

Food for Life Partnership Evaluation

Full Report Appendices & Technical Data

May 2011

University of the West of England, Bristol

Cardiff University

For Sections 3, 11, 12 and 13 of the full report

Appendix for Section 3: FFLP Logic Model January 2010

Inputs			
<u>Materials</u>	<u>School involvement</u>	<u>Support provided to schools & LAs</u>	
Flexible, holistic, enabling change programme. Links health, food, sustainability, education. Partnership approach (pupils, caterers, school, parents, LA).	Extensive campaign undertaken to secure sign-up to programme. Including free workshops, support from regional stakeholders, School Improvement Partners & LAs.	Food sourcing experts who help catering providers to find better sources of healthy and sustainable food (working at LA level or alternative catering providers).	Coordination of support and FFLP activities ensures a whole school and holistic approach is applied to link all related activities. Schools supported to link wider health and sustainability-related initiatives and activities at local, regional and national levels. Support and signposting to related groups/organisations/initiatives/schools.
Other on-line resources developed on subjects such as growing, cooking & farm links. Resources for caterers, including a self-assessment. Case studies of school practice	Flagship schools are supported by FFLP to become examples of good practice and demonstrate a whole school approach to food.	Cooking Bus visits all Flagship Schools for a week. Provides training for teachers and wider school community in teaching cooking skills and curriculum development. Pupils and community members potentially also benefit from cooking lessons.	
Website for schools to record progress through the programme. Opportunity to blog about their work and share good practice.	Flagship schools encouraged to become ambassadors/mentors of other schools	Garden Education Officers support schools in growing activities and trains school staff/parents /community in growing skills.	
Parent pack with tips and advice for getting involved and teacher activity pack with DVD that could be used for assemblies.	Opportunities to attend growing, sustainable food and farm visit workshops for teachers available for all schools.	Catering consultant provides support to school on all aspects of school meals. School cooks have opportunity to attend a 2 day training course.	
		Farm links officers support schools in setting up links to local farms and organising visits .	
		School food policy officer work with school to develop a steering group (School Nutrition Action Group) which provides a voice for students, school staff, caterers, wider community etc. on school food issues.	

<u>Outputs</u>	
Typical changes in school policy/organisation	Typical activities undertaken by school
Greater involvement of pupils, parents and caterers in school food policy, school meal improvements and food education. Including SNAG.	Pupils and parents consulted on school food improvements. Parents and community attend lunches and are involved in cooking and growing.
New emphasis across school on value of practical cooking and growing skills and food literacy. Stronger SLT focus on food culture and dining experience (e.g. Whole school food policy and action plan, food culture is embedded in SIP).	Pupils increasingly involved in growing food, composting, farm visits, cooking. Staff skills around growing, cooking, farm visits are improved through training.
School demonstrates greater coherence and a whole school approach around food culture and food education; in relationships with partners and in joining up disparate pieces of work under one banner.	More time is spent on cooking, growing and farm visits, and links are made between these activities as part of the teaching and learning around food. These activities are also linked to the school meals service and dining room.
Increase in partnership working by schools, caterers, communities, health practitioners, and suppliers, aimed at improving the quality of school food.	School will plan to, and be actively growing produce that contributes to the school meals service. Origins of food used in school meals are highlighted to the school community.
Increasing use of healthy and sustainable food as a subject to support teaching and learning.	Teachers incorporate food activities into the planned curriculum.
School, catering provider, and cook build a closer relationship and develop greater understanding of sustainable food procurement and ethical food issues.	School meals are improved; be of better quality and use more sustainable food. The dining room experience is improved.
Improved links with community, parents, other schools around food.	School shares best practice with other schools. The wider community and parents are involved in food focussed activities and events.
Establish closer links with farms and local food providers and source greater quantity of food from them.	School and caterer make links with local farms and local food businesses.

Intermediate outcomes = “good school food culture”					
	<u>Pupil</u>	<u>a) Home & b) Community</u>	<u>Teachers and support staff</u>	<u>Senior Leadership Team</u>	<u>Caterers and cooks</u>
Knowledge/skills	Increasing knowledge & skills about growing, buying & cooking healthy & sustainable food (awareness of food ethics, origins, production, environmental impact),	Increasing knowledge & skills about growing, buying & cooking healthy & sustainable food (awareness of food ethics, origins, production, environmental impact) Parents/ community are aware of schools role in promoting food culture, hub for food knowledge.	Improving skills & confidence around teaching food issues (eg. practical cooking and growing education, diet as a tool for learning, how food influences children’s well being.)	Awareness of school food impact on other agendas such as ECM Lunchtime experience continually seen as part of wider educational experience Maintain links to LA sustainability strategy	Increasing knowledge & skills about growing, buying & cooking healthy & sustainable food (awareness of food ethics, origins, production, environmental impact) Increased procurement & menu planning skills
Attitudes	Enjoyment & enthusiasm for good diet, cooking & growing. Engagement with local food producers. Positive attitudes to school meals. Awareness and positive attitudes towards sustainability.	Increasingly positive attitudes & awareness towards good food culture, healthy lifestyles, and life skills. Engagement with local food producers.	Team building around issues of food Well-being, attitudes, motivation	Continued partnership with catering staff. Maintain enthusiasm & drive for changing food culture in school, wider community and school partnerships.	Positive attitude and influence over whole school food policy and involvement in food education. Improved job satisfaction, enjoyment, career development.
Behaviours	Increasing consumption of local, seasonal organic food. (fruit and veg). Increasing cooking & growing at home. Talk about food at home. High level of pupil engagement in school food.	Greater consumption of local, seasonal organic food. (fruit and veg) Increase in cooking & growing at home. Talk about food at home. Parents/community interact with school around food issues	Teachers increasingly use food as part of curriculum. Improvements to teaching & learning (reflected by Ofsted)	‘Food’ embedded in curriculum planning/delivery. Food issues continue to be embedded in/central to SDP & other policies. Ongoing allocation of resources to food based initiatives. Staff training to enhance delivery of food based initiatives.	Actively promote positive food and dining experience Seek ongoing feedback on school food from whole school community. Ambassadors & lead school food culture. Continuing to work to improved quality of meals & dining experience

<u>Other possible intermediate outcomes (indirect impact)</u>	
<p><u>School</u></p> <p>Increased school sustainability/reduced foot print (linking with LA sustainability targets)</p> <p>Value for money and efficiency</p> <p>Partnership working, locality working, multi-agency working, leading to knock-on/multiplier effect, wider influence over a number of schools</p> <p>Coherence, unification, integration of different policies/agendas (eg healthy schools, extended schools, locality targets)</p> <p>Promotes learning outside the classroom</p>	<p><u>School staff</u></p> <p>Improved staff motivation, innovation, change capability</p> <p>Staff well-being</p> <p>Better self-evaluation skills and shared learning - leading to improved Ofsted ratings</p> <p>Wider curriculum development and enhancement</p> <p><u>Pupils</u></p> <p>Increased pupil voice</p> <p>Pupils' engagement in their learning/ personalisation.</p> <p><u>Parents and community</u></p> <p>Improved parental/ community engagement with school</p> <p>Improve wider parenting skills</p>

<u>Final outcomes for the whole school community</u>		
Health	Environment & community	Attainment & life chances
<p>Increased take-up of schools meals</p> <p>Changes to diet (greater consumption of healthy, fresh, local & organic food).</p> <p>Healthier behaviours and lifestyle</p>	<p>Increase in environmentally sustainable behaviours (including amongst catering staff)</p> <p>Improved community cohesion</p>	<p>Better educational attainment, well being, life-skills</p> <p>Improved behaviour, confidence, knowledge and skills</p> <p>Narrowing attainment gap</p>

Appendix for Section 11

Student Questionnaires: 'What's on Your Plate?'

Primary Schools

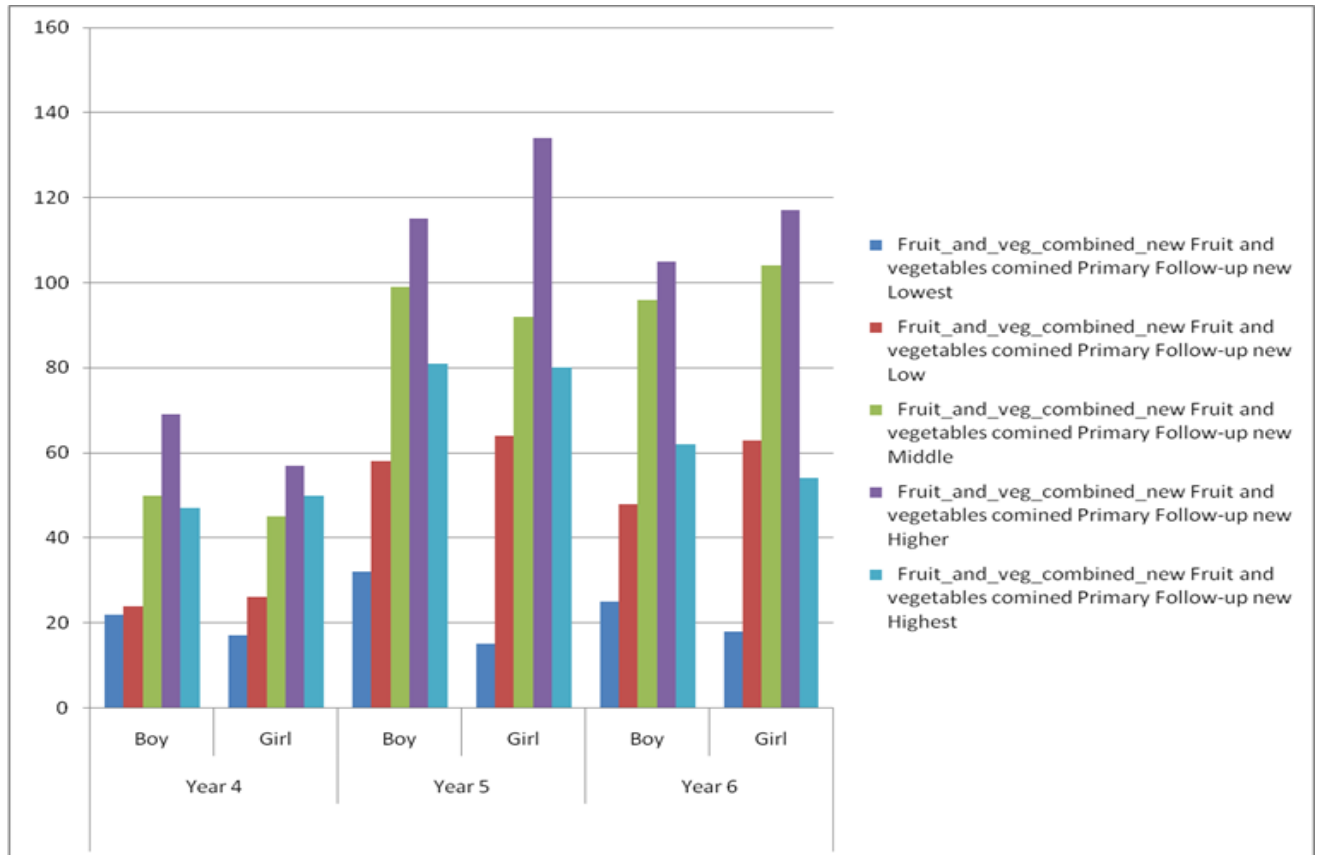
Piloting of the survey tools have been reported in FFLP Primary Schools Case study. In summary two age appropriate variants of the questionnaire were developed for Year 5-6 and Years 1-3. There was some cross over between questionnaires for Year 4s. The younger age group questionnaire excluded some measures and employed simplified questions.

