Introduction

As noted by Lusardi & Mitchell (2014) an increasing deregulation of the financial sector in recent times has resulted in a greater range of financial products and services available for consumers. Services such as payday loans, pawn shop loans and tax refund loans have become prevalent as alternatives to traditional loans from financial institutions such as banks (Lusardi & Mitchell 2011). The late 1980's also saw a growing level of financial complexity for those attending tertiary institutions, with the emergence of government loans for undergraduate tertiary students in countries such as England and New Zealand. Students now have the ability to take out student loans from the government to pay for not only tertiary fees, but also for general living expenses, as well as other course related costs such as text books. The introduction of tertiary fees also placed a greater importance on the future value of a tertiary qualification. Students now have to consider not only the opportunity cost of their time when earning a tertiary qualification, but also the expected future return on the financial outlay incurred through tertiary fees.

With a greater level of financial literacy required to negotiate increased access to both government and commercial debt, it is important to identify groups in society that are prone to lower levels of financial literacy. Several studies have identified females as one such group who have lower levels of financial literacy than their male counterparts (Lusardi & Mitchell 2014). There has however, been little research on understanding the relationship between financial literacy levels, and attitudes to student debt. This paper attempts to lessen the information void through a cross-national study, with data collected from corresponding samples of students from England and New Zealand (NZ). The financial literacy levels of the samples of students are initially examined to establish if a gender difference in knowledge levels exists in both countries. Attitudes to student debt are then examined using Likert scales to establish if there are gender based differences in attitudes to student debt in either country.

Literature Review

Research on gender differences in the financial sector has been noticeable since the end of the 20th century, with Burton (1995) publishing her paper Women and Financial Services: Some directions for future research suggesting it was "in the best interest of financial institutions to investigate the needs of women more closely" (p. 21). Burton (1995) chose to focus on the consumption of financial services by women because of the changes in consumer behaviour among women due to wider societal changes, significant differences in financial behaviour between the genders "which need explaining" (p. 21) and an increasing interest in the female market segment by financial institutions. The interest in female market segments in financial services was also discussed by Philp, Haynes & Helms (1992) in their paper 'Financial Service Strategies: Neglected Niches', with Kover (1999) continuing Burton's work by examining the increasing role of women in financial tasks such as budgeting and planning finances. With references to consuming financial services, Burton (1995) theorised that a plausible explanation of the differences in consumption patterns between men and women was because the purchase of financial services had been 'designated by some groups of women as a 'masculine' activity" (p. 22). Support for this idea was also lent by Spathis,

Petridou & Glaveli (2004) who found support for the hypothesis that "gender affects service quality perceptions and the relative importance attached to various banking service quality dimensions" (p. 90).

Further research has also uncovered differing attitudes across genders to investing, particular investing for retirement purposes (Martenson (2008), Faff, Hallahan & McKenzie (2011)). While Faff et al (2011) emphasised the increasing role of women in handling finances due to greater longevity and increasing divorce rates, Aguilar (2001) quoted a 1997 Bank of America report that the average age of widowhood for an American female was 56. In their 2013 study, Dwyer, Hodson & McCloud examined the relationship between gender, debt and dropping out of college, finding that trade-offs between attending college and full time employment were influenced by the "different labour market opportunities women and men face that affect the value of a college degree and future difficulties they may face in repaying college debt) (p. 30).

