

Financial literacy of secondary students, and its place within secondary schools

**Study commissioned by
the Commission for Financial Literacy and
Retirement Income**

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Executive summary

This study investigates the behaviours, attitudes and experiences of New Zealand secondary students with money and financial products and the range of financial literacy teaching/programmes being taught in New Zealand secondary schools. It also explores barriers to the implementation of financial literacy teaching.

The recent Programme for International Student Assessment (PISA) Financial Literacy report showed that New Zealand 15-year-old students were, on average, performing above the Organisation for Economic Co-operation and Development (OECD) average. However, this report also highlighted the large variation in performance, and the large group of 15-year-old students achieving the lowest level of financial literacy proficiency. Combining the findings from the current research with the recent PISA results will provide a more detailed depiction of financial literacy for New Zealand students.

Data were collected through a paper-based survey of Years 9 to 13 students and two online surveys for secondary school teachers and school leaders. A class of students from each year level in their *form groups* (i.e., classes of students who would not be grouped by ability or a particular subject area) were selected. Teachers were also selected on the basis of one form class teacher per year level, so as to avoid the selection of teachers by their subject area. The leader survey was to be completed by a senior staff member with curriculum oversight or responsibility in the school.

There were 2,646 student respondents from 24 schools; this was a response rate of 26 percent for schools that were sampled to complete the student survey. There were fewer deciles 1 and 2 schools with students who responded to the student survey compared to the sample frame, and more deciles 9 and 10 schools than expected. A total of 196 teachers from 53 schools responded to the teacher survey, and school leaders from 39 schools responded to the leader survey. These schools largely reflected the school decile characteristics in the sample frame, though there were fewer small schools and more large schools than expected.

Main findings

Attitude, behaviour, and experience

The research participants generally saw financial literacy as a key life skill.

- While virtually all teachers and school leaders agreed or strongly agreed that it was important for all students to learn about financial literacy, slightly fewer agreed that financial literacy should be included in their school.
- Students also agreed that money, and getting advice on how to manage their money, was important. Seventy-nine percent of students felt confident about managing money, and 73 percent thought they knew a lot about managing money, yet 70 percent of students still reported that they wanted to learn more about how to manage their money.
- While students obviously have a high opinion of their money management skills, just 19 percent of teachers reported that their students' money management skills were high.

Students showed a relatively high level of engagement with financial products.

- Nearly 90 percent of students reported that they had a bank account.
- Over half of the students had EFTPOS cards and about a fifth had used telephone banking.
- Nevertheless, cash was still the most commonly reported mode of purchase.
- About a third of students frequently or sometimes used credit cards to purchase things, although as the legal age for owning a credit card is 18, it is reasonable to assume the card belongs to a family member.

Students earned money in a variety of ways.

- The most common source of earning money was doing jobs at home, followed by working at a part-time job.
- About 60 percent of students had sold possessions for money at some time, though just 7 percent reported doing this regularly.
- Two-thirds of students were aware of tax obligations in general, but far fewer, mostly those with part-time jobs, understood gross and net income.

Students showed a strong savings ethic with many reporting that they had savings accounts, and only very few reporting that they never saved.

Sources of financial learning

Both students and teachers agreed that parents or caregivers were the most important source of financial learning. There was less agreement between teachers and students about other sources of financial learning.

- Half of the teachers saw banks as a major source of financial learning for students, whereas only 11 percent of students reported that they had learned 'a lot' from banks.
- Just under half the teachers also thought training courses outside of school were a major source of learning, whereas 65 percent of students reported that they had learned nothing from them.

- Teachers thought that peers were the least important source of financial information, yet about a third of students indicated they learned at least ‘some’ money management from their friends.

The New Zealand Curriculum (NZC) (Ministry of Education, 2007) refers to financial literacy as ‘financial capability’. It is suggested as a topic for cross-curricular activities implying that it should be incorporated across learning areas, but it is only specifically referred to in relation to key subject areas. The Ministry has also produced financial capability progressions which describe learning outcomes that encompass three capability strands. These are: managing money (covering money, spending, credit and debt, saving and investing, income and taxation, and budgeting and financial management); setting goals (covering setting financial goals and planning ahead); and managing risk (covering identifying and managing risk, and rights and responsibilities) (Ministry of Education, 2014a).

