing' benefits of transforming food culture to be central to the programme. Conventional monitoring and evaluation approaches often struggle to quantify these benefits. This SROI study has enabled an account of some of these less immediately tangible outcomes. In so doing it creates a platform for expressing other important forms of value such as the health and educational benefits of the programme. The SROI findings can therefore be used to communicate in summary terms the value of the whole settings and system change aspirations of the programme.

### **Conclusion**

This study found that FFL is valued by schools, civil society, local business and wider stakeholders as a locally commissioned programme in local authority areas. The SROI provides a financial measure of this value: that for every £1 spent on FFL there is social value of £4.41 created over a three year period. In the analysis, multiple adjustments to the role of different outcomes and other factors shows that the social value is likely to fall between a lowest estimate of £2.21 and a highest estimate of £6.29. The clustering of values around a narrow range of £3 to £4 lends confidence to the validity of the results.

The methods and findings from this research are significant for other Food for Life local commissions, the Food for Life Catering Mark and other area-based food programmes, such as the Sustainable Food Cities initiative, both in the UK and internationally. In many instances, the bottom-up research method places limits on the generalisability of SROI results. However in this study the close correspondence with other SROI studies in terms of methodology and findings suggests that a similar range of outcomes can be anticipated in other areas where an FFL-type programme model is implemented, especially where the programme is directed at schools and public service catering - and engages with other settings such as children's centres and hospitals.

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## Appendix 1. Stakeholder List

Stakeholder	Reason For Inclusion	Number
School staff: FFL lead teachers, cooks, head teachers, other school staff	Potential benefits to the school, employment conditions and the working environment. Good insight into the perspectives of children and their families.	16 (8 Kirklees, 8 Calderdale)
Staff linked to FFL Hospital Pilot (FFL/CQUIN Steering Group, CRH's catering contractor (ISS), Healthwatch)	Potential benefits to the workplace, employment conditions and the working environment. Good insight into the perspectives of patients and their families.	5
Local authority (Public Health) and CCG staff	A population level service working towards local strategic objectives	4 (2 Kirklees, 2 Calderdale)
Local authority catering staff	Directly affected by reforms to catering standards and procurement practices	3
Food producers, suppliers and retailers (meat, dairy, cheese, fresh vegetables, dry goods)	Potential benefits to their business and working conditions. Well placed to give insight into the impacts of the programme on the local economy and natural environment.	6
Community and voluntary sector staff	Interest in partnership working and potential impact on local services	2
FFL staff	Good overall understanding of the potential impacts of the programme for a wide range of groups.	7
<b>Total</b>		<b>43</b>

Stakeholder	Reason For Exclusion
School children Parents and families of school children Other direct beneficiaries: nursery children, patients and care home residents	It was beyond the resources of the study to directly consult with this group. However feedback was available from other sources. Indirect evidence was also available from other stakeholders.
Big Lottery Department for Education	Funders of programme activities but only indirectly impacted on through, for example, achievement of organisational or policy goals.

## ***Appendix 2. Stakeholder interview questions (1)***

### **Example: FFL – SCHOOL STAFF INTERVIEW QUESTIONS**

Thank you for agreeing to take part in this evaluation. The aim of this interview is for us to find out more about your experience of and the support you received from the FFL programme and how things have changed for you since. The findings will form part of an evaluation report on the FFL programme. Your views and those of all consulted as part of the evaluation will be used to inform the final evaluation report.

#### **INTRODUCTIONS**

Can you tell me a bit about yourself and your involvement with the FFL programme?

1. Name and background info?
2. How did you hear about the programme?
3. What did you expect?
4. Were you already engaged with a similar project?

#### **BEFORE FFL**

5. Can you tell me a bit about how things were for you before engaging with FFL?
6. How would you describe food-related activities in your workplace? What were your expectations?

#### **INITIAL PERCEPTIONS OF FFL**

7. Practicalities – engagement with FFL staff and resources- meetings, training events etc.
8. What did you like / not like?
9. Did you access any other projects as a result of working with FFL?
10. Did you give anything up to work with FFL?
11. If there was anything you could have changed what would it be?
12. Did the project match your expectations? How is it different to these?

#### **WHAT CHANGED FOR YOU?**

13. Do you feel like anything has changed for you as a result of working with FFL?
  - Changes for children families / community in school and out of school
  - Changes for staff in school and other related aspects of school. School as a whole.
  - Changes to curriculum / lunch period /school meals (etc. as appropriate)
14. [Each case] How important was this change? Were all the changes positive?
15. Were all the changes expected or was there anything that you didn't expect that changed?
16. Which of these changes will make the biggest difference to you?
17. How long do you think the change will last?

#### **COULD ANYTHING ELSE ACCOUNT FOR THESE CHANGES?**

18. What other projects/services/agencies were you engaged with at the same time?
19. Did anyone else contribute to the experience/change?

### WHAT IS THIS PROGRAMME WORTH?

20. Can you compare it to something else just as important to you and your school?
21. Which other ways might you achieve the same changes?

## **Appendix 3. Stakeholder interview questions (2)**

### **Example: FFL – FOOD SUPPLIER INTERVIEW QUESTIONS**

*(Adapted from Lancaster et al 2008)*

Thank you for agreeing to take part in this evaluation. The aim of this interview is for us to find out more about your experience of and contact with the FFL programme and what you think about the impact it's having. The findings will form part of an evaluation report on the FFL programme. Your views and those of all consulted as part of the evaluation will be used to inform the final evaluation report.

1. Your name, Business name and contact. Your role within the business
2. Can you tell me a bit about yourself and your involvement with the FFL programme?
3. How many schools in Local Authority area are you supplying?
4. Please list the key items you supply to school meals
5. How important is school food catering – and related local authority catering – to your business?
6. I am assuming that you supply a range of local authority caterers and other caterers involved in school food? Approximately how many?
7. Would you be prepared tell us confidentially what the total value of these contracts are- and what fraction they represent of your total turnover?
8. What have been the benefits to you from undertaking the contracts?  
  
What might have happened to your business without the contracts?
9. How often do you make a delivery for these contracts?
10. Do you supply your customers in the local authority or deliver to a central depot?
11. What and how many vehicles do you use (e.g. HGV's, vans). Are your deliveries refrigerated?
12. Roughly what's your delivery mileage in a month or week to supply the contracts? Do you supply any items from other producers as a regular part of the contract (please estimate the overall percentage of your contract supplied from other producers)
13. Please tell us about any additional costs you have had as a result of the contract:
  - a. Extra staffing (numbers and/or extra hours)
  - b. Equipment (the cost of lease/purchase):
  - c. New premises (cost)



- d. New transport (cost)
- e. Refrigeration (cost)
- f. Any other costs

14. Are you planning to re-tender for the contract (contracts)? Please say why.

## ***Appendix 4. Calculating Inputs***

### **The Food for Life programme in Kirklees April 2013-March 2015**

A number of inputs were identified in the scoping and stakeholder analysis stage of the SROI study. These are set out in detail and summarised below.

#### **Kirklees Public Health funding**

The original funding through the Public Health division in Kirklees for the FFL programme was £150,000 for the period from 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2016 inclusive. Of this total £30,000 was paid for initial start-up costs from the 1<sup>st</sup> February 2013.

For the period 1<sup>st</sup> April 2014 to 31<sup>st</sup> March 2016, an additional £65,000 budget was allocated to fund an increase in activity and the support required for care settings and hospitals to engage with the FFL approach.

Therefore, the total budget for the period 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2016 was £215,000

The scope of this SROI analysis was confined to the period 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2015. The funding over this period was £120,000 (for school focused work) plus £32,500 (for hospital, care home and early years work).

**This gives a total of £152,000 through this source.**

#### **Big Lottery Funding**

In addition to funding through local authority, the local commission benefited from resources made available to FFL from a grant to the Soil Association and partner agencies as part of the BLF Phase 2 Wellbeing Programme. The original BLF funding period corresponds to the period selected for analysis in this SROI report (1/4/13 to 31/3/15), although FFL was permitted some flexibility to account for delays in the actual start of the grant period and for extension of work into 2015.

FFL local commissions will have benefited from BLF funded central FFL resources including those for management, staff support and development, monitoring, evaluation and programme development. This will have included national work on enhancing the design of locally commissioned programmes, new settings development, networking and policy advocacy. FFL's Finance Officer estimated that three members of staff undertook 29 days work supported this commission at an average cost of £495 per day, which gives a total of £26,235.

Using this estimate, **this gives a total of £26,235 from this source.**

#### **School Food Plan costs**

The School Food Plan is a Department for Education funded programme that started in September 2014. Under this scheme FFL were funded to delivery training and support for schools to implement the universal infant free school meals initiative and to promote school meal take up

more widely in schools. Between September 2014 and March 2015, FFL were awarded £30,245 to deliver the work to all schools in the North of England. Funding was not specifically allocated to schools in local authority areas, although schools in Kirklees could access the scheme on a voluntary basis. Following interviews and correspondence with FFL staff, we decided to allocate a per-local authority fraction of the funding as a cost. This was calculated by dividing the total funds by the number of local authorities in the North of England: £30,245/43 =£703.

**This gives a total of £703 from this source.**

#### **School Staff FFL Mark costs**

Many FFL linked activities are integrated into the routine delivery of school activities. These include the provision of school meals and teaching of food-related education in class time. Such activities have not been included as programme costs because they would have occurred without the programme.

However the FFL programme is linked to some areas of additional time, and therefore costs, for school and catering staff. These include time for completion of FFL Award applications, including preparation, self-evaluation and consultations.

In Kirklees, over the evaluation period 43 schools completed FFL award applications. Drawing upon interviews with schools we estimate that the additional time for these activities is 10 hours per application, which is £371 based upon £37.10 per hour Qualified Teacher Main Pay Scale Spine Point 3 hourly rate Source: DfE (2014) Teachers Pay and Conditions.

**This gives a total of £15,953 from this source.**

#### **Catering Silver Mark Accreditation Costs**

In the SROI period of analysis, Kirklees Catering Service had to renew its silver FFL Catering Mark award. This carried a fee of £1000 for inspection and renewal. We estimate that the additional time involved in completing the award application was 30 hours over and above routine quality assurance activities, which is £912 based upon £30.40 per hour for an employee on GR14. Source Kirklees Council Employee Handbook (2014)

<http://www.kirklees.gov.uk/employment/pdf/employeehandbook.pdf>

Based upon the £1000 fee and £912 staff costs, **this gives a total of £1,912 from this source.**

#### **School meal costs**

The FFL Catering Mark and FFL award schemes at bronze, silver and gold levels involve meeting a number of criteria that may have an impact on the costs of school meals. In Kirklees no schools or caterers have achieved the gold standard. We therefore examined whether there were additional costs associated with meeting the bronze and silver criteria. Kirklees Catering Service reported that there were no additional costs linked to achieving silver FFL Catering Mark. Higher costs linked to, for example the procurement of organic dry goods was off-set by reduced spending on other ingredients. These changes in procurement and catering practices were incorporated into ongoing change management framework for the organisation. The service had therefore not increased school meal costs to customers and did not have an overall higher spend for ingredients and catering practices.

**No costs were identified through this element of the programme.**

### **Supplier costs**

Suppliers interviewed included meat, dairy, dry goods and fruit and vegetable suppliers. The suppliers did not identify additional costs associated with meeting contracts linked to FFL.

**No costs were identified through this element of the programme.**

### **Costs for pupils, volunteers, parents and the wider community**

The time given by pupils, volunteers, parents and the wider community as part of their involvement in the programme has not been allocated a cost. This follows the convention in most SROI analyses where the time and efforts of programme beneficiaries is not considered material in circumstances where they are not forfeiting forms of paid employment.

**No costs were identified through this element of the programme.**

### **New Settings: Hospitals, Early Years and Care Homes**

FFL activities in new settings consisted largely of attending developmental meetings and training events. During the SROI analysis period, we did not identify specific costs. This is likely to be different in the delivery period afterwards between April 2015 and March 2016.