Measures for healthier eating and confidence to cook were derived from the BIG Lottery Wellbeing tool from the nef national well-being tool for the BIG Lottery programme. Other measures were either bespoke or adapted from existing locally developed schools questionnaires.

Self reported fruit and vegetable intake

Children were asked to estimate their average daily intake of portions of fruit and vegetables using a standard questionnaire measure. This is a widely used measure and was recommended as part of the BIG Lottery Well-being questionnaire toolkit (nef/ Abdallah *et al.* 2008: primary schools tool). Eight written examples of one standard portion were given such as 'one apple' or 'a small bowl of salad'. Administrators of the questionnaires used standard guidance and pictures as the questions were read out to the class to reinforce understanding of portion size. After checking that pupils understood and had thought about the question, they were asked to record their estimate. Responses for fruit and vegetables were coded separately from '0' to 'over 5' portions, these were then summed together and categorised in a five point scale from 'highest' to 'lowest'.

Chart 11.30 Self reported average daily fruit and vegetable portion (Frequencies). Portion examples provided in the questionnaire. Follow up N=1483 Missing data=1



The researchers assessed the validity of this measure with 57 students at piloting and 82 students at the follow up stage. All students were in Years 5 and 6. These assessments consisted of small group interviews and the DILQ questionnaire: a 24 hour food consumption recall tool. The results suggest that children over-estimated their fruit and vegetable intake in response to the question. This was probably due to: separate recording of fruit and vegetables; average cognitive development of respondents; and social approval bias. The pattern of over-estimation appears consistent thus: children reporting an average of 8 portions were more likely to be consuming 5; those reporting an average of 5-7 equated to 4 portions. For the purpose of the analysis in this study we therefore estimated following portion equations:

- Highest = 5 or more portions
- High = 4 portions or more but less than 5
- Middle= 3 portions or more but less than 4
- Low= 2 portions or more but less than 3
- Lowest = Less than 2 portions

Preferences for fruit and vegetables

At follow up children in Years 4 to 6 were asked what they thought of eating a range of five vegetables and three fruit. They were offered a five point scale from really like to really don't like. Reliability analysis of the eight measures showed a Cronbach's Alpha of 0.892. The variables were summed then allocated into five categories (labelled as 'really like' to 'really dislike'). The distribution is presented in table 11.30.

Table 11.30 Preferences for selected fruit and vegetables

	Frequency	Percent	Valid Percent
Really like	298	15.7	15.8
Like	354	18.7	18.7
Neither like nor dislike	432	22.8	22.8
Dislike	370	19.5	19.6
Really don't like	313	16.5	16.6
Missing	130	6.8	6.6
Total	1897	100.0	100.0

Attitudes toward sustainable foods

For the follow up questionnaire, reliability analysis of the measures for student attitudes towards fair trade, organic, free range and UK sourced foods gave a Cronbach's Alpha value of 0.825. The four measures were combined to provide a five point scale from a highly positive attitude towards buying sustainable foods (4/4) to a highly negative attitude (0/4).

Children's confidence in giving a definitive response to these questions increased with age: with Year 6 less likely to respond "I don't know".

Chart 11.31 Going Shopping: "Which Yummy Bar would you buy? The bars taste the same" Pictures of the products. Fair trade product priced as more expensive.

Follow up only. Years 4-6. N=1891 Missing data=20

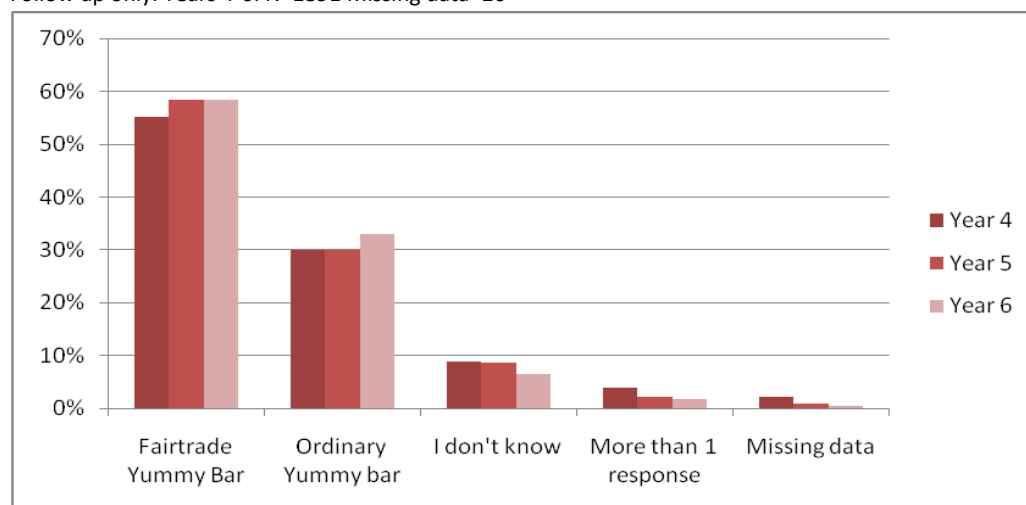


Chart 11.32 Going Shopping: “Which bag of carrots would you buy?” Pictures of the products. Organic product priced as more expensive.

Follow up only. Years 4-6. N=1891 Missing data=57

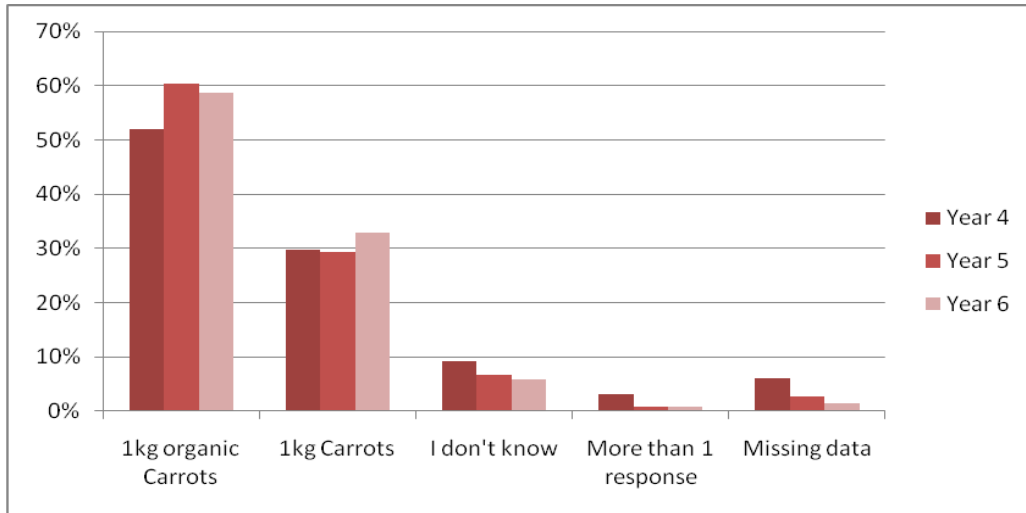


Chart 11.33 Going Shopping: “Which box of eggs would you buy?” Pictures of products. Free range eggs priced as more expensive.

Follow up only. Years 4-6. N=1891 Missing data=20

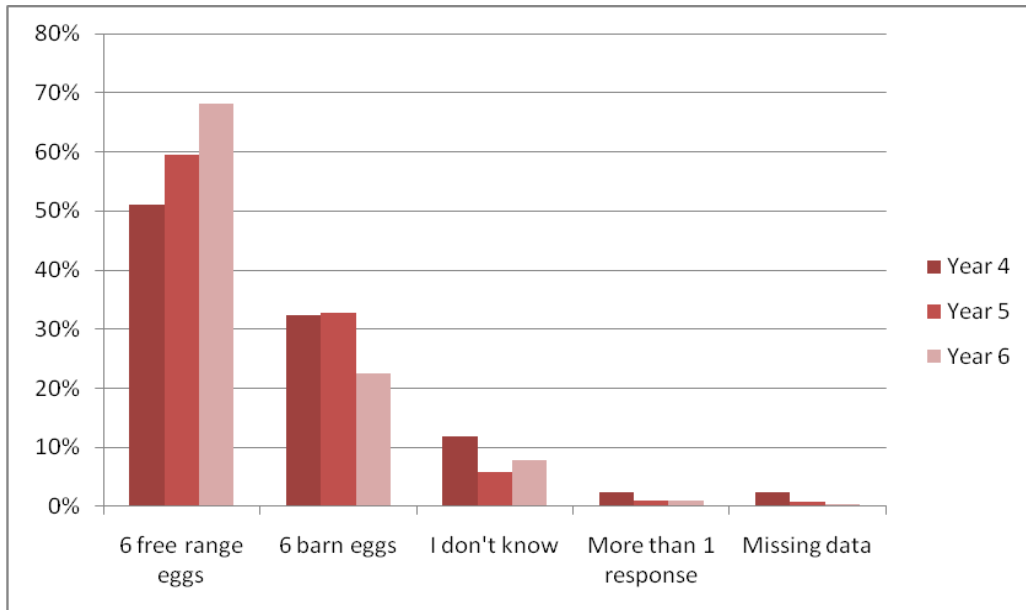
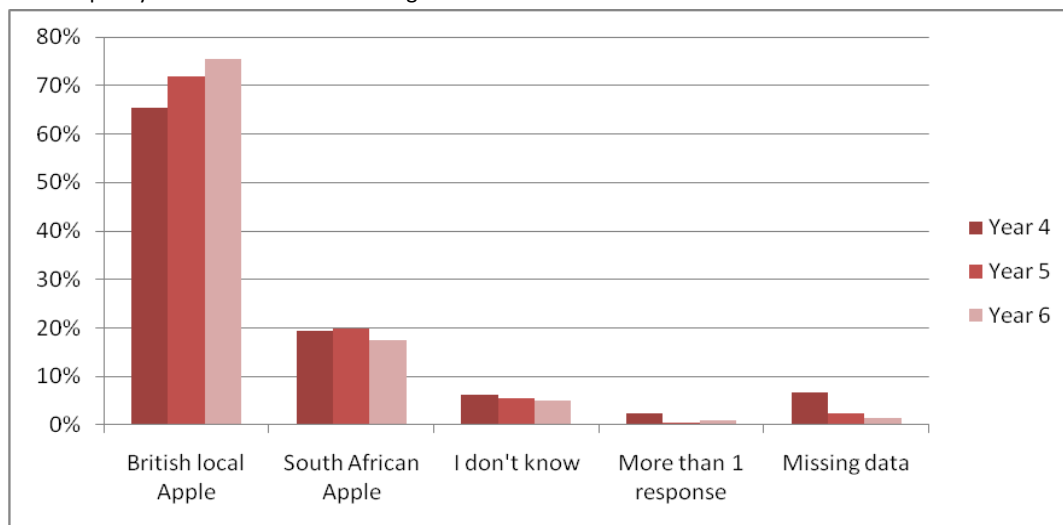


Chart 11.34 Going Shopping: Which Apple would you buy? Pictures of products. British local apple product priced as more expensive.