Current literature on the topic of gender discrepancy with regard to financial literacy is relatively extensive, with the general finding that males have higher levels of financial literacy than females (Lusardi, Mitchell, and Curto, 2010; Lusardi and Mitchell 2009; Lusardi and Tufano 2009a, 2009b). This appears to be the case across differing age groups (Chen & Volpe 2002; Mandell 2008), and regardless of test question sophistication levels. (Lusardi, Mitchell and Curto (2010); Hung, Parker and Yoong (2009); (Fonseca, Mullen, Zamarro and Zissimopoulos, 2012). The reasons for this gender differential are less well examined. Lusardi and Mitchell (2014) found the gender differential to be present in The United States of America, Germany, Switzerland and the Netherlands. They cite Hsu (2011) who proposed that some of the gender differences may be rational, with married woman only building up financial knowledge later in life when close to widowhood, as a result of specialisation of labour within the household. If Hsu's (2011) proposition is correct, this would suggest that countries with differing cultural norms and stereotypes around the world may have differing degrees of gender bias in financial literacy levels. The Programme for International Students Assessment (PISA) results for their 2012 *Students and Money: Financial Literacy* (OECD 2014) study stated that of the 13 OECD countries which took part, six of them have reported males outperforming females on surveys measuring financial knowledge, when adults were used as the subjects. However, when 15 year olds were the subjects, only one of the 13 countries (Italy) showed a statistically significant difference in financial literacy between males and females (with Italian 15 year old males outperforming their female counterparts). However, when students' competencies in other subjects (namely reading performance and mathematics) were accounted for, boys did perform better than girls on the topic of financial knowledge, and when looking at the performance distribution, among the high achievers, boys tend to outperform girls. The report went on to suggest "girls may need targeted help to develop the skills to reach the highest levels of proficiency in financial literacy" (2014, p. 79). In an attempt to explain why the gender difference in financial literacy level is not as prevalent for 15 year olds as it is for adults, the report supposes that "as boys and girls grow up, they may be exposed to different opportunities to learn and improve their financial competencies….and therefore they may develop different

levels of financial knowledge and different financial strategies in adulthood over time" (2014, p. 81). Given that university students have achieved to a sufficiently high level in reading performance and mathematics to gain entry to university, admission to university should act as a 'control' for other subjects to a certain extent.

The idea of 'different learning opportunities' mentioned in the PISA report supports Hsu's (2011) suggestion that specialisation within the household between males and females may be a possible cause of gender differences in the financial literacy knowledge of adults. In a summary of the literature on gender differences in financial literacy levels, Lusardi and Mitchell (2014) reference Bucher-Koenen, Tabea, Lusardi, Alessie, and van Rooij (2012) pointing to a potentially important role for self-confidence that may differ by gender. Lusardi and Mitchell also mention Brown and Graf (2013) who showed that gender differences are not due to differential levels of interest in finance and financial matters between men and women. This body of literature led Lusardi and Mitchell (2014) to surmise the gender debate was "far from closed" (p. 20) and that more research was required to better understand observed gender differences in financial literacy. They went on to note that financial literacy may be more easily acquired via interactions with others, in the workplace or in the community as a possible reason why the literature suggests those living in city communities generally do better than their rural counterparts, and as a possible explanation for the previously mentioned gender differences. They give the example that in many cultures, men are more likely than woman to interact daily with financially knowledgeable individuals. In addition, Lusardi and Mitchell (2014) hypothesised that woman (especially young women) may expect they will have someone later in life (a husband for example) to take care of their finances.

Given the body of literature on the gender difference in financial literacy levels, this paper seeks to establish if the same differential exists in the NZ and England samples used in this study; and to what extent gender differences are prevalent in attitudes to debt. If the suppositions above are correct, that societal factors are contributing to the gender differential in financial literacy levels, then a reasonable hypothesis is that the same societal factors may be contributing to differing attitudes to debt between the genders. This reasoning is discussed by researchers in the field of social cognitive theory such as Bussey and Bandura (1999) who presented the social cognitive theory of gender-role development and functioning, including 'how gender conceptions are constructed from the complex mix of experiences' (p. 676). Bussey and Bandura (1999) surmise that 'gender conceptions and roles are the product of a broad network of social influences operating independently in a variety of societal subsystems' (p. 676), a view supported by previous research such as Bandura (1986), Beall and Sternberg (1993) and Epstein (1997). They also briefly outline psychological, biological and sociological perspectives on gender differentiation, quoting Kohlberg (1966) when stating that according to Cognitive Development Theory, 'gender identity is postulated as the basic organizer and regulator of children's gender learning (Kohlberg, 1966). Bussey and Bandura (1999) go on to state that 'Children develop the stereotypic conceptions of gender from what they see and hear around them. Once they achieve gender constancy – the belief

that their own gender is fixed and irreversible – they positively value their gender identity and seek to behave only in ways that are congruent with that conception' (p. 677).