**No costs were identified through this element of the programme.**

### **Summary of inputs included in the SROI analysis**

<b>Input</b>	<b>Costs identified</b>
Kirklees Local Authority Public Health	£152,000
Big Lottery Fund	£26,235
School Food Plan	£703
School Staff FFL Mark applications	£15,953
Catering Silver Mark application	£1,912
School meals	-
Suppliers	-
Pupil, volunteer, parent and wider community member time	-
	196,803

### **The Food for Life programme in Calderdale April 2013-March 2015**

A number of inputs were identified in the scoping and stakeholder analysis stage of the SROI study. These are set out in detail and summarised at the end of this section.

#### **Calderdale Council (Public Health) and Calderdale CCG funding**

The funding through Calderdale Council (Public Health) and Calderdale CCG for the FFL programme was £165k between 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2015 (£30k from 1/4/13-31/9/13; £135k from 1/10/13-31/3/15).

**This gives a total of £165,000 through this source.**

### **Big Lottery Funding**

In addition to funding through local authority, the local commission benefited from resources made available to FFL from a grant to the Soil Association and partner agencies as part of the BLF Phase 2 Wellbeing Programme. The original BLF funding period corresponds to the period selected for analysis in this SROI report (1/4/13 to 31/3/15), although FFL was permitted some flexibility to account for delays in the actual start of the grant period and for extension of work into 2015.

FFL local commissions will have benefited from BLF funded central FFL resources including those for management, staff support and development, monitoring, evaluation and programme development. This will have included national work on enhancing the design of locally commissioned programmes, new settings development, networking and policy advocacy. FFL's Finance Officer estimated that three members of staff undertook 29 days work supported this commission at a cost of £495 per day, which gives a total of £26,235.

Using this estimate, **this gives a total of £26,235 from this source.**

### **School Food Plan costs**

The School Food Plan is a Department for Education funded programme that started in September 2014. Under this scheme FFL were funded to delivery training and support for schools to implement the universal infant free school meals initiative and to promote school meal take up more widely in schools. Between September 2014 and March 2015, FFL were awarded £30,245 to deliver the work to all schools in the North of England. Funding was not specifically allocated to schools in local authority areas, although schools in Kirklees could access the scheme on a voluntary basis. Following interviews and correspondence with FFL staff, we decided to allocate a per-local authority fraction of the funding as a cost. This was calculated by dividing the total funds by the number of local authorities in the North of England: £30,245/43 =£703.

**This gives a total of £703 from this source.**

### **School Staff FFL Mark costs**

Many FFL linked activities are integrated into the routine delivery of school activities. These include the provision of school meals and teaching of food-related education in class time. Such activities have not been included as programme costs because they would have occurred without the programme.

However the FFL programme is linked to some areas of additional time, and therefore costs, for school and catering staff. These include time for completion of FFL Award applications, including preparation, self-evaluation and consultations.

In Calderdale, over the evaluation period 25 schools completed FFL award applications. Drawing upon interviews with schools we estimate that the additional time for these activities is 10 hours per application, which is £371 based upon £37.10 per hour Qualified Teacher Main Pay Scale Spine Point 3 hourly rate Source: DfE (2014) Teachers Pay and Conditions.

**This gives a total of £6,956 from this source.**

### **Catering Silver Mark Accreditation Costs**

In the SROI period of analysis, CHFT started to apply for the FFL Catering Mark award. This carried a fee of £1000 for inspection and renewal. We estimate that the additional time involved in

completing the award application was 30 hours over and above routine quality assurance activities, which is £912 based upon £30.40 per hour for an employee.

Based upon the £1000 fee and £912 staff costs, **this gives a total of £1,912 from this source.**

#### **School meal costs**

The FFL Catering Mark and FFL award schemes at bronze, silver and gold levels involve meeting a number of criteria that may have an impact on the costs of school meals. In Calderdale one school caterer had achieved the gold standard.

We examined whether there were additional costs associated with meeting the bronze and silver criteria. Cooks and caterers reported that there were no additional costs linked to achieving silver FFL Catering Mark. Higher costs linked to, for example the procurement of organic dry goods was off-set by reduced spending on other ingredients. These changes in procurement and catering practices were incorporated into the practice of organisations. The services had therefore not increased school meal costs to customers and did not have an overall higher spend for ingredients and catering practices.

**No costs were identified through this element of the programme.**

#### **Supplier costs**

Suppliers interviewed included meat, dairy, dry goods and fruit and vegetable suppliers. The suppliers did not identify additional costs associated with meeting contracts linked to FFL.

**No costs were identified through this element of the programme.**

#### **Costs for pupils, volunteers, parents and the wider community**

The time given by pupils, volunteers, parents and the wider community as part of their involvement in the programme has not been allocated a cost. This follows the convention in most SROI analyses where the time and efforts of programme beneficiaries is not considered material in circumstances where they are not forfeiting forms of paid employment.

**No costs were identified through this element of the programme.**

#### **New Settings: Hospitals, Early Years and Care Homes**

FFL activities in new settings consisted largely of attending developmental meetings and training events. During the SROI analysis period, we did not identify specific costs. This is likely to be different in the delivery period afterwards between April 2015 and March 2016.

**No costs were identified through this element of the programme.**

#### **Summary of inputs included in the SROI analysis**

<b>Input</b>	<b>Costs identified</b>
Calderdale Local Authority Public Health and CCG	£165,000
Big Lottery Fund	£26,235

School Food Plan	£703
School Staff FFL Mark applications	£6,956
School meals	-
Suppliers	-
Pupil, volunteer, parent and wider community member time	-
	£198,894

## Appendix 5. Impact Map and Data Sources

The embedded excel workbook has impact maps for Calderdale and Kirklees along with data and data source information.



Kirklees Calderdale  
Impact Map\_10.xlsx

## Appendix 6. Assessment & valuation of health outcomes

This Appendix provides further details on process for assessing the dietary health-related outcomes of the FFL programme.

The wider research literature is summarised in the section “**Context: economic studies of FFL and similar programmes**” in the Introduction of this report. This outlined the potential value to healthcare services and more generally to public health of interventions designed to improve the diets of children and young people. However at present there is no widely accepted approach to assessing the financial benefits of such interventions with respect to health outcomes. To address this problem we drew upon both local and external sources of evidence to develop a ‘willingness to pay’ approach with key stakeholders in Public Health.

### Stakeholder perspectives, external evidence and guidance

Stakeholders, both from within the local authority Public Health teams and outside, were aware of the importance of dietary health and its value to NHS and public health. Building on this we summarised the key external evidence and guidance as follows:

1. Low fruit and vegetable consumption is a major risk factor in the burden of disease (WHO, 2003: Lancet Global Burden of Disease Panel [Lim et al], 2012).
2. 42,200 deaths could be avoided each year if the UK population met 5 a day guidelines for fruit and vegetable intake. This is equivalent to 411,000 QALYs (Cabinet Office Strategy Unit, 2008).
3. NICE states “Generally, we consider that interventions costing the NHS less than £20,000 per QALY gained are cost effective. Those costing between £20,000 and £30,000 per QALY gained may also be deemed cost effective, if certain conditions are satisfied” (NICE, 2013).

4. The health cost benefits of children meeting guidelines for fruit and vegetable intake accrue mainly over a longer term in the life-course. However there will also be short term (5 years or less) cost savings linked to reduced healthcare use (Cobiac et al, 2012; Lehnert et al, 2012; Solmi & Morris, 2015).

### **Interpreting the local evaluation evidence on FFL and children's diets**

Secondly we presented stakeholders with the evaluation evidence available on the association between FFL and fruit and vegetable consumption (for full report see Jones et al, 2015) and an estimate of the impact on Key 2 pupils in the local authority areas:

1. After adjusting for potential confounders, pupils in schools engaged with the FFL programme are twice as likely to eat five or more portions of fruit and vegetables per day OR=2.07, p=0.000, CI (1.54, 2.77), they were also about 60% more likely to eat more than the national average of 2.55 portions per day; OR=1.66, p=0.000, CI (1.37, 2.00).
2. The survey found that 12.3% Year 4-5 students met 5 a day in FFLP schools  
5.7% Year 4-5 students met 5 a day in Comparison schools.
3. Using school population data we estimate that:
  - a. in Kirklees 960 more Key Stage 2 pupils in FFL schools met the 5 a day FV guideline,
  - b. in Calderdale 890 more Key Stage 2 pupils in FFL schools met the 5 a day FV guideline,compared to the number of Key Stage pupils meeting 5 a day FV guideline in the Comparison schools.

The evaluation was limited to Key Stage 2 children. We therefore did not have evidence on the diets of children in Key Stages 1, 3 and 4.

### **Valuing the outcomes**

We confirmed that there was a value to Public Health and the NHS of Key Stage 2 children making dietary improvements. We proposed that this can be expressed as "the monetary value of a change in the behaviour of a Key Stage 2 child such that s/he meets the 5 a day fruit and vegetable guidance."

Drawing upon the Cabinet Office estimate of the QALYs gained if the UK population met 5 a day guidelines for fruit and vegetable intake, we used a per capita value of a QALY gained as a starting point:

"QALYs obtained through meeting FV guidelines X Lower QALY value / UK population in 2005"

$$411,000 \times \text{£}20,000 / 60,400,000 = \text{£}136.00$$

Therefore the monetary value of a change in the behaviour of a Key Stage 2 child such that s/he meets the 5 a day fruit and vegetable guidance was £136.

### **Establishing impact**

The next step involved exploring what would have happened anyway or were the result of other factors. This followed the same process in the main report for all outcomes

1. Deadweight: 20% of the change would have happened anyway. This was possibly because schools participating in the FFL programme would have made changes to food in school.
2. Displacement: 20% of the change represented a displacement of other outcomes. This was the standard estimate used for all outcomes.
3. Attribution: 20% of the change was caused by other agencies. The most important agencies in this respect were caterers that had started to put reforms in place before the FFL commission period.

With £136 as the starting point, the value created by FFL of each Key Stage 2 child meeting 5 a day FV guidance is therefore £69.63.