Follow up only. Years 4-6. N=1891 Missing data=56



Sustainable food education at school

Teachers were asked whether their class completing the questionnaire had take part in a range of food education activities in the past academic year. Reliability analysis of the four measures for participation in sustainable food education (fair trade, organic, animal welfare and locally sourced foods) gave a Cronbach's Alpha value of 0.941. The four measures were combined to produce a five point scale from high levels of sustainable food education (4/ 4) to no sustainable food education in the last year (0/4).

Favourite foods

Students were asked an open question to write down their three favourite foods. The three favourite foods were separately entered on to the database. All reports of 'fruit' and 'vegetable' items were recorded. These did not include items involving processed fruit or vegetables such as 'apple pie' or 'carrot soup'. Dishes with clearly distinct foods, such as fish and chips were recorded separately. Missing data was recorded for respondents who wrote less than three favourite foods. Where respondents wrote down more than three favourites, only the first three were counted in the analysis. Thus three favourite foods were recorded for each respondent.

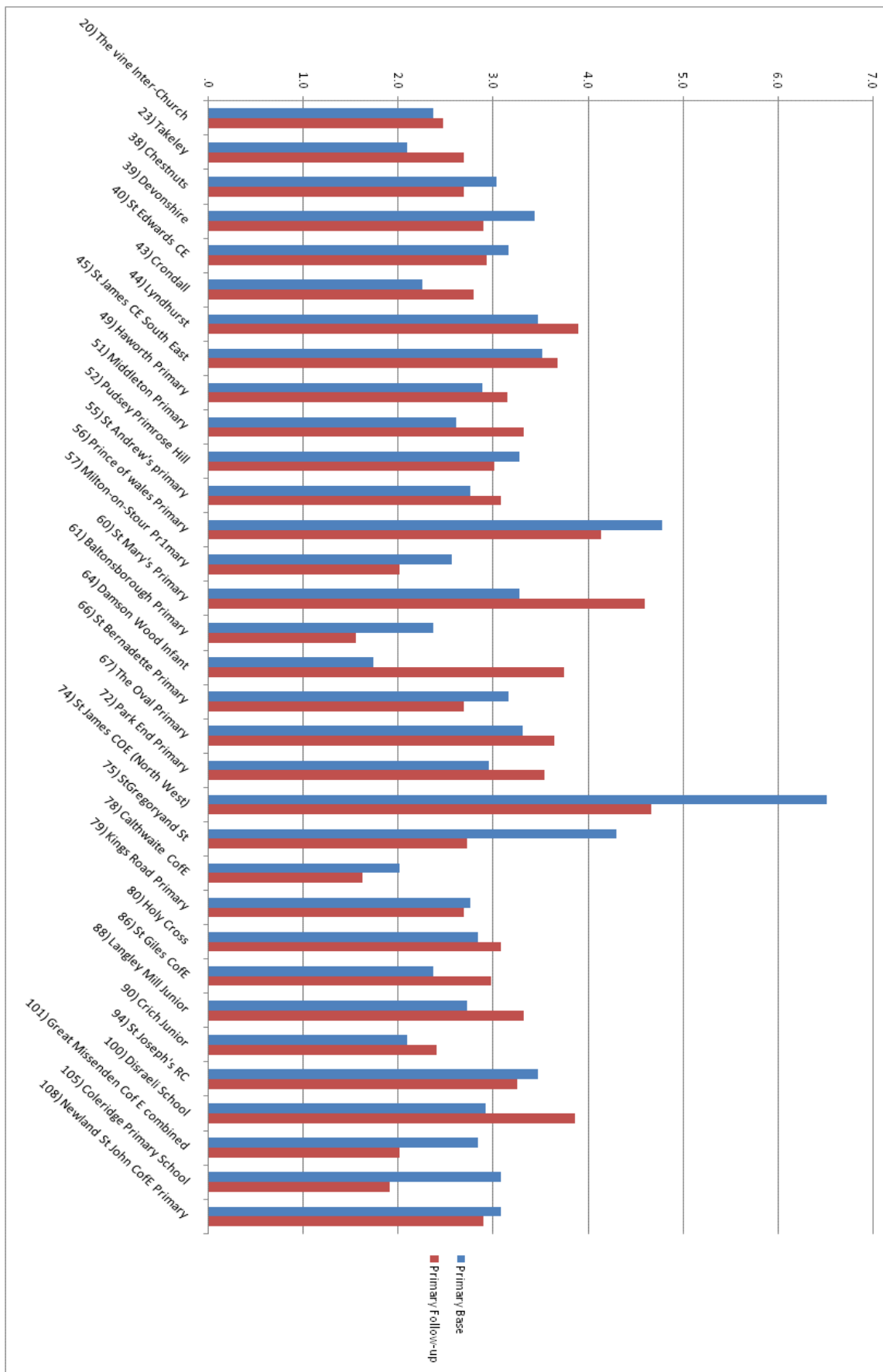
Secondary Schools

The secondary schools questionnaire employed a similar set of measures as the primary schools tools. It also drew upon additional items adapted from the LIDNS survey (Nelson et al 2007a,b) included those covering cooking, food preparation and growing at home, and attitudes towards healthier or sustainable foods.

Ethical issues

For each school, the Head teacher completed a partnership agreement with FFLP prior to enrolment on the programme. As part of this process the Head teacher was asked to consent for the school to take part in the evaluation- part of which included the use of student questionnaires. Parents were informed about the programme and the evaluation through the school. The researchers followed

school policies on the opportunity for students to opt out of the study within the educational setting. The study was given ethical approval by Faculty of Health and Life Sciences Research Ethics Committee at the University of the West of England, Bristol.



Secondary Schools Supplementary Analysis

Chart 11.36 Students responses to the question: how often do you have a packed lunch?

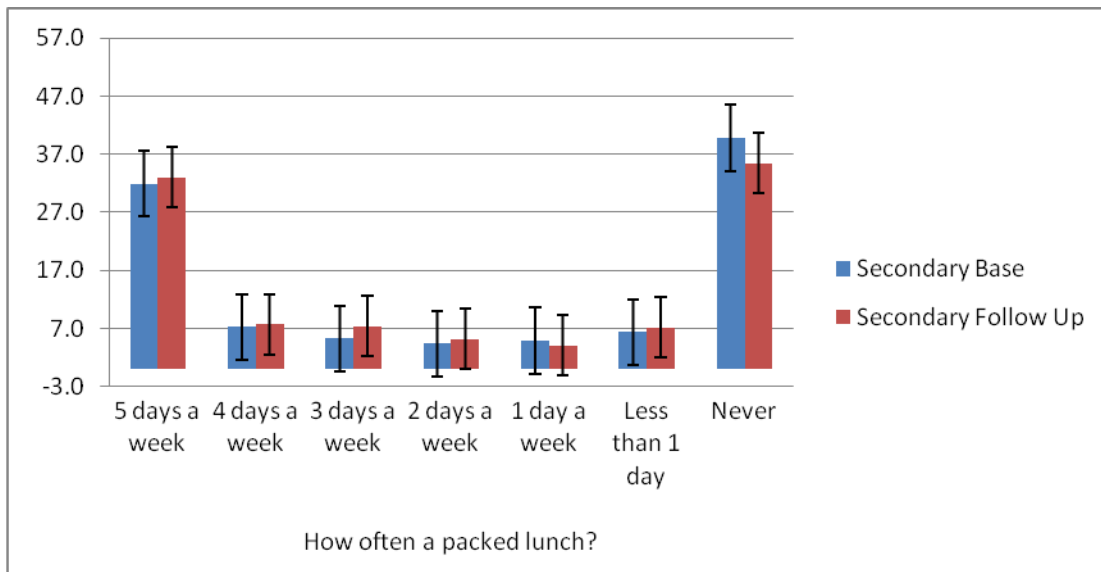
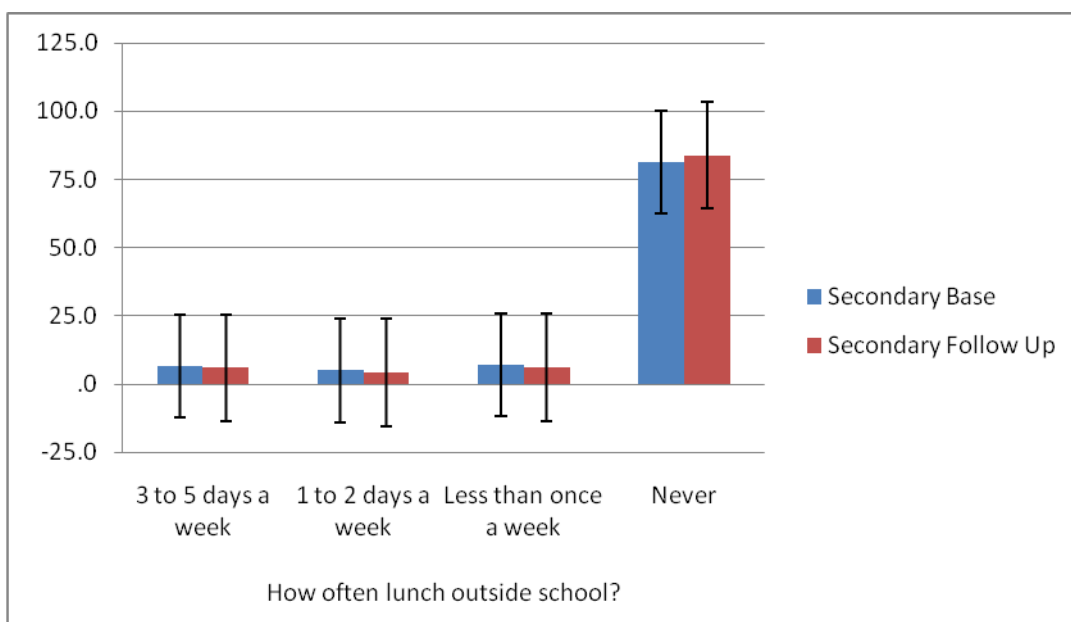
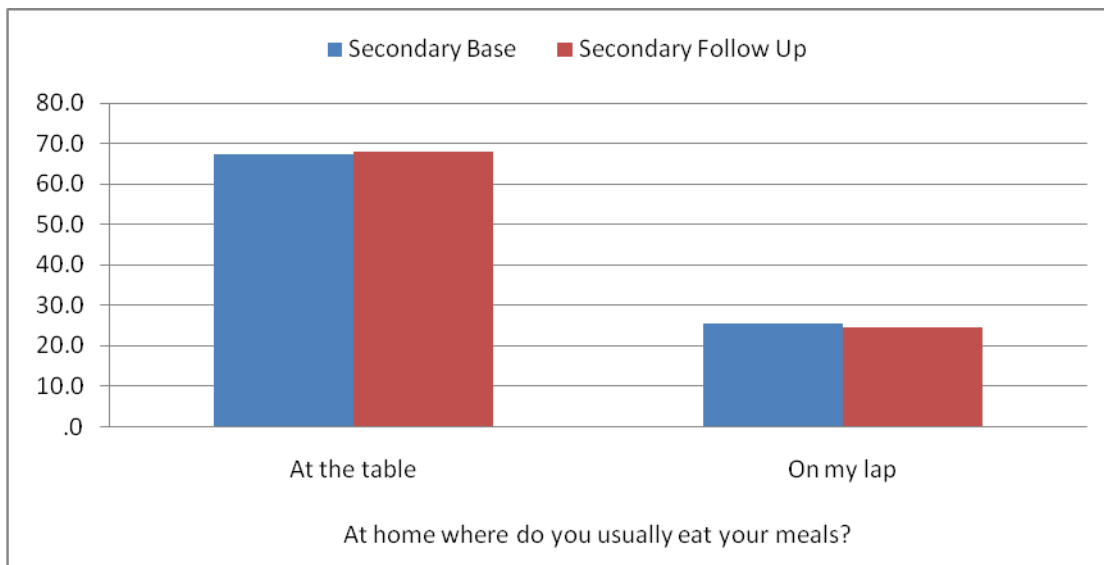