While about a third of school leaders agreed that their school had a strong emphasis on financial literacy, and more than a third of teachers reported that they included money management in their teaching, a number of open responses indicated that not all teachers feel they are required to teach it, or that it is their responsibility. Only 18 percent of teachers reported regularly teaching money matters *within a curriculum area*, but 64 percent reported using *teachable moments* to include it. Student responses reflected this apparent lack of explicit teaching, reporting that they had received little or no financial literacy learning at school.

Students and teachers agreed about the subject areas in which financial literacy was taught.

- Subject areas in which students reported that they had learned the most about money and money management included Economics, Accounting, and Business Studies, followed by Mathematics and Statistics, then Careers, Transitions and Trades, and Social Studies.
- Teachers reported the same top three subject areas as the most important for teaching about money and money management.

The range of responses to open questions about examples of how teachers included financial literacy in their classes suggested that teachers’ understanding of financial literacy was not clear and that it was variously constructed as ideas relating to larger economic concepts, personal financial concepts and numeracy. This was frequently influenced by the teacher’s own subject area.

While students did indicate that they learned a lot about money and money management in the aforementioned areas, responses to an open question yielded a range of responses that generally related to learning outside of secondary school.

The financial literacy-related resources used most frequently by teachers include

- the NZC and the Te Kete Ipurangi (TKI) website, followed by
- the Sorted website and then
- general bank websites.

Financial literacy unit standards were used by only a small percentage of teachers, with a third indicating that they hadn't heard of them.

All but four school leaders stated that there was more emphasis on achievement standards in their school, although school leaders did largely agree that financial literacy unit standards would be useful in helping students progress towards a formal qualification.

Other resources mentioned included resources that teachers had created themselves such as workbooks or games, and other materials such as bank pamphlets and newspaper articles.

Barriers to teaching financial literacy in schools

Overall, it seems that money-related topics are seen as important, but there are a number of barriers to them being included comprehensively in the curriculum.

Time issues related to covering required curriculum content was the **most frequently noted** barrier to the implementation of money and money management teaching.

Relevance to the subject area being taught was the **second most frequently noted** barrier. Some teachers see financial literacy as an area that is additional to their current teaching and not something that can be integrated easily (despite the high proportion of teachers who report to be teaching money and money management by 'teachable moments').

Resourcing was the **third most frequently noted** barrier, and this included teaching materials and funding for staffing and professional development.

- Sixty-nine percent of teachers see access to relevant professional development as a barrier (to varying degrees).
- The majority of professional development offered or available to teachers was overwhelmingly undertaken by Economics, Business Studies, and Accounting teachers but was most often informal and self-driven.

Nevertheless, many teachers reported ways they overcame barriers in order to include some financial literacy in their classes, reflecting their belief that it is an important life skill.

Other barriers included gaps in professional development opportunities for teachers, and a perception that more emphasis is placed on achievement standards (which do not exist for financial literacy) rather than unit standards (which do exist for financial literacy).

1. Introduction

Background

The Commission for Financial Literacy and Retirement Income has a strong interest in researching and promoting the role of financial literacy in schools. They previously commissioned a survey on financial literacy of primary school students and wished to follow this with research on the place of financial literacy in secondary schools. They therefore contracted a team at the New Zealand Council for Educational Research (NZCER) to undertake research in this area.

In this research, we investigated:

- the behaviours, attitudes, and experiences of secondary students with money and financial products
- the range of financial literacy programmes that teachers use
- barriers to the implementation of financial literacy teaching.

We discussed the scope, goals and methods of the research with the Commission throughout the project, and consulted with an advisory group of secondary teachers in January 2014.

Definitions of financial literacy

Financial literacy is defined in various different ways. In *About financial literacy* (2012a), the Commission states that:

Financial literacy is defined as the ability to make informed judgements and make effective decisions regarding the use and management of money. It is about having financial knowledge and having the understanding, confidence and motivation to make financial judgements and decisions.