### **Sensitivity analysis**

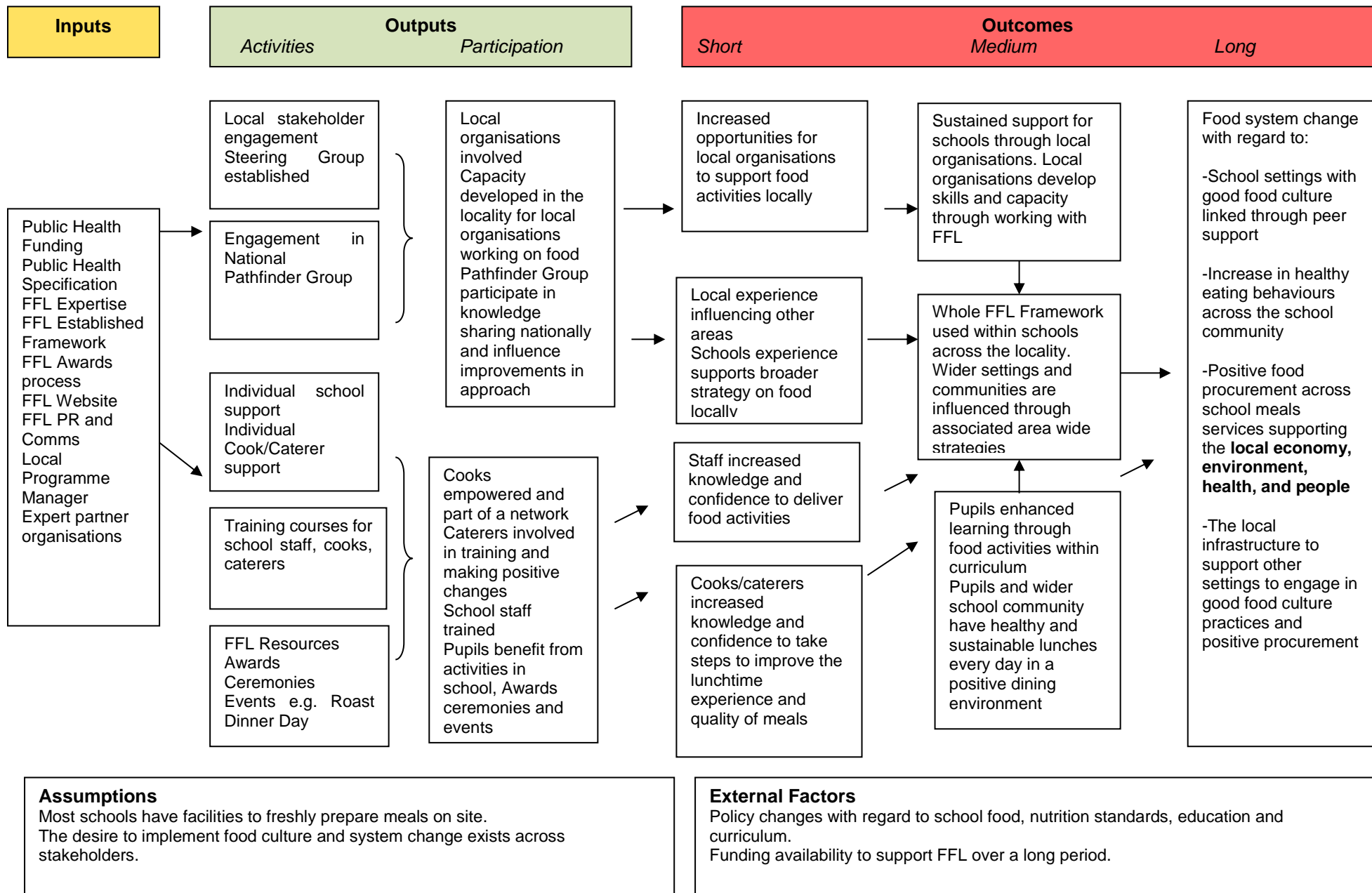
The use of QALY related data to provide a basis for the financial proxy involves a number of assumptions which would be difficult to accommodate in mainstream health economics. However in this case it provided a basis for putting a financial figure to our indicator. This helped us adhere to SROI principles by enabling dialogue with key stakeholders on what commissioners might be willing to pay for the dietary health-related outcomes of the programme.

In order to avoid over claiming the sensitivity analysis section of the main report reports on an SROI ratio that excludes the valuation of the dietary-related health outcome. This reduces the overall SROI ratio by small amount, but does not affect the overall positive return on investment.

## ***Appendix 7: FFL Locally Commissioned Programme Logic Model***

This logic model was developed in consultation with the FFL programme team in September 2014.







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**Paper 13** Gray, S., Jones, M., Means, R., Orme, J., Pitt, H., & Salmon, D. (2017). Inter-sectoral Transfer of the Food for Life Settings Framework in England. *Health Promotion International*.

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# Inter-sectoral Transfer of the Food for Life Settings Framework in England

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## Summary

Organisational settings such as schools, workplaces and hospitals are well recognised as key environments for health promotion. Whilst there is extensive literature on specific types of settings, little empirical research has investigated the transfer of frameworks between sectors. This study analyses Food for Life, an England-wide healthy and sustainable food programme that evolved in schools and is being adapted for children's centres, universities, care homes, and hospital settings. Following a case study design, we interviewed 85 stakeholders in nine settings. Food for Life's systemic framework of 'food education, skills and experience' 'food and catering quality', 'community and partnerships' and 'leadership' carried salience in all types of settings. These were perceived to act both as principles and operational priorities for driving systemic change. However, each setting type differed in terms of the mix of facilitating factors and appropriate indicators for change. Barriers in common included the level of culture-shift required, cost perceptions and organisational complexity. For settings based health promotion practice, this study points to the importance of 'frame-working' (the systematic activity of scoping and categorising the field of change) alongside the development and application of benchmarks to stimulate change. These processes are critical in the transfer of learning from between sectors in a form that balances commonality with sufficient flexibility to adapt to specific settings. Synergy between types of settings is an under-recognised, but critical, part of action to address complex issues such as those emerging from the intersection between food, health and sustainability.

**Key words:** education, food, healthy public policy, intersectoral partnerships, qualitative methods

## INTRODUCTION

Workplaces, schools and hospitals are well recognised as key organisational settings for health promotion activity (Whitelaw *et al.*, 2001), not least for initiatives seeking to improve public health nutrition and wider food-related practices. These settings, and the sectors they represent, have a major role in shaping our

relationship to food. In England, adults consume at least a third of their daily calorie intake while at places of work (NHS, 2015) and there are similar estimates for children attending school (Kaphingst and French, 2006). Thirteen percent of all meals eaten out of home are provided in healthcare environments (WRAP, 2014). National figures point to the importance of food in other

settings. In England, almost 2 million students attend 133 higher education institutions (HESA, 2014), 4.7 million children aged 0–5 years attend 82,000 registered child-care providers (DfE, 2014), and more than a quarter of a million people aged 65 and over are living in one of over 15,000 care homes in England and Wales (ONS, 2014). The significance of these settings becomes amplified when put into a life-course and ecological perspective: actors move in time and space through multiple settings, and the settings themselves can interact, especially when in spatial proximity to one another.

Whilst there is extensive literature on specific types of settings, little research has investigated the transfer of frameworks between settings in health promotion programmes. There are a variety of reasons why this form of enquiry is important for health promotion. Such research can provide insights into what programme elements work, why they do so and in which contexts. Analysis of the transfer of ideas and practices between types of settings can tease out significant commonalities and differences and identify common solutions to problems. Action across multiple settings may itself lead to synergies, for example in the form of new communities of practice and coalitions advocating for health promotion goals. With a focus on one national healthy and sustainable food programme, the aim of this paper is therefore to examine the transferability of practice and learning between settings and, in particular, tease out the role of whole system frameworks for stimulating change.

## THE SETTINGS APPROACH IN HEALTH PROMOTION

A huge diversity of contexts can be considered as ‘settings’ from a health promotion perspective. This is clearly conveyed in the WHO’s definition of settings for health:

The place or social context in which people engage in daily activities in which environmental, organizational and personal factors interact to affect health and wellbeing. A setting is also where people actively use and shape the environment and thus create or solve problems relating to health. Settings can normally be identified as having physical boundaries, a range of people with defined roles, and an organizational structure (WHO, 1998: 19).

In this paper, our settings focus is on institutions with formal organisational structures, such as hospitals and children’s centres, as opposed to settings such as neighbourhoods that are primarily defined in terms of spatial boundaries and informal social networks. In health promotion theory, Dooris’s (2005: 59) leading conceptualisation draws attention to the following features of a settings approach with organisations:

1. An ecological model, which recognizes that health is determined by environmental, organisational and personal factors which interact in complex ways.
2. A recognition that the settings are dynamic as inputs, throughputs, outputs and impacts interact in complex ways.
3. A focus on introducing change across a whole organisation or system.

This approach emphasises holistic thinking and multiple forms of action integrating health promotion into daily life (Dooris, 2004).

There is a significant body of research into healthy setting programmes delivered in the context of schools (Langford *et al.*, 2014). Other settings have received less attention, despite the positive potential for large institutions like hospitals and universities to lever change through the scale of their population reach and purchasing power (Dooris and Doherty, 2010; Weisz *et al.*, 2011). As institutions with a public service dimension, health, education and social care organisations have a significant responsibility for society’s most vulnerable are well placed to address social and health disparities.

For setting research, Dooris (2004) recognises that there is a need for better evidence of what works, how it works and in what conditions. One difficulty has been that although theoretical models present the possibility of a systems approach to settings based health promotion, practice is often focused in smaller scale projects from which it is not possible to ascertain the feasibility of transferring learning from one setting to another. The application remains isolated to project examples rather than systemic initiatives, consequently there continues to be a lack of understanding of how to achieve healthy sustainable settings (Poland and Dooris, 2010).

As with the comparative literature Dooris (2004) warns that what works in one type of setting will not necessarily transfer to others and therefore it is crucial to understand the differences between them as part of attempts to implement change across different settings and sectors (Dooris, 2004: 53). This leads Poland *et al.* (2009) to propose an analytic framework for assessing and comparing contexts. They suggest that analysis of settings can identify what is likely to be successful, so improving the transferability of good practice. Poland *et al.* do not articulate the desirability of transferring practice between settings, and offer a purely theoretical perspective which has not been applied empirically. Having obtained an understanding of what principles and activities might transfer from one setting to another, a further challenge is concerned with measuring

performance or, in other words, defining what good practice looks like. Recently there has been growing attention to the role of benchmarks in both defining and stimulating organisational change in areas such as action on obesity (Swinburn *et al.*, 2013). This is exemplified in a case study addressing the prevention of lifestyle diseases in a Danish municipality, the researchers describe the ‘supersetting’ approach maintaining that:

health promotion is most effective ‘through integrated efforts and long-lasting partnerships involving a diverse range of actors in public institutions, private enterprises, non-governmental organisations and civil society’ (Bloch *et al.*, 2014:1).

However, subsequently there has been little empirical research conducted on the transfer of benchmarking criteria from one setting to another.

Transferability and the potential for cross-settings approaches are of interest because a truly systemic model for health promotion requires links between settings to establish local connectivity:

Bridges must be built between work in different settings. Quite apart from the fact that one setting can learn a lot from another, it is clear that in relation to specific health-related topics, an issue impacting on health in one setting has its origin or solution in another (Dooris, 2004: 58).

Such integration and learning is under-researched, and there is a lack of empirically focused studies analysing learning across and between settings. This paper addresses the lack of attention to learning across settings and presents an empirical example of work to translate success in one setting to other contexts. It uses cross-sector comparison to identify processes which facilitate the implementation of a whole settings framework. The research focuses on a settings programme centred on food; this provides a focus which brings together important social, economic and environmental benefits and connects issues of health and sustainability (Fairchild and Collins, 2011). As a common feature across multiple settings, food offers a key focus for developing connections between settings and opportunities for developing comprehensive and innovative approaches.

## CONTEXT: FOOD FOR LIFE AND THE NEW SETTINGS PROGRAMME

The Food for Life Partnership (FFLP) is a coalition in England of national charities led by the Soil Association, working with Garden Organic, Focus on Food, the Health Education Trust and the Royal Society for Public Health. (Food for Life Scotland is a similar programme, but with a

different partnership structure). The partnership’s overall mission is to promote ‘good food culture’ (FFLP 2015a) and, after piloting, launched in 2007 as a whole school approach. The programme is a settings based approach that extends beyond nutritional and dietary education to encompass wider aspects of the health, social and environmental dimensions of food. These include the procurement of environmentally sustainable school food ingredients, higher animal welfare standards, food waste reduction, cooking and food growing skills, understanding of farming and food production, and the importance of a positive dining culture and food celebrations in the school community life. A FFLP whole settings framework for schools is organised under the elements of food education, skills and experience; food and catering quality; community and partnerships; and leadership.

Research linked FFLP’s systemic activities found evidence of better pupil diets in primary schools (Jones *et al.*, 2012) and subsequently the programme has been identified as a promising approach in education policy (DfE, 2013). By 2014, 5500 schools had registered online with the scheme and 21 local authorities had commissioned FFLP as an area-based schools programme with supplementary training and support for educational and catering staff. FFLP is closely linked to the Food for Life Catering Mark (FFLCM) led by the (Soil Association, 2015). The UK-wide mark involves an independent audit of caterers, offering accreditation for raising food standards. This accreditation demonstrates that an organisation meets the food quality requirements of FFLP’s framework. Organisations in varied sectors have gained FFLCM accreditation (e.g. defence and hospitals), including large catering contractors working across settings. By 2014, FFL Catering Mark meals were being served in over 25% schools in England, 20% universities, over 300 nurseries and over 100 care homes and hospitals (Soil Association, 2014).

With support from the Big Lottery Fund in 2013, FFLP built upon the work with caterers and local authorities to develop whole setting frameworks in:

- early years
- universities
- hospitals
- care homes for older people.