Chart 11.37. Students responses to the question: how often do have lunch outside school?



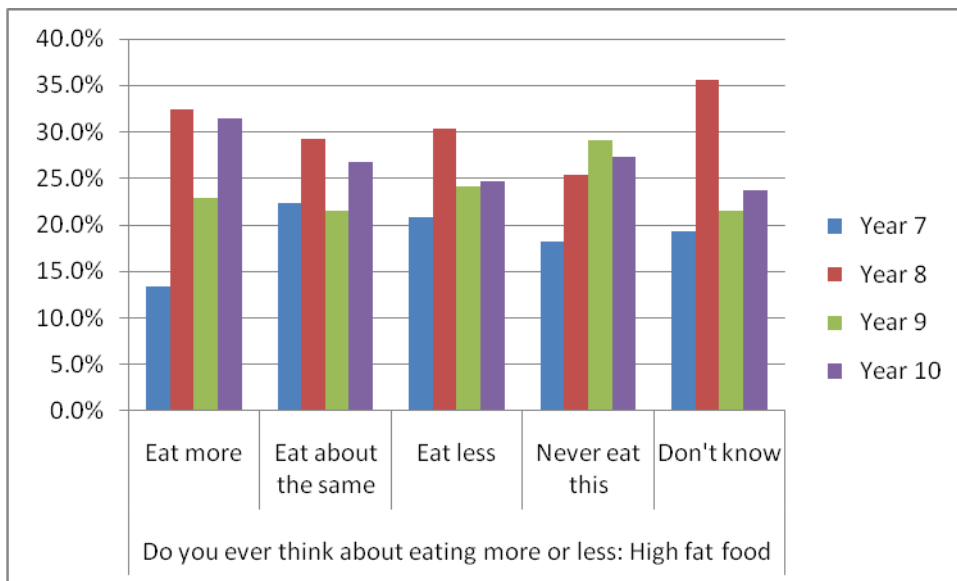
Cooking, food preparation and eating at home

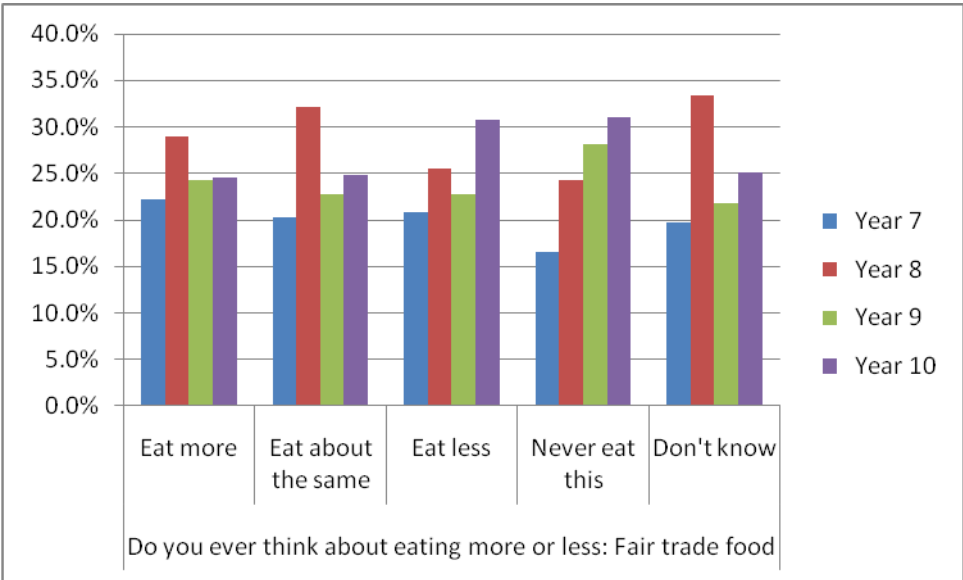
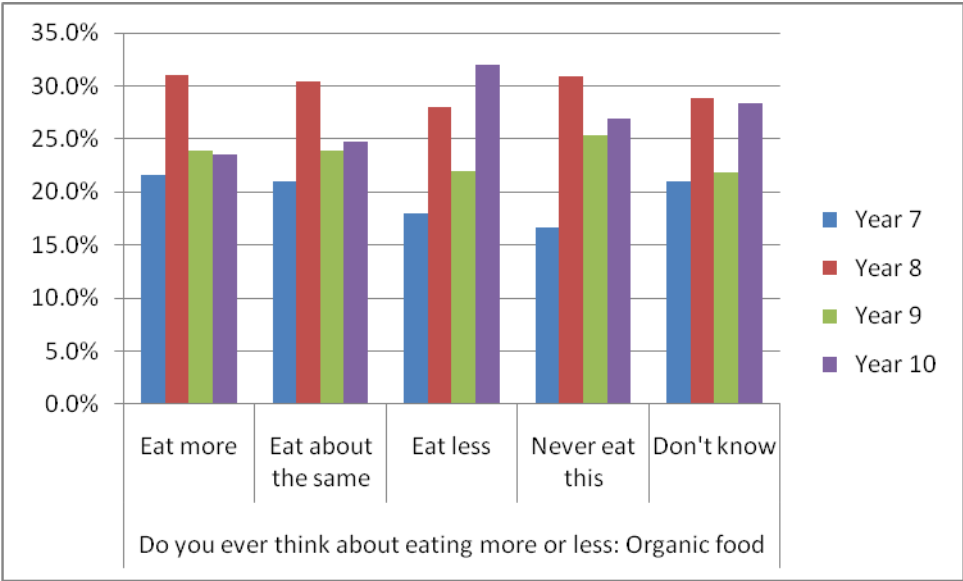
Chart 11.38. Students responses to the question: at home where do you usually eat your meals?



Attitudes towards eating healthy and sustainable foods: secondary schools

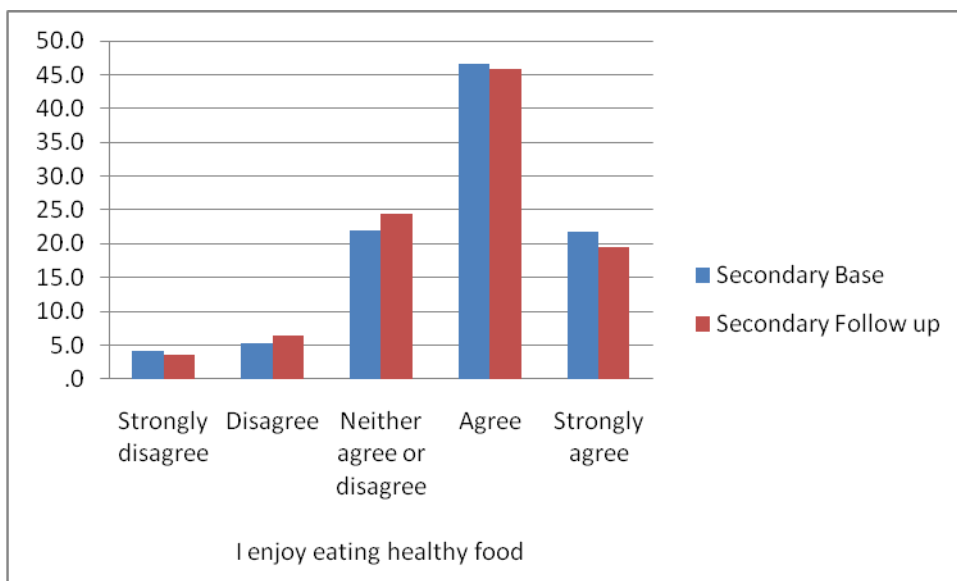
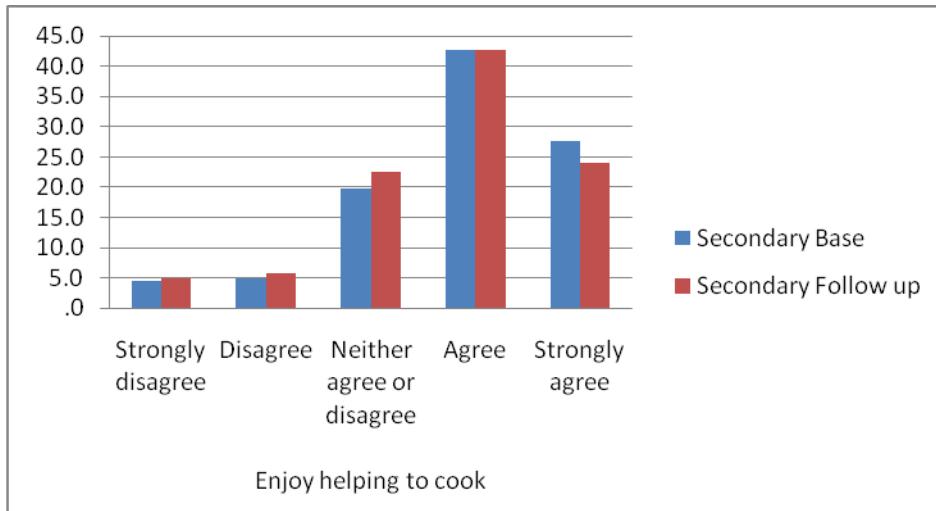
Charts 11.39-41. Attitudes towards eating healthy and sustainable foods by Year group