The OECD defines financial literacy as follows:

Financial literacy is knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life. (OECD, 2012, p. 13)

The NZC uses the term ‘financial capability’ instead of financial literacy. This term is also in use in the United Kingdom. The NZC aims to:

Develop students' financial capability, positioning them to make well-informed financial decisions throughout their lives. (Ministry of Education, 2007, p. 39)

Financial literacy and New Zealand young people

There have been some studies of financial literacy carried out in New Zealand but they have generally involved post-school students (18 and above). For example, Stangl and Matthews (2012) carried out a longitudinal study on a cohort of 18–22-year-old New Zealanders, including tracking their sources of financial information. They found the level of financial literacy for these New Zealanders was relatively low. They also concluded that: young New Zealanders often know elements of good financial management (such as saving) but may not put them into practice; that they are debt averse; and that parents are their main source of financial education.

Rout and Pappafloratos (2009) carried out a survey of approximately 850 people aged 18 or over. Their study found that the overall levels of financial literacy had increased nationally between 2006 and 2009. However, they found that there was no significant growth in the financial literacy in groups that already had low financial literacy (often Māori or Pasifika peoples and, to some extent, Asian peoples). This underlines the importance of financial literacy programmes in schools to ensure coverage across all groups in society.

Scarcity of financial literacy information for school-aged students is not confined to New Zealand. The OECD, in its financial literacy framework, notes that “there are currently very few data on the levels of financial literacy amongst young people under the age of 18, and none that can be compared across countries” (OECD, 2012, pp. 10–11). Based on this, the OECD has conducted a large-scale assessment of the financial literacy of 15-year-olds across a wide range of countries, including New Zealand. This assessment is known as the Programme for International Student Assessment on Financial Literacy. The PISA study is mainly oriented towards knowledge and understanding of financial literacy. It asks students to interpret actual financial situations, make correct financial decisions and interpret or carry out financial calculations. The framework on which the study was based states

The content of financial literacy is conceived of as the areas of knowledge and understanding that must be drawn upon in order to perform a particular task. (OECD, 2012, p. 15)

The PISA study asked students to interpret actual financial situations and correctly ascertain a correct interpretation of the best financial decision, or to perform or interpret financial computations. Carpena, Cole, Shapiro and Zia (2011) described financial literacy as a combination of three aspects: number skills (financial numeracy); basic financial awareness; and the attitudes towards financial decisions. Our research has a main focus on the latter—student behaviours and attitudes—so it is therefore largely complementary to the PISA study. Combining the findings from both the PISA study and the current research will provide a richer picture of the financial literacy of New Zealand students.

The international results for the PISA study of financial literacy (*PISA 2012 Results: Students and Money (Volume VI)*) were released as the current report was being written, together with a report of the financial literacy performance of New Zealand students (Ministry of Education, 2014b). This shows that New Zealand's financial literacy performance was significantly above the OECD average. New Zealand was, however, the country with the largest variation of performance, with relatively large groups of students performing at both the highest and the lowest levels of financial literacy.

Financial literacy in New Zealand schools

One powerful way of enhancing financial literacy across the population is to incorporate it in the compulsory schooling system. Effective financial education needs to be available both at school and post-school. McCormick (2009) has reviewed the literature on the effectiveness of financial education and concludes that, while the number of programmes has grown, more needs to be learned about effective pedagogy, and its influence on current and future behaviours.

The Commission has produced a report that made a number of recommendations about improving financial education. This included a recommendation that:

the Ministry of Education ... takes responsibility for the schools project currently within the Retirement Commission, to ensure that financial education is embedded in the schools (sic) curriculum. (Retirement Commission, 2007, p. 11)

The NZC sees financial capability as a cross-curricular construct that encompasses elements of several different learning strands rather than its own learning area. Financial capability can also be linked to the NZC's key competencies (Ministry of Education, 2007, pp. 12–13). This includes not just *managing self*, but *participating and contributing*, and *relating to others* as well as *thinking*. The relationship between financial capability and the NZC is further explored on the Ministry of Education website (2014c). The Ministry of Education (2014a) has published a set of financial capability progressions for students across all learning areas and curriculum Levels 1–8 of the NZC.