Hospitals and early years settings had both received public attention for inadequate food provision (APFNEY, 2010; Age UK, 2010; Sustain, 2013). In addition, hospitals and care homes were prioritised as organisations caring for the nutritionally vulnerable, where food is closely related to care, treatment and recovery from illness (Francis, 2013; Russell and Elia, 2014).

For each new setting FFLP worked with stakeholders to design and pilot a suitable whole setting approach to health promotion focused on food. This entailed co-developing a framework which drew on key components, criteria and award scheme set out in the schools programme.

## RESEARCH METHODS

The research used a key stakeholder case study design (Yin, 2013), focusing on all nine organisations piloting the FFLP new setting frameworks (three early years providers, one university, three hospital trusts and two care home groups). It followed a ‘theory of change’ approach to evaluation to examine lead informants’ interpretation of the programme operation and context (Connell and Kubisch, 1998). Data were collected primarily using semi-structured interviews, by four interviewers, with stakeholders who were involved in the design or implementation of the frameworks. Interviewees were: FFLP staff involved in piloting FFLP in settings ( $n=54$ ); a FFLP manager overseeing the programme ( $n=1$ ); FFLCM staff supporting pilots ( $n=4$ ); catering contractors supplying settings pilots ( $n=5$ ); and lead agency staff and representatives in the pilot organisations ( $n=21$ , with 2–3 per organisation). For the early years settings this included parents. Interview questions focused on the characteristics of the organisational setting; the relevance and applicability of the overall FFLP approach and framework elements; the process of establishing an FFLP whole settings framework; perceptions of barriers and facilitators for implementing an FFLP framework; and perceptions of transferability of the FFLP framework between settings. Additional data were collected from programme documents on the piloting and development of the programme in different settings.

The interviews were audio-recorded and transcribed. Following Connell and Kubisch (1998) we sought to identify participants’ explanations of how and why characteristics of the FFLP programme could (or could not) be applied to the settings of interest. Using the data analysis approach set out by Braun and Clarke (2006), each interviewer organised data according to initial themes emerging from the transcripts. The interview team then compared these results to compile dominant themes. One member of the team, who was involved in interviews in all settings, arbitrated in cases where interviewees identified very different categories. This approach allowed movement from interview topics and raw data to abstraction in the analytical process, without losing the ‘voice’ of participants (Ritchie *et al.*, 2003) and their explanations or ‘theories of change’.

Ethical approval for the study was given by the UWE, Bristol Ethics Committee.

## FINDINGS

The findings summarise the main themes arising from across the case studies. In the context of the article, these are necessarily selective and represent one area of focus in a larger evaluation. It starts with an overview of how the FFL model was framed for each setting and draws attention to commonalities and differences. The findings are then concerned with the views of study participants on the implementation of the programme, and in particular, their explanations of the role of whole setting frameworks. Finally, the findings are presented on the themes concerned with participant perspectives on the transfer of the framework elements between different organisational settings.

### Framing the FFL model for each setting

Over the course of the development process, all settings retained core elements mirroring FFLP’s school framework. Interviewees in each setting perceived a number of positive outcomes arising from piloting the FFLP framework:

**Hospitals:** better quality patient food being served and receiving positive feedback; healthier choices for staff and visitor dining and working towards this for vending; developing nutritional support for patients at discharge; trialling innovative food-focused measures such as ward dining for patients; better coordination of food related activity; improved understanding across the organisation of the role food plays in patient care and recovery.

**Care homes:** better quality food being served to residents with the result that more is eaten and residents enjoy mealtime; signs of reduced constipation amongst residents; catering staff satisfaction through external recognition and more rewarding work; better understanding of food purchasing systems; closer links between resident wellbeing and food.

**Early years:** better quality food being served to children and more children receiving freshly cooked hot meals; more opportunities for children to engage in cooking and food growing activities; staff enthusiasm and confidence for food education; increased parental engagement; external recognition for food standards.

**Universities:** excellence in catering for staff, students and visitors; more coordinated and increased awareness of food activity across campus.

The role of FFLP in supporting external communication with stakeholders was an important one, as perception of food provision played a significant role in shaping

both public perception of services and in some instances commercial advantage in terms of negotiating better food:

Trying to put what we were trying to do within a set framework, of what was easily understandable and recognizable within the external world was what FFLP brought to it (University manager).

It was particularly helpful in providing external support and challenge around the FFLCM with the contractors for staff food: FFLP has brought us together on a common goal; there is so much going on when you put it all together on paper, it makes sense (Hospital manager).

These perceived outcomes were felt to be interdependent: it was widely agreed that one value of a whole settings framework was that coordinated action across multiple areas could produce systemic change. Whilst the schools framework had many elements of application in alternative settings, in two of the new settings a fifth element emerged. This was concerned with the well-being of staff, given that employees as well as service users were clearly potential beneficiaries in these settings. The emergence of staff well-being as an element that needed to be included in the overall framework also showed how dialogue amongst stakeholders in different settings produced additional dimensions to the programme that were felt to be important in driving organisational change.

When framing the FFLP model across different settings, it was important to consider the relevant policy drivers, and how these shaped the articulation of the model to key stakeholders. The ability to use appropriate terminology within the setting may appear simplistic but the staff involved in piloting this work reported the significance of terminology in enabling them to 'read across' and transfer learning between settings.

### Implementing FFLP's setting approach

To devise settings approaches for new settings, FFLP staff sought to apply their learning from school settings:

what we wanted to[...]was to create a framework that would give a clear direction of travel to institutions that wanted to take a whole setting approach to food with the different areas of focus and with a set of criteria they might work towards [...] because, I think if you have the framework and criteria in place, it gives an opportunity for all sorts of innovation within particular settings, but that national consistent framework which allows for the sharing of good practice and a sense of benchmarking which is really motivating to a setting if they want to know how they can compare with other settings (FFLP manager).

The case studies reported that this benchmarking role was useful; all those involved had paid some attention to food prior to engagement with FFLP but it was agreed that bringing in an external perspective drove their ambition and enabled them to measure progress. A majority of the participants described the frameworks as valuable for integrating and coordinating activities, whilst alerting them to gaps or additional opportunities. A university interviewee described these wider ambitions:

the framework makes us think more widely about what we are doing on food... including things like wellbeing and that sort of stuff in it makes us think wider about how we look after staff here (Member of university carbon environment management team).

The use of frameworks in this way can be termed 'frame-working' as they were used to communicate the initiative to others, helping to secure commitment across an organisation. It enables the establishment of core principles and priorities in organisational settings with sufficient flexibility to adapt to specific contexts. One hospital representative said it provided 'a co-ordinated and focused approach to food in a way that people understand'.

FFLP's frameworks were perceived to 'pull together' activity across an organisation by:

- encouraging coordinated effort,
- stimulating dialogue across an institution,
- identifying gaps in existing activity, and
- supporting communication.

This was complemented by 'pushing out' their perspective by:

- promoting reflection on practice,
- providing opportunities to learn from others,
- sharing good practice,
- offering a framework to guide progress, and
- lending impetus to the process.

Through pulling together and pushing out, the organisations became more ambitious about what they might achieve around food and took a more systematic approach. [Table 1](#) outlines a comparison of facilitating factors for a whole setting approach across new settings.

Although case study organisations recognised the value of the frameworks, not all had implemented activity across all elements. One care home group did not feel workplace wellbeing to be a priority; and although hospitals recognised potential for food activities (e.g. food growing) on site this was not a priority and was difficult to deliver. Terminology was revised to suit each context,



**Table 1:** Comparison of facilitating factors for a whole setting approach in new settings

Facilitating factor	Early years	Care homes	Hospitals	Universities
Internal drivers	<ul style="list-style-type: none"> <li>– Brand advantage of award status (profit-making organisation)</li> <li>– Commitment of a ‘champion’ (non-profit making organisation)</li> </ul>	<ul style="list-style-type: none"> <li>– Significance of food’s contribution to resident care and wellbeing</li> <li>– Commitment of a ‘champion’</li> </ul>	<ul style="list-style-type: none"> <li>– Significance of food’s contribution to patient care and rehabilitation</li> <li>– commitment of a ‘champion’</li> </ul>	<ul style="list-style-type: none"> <li>– Food’s contribution to student experience</li> <li>– commitment of a ‘champion’</li> </ul>
External drivers	<ul style="list-style-type: none"> <li>– Statutory Early Years Foundation Framework promoting health education</li> </ul>	<ul style="list-style-type: none"> <li>– Dignity in Care agenda</li> <li>– CQC monitoring of food provision</li> </ul>	<ul style="list-style-type: none"> <li>– Statutory requirement for NHS food and drink strategies</li> <li>– Statutory requirement for a Sustainable Development plan</li> <li>– Required reporting of patient assessments of food quality</li> </ul>	<ul style="list-style-type: none"> <li>– Voluntary Healthy Universities programme</li> <li>– Voluntary People and Planet University League</li> </ul>
Team approach	<ul style="list-style-type: none"> <li>– Award criteria require staff engagement and a cross-setting approach</li> </ul>	<ul style="list-style-type: none"> <li>– Cross-setting food group</li> <li>– Cross-setting food action plan</li> </ul>	<ul style="list-style-type: none"> <li>– Cross-setting food groups with all key actors engaged</li> <li>– Cross-setting food action plans</li> </ul>	<ul style="list-style-type: none"> <li>– cross-setting steering group which lacked certain key actors</li> </ul>
Capacity and resources	<ul style="list-style-type: none"> <li>– Constrained in charitable organisations by lack of funding</li> </ul>	<ul style="list-style-type: none"> <li>– Limited by pressures on budgets and staff time</li> <li>– Some external funding for staff training</li> </ul>	<ul style="list-style-type: none"> <li>– External financial support through CQUIN payments, CCG and public health</li> <li>– Internal financial support via food’s inclusion as an organisational priority</li> <li>– Scale of catering operations allows efficiency savings to balance costs incurred through catering changes</li> </ul>	<ul style="list-style-type: none"> <li>– External funding through National Union of Students</li> <li>– Internal funding through links to estate’s priorities</li> <li>– Scale of catering operations allows efficiency savings to balance costs incurred through catering changes</li> </ul>

for example referencing ‘student education’ in universities and ‘patient experience’ in hospitals were characterised under the food education, skills and experience element.

FFLP’s whole school approach centred on embedding food in school life including the curriculum facilitated by senior manager commitment, pupil involvement, and steering groups involving a variety of stakeholders. A key task for the FFLP team was to mirror this in new settings:

One of the key aspects emerging from the schools work is that you need the leadership to be in place. So when it came to hospitals and care settings and the universities in particular, they are very large institutions. If you want to do anything meaningful then you have to be engaging at a board, senior decision maker level, making sure we had access to the management structures we need to take a whole setting approach (FFLP manager).

This is highlighted by the contrast between the three hospital case-studies: only two have established multi-

disciplinary steering groups involving senior staff from key functions. In these cases FFLP staff noted the groups helped ‘bridge that divide between catering and clinical and nursing staff around food’. Hospital staff agreed the groups prompted collaboration and a more strategic, holistic approach to food. The hospital without a multi-disciplinary steering group was identified as having slow progress and limited engagement beyond their catering teams.

### Transfer between settings

With the move from schools into new settings, FFLP worked to adapt to different contexts. This approach entailed being flexible to respond to each sector whilst retaining a commitment to core principles. Interviewees agreed that following adjustments guided by their input the final FFLP frameworks were appropriate for their settings. This was important for care homes and hospitals where staff highlighted that food cultures and practices were particular to client’s needs. Examples

included the need to provide pureed food in care homes, and the dietary needs of those recovering from illness: ‘What you eat when you’re well is not what you eat when you’re unwell’ (a member of hospital staff). A caterer with experience of schools and hospitals noted that FFLP’s focus on lower calorie meals for pupils was not appropriate for all patients. Care home staff gave the example of needing to offer foods familiar to older residents.

Some interviewees were aware that FFLP began as a school focused programme, and felt that initially there had been an over-emphasis on drawing experience from this context. A hospital facilities manager noted two sides to this: she emphasised that catering in schools is much smaller and less complex than in hospitals so lessons do not always transfer. While at the same time, hospitals could be too ‘inward looking’ and should seek to learn more from others, including FFLP who provided the opportunity to be more outward looking.