In addition, Bussey and Bandura (1999) summarise sociological theories, stating that 'In sociological theories, gender is a social construction rather than a biological given.The sources of gender differentiation lie more in social and institutional practices than in fixed properties of the individual' (p. 683). They also reference Geis (1993) when saying 'Gender stereotypes shape the perception, evaluation, and treatment of males and females in selectively gendered ways that beget the very patterns of behaviour that confirm the initial stereotypes' (p. 683). Given that females on average earn less than males, sociological theories would suggest that females may value the future worth of tertiary education lower than males, and thus influence their willingness to incur debt to earn a tertiary qualification.

From a students' perspective, borrowing to fund extended education is generally seen as a good investment, with long-term rates of return that exceed the cost of borrowing for most (Walker and Zhu, 2011). There has been a strong (and growing) perception that a degree is essential for entry into lucrative non-manual careers, with expected return becoming a component within the cost/benefit analysis that those considering university make. (Harrison, Agnew and Serido, 2015). This is consistent with human capital theory (Becker, 1994), which predicts that individuals will make economically rational decisions about their investment in education. However, Brynin (2013) questions the extent to which prospective students are in a position to make this assessment. Often students do not know the inner workings of the labour market until after graduation, with Brynin (2013) suggesting graduates now face a blurring of the lines between graduate and non-graduate work, with many graduates competing with non-graduates when applying for a job. This paper questions if there is a different attitude to student debt between males and females, given that females traditionally have lower levels of financial literacy, and lower expected earnings than males. The paper then goes on to discuss the implications for the provision of personal finance services for tertiary students.

Methodology

This paper uses data collected from two groups of students, from a mid-ranking university in England and an equivalent university in New Zealand, with both universities being located in medium sized cities; with a mixed profile consistent with the national demographic profile for higher education students. The samples in both countries comprised full-time domestic (i.e. not international) undergraduates in their first year of business (including management, marketing, accountancy, commerce, economics and applied statistics) or social science (including sociology, psychology, politics and education) programmes.

The questionnaire used was developed from interview data results reported in Harrison, Chudry, Waller, & Hatt (2015). The original questionnaire was piloted in England in December 2012, with a number of subsequent refinements made. The final version of the questionnaire contained 20 items measuring student attitudes to debt using Likert scales running from 1 (Strongly agree) to 5 (Strongly disagree); demographic questions, a financial

literacy test; and a personality inventory. The data were collected during a period spanning October 2013 and January 2014, corresponding roughly to halfway through the students' first year of study in both hemispheres. Minor changes to the questionnaire were made to reflect local vocabulary in each country.

The financial literacy quiz (Appendix 1) was informed by the literature, with question one being one of three questions used by Lusardi & Mitchell (2007), albeit with the dollar amount changed, to measure understanding of compound interest. Question five was a slightly more complicated compound interest question, taken from the Jump$tart 2008 survey of Personal Financial Literacy Among College Students (Mandell, 2008). Question two is an altered version of a question from the Jump$tart 2008 Survey (Mandell, 2008). Where the Jump$tart question examined which groups were more affected in times of inflation, the question in this paper examined why the Consumer Price Index was important for students. Questions three and four were knowledge based questions on sales tax rates and interest charges on credit cards. As a package, the five questions were designed to examine knowledge, and the ability to use concepts, without relying on the ability to make complicated calculations.

The questionnaire was rendered online using Moodle in NZ and Survey Monkey in England, with e-mail and in-person reminders being provided over the course of one month. Courses were chosen at the 100 level in subject areas which were common to both universities and provided a spread of subjects across different faculties, such as Management, Psychology, Sociology, Statistics and Education, with 'all class' emails sent inviting students to participate. Responses from students outside the sampling frame (such as international students) and those without debt were subsequently removed by hand. In both countries a prize draw incentive was used to increase response rates. This approach helped to reduce self-selection bias by encouraging responses from groups who might not typically respond to an unsolicited survey invitation. The responses rates of 16 percent in England and 17 percent in NZ were almost identical between the two samples. While the response rates were a little on the low side, the questionnaire provided sufficiently large samples which were both found to be representative of the populations from which they were drawn by demographic variables. The resulting total of 439 valid responses comprised 240 from NZ and 199 from England. Table 1 provides descriptive statistics of the two national samples.