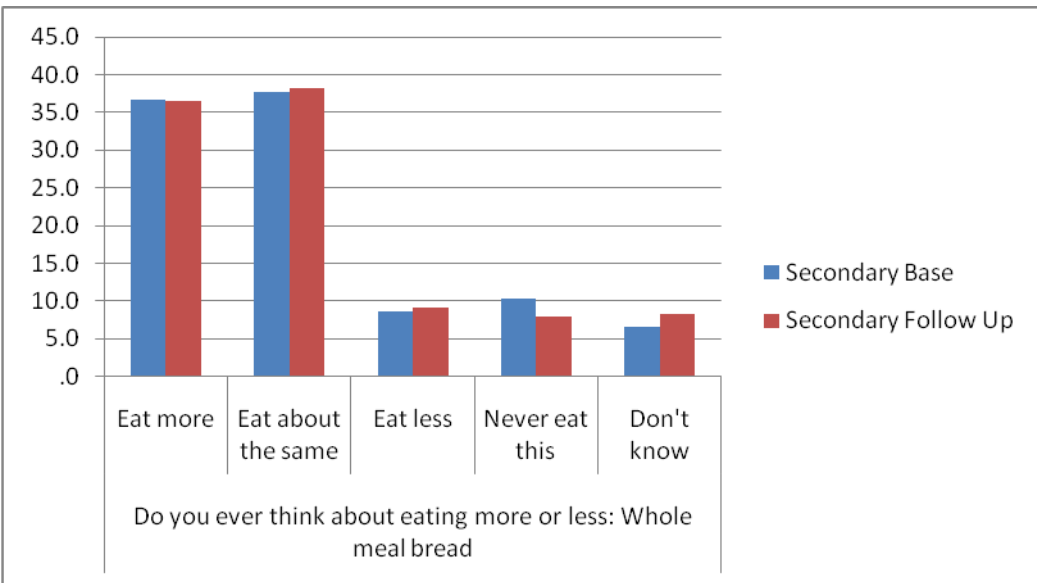
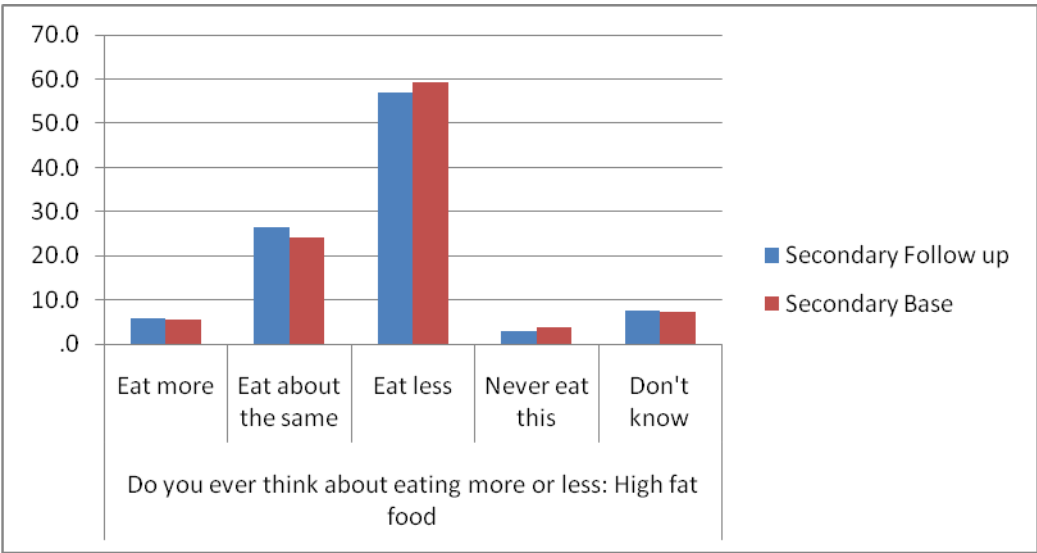
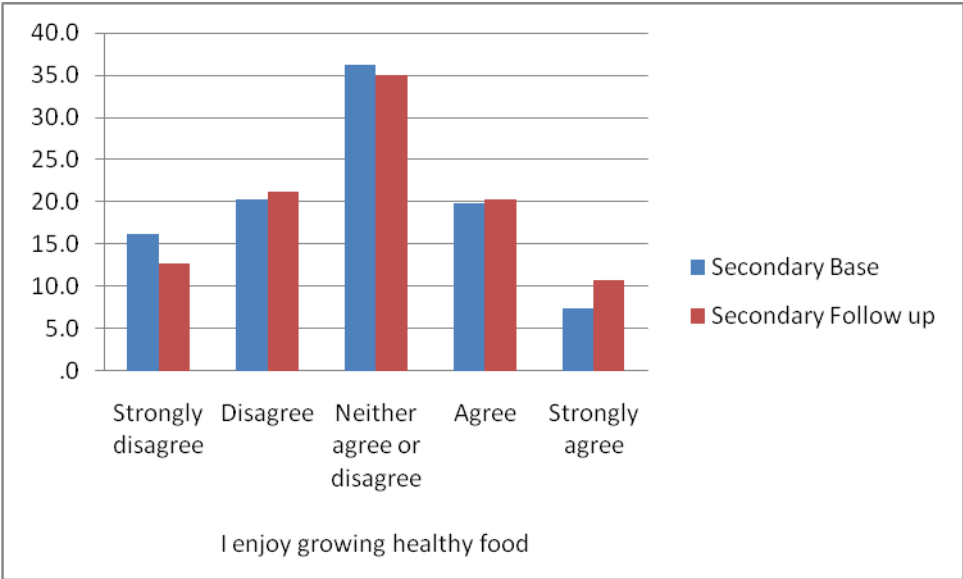


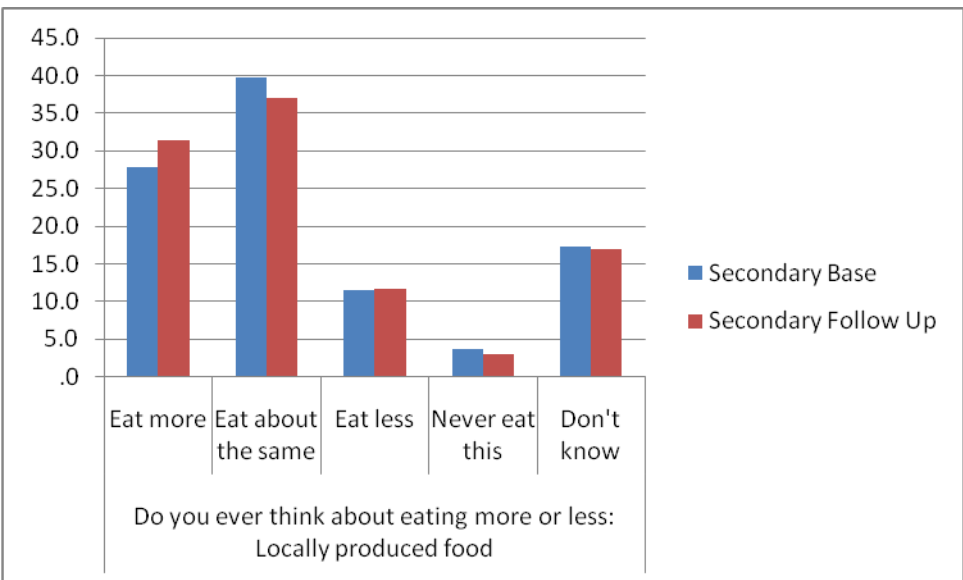
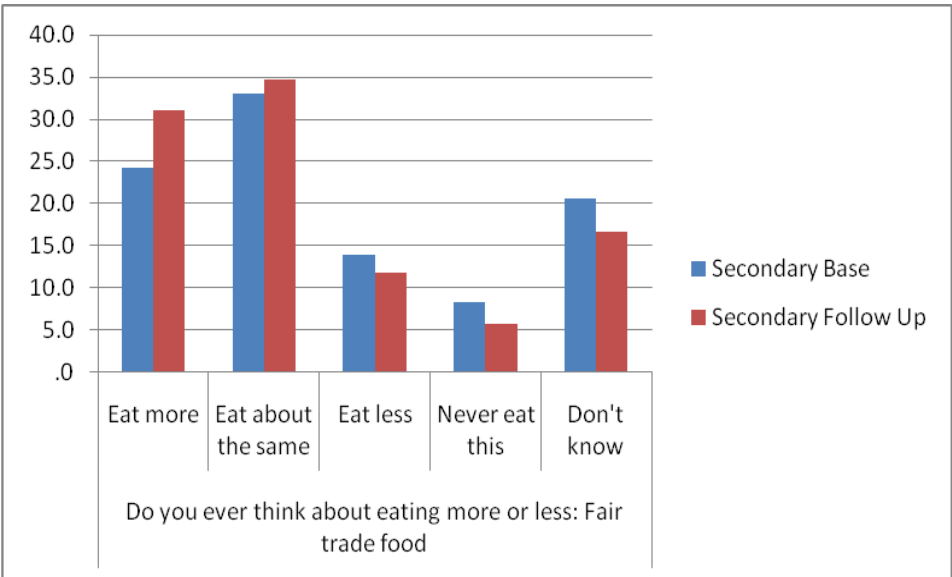
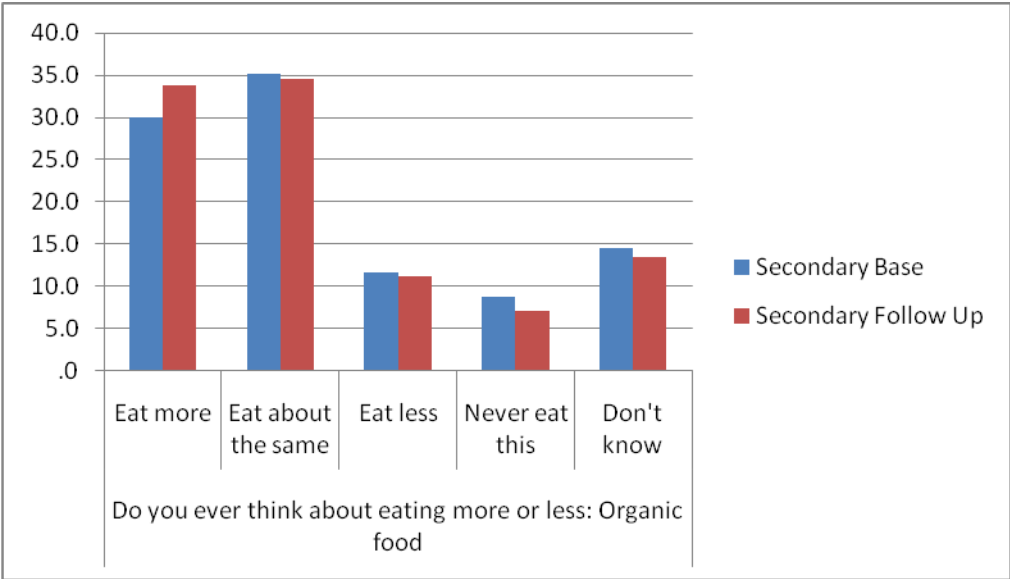