Another feature of FFLP’s approach to new settings was facilitating the exchange of good practice between similar organisations. A group of leaders for hospital food was convened which staff appreciated as opportunities to gain inspiration, and learn how to tackle common problems. In other cases, FFLP staff and public health staff acted as links between settings, and drew on experience from one context when working in another. Large catering companies supplying the case study organisations also worked across settings.

Certain features limited the potential to implement FFLP’s model fully in each setting. FFLP encouraged involvement of everyone affected by food, hence the significance of pupil voice in schools. But in other contexts, it had not been feasible to consult beneficiaries. One care home cook explained the difficulty of gaining feedback on menu changes from residents with dementia: ‘I don’t know if it’s made any difference to our residents, mainly because we can’t ask them so we don’t know’.

Another difficulty was diverse forms of organisation within each sector. The early years case studies represented very distinct operations: a large private nursery group with multiple sites nationwide dominated by fee paying parents, and a small charitable provider operating with a high proportion of attendees receiving free childcare through government support. The care home case studies similarly showed contrasting experiences between a large, national business and a regional not-for-profit group. Both large groups felt that their operational models were challenging for FFLP to work with, and that the scale of their business made it difficult to drive change through the whole institution. For charitable organisations the process was challenging for different reasons, particularly due to costs incurred:

Sourcing, it’s a step too far for a lot of people; if you look at our meat bill now it’s horrendous! [...] A lot of settings it will wipe them out (Early years manager).

This manager was concerned that an accreditation fee would be prohibitive for small organisations. In contrast, the large nursery group saw investment in FFLP’s priorities as good business as providing better meals attracts parents: food ‘was recognised in the deciding factor of choosing them or going somewhere else’. FFLP staff acknowledged the difficulty of developing an early years programme which can accommodate these differences: ‘it has to fit such a diversity of systems, it is really, really hard’.

A prominent challenge across the case studies was the nature of hospital catering systems and infrastructure. Whilst hospital staff were enthusiastic about cooking more fresh food on site, they lacked suitable kitchens or staff. FFLP’s emphasis on local produce was challenging due to the scale of hospital purchasing which necessitates large suppliers. Certain catering changes were precluded by the nature of contracts lasting a decade or more, tying a hospital to a mode of meal provision or specific sub-contractors. The logistics of altering these was indicative of the overarching challenge of driving change within hospitals:

Just the size and pace of a hospital environment, and the fact that food’s not always the most important thing, competing priorities (Hospital staff).

## DISCUSSION

This cross setting research has provided new insights into the transferability of a school focused national healthy and sustainable food programme across five new diverse complex settings. To differing degrees, the FFL pilot was successful in facilitating organisations to become more ambitious about what they might achieve around food through the adoption of this systemic framework approach. In particular, it focused organisations on how to introduce change at a systems level, through attention to the framework elements of leadership; community and partnerships; food and catering quality; food education, skills and experience - and the additional element of workplace wellbeing. It increased organisational understanding of the complex interactions needed to support a healthy and sustainable food system and ultimately public health improvement (Dooris, 2005; Orme and Dooris, 2010).

The case studies illustrate varying forms of adoption in new settings of a national programme originally developed with schools and catering organisations. The overall elements employed in the programme framework carried salience across types of setting, although specific

elements resonated to different degrees. The research identified some cross-cutting barriers to implementing a whole setting approach to the promotion of healthy and sustainable food issues. These included:

- The scale of culture-shift required from marginalised and cost-driven catering services.
- Perceptions of affordability linked to investment in staff time, accreditation and changes in food procurement practices.
- Logistical and infrastructural limits in complex organisations with dispersed operations.

A number of factors facilitated engagement, these are summarised in [Table 1](#) in terms of the internal and external drivers, the team approach and the capacity and resources typical for each organisational setting. Some factors identified are similar to those identified by Poland *et al.*'s work (2009) on generic issues involved in changing settings in health promotion planning, although our work illustrates specific food-related issues.

Overall, organisations found the clearest engagement in relation to the 'food quality and catering' element. In settings where food was directly linked to the core business of providing care and health recovery (hospitals, care homes) catering was an obvious focus. For early years providers concern with food quality represented an opportunity either to gain a market advantage or improve service user outcomes. To promote activity beyond food quality it was important to identify how a settings approach contributed to core business as expressed, for example, in quality management systems of hospitals (Röthlin *et al.*, 2015; Weisz *et al.*, 2011). For universities, there were opportunities to connect food quality to the sector's priorities including student experience and education for sustainable development (Dooris and Doherty, 2010).

Whilst some organisations piloted activity under additional framework elements this was not universal. Adoption of a whole setting approach depended ultimately on high-level commitment. The care home group whose board and chief executive agreed to make food a priority authorised a wider range of activities than in one where top-down support was weak. Interviewees suggested that, had higher-level support within the university been more widespread, co-ordinated progress would be possible. Within a hospital, high-level commitment was boosted through the personal interest of a senior executive. As with FFLP's work in schools (Orme *et al.*, 2011), it was clear that leadership is vital to making progress. But this had to be combined with bottom-up participation across an organisation (Dooris, 2004; Dooris and Doherty, 2010). This was evident in the

value of steering groups drawing in people from multiple teams and functions, particularly in large complex organisations.

Dooris (2005) has drawn attention to the need to create links between parts when applying a systems approach. Participants reported that the programme model offered a useful basis for 'pushing out' and 'pulling together' coordinated action across their organisations. However, there remained gaps in practice, for example the university case study showed signs of activity across all elements, but limited evidence of integrated activity or recognition of the interrelationships between elements. One process that appeared to help plan and develop whole settings work could be described as 'frame-working'. Frame-working, in this context, can be defined as a structured process of scoping and categorising principles and priorities in the field of change. This was a step further than that of the general 'framing' because it led to the identification, naming and grouping of actions needed to create whole system change. In the case of FFLP, frame-working was an active process that involved lesson drawing between settings and dialogue between programme and organisation staff to agree meaningful categories and points of reference. This process helped stakeholders look beyond initial areas of focus, communicate the connections between food-related activities, and identify appropriate indicators for change.

There are a number of limitations to this study. The focus on the work was on the early stage – or pilot - implementation of inter-sectoral transfer, and did not have the opportunity to track this process over a longer duration. Although we obtained the perspectives of a range of practitioners, it was beyond the scope of the study to explore the views of key stakeholders such as students, patients and care home residents. It is plausible that the learning to arise from the research is applicable in a range of health promotion settings, however some aspects, for example connected to catering procurement, may be specific to food-related practices. The concept of settings is widely applied in health promotion and this study was concerned with organisational settings, rather than those framed in relation to communities and residential populations.

## CONCLUSION

This research has found that it is possible for a whole setting approach to transfer between types of setting, and to develop interventions applicable in more than one sector. The example of Food for Life Partnership suggests that the transfer of whole setting frameworks is

feasible and can act as a basis for scaling out interventions. This was apparent as the programme embedded and mainstreamed its multi-setting approach over the course of our research. It shows that working across settings is desirable for making use of learning from one context to inform design of an intervention applicable elsewhere. There is a potential public health efficiency to work across settings, and to share staff and materials. For commissioners there is value in working with approaches they are familiar with, and which can build into connected multi-settings work across an area. Cross-sector work also fits a real world context where large contractors, for example in catering, are delivering across multiple organisations. There is also value for wider circles of policy actors: attention given to whole setting frameworks and their transferability offers granularity and substance for those charged with coordinating strategic action with multiple organisational partners and sectors of activity.

The study helps develop a methodology for practical and coordinated health promotion action across multiple settings (Poland *et al.*, 2009). This analysis draws attention to ‘frame-working’ as a key process for establishing core thematic principles and priorities in organisational settings - a process that must be balanced with sufficient flexibility to adapt to specific contexts. A linked process is one of developing criteria for change that are meaningful and appropriate to the setting, but which also offer the prospect of coordinating work between settings. Evaluative researchers have a valuable role to play in frame-working activities because their enquiries can ‘surface’ the theories of change - or underlying explanations - that might be implicit or weakly articulated in a programme’s framework. Evaluations can then test out the role of these underlying processes in leveraging change in different types of setting and inform a more nuanced understanding about what, why and how framework elements do or do not travel.

Comparison of different setting types suggests that to transfer between settings an intervention must be able to be linked directly to the key internal and external drivers of each setting. This research demonstrates that applying an intervention like FFLP in diverse settings does not result in inappropriate homogenisation providing it is tailored to suit. Ensuring this achieves positive outcomes depends on close collaboration between those in the target setting and those designing the intervention, with a culture of mutual learning. A whole setting approach should be regarded as a live, constantly evolving model, allowing each new setting to adapt it to their needs and ways of working.

By turning attention to cross-sector learning and delivery this paper develops the field of enquiry within settings research. It provides an empirically focused analysis to complement Poland *et al.*’s theoretical framework for considering transferability between settings (2009). The research points to certain challenges facing the healthy setting agenda. Firstly, it suggests that organisations can emphasise the elements of a settings approach rather than the links between them (Dooris, 2005). Secondly, there has not yet been full consideration of how to link action between settings and to develop coordinated action across multiple sectors. This is a crucial next step to secure synergy and scaling up in health improvement (Dooris, 2005; Poland and Dooris, 2010), particularly for complex issues such as those born out in the intersection between food, health and sustainability.

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Article

# Scaling up and out as a Pathway for Food System Transitions

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**Abstract:** This paper contributes to the understanding of sustainability transitions by analysing processes of scaling up and out as change pathway. It defines scaling up and out as a distinct form of policy transfer focused on programme implementation, with continuity of actors across jurisdictions. We detail how scaling up and out occurs, introducing a new mechanism to policy transfer frameworks. This is explicated through the case study of Food for Life (FFL), a civil society innovation programme promoting sustainable healthy food in public settings. We highlight why FFL was scaled up and out, how this was achieved, by whom, and the results and success factors. The case study demonstrates the importance of interrogating motivations for transferring policies, and how these influence whether successful outcomes are achieved. This requires a revised framework for analysing policy transfer, with greater attention to the links between motives and outcomes, and a less binary understanding of agents' roles. Where scaling is the mode of policy transfer, we suggest that continuous involvement of at least one transfer agent across the process is significant to success. We conclude by highlighting implications for future research into policy transfer and food system transitions.

**Keywords:** transitions; scaling up; scaling out; policy transfer; public food

## 1. Introduction

The need to change an unsustainable food system seems in little doubt; how this might be effected is a fundamental question for agri-food and sustainability scholars [1]. Desire for change has stimulated a proliferation of alternative food initiatives, but innovations remain piecemeal, making limited impact on the dominant system [2–4]. This resultant gap between ambition and achievement presents a challenge for those facilitating or researching sustainability transitions. Bringing transitions under the spotlight, Hinrichs suggests that there are many potential pathways to food system sustainability the “processes, promises and pitfalls” of which need interrogation [1] (p. 144). We interrogate one such pathway.

Commentators suggest niche or alternative food system innovations should scale to become more widespread making the challenge of enabling alternatives to ‘scale up and out’ as pressing [3,5,6]. Mount identifies this as the next hurdle facing local food systems: “in order to capitalize on the momentum of this movement and to broaden accessibility, local food entities will have to scale-up, engaging either more or larger consumers and producers” [7] (p. 108). Friedman notes the effort to scale up local food supply chains as a long-standing focus of Toronto’s community food sector [8]. Those participating in UK food policy networks will have encountered frequent discussion of how to scale. But commentators do not explain why this is a suitable strategy for driving change. Following Hinrichs, it is important to consider the promise and problems of scaling as potential pathway for food systems change. But there is little clarity on what scaling up and out is, hence a key task is

to define this distinct pathway. Policy is one component of regimes perpetuating unsustainable systems, with transition dependent on policy makers choosing to enact alternative regulation [9,10]. Applying the logic of policy transfer to transition therefore contributes understanding of how innovations drive change. Policy transfer analysis complements transition theory as the former attends to actors and agency [11] whilst the latter tends not to [12].