Table 1: Sample descriptive statistics

	England		NZ		ALL	
	n	%	n	%	N	%
Social science degree	75	38	114	48	189	42
Business degree	124	62	126	52	250	64
Male	66	33	92	38	158	36
Female	133	67	148	62	281	64
Majority ethnic group	178	89	208	88	386	88
Minority ethnic group	21	11	32	12	53	12

Mother has degree	43	22	91	38	134	31
Mother has no degree	156	78	149	62	305	69
Father has degree	54	27	94	39	148	34
Father has no degree	145	73	156	61	301	69

An ordinary least squares regression was run on the total sample, as well as on the England and NZ samples individually, to establish which variables significantly affected the students' financial literacy quiz score. The following binary variables were included in the multiple regressions:

Country (England = 1); Gender (Female = 1); Age (21 or under = 1); Ethnicity (Minority Ethnicity = 1); Mother's Education (University Graduate = 1); Father's Education (University Graduate = 1); Department (Business = 1). The five personality variables of extraversion, neuroticism, conscientiousness, agreeableness and openness-to-experience from The Big Five Inventory (BFI-10) were also included in the multiple regressions (John, Donahue & Kentle, 1991; Rammstedt & John, 2007).

A combination of z-statistics, odds ratios and logistic regressions were also used to examine correlations between the responses to each of the questions in the financial literacy quiz and the gender and country variables.

Finally, ordinary least squares multiple regressions were also run for each of 20 attitudinal statements mentioned earlier, developed by Harrison, Agnew and Serido (2015), focussing on correlations between the attitudinal statements and the ethnicity, gender and country variables.

Results

As shown in table 2**,** four variables are correlated with a higher financial literacy quiz score: Aged 21 or younger, male, studying business and coming from NZ. (The five financial literacy questions were developed from the literature, and are shown in Appendix 1).

Table 2. OLS coefficients and t-statistics for variables correlated with a higher financial literacy quiz score.

	Total	**NZ**	**England**
Extraversion	0.696 (0.022)	-0.783 (-0.031)	1.782 (0.096)
Neuroticism	0.203 (0.006)	-0.252 (-0.011)	0.652 (0.031)
Conscientious	0.320 (0.011)	-0.904 (-0.041)	1.776 (0.100)
Agreeableness	-1.054 (-0.040)	-0.420 (-0.021)	-1.072 (-0.062)
Openness	0.932 (-0.029)	-0.331 (-0.013)	-1.763 (-0.094)
England	**-7.697*****		

	(-0.819)		
Female	**-3.528*** (-0.430)**	**-2.525** (-0.398)**	**-2.542** (-0.482)**
21 Years old or younger	**3.036*** (0.486)**	1.267 (0.238)	**3.482*** (1.001)**
Minority Ethnicity	-1.634 (-0.256)	-0.925 (-0.176)	-1.208 (-0.326)
Mother University Graduate	-1.153 (-0.143)	-0.499 (-0.073)	-1.023 (-0.220)
Father University Graduate	0.059 (0.007)	0.525 (0.077)	-0.574 (-0.114)
Studying Business	**2.405** (0.274)**	**2.777*** (0.399)**	0.292 (0.055)

** and *** denote statistical significance at the 5 and 1% levels respectively.

When the data is split by country, the gender variable is significant across both samples, with studying business being significant in the NZ sample, and aged 21 or younger being significant in the England sample.

Given gender was the only variable that showed a statistically significant difference both overall and within each country, the scores for each individual question on the financial literacy quiz were compared by gender within each country, to see if similar patterns emerged between England and NZ. The Odds ratios and Z-statistics shown in table 3 reveal that in both countries, males scored significantly higher than females on question one; a simple compound interest question (NZ 85% v 58%; England 80% v 53%). In England, the only other significant difference was for question four, where males scored significantly higher than females on a question about indirect tax rates. In NZ, the only other significant difference was for question three, where males scored significantly higher than females on a question about credit card debt.