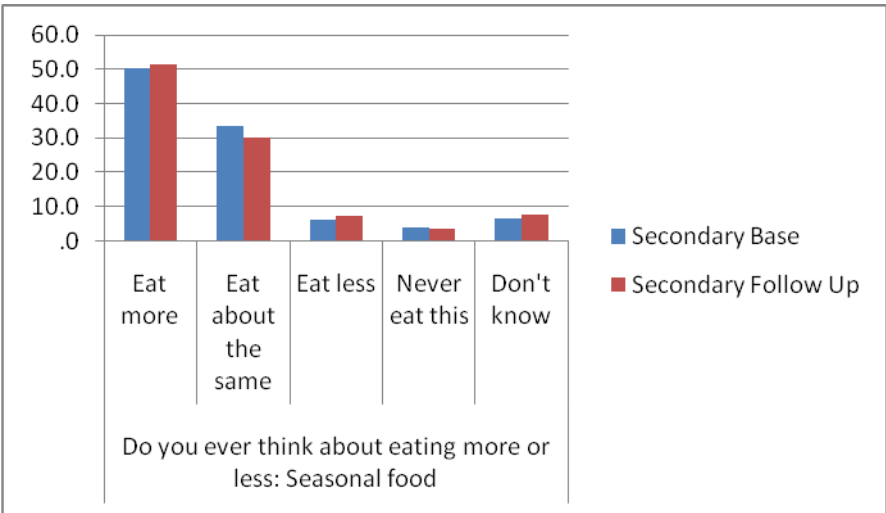
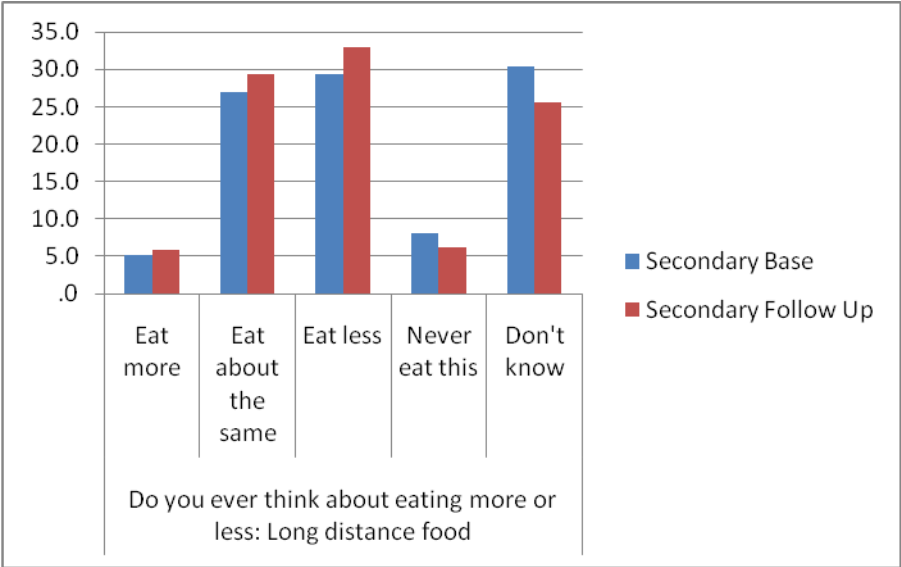
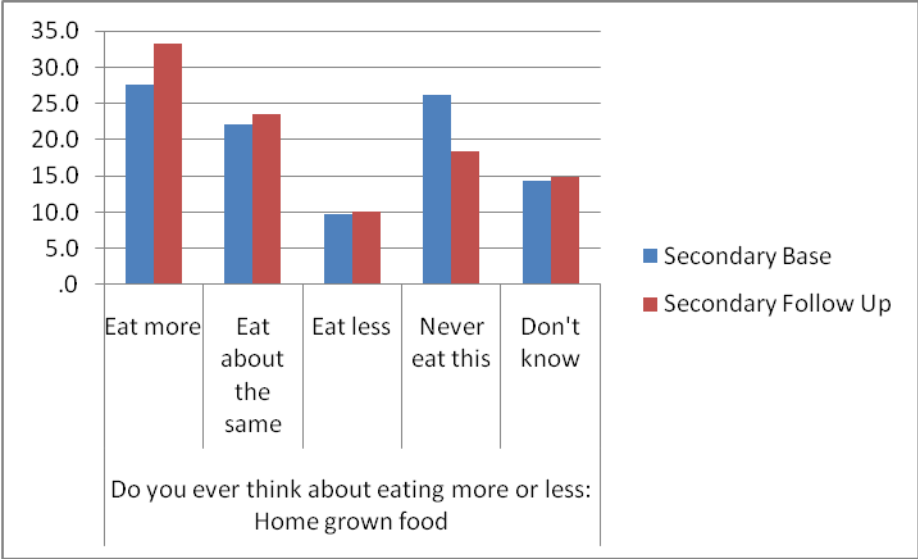
Attitudes towards Healthier and Sustainable Foods: secondary schools

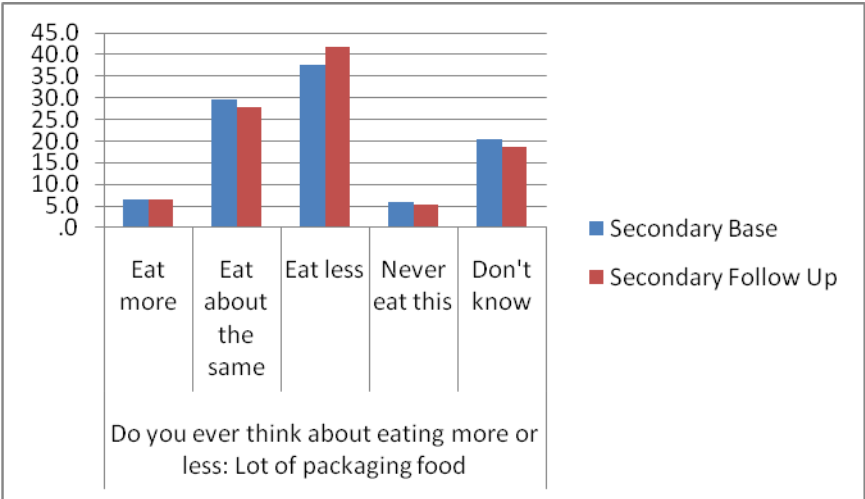
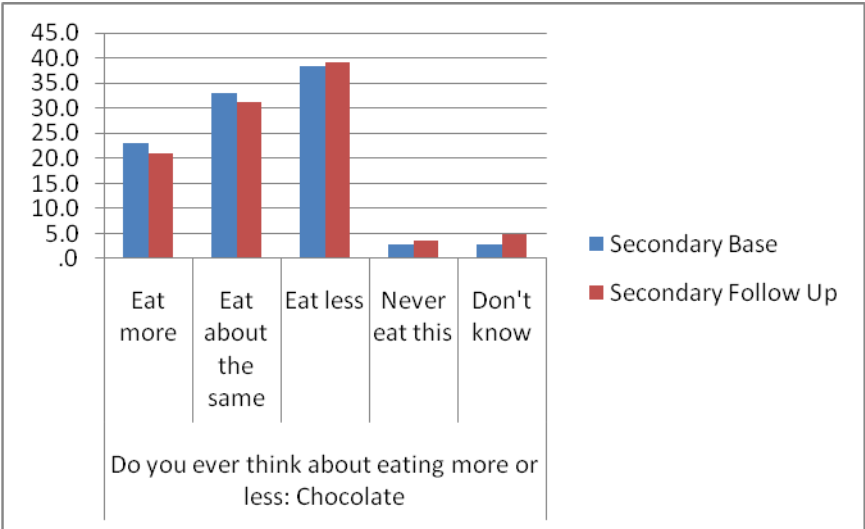
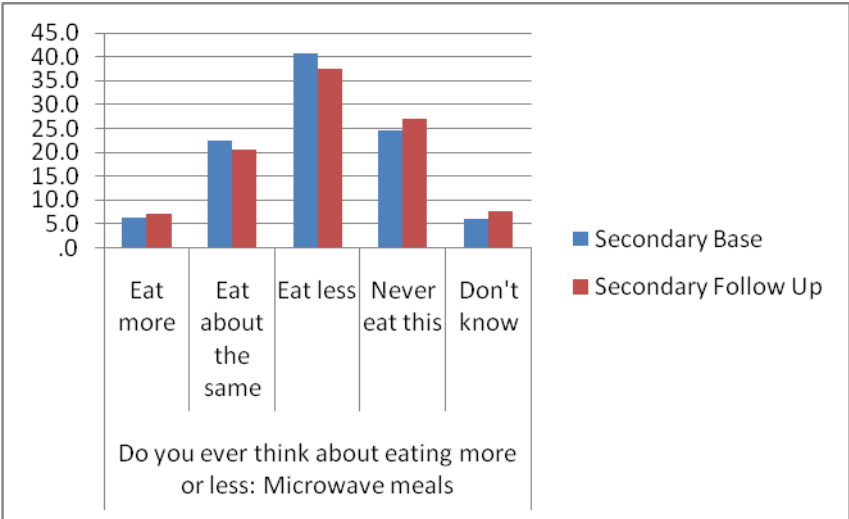
Charts 11.42-60. Attitudes towards cooking, healthier food, growing food and sustainable foods