A second challenge is knowing whether scaling up and out is a desirable transition pathway, and why. Proponents assume innovations delivering at a small scale will achieve more if scaled beyond the local. This logic is apparent in transition theories, with scaling up identified as one mechanism for niche innovations to become mainstream [13,14]. Although this logic is intuitively appealing, Born and Purcell [15] alert us to the danger of assuming any association between scale and sustainability. A second task for this paper is therefore to identify what makes scaling a desirable transition pathway, and whether it is more so than other modes of policy transfer. This requires better understanding of how it happens, how successful outcomes are promoted and negative ones avoided [16]. The case study demonstrates that transfer agents' motivations are a crucial success factor. We argue that this requires analysts to revisit the question 'why transfer policy?' because placing policy transfers on a continuum between voluntary and coercive over-simplifies drivers, neglecting motivating factors and how transfer agents interact. Closer attention to these is important to understanding the likelihood of successful transfer, and to correctly characterise roles involved. We therefore revise Dolowitz and Marsh's [17] influential framework for policy transfer to support assessment of whether transfer is likely to achieve success.

The paper aims to address two linked questions. Firstly, how can scaling be defined and developed as a framework for conceptualising transitions to food sustainability? Secondly, how can this conceptualisation be used to inform our understanding of the development of food sustainability initiatives? The initial question is addressed through a review of literature, with a focus on the contribution of scholars working in the fields of policy and programme analysis. We then draw upon this material in an organisational case study of Food for Life (FFL), a leading a non-governmental initiative in England aimed at promoting sustainable food in public settings such as schools. The paper concludes with broader reflections and questions for future research.

## 2. Literature Review and Conceptual Development

### 2.1. Transitions to Food Sustainability

Like many seeking to understand sustainability, scholars of food systems have taken interest in transition. This "gradual, pervasive shift from one state or condition to something different" is pertinent to sustainability as actors work to drive change, in this case towards a more sustainable food system [1]. Food systems encompass activities to produce, process, distribute, sell and consume food, which are linked in complex relationships and feedback loops [18]. Today's dominant food system is characterised by highly industrialised production feeding global supply chains where power concentrates with multi-national businesses [9,19,20]. Transitions from this towards sustainability are driven by the goal of increasing social justice and reducing environmental damage [19], and increasing resilience to climate change [20]. The many strategies for this include those targeting public procurement and mass institutional catering. Public institutions' purchasing effects significant change because its scale and stability is sufficient to motivate large suppliers and producers to work differently [18,21]. Food for Life, a case study focus in this paper, is part of a global movement working to lever change through school food, in response to concerns regarding health and environmental impacts [5,22]. Food policy decisions arguably have more traction when targeting public actors than individual consumers or businesses, hence interest in potential to transfer successful policies for sustainable public food.

There is a large and growing literature on sustainability transitions, which we define as "fundamental transformation(s) towards more sustainable modes of production and consumption" [23]



(p. 955). A number of frameworks, or pathways, have achieved prominence including those concerned with organizational management, social movements and technological innovations [23]. Such ideas have been applied to food system innovations, with Geels' [24] multilevel perspective model particularly popular, e.g., [2,9,10,25]. This regards transitions as a result of interaction between regime, landscape and niche. Regime level is the over-arching socio-technical system of rules, structures and organisations which stabilise practice and drive continuity. Landscape level marks deep structural trends which shape the context for actors, only changing slowly. Niches are often the product of community or civil society actors tackling local problems in a zone of experimentation which pulls against forces perpetuating regimes [20]. Innovation occurs at niche level where they find incubation from the regime so can operate under different rules, free from path dependencies. Transition occurs when innovations break out of niches to influence landscape or regime. This might happen through accumulation if an innovation builds momentum within a niche, through change at landscape level creating pressure for change, or when destabilization of the regime opens an opportunity [24].

Applied to food systems, regime represents mainstream approaches dominated by large-scale industrial farming, and lengthy supply chains controlled by powerful agri-businesses [9]. Niche innovations include alternative food networks which bring producers and consumers closer together [2], organic food production [10], and civil society programmes supporting local food activity to shorten supply chains [26]. Strategic niche management can prompt policy change supportive of niche innovations as happened with the expansion of organic food production [10]. The mainstream may react by marginalising niches; particularly strong state control of agri-food systems can limit the potential for transition [20]. A further scenario is one in which alternative food production becomes 'conventionalised', that is a process of transforming an oppositional movement into a highly regulated and capitalised sector that differs little from its conventional counterparts [27,28].

Scaling up is cited as one mechanism spreading niche innovations to prompt transition [13,14]. But literatures on transitions theory and food systems lack critical reflection on how scaling functions, its outcomes and desirability. Given the prominence of governance within the food sector [20], policy makers are key transition agents in this context. Yet food system transition through policy and civil society programmes have not been explored as fully as those driven by individual practices. This leads us to regard scaling as a form of policy transfer in which state and non-state actors move and develop a solution. A focus on scaling up and out applies a policy transfer perspective to enhance understanding of transition mechanisms, in turn challenging how policy transfer is analysed.

## 2.2. Conceptualising Scaling up and Scaling out

In this section we review definitions of scaling, before locating it within policy transfer analysis. Definitions of scaling up and out share the notion of seeking to achieve more, reaching more beneficiaries, having greater impact ([29] (p. 733), [30] (p. 15) and [31] (p. 213)). Scaling implies an innovation moved across boundaries to reach more people [32], in the context of food systems meaning more or larger consumers and producers. This might be achieved by transferring alternative production and supply modes to larger businesses, as when practices developed by family farms are adopted by medium scale enterprises [7]. Scaling has also been associated with the process of civil society actors encouraging mainstream institutions to alter practices [18]. In transition terms scaling equates growing a niche, moving into landscape and regime. It occurs through replication [33], a quantitative increase in activity and coverage [3,29,30], or expansion through growth in institutional capacity [30,34]. Expansion and replication lead to innovations occupying more or enlarged niches. Alongside this the innovation may evolve to meet new needs [33], moving between niches or 'scaling out' [34–36].

Not all authors distinguish scaling up from out, and distinctions are inconsistent. A definition used by UN agencies [37] and others [29] describes scaling up as: "expanding, adapting and sustaining successful policies, programmes or projects in different places and over time to reach a greater number of people" [34] (p. 1). This implies spatial expansion from local micro action to meso or macro

level [30,33,38]. Others see scaling up as expansion of institutional capacity [31]. Alternatively, the extension of geographic reach is regarded as horizontal scaling, with vertical scaling representing institutional expansion [35]. A tendency to conflate scaling up and scaling out might be due to the reality that geographical expansion requires organizational growth [35]. Common to these definitions is actors' intent for greater impact by crossing jurisdictions [39].

Scaling up and out can occur through policy innovations being shared and mimicked [26] as policy makers consider whether an innovation suits their needs, and whether to adopt it. Policy decisions are significant to transition because policy convergence might create pressure for regime change or facilitate strategic niche management. For example, actors focused on changing food in public institutions seek to influence state investment to lever food system transition [18,21]. These processes require greater recognition within transition theory, as pathways by which innovations influence beyond their niche are under-explored [14]. Applying a policy transfer lens highlights the role of decision makers, addressing transition theory's neglect of actors and agency, and agents acting across scales [32]. We consider policy transfer a potential driver of transitions, emphasising scaling as a distinct mechanism.

### 2.3. *Scaling as Policy Transfer*

Scaling as "the practice of introducing proven interventions into new settings with the goal of producing similarly positive effects in larger, more diverse populations" [30] (p. 15) clearly overlaps with policy transfer. Policy transfer centres on intentional knowledge exchange between decision makers [11,17,40,41]. It is misleading to see these processes happening spontaneously as they are driven by agents, and require careful planning and facilitation [31,39]. This is made easier by the support of political leaders [35] and thus mediated by power relations. Scaling up and out happens through innovations being shared and mimicked either through loose inspiration or direct implementation [29]. Central to this is learning between policy makers as they consider whether an innovation is suited to their needs. Should policy makers choose to transfer an innovation the result would be its replication in a new space, hence it scales up or out. This can be interpreted as a form lesson drawing as decision makers work to understand what has worked elsewhere and use this knowledge to influence their own programmes [42].

We identify scaling up and out as a form of policy transfer focused on movement of programmes—delivery of specific means of action on a problem [17]. This gives it a distinct position on Dolowitz and Marsh's framework for analysing policy transfer. Firstly, 'what is transferred' concerns implementation through practical action and supporting infrastructure. The degree of transfer is towards the copying end of the spectrum, although a programme reproduced in new contexts adapts to new conditions [29,30,43–45], so is an imprecise copy. Scaling includes transfers not just across spatial jurisdictions—regions or countries—but between policy jurisdictions, hence our definition:

Scaling is the deliberate effort to transfer a policy programme over space, time or function through spread, renewal, and diversification. The original programme is imitated in new contexts, by actors who retain a role in delivery. Expansion across space and time represents scaling up; diversification into new functions is scaling out.

One defining feature is outside Dolowitz and Marsh's framework: at least one actor remains involved in delivery as the programme transfers across jurisdictions. The case study illustrates this as success factor and significant influence on policy makers' involvement in the transfer. Scaling therefore suggests a need to reconsider why policy transfers happen, and how to interpret their success, with the analytical framework amended accordingly.

Introducing scaling as a mode of policy transfer addresses limitations in existing analysis of solutions moving between policy makers. Firstly, studies tend to be descriptive cases [41] lacking comparative analysis, so the relative merits of different approaches are unknown. Analysis often stops at point of transfer so outcomes are neglected; there is a need for greater attention to whether transfers succeed and why [17,44–46]. A related gap concerns lack of insight into why decision

makers transfer policy. The question ‘why transfer?’ has been mooted since Dolowitz and Marsh’s framework, but answers focus on whether transfers are coerced or voluntary [47]. This offers limited parameters for understanding what motivates transfers, and over-simplifies factors driving policy making [48,49]. Considering the appeal of scaling reveals a complexity of reasons for transfers, suggesting a need to consider different actors’ motivations and how these influence outcomes. This advances understanding of why policy transfer is attractive to decision makers, answering criticism that it is not distinct from general policy making [11,50] and begins to identify modes of transfer conducive to successful outcomes.

Some policy transfer analysis explores the movement of ideas or information [41], but programmes also move [17]. Our analysis demonstrates that policy and programme are not discrete entities as delivery influences policy, whilst policy decisions aid programme growth and transfer. Scaling reveals complex interactions as solutions evolve, challenging how policy analysts regard transfer agents. Dolowitz and Marsh ask ‘who is involved in transfer?’, and categorise state and non-state actor [17]. Through its evolution policy transfer research has broadened this typology to include more non-governmental actors [47], which reflects the influence a more dispersed and governance-informed analysis of policy processes. How this diversity affects motivations for policy transfer requires attention, as distinct actors are likely to have specific goals. Such multiplicity is acknowledged in more recent work influenced by social constructivism [47]. From this perspective a longer list of potential transfer agents still will not capture the process’s complexity if it assumes a linear process passing knowledge from sender to recipient [48–50]. This is challenged by mobility perspectives which recognize a fluid process with agents’ roles interacting and morphing [48–50]. Scaling up and out as transfer mode supports a less linear interpretation not founded on a bilateral sender-recipient relationship [49,51] as the case study demonstrates blurred divisions between state and non-state actors. Non-governmental organisations deliver for government, programmes and policies are shaped collaboratively. This suggests a need to reframe analysis of transfer agents around the question ‘what are the roles of those involved?’, shifting focus from who to what they do. Attention to roles corrects a tendency to emphasise what is transferred to the neglect of how it happens [49], and why [50].

In summary, adding scaling up and out to policy transfer frameworks sheds light on a previously neglected mode, adding detail on transfer mechanisms. It confirms the need to consider relationships between actors as complex and iterative rather than bilateral, and the transfer process as non-linear. Scaling challenges the view that ideas exchanged between policy makers are rarely implemented [42,43,52] by focusing on programme delivery. However, that programmes evolve as they scale supports the suggestion that solutions mutate [50]. The case study demonstrates the significance of motivations, and how they alter the likelihood of success. On this basis we amend Dolowitz and Marsh’s framework for policy transfer [17] prioritising questions which better interrogate the likelihood of successful outcomes.