Table 3. Mean differences, odds ratios and z-statistics by gender and country for each financial literacy quiz question.

	England			**NZ**		
	Female	*Male*	*Z-statistic & odds ratios*	*Female*	*Male*	*Z-statistic & odds ratios*
Question One (Compound Interest)	53%	80%	**3.663 (0.27)*** **	57%	86%	**4.396 (0.22)*** **
Question Two (CPI)	52%	45%	0.853 (1.29)	55%	55%	0.004 (1.00)
Question Three (Credit Card Debt)	52%	56%	0.556 (0.85)	64%	87%	**3.798 (0.26)*** **
Question Four (Indirect Tax Rates)	58%	89%	**4.153 (0.16)*** **	96%	98%	0.777 (0.53)
Question Five (Compound Interest)	53%	42%	1.452 (1.55)	66%	76%	1.616 (0.62)
TOTAL MEAN	2.68	3.13		3.39	4.02	

** and *** denote statistical significance at the 5 and 1% levels respectively.

It is interesting to note that while males scored significantly higher than females in terms of total quiz score in both countries, in NZ males were more likely to answer correctly than females on every question apart from question two, where 55% of both genders were correct. In England however, females were actually slightly more likely to answer correctly on two of the five individual questions, but still scored significantly lower than males overall.

Logistic multiple regressions were also run on the same data, to calculate odds ratios given the effect of the other variables in the earlier regressions. For brevity, only the results for the gender variable by country are shown. As table 4 shows, the same questions as in table 2 showed significant differences between males and females, however the odds ratios did change slightly once the effect of variables other than gender were accounted for.

Table 4. Odds ratios by gender for financial literacy quiz question in each country, accounting for additional variables.

	NZ Male v Female	**England Male v Female**
Q1 – Compound Interest	**0.42****	**0.31*****
Q2 - CPI	0.94	0.78
Q3 – Credit Card Debt	**0.31*****	0.71
Q4 – Indirect Tax Rates	0.96	**0.21*****
Q5 – Compound Interest	0.82	1.40
Total (OLS)	**-2.53**** **(-0.40)**	**-2.54**** **(-0.48)**

** and *** denote statistical significance at the 5 and 1% levels respectively.

In tables 2 and 3 above, comparisons were made between males and females within each country. In table 5 below, a comparison is made between countries for each gender. As the z-statistic and odds ratios (confirmed by logistic multiple regressions including all variables) show, both males and females from England were less likely to answer questions three (credit card debt), four (indirect tax rates) and five (calculating compound interest) correctly than their counterparts in NZ (For question three (credit card debt), logistic odds ratios for male were only significant at the 90% confidence level).

Table 5. Odds ratios comparing quiz results between countries by gender .

	Female England v NZ	**Female England v NZ**	**Male England v NZ**	**Male England v NZ**
	Z-statistic & odds ratios	*Logistic Odds Ratios*	*Z-statistic & odds ratios*	*Logistic Odds Ratios*
Question One (Compound Interest)	1.007 (0.79)	0.79	0.927 (0.67)	0.46
Question Two (CPI)	0.592 (0.87)	0.98	1.236 (0.67)	0.59
Question Three (Credit Card Debt)	**1.968 (0.62)*****	**0.63*****	**4.168 (0.19)*****	0.16
Question Four (Indirect Tax Rates)	**6.292 (0.06)*****	**0.03****	**2.045 (0.19)****	**0.05*****

Question Five **(Compound Interest)**	**2.186 (0.58)****	**0.54*****	**4.192 (0.23)*****	**0.27****

** and *** denote statistical significance at the 5 and 1% levels respectively.

Given that both the England and NZ samples supported findings from the general literature that males outperform females on financial literacy tests (from table 2, gender was the only variable which was statistically significant in both countries), and that country was also significantly correlated to financial literacy quiz score, responses to the attitudinal statements were analysed by gender for each country separately. Appendix 2 shows the 20 attitudinal questions for which students were asked to respond on a five point Likert scale from 1 = Strongly Agree to 5 = Strongly Disagree.