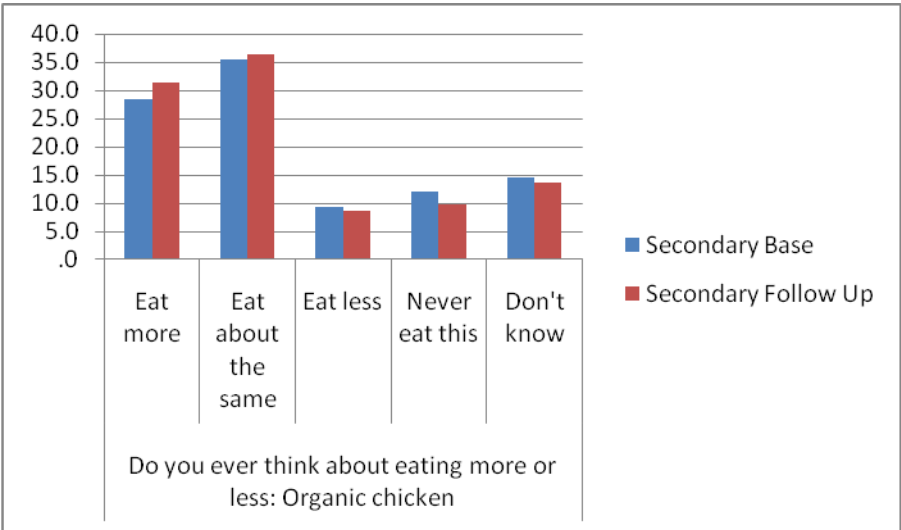
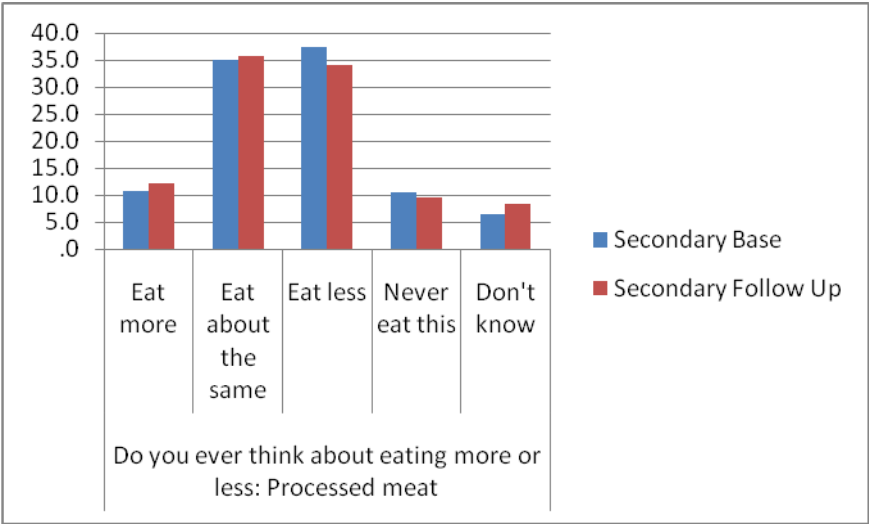
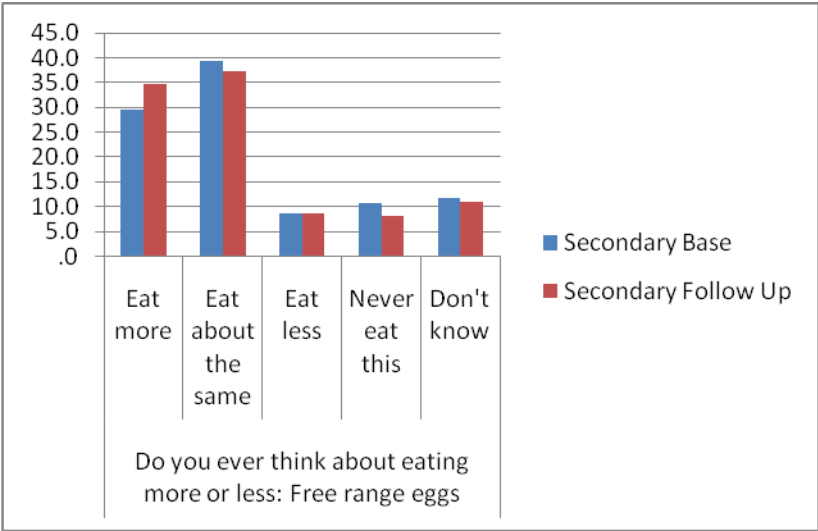


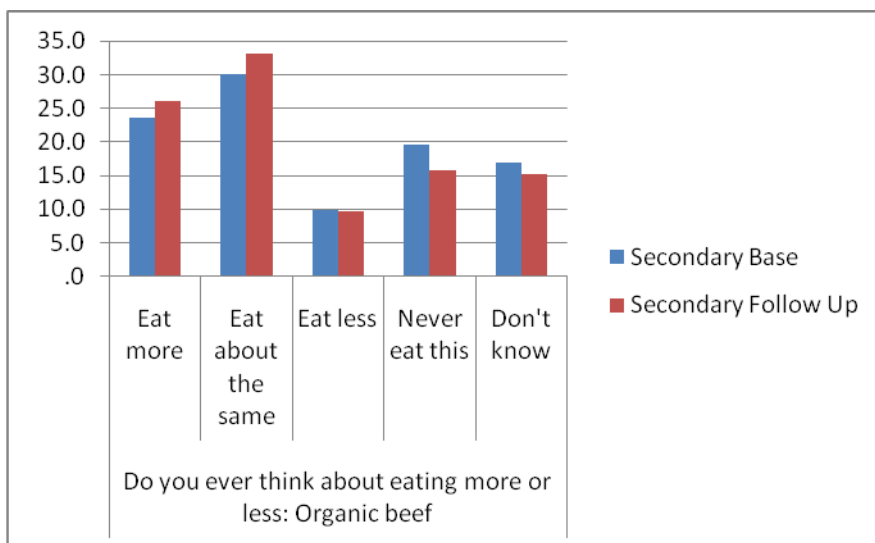
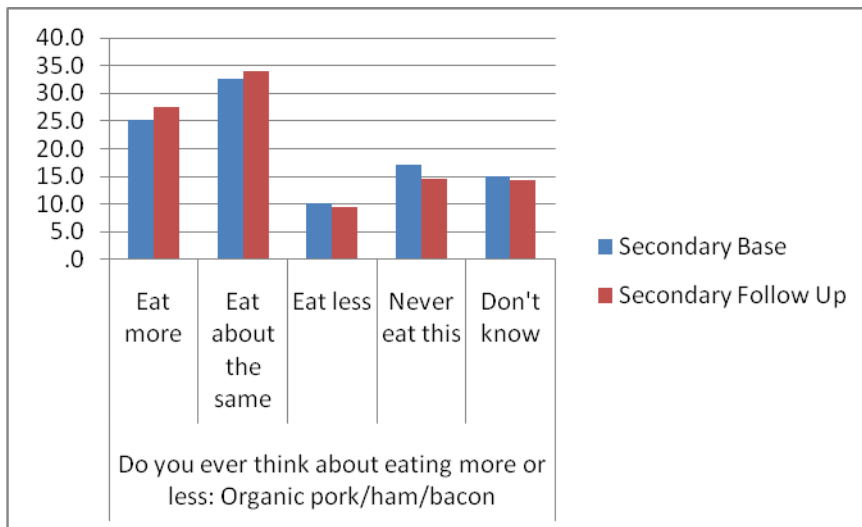












Correspondence analysis: primary schools and healthy eating

The analysis in the Chart below is a permuted correspondence analysis of schools with fruit and vegetable preferences. It shows that a number of schools had children more likely to report favourable attitudes towards fruit and vegetables. These are schools # 40, 43, 52, 49, 45, 94 and 78. Whilst these and some of the others clustered in this area are FFLP Silver and Gold schools, the clustering indicates that there is no strong association. This may be because schools can, for example, receive awards for their efforts to make changes under circumstances where students have had negative perceptions. The associations are less clear for secondary schools.

Chart 11.61 Relationship between primary schools and student fruit and vegetable preferences.