Table 1 presents the amended framework. A key amendment is re-framing the question ‘why transfer?’ away from answers on a continuum between ‘want to’ and ‘have to’. Scaling is a process driven partly by non-government bodies working to grow their programme, partly by policy makers seeking proven solutions. Where these motivations align transfer occurs; there must be a coincidence of those driving an innovation with those shaping opportunities for scaling [32]. Reframing responses to ‘why transfer?’ as motivations better accounts for actors’ diverse motives, and uncovers their goals for policy transfer. Focusing on goals provides parameters for judging policy transfer success: if goals are achieved the transfer was successful. We now elaborate an example of scaling up and out, applying questions from the amended framework.

**Table 1.** A revised policy transfer framework.

Dolowitz and Marsh's Questions	Why Transfer?	Who Is Involved?	What Is Transferred?	From Where?	Degree of Transfer?	Constraints on Transfer?	How to Demonstrate Policy Transfer?	How Transfer Leads to Policy Failure?
How they answer	Voluntary—coercive continuum, i.e., 'want to' or 'have to'	List of state and non-state agents, e.g., civil servants, NGOs	Policies, programs or negative lessons	Past to present, within country, e.g., city to city, or cross national	Copying, emulation, inspiration or a mixture	Policy complexity, feasibility, past policies	Reports, media	Uninformed transfer, incomplete or inappropriate transfer
Revised Questions	What Motivates Transfer?	What Roles and Who Fulfils Them?			How Does Transfer Proceed?		What Is the Outcome?	What Contributes to Success?
Answers from scaling Food For Life	NGO: seeking to expand program achievements, good food for all, commissioner encouragement. Local government officials: seeking effective, low risk policy solutions. Public institutions: seeking proven solutions, encouraged by national policy.	NGO: raise problem, promote programme, develop evidence base, design & deliver programme. Local gov't: fund programme delivery, shape program design. Policy network: encourage peers to implement programme.	Programme delivery model: FFL local commission. Program design: FFL framework for whole settings approach.	Between local government areas. Between policy jurisdictions: from one public food setting to others. Between local and national policy for public food.	Scaling up through programme expansion into multiple local commissions. Scaling out through programme diversification into new settings. Supported by national policy influenced by FFL.	Competition from other programs. Limited local government funding for program delivery. Limited reach of policy networks.	Goals for more sustainable food met in many schools. Goals for more sustainable food partially met in other public institutions. National food policy changed to encourage sustainable food in some settings.	FFL expertise and experience applied across jurisdictions. Work to distinguish variable and invariable aspects to evolve program design. Investment in scaling strategy and capacity.

### 3. Programme and Case Study Methodology

#### 3.1. Food for Life Programme

Food for Life was established by the Soil Association, an NGO campaigning for “healthy, humane and sustainable food, farming and land use” [53]. From 2007 the FFL partnership operated as a coalition of five charities working to change food cultures by “reach(ing) out through schools to give communities access to seasonal, local and organic food, and to the skills they need to cook and grow fresh food” [54]. FFL takes a whole setting or organisation approach to food, integrating action on health and sustainability.

Schools enrol with FFL then gain awards recognising progress in food leadership and food culture, food quality, food education, community and partnerships. Schools teach practical food skills and integrate them into the curriculum; they are encouraged to involve parents, staff and pupils in changing mealtimes and through extra-curricular activities. FFL encourages school caterers to use more seasonal, local, organic and ethically sourced produce, with a Catering Mark accrediting good practice. The partnership supports through training, advice, resources and by sharing information about schools’ progress. Charitable grants to FFL and investment by local commissioners allows support to schools without charge.

By the end of 2015, 5500 schools in England had registered online with the FFL scheme and 21 local authorities had commissioned FFL as an area-based schools programme with supplementary training and support for educational and catering staff. FFL is closely linked to the Food for Life Catering Mark (FFLCM) also led by the Soil Association. The mark involves an independent audit of caterers, offering accreditation for raising food standards. This accreditation demonstrates that an organisation meets the food quality requirements of FFL’s framework. Organisations in varied sectors have gained FFLCM accreditation (e.g., defence and hospitals), including large catering contractors working across settings. By 2015, FFL Catering Mark meals were being served in over 25% schools in England, 20% universities, over 300 nurseries and over 100 care homes and hospitals [55].

FFL seeks to influence food systems in two ways. The programme encourages public institutions to use more local and organic produce, and menus less reliant on meat, supporting food production with reduced environmental impacts [56]. Secondly, FFL develops knowledge and skills for buying, cooking and growing food to enable enduring lifestyle changes favouring sustainable food choices. Institutions can only obtain an FFL award by providing documentary evidence that they have met a set of criteria concerned with menu changes, ingredient spend, educational reform, leadership and consultation. Awards are categorised at bronze, silver and gold levels to reflect the scope and scale of reforms implemented. Previous research has found that the award levels serve as an indicator of the scale of impact on sustainable food systems [57], for example with respect to greater procurement from local or organic food producers and suppliers [56]. Impacts on the wider consumption behaviours of service users, for example the household food purchases of school parents, is less clearly evidenced although self-report surveys suggest a positive influence [58] FFL presents a valuable case of niche influencing agri-food systems because it is regarded as the “the gold standard” in sustainable school food but had been confined to “islands of good practice” [21], within a public food regime centred on low-cost mass-catering [5]. FFL has sought to scale up and out, with the ambition to bring ‘good food to all’, presenting an opportunity to analyse scaling processes.

#### 3.2. Case Study Methodology

A case study approach was used to examine processes of scaling as a pathway for food transitions. The study was informed by realist evaluation principles which seek to understand the context, mechanisms and outcomes of the programme through interrogating programme delivery processes [59]. These data were based in the interpretations, or ‘theories of change’, held by lead informants involved in the implementation or receipt of the programme [60]. This research formed part of a wider

project examining FFL between 2014 and 2015, which involved understanding the evolution of FFL's commissioned programme and its spread from schools to other settings such as hospitals.

### 3.3. Methods

The study adopted qualitative methods in the collection and analysis of programme documentation, observation of partnership meetings and semi-structured interviews. Researchers sought to interview lead representatives from all 11 local authorities that had been operating an FFL commission for at least 12 months; 10 accepted. Interviews were held with 13 FFL staff (two managers developing commissioning nationally, two regional commissioning managers, nine local programme managers). Discussion with FFL staff identified supplementary research participants offering insight into strategic work to expand the programme, and experience of scaling activity. Other aspects of the research project focused on delivery in schools and other settings, allowing researchers to draw on wider knowledge of FFL. Documents and transcribed interviews were analysed thematically with findings cross-checked between researchers. The research received ethical approval by the University Research Ethics Committee.

## 4. Case Study Results and Discussion

Table 1 summarises the overall results of applying policy transfer framework in the context of this case study research. The following sections expand upon and discuss each area.

### 4.1. What Is Transferred and How Does Transfer Proceed?

The FFL partnership was the innovating organisation, involved in delivery across the programme's transfer. FFL's first target group for policy transfer were public health officials responsible for commissioning school food programmes. As FFL expanded its focus to other public institutions, decision makers in other jurisdictions became targets. From its inception in 2007 until 2012 FFL centred on individual schools choosing to engage, whilst the partnership promoted participation. Geographic 'hotspots' emerged where a significant number of schools were FFL-active; shared catering contracts and pre-existing educational collaborations lent impetus to these clusters. At this stage the innovation grew by replicating within schools; its niche enlarged. This created pressure for wider change by increasing demand for sustainable produce, pushing suppliers to re-consider their sourcing. Path dependencies within the mass-catering sector were broken as companies established new supply contracts with alternative and local producers. These supply routes were opened to the wider market, affecting actors outside the niche, influencing the wider school food system.

Niche expansion accelerated when local government public health officers in one hotspot identified an opportunity to support FFL as a commissionable programme delivering public health outcomes. With FFL they devised a package which local policy makers could commission the partnership to deliver:

- a local programme manager providing coordination and support,
- a training programme,
- support for school caterers to achieve the FFL Catering Mark, and
- support for schools to achieve FFL Awards.

The commission was designed for local authorities to 'buy' through commissioning processes. At this point scaling up as policy transfer truly began as successive local government public health departments adopted the commissioned programme and FFL promoted it to potential commissioners. New commissions meant more schools engaged, the innovation grew. It spread between neighbouring local authorities, resulting in 10 commissions by 2014. Transfer initially concentrated in regions where food or obesity policy networks disseminated knowledge between neighbouring commissioners. Wider geographic spread was promoted by a later strategy targeting local authorities in regions with lower engagement.

This replication over space represents scaling up, supported by concurrent growth in FFL as an organisation. It was an iterative learning process during which stakeholders identified hard, invariable dimensions core to successful delivery, and soft elements adaptable to local context [28]. Invariable elements included the award framework, whilst the mode of support to schools was variable: some commissions targeted certain schools whilst others took a universal approach.

FFL scaled over space by working in more schools, then more commissioned areas, and over time through renewed involvement. Growth accelerated when commissioning introduced a strategic system for engaging schools across an area, and a programme transferable between local governments. Fundamental to these processes were the partnership's will to work with as many schools as possible, and their ability to gain support from local decision makers who could facilitate this.

Next FFL sought funding to diversify beyond schools through scaling out into other institutions that might adopt a similar whole setting approach to food. The partnership drew on expertise in school food to transfer the programme to care homes, universities and hospitals. Core aspects of the school programme were adapted to create parallel frameworks suiting other organisations' priorities. The partnership's links to local governments who commissioned the programme for schools connected them to providers of early years education, helping FFL scale into these. Similar connections encouraged health care trusts to implement FFL; here scaling was facilitated by the partnership's campaigning for better hospital food. FFL was working to influence national policy for hospital food, urging government to introduce incentives for better catering. One local commissioner noted that the introduction of a financial incentive to improve patient food was instrumental in encouraging his health trust to engage FFL.

To scale out into new settings FFL had to identify invariable aspects which made the programme work in schools and translate them:

*The Food For Life USP [Unique Selling Proposition] coming out of the schools was the whole setting approach encapsulated in the award framework [ . . . ] we have learned how valued it is to have a series of stepping stones and a journey that schools and other institutions can take where they can benchmark. (FFL manager)*

This whole setting approach was revised for each setting, with some elements remaining consistent. Establishing a cross-school group focused on food was identified as essential to delivery; this was adapted to other settings as a cross-departmental group. A focus on learning to grow food in schools evolved into patient involvement in therapeutic horticulture. Adapting the whole setting framework was done collaboratively between FFL staff, and pilot institutions in each new setting. This brought together FFL's expertise in sustainable catering and changing food cultures, and institutions' knowledge of their contexts. Continued involvement of the FFL partnership across the transfer process ensured their understanding of a successful programme for sustainable public food was applied throughout.

This section has described how FFL scaled up and out in multiple stages and through multiple influential actors exchanging knowledge in several directions. We now elaborate on the nature of scaling by addressing other new questions in our policy transfer framework.