Table 6 shows the results of ordinary least squares multiple regressions being applied to each attitudinal statement. For space considerations, although the personality variables of extraversion, neuroticism, conscientious, agreeableness and openness from The Big Five Inventory along with the age, parental education levels, financial literacy quiz score and department of study variables were included in the multiple regressions, the results for these variables are omitted from table 6. The variable of gender was focused on as the literature and results discussed earlier pinpointed this variable as being significantly correlated with financial literacy knowledge.

Table 6. Significant OLS coefficients and t-statistics associated with attitudinal statements for England and NZ data.

	England ***(Female = 1)***	**NZ** ***(Female = 1)***
I expect to earn more in the future because I went to university	**0.243**** **(1.976)**	0.184 (1.607)
Educational loan debt is a good investment for the future	**0.435***** **(2.758)**	-0.094 (-0.653)
I have a greater chance of getting a job if I have a degree	**0.256**** **(2.149)**	0.008 (0.069)
I will start to deal with my student debt once I leave university and get a job	0.242 (1.626)	**0.365**** **(2.214)**
I minimise my spending to minimise my debt	**-0.514***** **(-2.735)**	-0.077 (-0.480)

** and *** denote statistical significance at the 5 and 1% levels respectively.

In England females have more negative attitudes relative to males around the future benefit of education, being more likely to disagree that they expect to earn more in the future because they went to university (OLS coefficient 0.243); educational loan debt is a good investment for the future (0.435) and they have a greater chance of getting a job if they have a degree (0.256). Females in England are also more likely to agree that they minimise their spending to minimise their debt relative to males in England.The NZ sample does not show the same

results, with no significant difference between male and female responses for the same statements. The only statement where females in NZ showed a significant difference from their male counterparts was that females were more likely agree that they would deal with their student debt once they leave university and get a job. A summary of the statements where there was a significant difference between male and female response on the five point Likert scale are shown in table 7 for both countries.

Table 7. Statements females are more likely to agree or disagree with than their male peers.

	England	**NZ**
I will start to deal with my student debt once I leave university and get a job		Females more likely to disagree
I expect to earn more in the future because I went to university	Females more likely to disagree	
Educational loan debt is a good investment for the future	Females more likely to disagree	
I have a greater chance of getting a job if I have a degree	Females more likely to disagree	
I minimise my spending to minimise my debt	Females more likely to agree	

Discussion

The results outlined in the previous section confirm the gender bias that has been reported in the general literature, that males score higher than females on financial literacy tests. In fact, gender is the only variable consistent across both the England and the NZ sample as having a significant correlation with financial literacy test score. When examining each of the specific questions in the quiz, NZ males consistently outperformed NZ females on the different topics; however the performance of England males relative to England females, whilst still superior overall, was less comprehensive. One area where males significantly outperformed females in both countries was on the simple compound interest question. This is consistent with Lusardi and Mitchell (2008) who found that 74.70 per cent of males answered a similar question on compound interest, while only 61.90 per cent of females answered correctly. However, where Lusardi and Mitchell (2008) found a similar differential with their question on inflation, in this study 55% of NZ males and females both answered the inflation question correctly, while more females answered the question correctly than males in the England, although in neither country was the difference statistically significant. The reasons for a differential between genders on the simple compound interest question in both countries, along with similar findings by Lusardi & Mitchell (2008) are difficult to fathom. The question did not require a compound interest calculation, just an understanding of the concept of compound interest. The compound interest question (question five) that did require an

element of calculation was more likely to be answered correctly, by females than the simple compound interest question, with no significant difference between the genders.

One interesting consistent difference between the countries was for the questions on credit card interest, sales tax rates and a more complicated compound interest question, where both female and male NZ students outperformed their respective counterparts from England. This may suggest a more systemic weakness in the financial knowledge of students in England relative to NZ with regards to these topics.