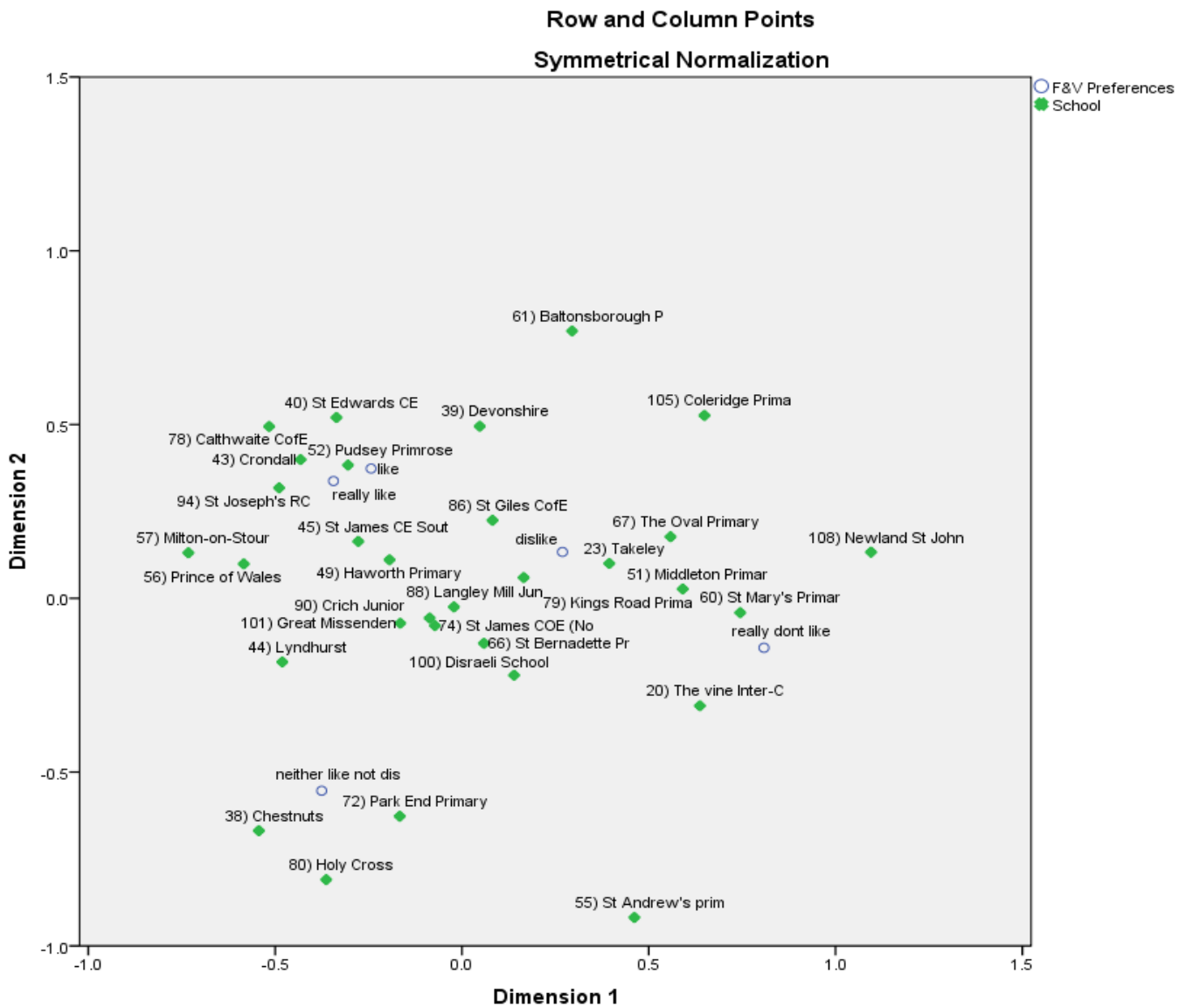
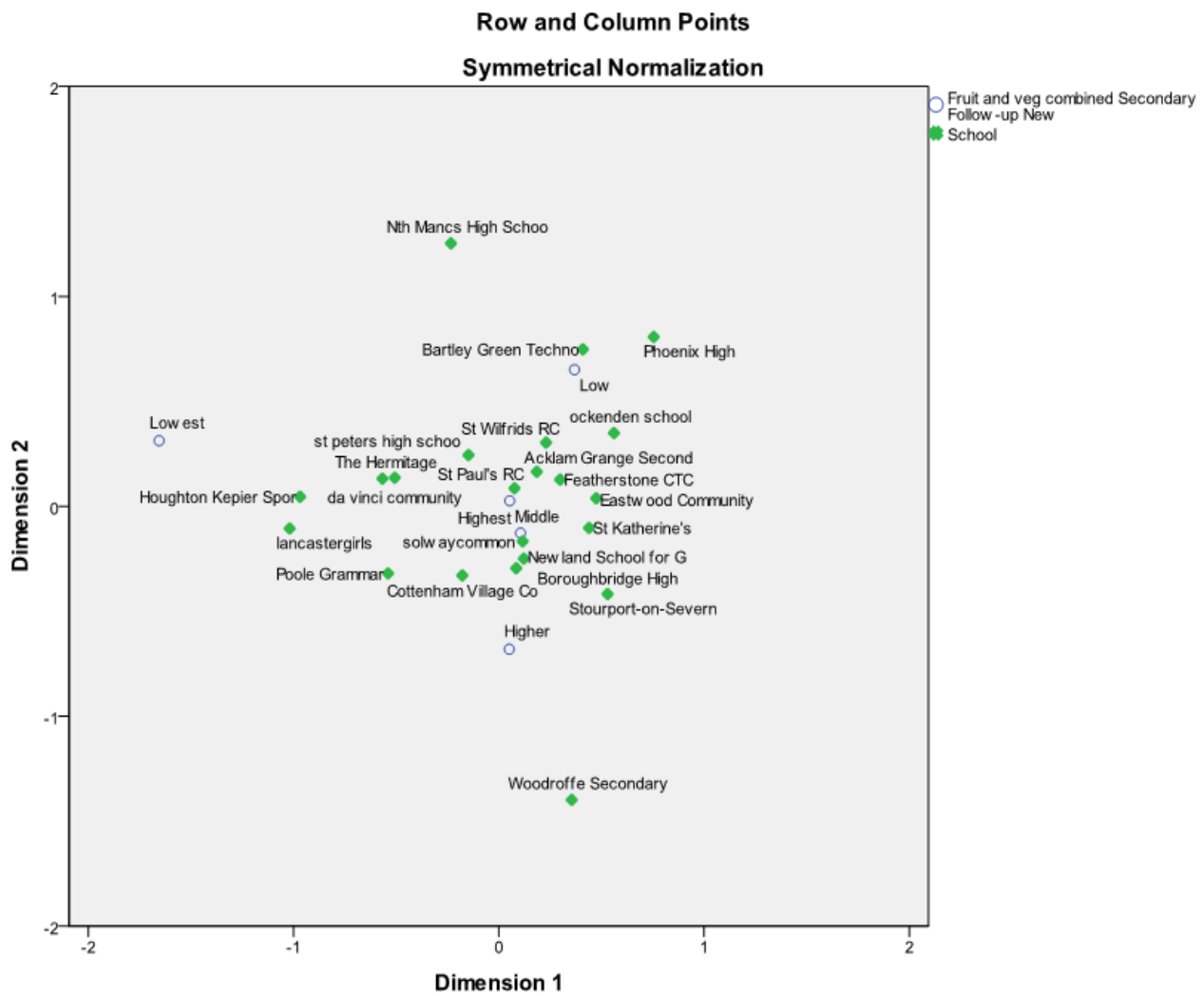


Chart 11.62 Relationship between secondary schools and student fruit and vegetable intake.



Appendix for Section 12 Supplementary data on secondary schools

Table 12.20 Secondary school Year Group data by first child

	Frequency	Percentage
Year seven	83	24
Year eight	77	23
Year nine	71	21
Year ten	72	21
Year eleven	18	5
Year twelve	8	2
Non response and first children who have left school	14	4
Totals	343	100

Table 12.21 Assessment of school meals

Quality of meals	Frequency of response	Percentage of total sample
Excellent	45	14
Good	176	55
Neither good or bad	75	23
Poor	11	3
Very poor	2	1
No response	12	4
Total	321	100%

Table 12.22 Assessment of levels of improvement

Level of improvement	Frequency of response	Percentage of total sample
Improved enormously	26	8
Got better	76	24
Stayed the same	107	52
Got worse	10	3
No response	42	13
Total	321	100%

Table 12.23 As a result of your child's learning through FFLP, has your child talked about any of these topics?

	Yes %	No %	Non response %
Healthier food choices	56	44	
Fair trade food	41	58	1
Local shopping	16	84	
Organic meat	12	88	
Food miles	15	84	1
New fruit and vegetables	22	78	
Organic food	28	77	
Local food	17	83	
Free range eggs	22	78	
Food packaging	20	80	
Cooking skills or recipes	64	36	

Growing fruit and vegetables	33	67	
------------------------------	----	----	--

Table 12.24 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	3	14	46	19	8	10
Learned more about cooking from scratch	6	24	36	17	8	9
Learned more about growing fruit & vegetables	4	17	43	18	8	10
Changed some of the foods we buy	6	32	34	14	7	7
Changed our family attitudes to food	4	25	38	16	7	10
Eaten more fruit and vegetables	8	25	35	16	7	9
Not changed our level of involvement in school life	12	29	34	8	4	13

Appendices for Section 13 Wider Programme Influences

Coding protocol for content analysis of the Ofsted Commentary

Example 1: Positive reference

*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.*

This extract is categorised as single syntactic unit and coded as:

1 positive reference = "grow*"

2 duplicate reference search words ="health*", "food*"

Example 2: Positive reference

*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.*

This extract is categorised as single syntactic unit and coded as:

1 positive reference search word = "food*"

2 duplicate reference search words ="health*", "meal*"

Table 13.20 Section 5 Ofsted Judgements for FFLP Flagship Schools. Data based upon Ofsted Inspection Reports at both Pre-enrolment (up to 24 months) and Post-enrolment (upto 24 months). Ratings for ten aspects of school performance selected. N=48

		Outstanding		Good		Satisfactory		Inadequate	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
Inspection judgements									
Overall effectiveness									
1	How effective, efficient and inclusive is the provision of education, integrated care and any extended services in meeting the needs of learners?	4.3	22.9	59.6	50	29.8	27.1	6.4	0
Achievement and standards									
2	How well do learners achieve?	4.3	25	61.7	52.1	27.7	22.9	6.4	0
Personal development and well-being									
3	How good is the overall personal development and well-being of the learners?	27.7	43.8	59.6	43.8	8.5	12.5	4.3	0
4	The extent to which learners adopt healthy lifestyles	30	64.6	59.6	33.3	6.4	2.1	0	0
5	How well learners enjoy their education	38.3	52.1	53.2	35.4	6.4	12.5	2.1	0
6	The attendance of learners	4.3	16.7	38.3	45.8	46.8	37.5	10.6	0
7	The behaviour of learners	29.8	33.3	57.4	58.3	8.5	8.3	4.3	0
The quality of provision									
8	How effective are teaching and learning in meeting the full range of learners' needs?	4.3	25	55.3	54.2	34	20.8	6.4	0
9	How well are learners cared for, guided and supported?	21.3	47.8	59.6	37.5	14.9	14.6	4.3	0
Leadership and management									
10	How effective are leadership and management in raising achievement and supporting all learners?	8.5	31.3	61.7	47.9	23.4	20.8	6.4	0
Mean for the 10 selected ratings		17.3	36.2	56.6	45.8	20.6	17.9	5.1	0

Table 13.21 England primary school Section 5 inspection judgements 2005-2009 Ratings for ten selected aspects of school performance

		Outstanding				Good				Satisfactory				Inadequate			
		05-06	06-07	07-08	08-09	05-06	06-07	07-08	08-09	05-06	06-07	07-08	08-09	05-06	06-07	07-08	08-09
	Inspection judgements																
	Overall effectiveness																
1	How effective, efficient and inclusive is the provision of education, integrated care and any extended services in meeting the needs of learners?	9	12	13	16	49	48	50	52	34	34	33	29	7	5	4	3
	Achievement and standards																
2	How well do learners achieve?	8	12	13	15	50	49	50	53	35	34	33	29	7	5	4	3
	Personal development and well-being																
3	How good is the overall personal development and well-being of the learners?	26	32	35	40	63	58	55	53	11	10	10	7	0	0	0	0
4	The extent to which learners adopt healthy lifestyles	23	31	36	44	66	61	57	52	11	8	7	4	0	0	0	0
5	How well learners enjoy their education	31	37	41	45	61	56	52	49	7	7	7	5	0	0	0	0
6	The attendance of learners	8	8	11	12	42	44	44	46	40	45	43	39	10	3	2	2
7	The behaviour of learners	30	33	37	43	63	59	56	52	8	8	7	5	0	0	0	0
	The quality of provision																
8	How effective are teaching and learning in meeting the full range of learners' needs?	7	11	12	14	53	52	52	55	36	35	34	29	4	3	3	2
9	How well are learners cared for, guided and supported?	24	26	28	33	56	51	48	48	19	22	23	18	1	1	1	1
	Leadership and management																
10	How effective are leadership and management in raising achievement and supporting all learners?	11	14	15	17	51	50	52	54	34	33	31	27	4	3	2	2
	Mean across the 10 selected ratings	17.7	21.6	24.1	27.9	55.4	52.8	51.6	51.4	23.5	23.6	22.8	19.2	3.3	2	1.6	1.3