For Levels 6–8 of the NZC, financial literacy is included in the achievement objectives of Economics, Accounting, and Business Studies. In addition to this, there are unit standards available in personal financial management at each of Levels 1–3 of the National Certificate of Educational Achievement (NCEA) (New Zealand Qualifications Authority, 2014). These align with Levels 6–8 of the NZC. There are not, however, any achievement standards in either NCEA or Scholarship, which has the potential to reduce the status of financial literacy. The marginalisation of financial literacy as a school subject in the United States is reflected on by McCormick (2009), who comments that “a major impediment to progress in getting financial education into the schools is the lack of inclusion of financial education standards in state academic standards” (p. 79).

New Zealand has a variety of resources to support the teaching and learning of financial literacy. Many of these can be accessed from the TKI website (Ministry of Education, 2014d), which also provides a number of overseas resources. The publication *Taking part in economic communities* (Ministry of Education, 2012) explores financial literacy within the Social Sciences learning area. It is aimed at students up to about Level 5 of the curriculum. Bleasdale (2012) summarises the key ideas from this publication.

2. Method

Research focus

Our research focused on investigating:

- the attitudes, behaviours, and experiences of secondary students (year levels 9 to 13) with money and financial products
- the range of financial literacy teaching/programmes being taught in New Zealand secondary schools, and the main barriers to the teaching of financial literacy in schools.

Research instruments

We developed three research instruments:

- a student questionnaire administered using pencil and paper
- a teacher questionnaire administered using SurveyMonkey (<http://www.surveymonkey.com>)
- a school leader questionnaire administered using SurveyMonkey.

The instruments were piloted in two schools. The pilots included administering the questionnaire to four full classes of Year 10 or Year 11 students, and having a brief discussion with them on how they found it. This also included discussion with the teachers and school leaders on how they responded to the SurveyMonkey questionnaires. The feedback we collected suggested that only minor alterations to the instruments were needed.

The student survey

The student questionnaire was made up of 19 questions. We did not include the term ‘financial literacy’, as it may not be meaningful to students. Instead the more student-friendly term ‘money and money management’ was used. The student questionnaire was broadly organised around the domains of the financial capability progressions (Ministry of Education, 2014a¹). The questionnaire had nine sections entitled:

- Money
- Income
- Spending
- Saving and investing
- Borrowing money
- Budgeting and financial management
- Managing risk
- Money and financial learning
- Learning about money at school.

Most of the questions were closed, as the survey needed to be completed in about 15 minutes. This was because they were performed in form time, giving a more representative sample of students than if they were administered during specific lessons. Many of the questions were either on a Likert-type scale, or were yes/no responses. This allowed a large range of issues to be covered in a short time frame.

The teacher survey

The teacher survey was organised around the following ideas:

- general attitudes to financial literacy teaching and learning
- access to, and need for, professional learning and development related to financial literacy
- barriers to teaching about financial literacy.

The term ‘financial literacy’ was introduced in the preamble to the survey, but was used alongside the more general ‘money management’, to ensure that teachers who taught in areas where financial literacy was not seen as being relevant would still be able to relate the questions being asked to their own teaching experiences.

There was a mix of open-ended and closed questions. Many of the questions were on a Likert-type scale as this allowed a range of issues to be covered in a short time frame. However, a

¹ The financial literacy progressions used in designing the survey were those as at January 2013, but the URL reference given is to the most recent version.

number of open-ended questions were required in order to obtain more detailed information about resources, barriers and teaching strategies.

School leader survey

We designed the school leader survey to find out about the role of financial literacy from a school policy perspective. The school leader was a senior management team member with oversight or responsibility for curriculum in the school.

As with the teacher survey, there was a mix of open-ended and closed questions. The open questions were aimed at gathering more in-depth information about financial literacy-related resources (including unit standards) and programmes, the availability of and demand for professional learning and development in their school, and barriers to including the teaching of financial literacy.

Sample selection

Stage one sampling

We used a stratified probability-proportional-to-size sample design to select 186 schools to approach to participate in the research. In this sample, the probability of selection of a school was proportional to the number of Year 9–Year 13 students in that school. Each school was approached to participate in the curriculum leader and teacher surveys, with half of the schools asked to additionally participate in the student surveys.