#### 4.2. Why Transfer: Motives for Scaling FFL

Typically, the answer to 'why transfer policy?' has focused on whether this was coerced or voluntary. FFL's scaling does not fit this continuum because actors had different drivers. National policies requiring action on public health compelled transfer between local governments but they could implement alternative programmes. No actor was coerced, rather they encouraged each other to implement and evolve FFL. This suggests other factors more significant than the degree of coercion. For the FFL partnership the potential to scale was ever present:

*We are always thinking from the outset where is this work going and how might it be supported in taking it forward (FFL manager). The will for expansion is in their nature: I suppose the other*

*drivers were about the way in which we operate, the Soil Association operates as an agent for change I suppose, looking to shine a spotlight on where there are problems and innovate solutions and then go onto deliver them. (FFL manager)*

*FFL want to maximise numbers of people eating 'good food': the rationale is about changing social norms, a big part of which is around changing the availability [of unhealthy food] in all these keys settings where people live out of their daily lives. (FFL manager)*

Achieving this requires change at regime and landscape level so attention had to move beyond schools. Diversification into new niches was also driven by demand as FFL developed a reputation for good work with schools which led other institutions to approach them. This coincided with interest from local government public health commissioners in a life course approach to good food meaning: *looking at which of the institutions that are responsible for feeding sections of the population at different stages (FFL manager).*

FFL in schools met commissioners' need for action to encourage healthy childhood weight, a national public health priority [61]. Addressing a national concern provided a good basis for scaling up. These commissioners work on health needs across demographics, taking a systems approach to tackling health inequalities and issues such as obesity; transferring FFL out offered synergy across this activity. One described how prior to FFL's activity to scale out her team was considering moving it from schools; they already worked with hospitals so bringing FFL in "felt like a natural extension". This transfer "built momentum", driving moves into other jurisdictions including social care, and linked activities into "a more integrated approach". Local governments which saw themselves as food sustainability leaders wanted to build on FFL's work with schools to advance progress.

Commissioners described advantages of working with an NGO partner like the FFL partnership which encouraged them to support scaling: they bring good practice from elsewhere, offer an alternative perspective and encourage a holistic outlook on food. Rather than looking to alternative programmes and NGOs they preferred to scale work with FFL. Commissioners said that they knew and trusted the partnership and appreciated their staff's approach. Policy makers follow lines of least resistance by looking for short cuts and solutions close by [53]. Programme transfer was a lower risk option for local government actors motivated by the need for proven, successful solutions and trusted partners.

FFL staff and commissioners suggested independent evaluation of the programme was crucial in convincing others to invest in the programme. This is consistent with a political culture favouring evidence based policy [11,51]. Interest in scaling was partly driven by England's current system of public health commissioning which encourages local policy makers to collaborate with NGOs and work in partnership with programme delivery bodies, increasing opportunities for non-governmental agencies to provide services [62]. This leads us to address how transfer agents work together.

#### 4.3. What Roles and Who Fulfils Them?

Policy transfer analysis has presented transfer agents as sender and recipient passing knowledge or programme between them. The collaborative nature of commissioning disrupts this as state and non-state agents cooperate to design policy and implement solutions, drawing on learning from multiple sources. This is epitomised by FFL's approach to evolving the programme for hospitals and other settings by co-developing with pilot institutions:

*Working closely with those settings at a strategic level was to make sure that those frameworks would resonate with their strategic priorities and various drivers acting on them and was in the appropriate language. (FFL manager)*

FFL, local government officials and institution representatives shared responsibility for adapting programme design, so there is no clear divide between agents responsible for delivery and policy decisions. This may be a facet of a commissioning model which promotes partnership between state



and non-state actors, but others suggest transfer relationships are rarely organised around bilateral sender-recipient roles [62].

A more fluid account of transfer actors is required because each takes on various roles across the process. The FFL partnership had several related roles in scaling out, firstly, campaigning on poor food in public settings. Secondly identifying and championing best practice, thirdly engaging key decision makers through national events and establishing networks to share their whole setting approach. The partnership convened networks to promote cross-regional exchange between local government officials, and intra-regional sharing between actors involved in public food. Networks transferred solutions by communicating policy ideas [8,11,41]. In this role the partnership facilitated learning about FFL, capitalising on decisions makers' tendency to look to close peers for policies [41,43]. FFL's scaling benefited from 'champions' who promoted the programme; the partnership capitalised on this by creating opportunities for commissioners to network. One commissioner described helping FFL scale by advocating it to peers in other areas, and encouraging colleagues in other policy fields to support it. Actors' roles overlapped and worked synergistically because motives aligned around the will to expand the success of a proven programme.

It should be apparent that multiple actors effected FFL scaling, each fulfilling multiple roles. It is also significant that the FFL partnership remained constant across these transfers. The partnership holds knowledge about how to promote food sustainability in public institutions, has skilled staff experienced in working on these issues, and holds resources such as training packages and communication materials. These remain available as the programme moves locations and sectors, making for efficient lower risk delivery. A vital characteristic of FFL as actor driving scaling is its reputation and track record which give decision makers confidence. The continuity of FFL as actor and their will to pursue scaling is significant to this mode of policy transfer; the partnership's history of successful innovation attracts those able to support delivery in new contexts.

Although a constant presence, the FFL partnership has changed in shape, size and ways of working since the programme was born. This suggests that in addition to considering how policies mutate as they move [63] it is important to consider how actors evolve. The partnership grew in terms of staffing and turnover, and developed new funding models for their work; priorities shifted according to how different sectors responded. It is probable that other actors changed through involvement in scaling. This deserves further attention, perhaps supported by an additional analytic question for policy transfer: how do transfer agents change?

#### 4.4. *What Is the Outcome of Scaling, and What Contributes to Success?*

The final two questions in the framework are closely related, addressing the need to assess the results of transfers, firstly by asking whether scaling was successful. Commissioners all regarded FFL as successful in delivering desired outcomes. Programme evaluation supported this conclusion, finding that FFL has a positive impact on food cultures within and beyond schools [64]. During scaling FFL was found to have made good progress bringing healthy sustainable food to more communities through greater geographic coverage of its school's work, diversifying into new settings, and influencing strategic drivers for public food, especially for schools and hospitals. This presented the prospect that the programme accelerated transitions towards sustainable food systems in the local context.

Three factors contributed to FFL's successful scaling. The first is actors' work to distinguish the programme's invariable and variable aspects, and to identify how to apply the former in new situations [29]. The focus on a holistic setting approach to food remained constant; as one commissioner said "*the principles are universal no matter what the setting*". The programme could retain its core as it scaled out by focusing on institutions sharing the features of being large procurers of food served as a central part of daily life. As the programme scaled out, adapting variable aspects was imperative because institutional settings vary. For example, FFL prepared guidance on sourcing and menus for each setting to accommodate dietary considerations and catering systems whilst retaining key principles. This demonstrates that actors seeking to scale a programme need skills in identifying its

variable and invariable elements, to understand why an innovation was successful in its original niche, and how success can be replicated.

A second success factor was the reputation and profile of FFL as a programme and the partnership as delivery agent. Promotion of FFL's success in schools prompted institutions to look to the partnership for assistance. Local government officials were happy to expand support for the programme because "*we know they are a very professional organisation who deliver*" (public health commissioner). The FFL partnership secured commissions by promoting testimonials from current commissioners and influential advocates. Commissioners said they were influenced by knowledge that counterparts adopted the approach and found it worked. Several actors said the organisation's profile helped attract executives to events which encouraged them to support the programme.

A third and related factor is that the partnership influenced various levels of decision making to shape the context for local implementation. The latest national plan for food in schools champions an approach mirroring FFL which commissioners said increased demand for FFL. The partnership influenced the national policy context to be conducive to scaling through pressing for government action and contributions to relevant policy networks. Westley et al. [32] identify such advocacy as a transition pathway and term it scaling up. They suggest social organisations come to recognise their ability to deliver micro-scale change is limited by macro factors, so shift focus to systemic causes. These authors demonstrate that NGOs act across levels, influencing vertical and horizontal policy transfer. An organisation is influential at macro scale because it has "a platform of experience, in-depth knowledge of the field, and established reputation" [32] (p. 256). The scale and success of FFL's innovation made it nationally influential when campaigning for better hospital food. By acting at macro level FFL levered change in institutions they do not work with directly, but this was founded in activity to change practice in certain hospitals to demonstrate a feasible alternative. The partnership's skill in influencing national policy makers contributed to successful programme scaling, demonstrating the iterative relationship between policy and programme with each influencing the other. In this sense local opportunities for scaling out can be understood as being partly contingent upon national policy processes for scaling up. Conversely national context at the 'regime level' also accounts for the challenges the programme has experienced, with limited high level political support for alternative food systems.

Although FFL's scaling can be judged successful it encountered constraints common to policy transfer. Scaling is dependent on the fiscal space [35], in FFL's case investment from commissioners with finite budgets. But the programme seems to have largely avoided other contributors to transfer failure [17]. We suggest three factors helped FFL avoid inappropriate or incomplete transfer. Firstly, the partnership remained a consistent presence across programme transfer. This reduced the risk of insufficient knowledge or skill hampering implementation in new jurisdictions. It provided on-going access to expertise in the programme's invariable aspects and how to deliver them, so avoiding incomplete transfers. Secondly, by working in collaboration with experts in each setting the partnership accessed expertise required to shape variable aspects to suit new contexts, reducing the risk of inappropriate transfers. Finally, the reasons actors involved wanted the programme to scale altered the likelihood of success, hence the significance of analysing motivations.

What motivates policy transfers requires greater attention because it is associated with the likelihood of successful transfer outcomes. The FFL partnership wanted to scale the programme and its achievements, a motive which led them to invest in a strategy for scaling, acquiring funding and expertise to support it. Some spread was achieved through opportunistic diffusion, but widespread replication requires a deliberate strategy and well-resourced, skilled team [31,39]. The desire to scale led the partnership to prioritise this, allowing them to overcome constraints others encounter. But the goal was not policy transfer for its own sake, their ultimate motive was 'good food for all'. Where this seemed unlikely transfers did not proceed, minimising inappropriate transfer.

FFL's ambition to bring good food to all motivated their scaling strategies, in the belief that many people and institutions could benefit from healthy, sustainable food. But not all organisations have

scaling as a goal and not all innovators look to move beyond niche [65]. Whether scaling is appropriate depends on the purpose of an innovation, and whether it can be met through scaling up and out. For FFL it has been possible to contribute to a more sustainable agri-food system by scaling across space, time, and domains, with commissioners satisfied that the programme has met their objectives. For other innovations, moving up scale may preclude success or have perverse consequences [7], suggesting scaling is not always appropriate transition pathway. The question 'what motivates transfer' seems crucial to assessing the desirability of scaling up and out as the answer is closely linked to factors in successful outcomes.

## 5. Conclusions

This paper has examined how niche innovations influence transitions of the kind sought by proponents of a more sustainable agri-food system, improving understanding of processes involved. The case of Food for Life suggests how scaling up and out an innovative programme can achieve change which might represent a transition pathway. We have characterised this as a specific mode of policy transfer, and demonstrated that its defining features increase the likelihood of successful outcomes, namely the continued involvement of a delivery agent across contexts transferred into. This suggestion deserves further investigation through comparative research into the relative success of different modes of policy transfer and their role in accelerating sustainability transitions [66]. The analytic questions proposed here can help evaluate the relative merits of different modes of transfer, and the likelihood of successful outcomes. In addition to Food for Life, they might also be applied to other types of food sustainability initiatives such as those led by government, private sector and civil society actors.

Our focus on scaling challenges how policy transfer has typically been analysed, in particular revisiting the question 'why transfer?'. Placing policy transfers on a continuum between voluntary and coercive over-simplifies possible drivers, and neglects what motivates agents to attempt a transfer. Closer attention to motivations for transferring policy addresses a gap in understanding why decision makers favour the process. More importantly it supports analysis of the likelihood of success, providing parameters to assess the outcomes. Our framework for policy transfer supports analysis focused on evaluating success and understanding how it is achieved. It allows for complex overlapping roles of actors involved in policy transfer, and their evolution. The case study suggests that future research may pursue the question 'how are actors changed by the process?'

Analysing how Food for Life achieved positive transfers demonstrates that motivations for transfer affect whether it is successful; had the motive been scaling per se the partnership may have attempted inappropriate transfers. This is an important lesson for scholars of food system transitions who have been guilty of calls for scaling without explaining why this is desirable, or precisely what should be scaled: actors, programmes, practice or outcomes? This risks the aspiration to scale an innovation becoming a goal, driving transfers irrespective of the likelihood of beneficial outcomes. The goal of achieving transition towards sustainability should not be confused with scaling as a potential strategy; making food systems more sustainable requires replication of outcomes conducive to sustainability which might be achieved through scaling, but this is only one potential pathway, and not necessarily the appropriate route.

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