The statistical analysis carried out on the attitudinal statements suggests there is also a difference in attitudes toward student debt between males and females. Where the difference in the NZ sample was minor, a worrying difference between the genders was identified in the England sample; where females were less likely to see the future benefits of higher education than males. As noted in the introduction, Brynin (2013) questioned the extent to which prospective students are in a position to make economically rational decisions about their education consistent with *human capital theory* (Becker, 1994). It appears that in England, female students may be aware of the projected lower earnings they receive relative to males, with the Office for National Statistics (ONS) reporting a 'gender wage gap' of 9.4% in April 2014 in the mainstream media (BBC News, 2014). However, this may be clouding their perception of how valuable a degree is relative to not having a degree, regardless of gender. While it is true that a gender wage gap exists in terms of salaries in England, it is also true that a female with a degree earns more on average than a female without a degree. It is also interesting to note that according to the Ministry for Women a similar gender wage gap of 9.9% also exists in NZ (Ministry for Women, 2014), but the differences in female attitudes to student debt relative to males are far less prevalent than in England. If females who actually attend university in England harbour these pessimistic views relative to males regarding the worth of a degree, one wonders if some female students do not attend university due to this perception.

Implications and Further Research

The results above show that in England, female students have lower expectations around the future value of tertiary education. Whether or not these lower expectations are sufficient to dissuade some students from attending university is beyond the scope of this study, but provides an opportunity for further research, especially examining people who chose not to engage in tertiary education. For those providing personal finance services and courses, it is important to understand preconceived notions participants may hold that can inhibit both attendance at and engagement in such programs. The differing attitudes females in England on average hold around the future benefit of investment in education for example could act as a real barrier toward making appropriate and correct decisions in terms of the financing of their education. The underperformance of females on financial literacy quizzes in both England and New Zealand, both generally and when dealing specifically with questions on compound interest concepts also needs to be recognised by those involved in the personal finance sector. For such an important concept as compound interest, it is of concern to see only just over half of female university student samples in both England and New Zealand

answer a simple compound interest question correctly. This does not instil a great deal of confidence in their ability to successfully manage their personal finances involving debt and investment in the future.

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Appendix 1 - Financial Literacy Questions (New Zealand Version)

Question One.

Suppose you had $100 in a savings account where the interest rate is 10% per year and you never withdraw money or interest payments. After 5 years, how much would you have in this account in total?

1. Less than $150.
2. Exactly $150.
3. More than $150.

Question Two.

(The Consumer Price Index (CPI) is important for students as it

1. shows by how much in general a student loan is decreasing in real terms.
2. shows how prices in general are increasing over time.
3. gives an idea of by how much money is losing value over time.
4. all of the above.

Question Three

If John pays off the full amount on his credit card each month he won't be charged any interest on the amount borrowed.

1. True.
2. False.

Question Four

What is the current rate of Goods and Services Tax (GST) payable in New Zealand?

1. 15%
2. 20%
3. 25%
4. 30%

Question Five

Rob and Mary are the same age. At age 25 Mary began saving $2,000 a year while Rob saved nothing. At age 50, Rob started saving $4,000 per year while Mary kept saving her $2,000. Who has the most money at age 75?

1. They would each have the same amount because they put away exactly the same
2. Rob, because he saved more each year
3. Mary, because her money has grown for a longer time at compound interest

Appendix 2 - Attitudinal statements responded to using a five point Likert scale.

Question 1	I expect to earn more in the future because I went to university
Question 2	Educational loan debt is a good investment for the future
Question 3	I have a greater chance of getting a job if I have a degree
Question 4	I worry that the repayments on my debt will become unaffordable
Question 5	I have a good idea about how much student loan debt I am incurring
Question 6	I will start to deal with my student debt once I leave university and get a job
Question 7	Debt is an expected outcome of attending university
Question 8	I use debt to pay for a good social life
Question 9	I use debt so I don't miss out on 'normal' student experiences
Question 10	The debt I create as a student is an unfair start to my working life
Question 11	I use debt to pay for luxuries
Question 12	I sometimes can't sleep because I worry about how much debt I am in
Question 13	I worry about debt to the point where it affects my grades
Question 14	I feel I have a good understanding of how student loans work
Question 15	I minimise my spending to minimise my debt
Question 16	I know about the repayment terms for my student loan
Question 17	I have a good idea about how much credit card and overdraft debt I am incurring
Question 18	The best use of my student debt is to pay for my university expenses
Question 19	Even though I am incurring debt now, it will be worth it in the future
Question 20	I feel isolated by my student debt