Sample frame

The first step of the sample selection process was to choose the schools that would take part. Table 1 details the sample frame (the list of schools to be sampled from) developed from the Ministry of Education’s school profile and roll data from July 2013. The sample frame covered a total of 380 New Zealand secondary and composite schools. See Appendix A for more details of the sample frame.

Strata

Schools in the sample frame were grouped into strata according to their decile and size characteristics. Decile was categorised as low (deciles 1 and 2), mid (deciles 3–8), or high (deciles 9 and 10) and school size was small (less than 301 students), medium (301–1,000 students), and large (more than 1,000 students).

Note that schools were classified into size groupings by the total number of students that attended a school. The number of schools sampled from each stratum was proportional to the number of schools in each stratum for the sample frame, given the total number of schools to be sampled. See Appendix A for more details of the selected sample.

Table 1 **Sample frame**

Characteristic	Inclusions	Exclusions
School type	Composite (1–15), Secondary (7–15, 9–15)	Composite (1–10, 7–10), Secondary (7–10, 11–15), Special School, Teen Parent Unit
Definition	Not Applicable, School with Boarding Facilities, Designated Character School, Normal School (model classes)	Kura Kaupapa Māori, Secondary Māori Boarding School
Authority	Private, State, State-Integrated	N/A
Size	Schools with greater than 50 Year 9 to Year 13 students	Schools where the number of Year 9 to Year 13 students totals to 50 students or less
Decile	1–10	N/A

Stage two sampling

The second sampling stage took place within schools, and relied on a contact person within the school (communicating with an NZCER team member) to carry out a selection process for school leader, teacher, and student participants. School contacts were to select one class from each year level of students in their form groups (classes of students who would not be grouped by ability or a particular subject area). The contact person was instructed to select teachers from one form class per year level, so as to avoid the selection of teachers by the subject area they taught.

Response rates and demographics

A total of 196 teachers from 53 schools responded to the teacher survey, and school leaders from 39 schools responded to the leader survey. There were 2,646 student respondents from 24 schools.

Teacher respondents

Of the teacher respondent schools, all but one was situated in an urban location. Two were private, and the remaining were state or state-integrated. From the majority of schools, there were between two and five respondents. See Appendix B for a comparison of the decile and size characteristics for schools where teachers responded, compared to the sample frame. This comparison is highlighted as the sample was stratified by school size and decile. The distribution of deciles of participating schools adequately represented the distribution of deciles in the sample frame, although there were higher proportions of teachers from deciles 9 and 10 schools than

expected. Participating schools tended to be larger than we would have expected from the sample frame; only 10 percent of teacher schools were small compared to 19 percent in the sample frame.

Around 36 percent of teacher respondents were male, and 59 percent were female. The rest declined to indicate their gender. The majority of teacher respondents (around 76 percent) identified as NZ European, while only around 7 percent indicated that they identified as Māori, 3 percent as Pasifika, and 11 percent as Asian (note that respondents could identify with multiple ethnic groups).

There was a good spread of age ranges (Table 2) across respondents, with about 60 percent of respondents being over 39, and a range of years of experience (Table 3) with only 7 percent of teachers being ‘new’ (teaching for 0–2 years).

Table 2 **Teacher age groups (n=196)**

Age group	n	%
< 30	22	11.2
30–39	53	27.0
40–49	49	25.0
50–59	45	23.0
60+	20	10.2
No response	7	3.6

Table 3 **Teachers: length of time teaching, and teaching at current school (n=196)**

Time in years	Teaching		At current school	
	n	%	n	%
0–2	13	6.6	36	18.4
3–5	26	13.3	66	33.7
6–10	30	15.3	32	16.3
> 10	116	59.2	53	27.0
No response	11	5.6	9	4.6

Teachers were asked to indicate the *main* subject they taught (Table 4; note that they could indicate more than one subject). Despite carefully describing to the school contacts that the aim was to survey a range of teachers, the most prominent subject areas indicated are Economics, Accounting, and Business Studies; and Mathematics and Statistics. As a result, there may be a bias towards teachers with some investment in, or knowledge about, financial literacy responding to this survey.

Table 4 **Teacher subject area (n=196)**

Subject area	<i>n</i>	%
Social Studies (including History, Geography)	30	15.3
Economics, Accounting, Business Studies	43	21.9
Mathematics and Statistics	48	24.5
Technology (e.g., Fabric, Food, Hard Materials)	16	8.2
Technology (e.g., Digital, Design)	19	9.7
English	27	13.8
Arts (Dance, Drama, Music)	10	5.1
Health and Phys Ed	16	8.2
Languages	2	1.0
Careers, Transitions, Trades	11	5.6
Science	21	10.7
Other	14	7.1
No response	2	1.0

Leader respondents

Of the leader respondent schools, all but one was situated in an urban location, and there was one private school. Tables in Appendix B show decile and size characteristics for schools where leaders responded, compared to the sample. The schools that leaders responded from were larger than expected, compared to the sample frame, but adequately distributed by decile.

Around 36 percent of leader respondents were male, and 62 percent were female. The rest did not indicate their gender. The majority of respondents (85 percent) identified as NZ European, while 10 percent indicated that they identified as Māori, 3 percent as Pasifika, and 3 percent as Asian (note that respondents could identify with multiple ethnic groups). The age distribution (Table 5) shows that the school leader respondents tend to be older than the teacher respondents. There was no school leader younger than 30, and about 90 percent of respondents are 40 and older. The school leaders have been teaching longer than the teacher respondents, and been in the same school for longer (Table 6).

Table 5 **Leader age groups (n=39)**

Age group	<i>n</i>	%
30–39	4	10.3
40–49	11	28.2
50–59	13	33.3
60+	10	25.6
No response	1	2.6

Table 6 **Leaders: length of time teaching, and teaching at current school (n=39)**

Time in years	Teaching		At current school	
	n	%	n	%
0–2	0	0.0	4	10.3
3–5	0	0.0	6	15.4
6–10	2	5.1	11	28.2
> 10	36	92.3	17	43.6
No response	1	2.6	1	2.6

Leaders were asked to indicate the *main* subject areas they were involved in (Table 7). Similar to teacher respondents, the most prominent subject area for school leaders was Economics, Accounting, and Business Studies; followed by Mathematics and Statistics; and Social Studies, History, and Geography. This suggests that some schools agreed to participate because there was a particular emphasis of financial literacy in the school. This is perhaps an artefact of our method of liaising with a school organiser or contact person to access respondents in schools.

The school leaders in this study were largely assistant or deputy principals (Table 8).

Table 7 **Leader subject area (n=39)**

Subject area	n	%
Social Studies (including History, Geography)	7	17.9
Economics, Accounting, Business Studies	9	23.1
Mathematics and Statistics	7	17.9
Technology (e.g., Fabric, Food, Hard Materials)	0	0.0
Technology (e.g., Digital, Design)	3	7.7
English	6	15.4
Arts (Dance, Drama, Music)	3	7.7
Health and Phys Ed	3	7.7
Languages	1	2.6
Careers, Transitions, Trades	0	0.0
Science	2	5.1
Other	3	7.7
No response	4	10.3

Table 8 **Leader position in school (n=39)**

Position	<i>n</i>	%
Principal	5	5.1
Assistant principal	6	15.4
Deputy principal	24	61.6
Head of department/Teacher in charge	5	12.8
No response	2	5.1

Student respondents

All student respondent schools were urban, and included one private school. Mid-decile schools are adequately represented, but there were fewer deciles 1 and 2 schools and more deciles 9 and 10 schools than we would have expected given the sampling frame. A similar pattern is evident for schools size: there are fewer small schools than we would have expected, an adequate proportion of medium-size schools and more large schools than we would expect.

Responses were evenly distributed by gender, with less than 1 percent of students not responding to this question.

The majority of student respondents (73 percent) identified as NZ European, while 16 percent indicated that they identified as Māori, 6 percent as Pasifika and 12 percent as Asian. Note that students could tick multiple ethnicities, and so the groups described will add up to more than 100 percent. Multiple ethnicities were not used in analysis; students were assigned a ‘prioritised’ ethnicity (described in more detail in the following section).

The low number of Pasifika students means that it is difficult to make statements about Pasifika student responses with much certainty. Results comparing students by ethnicity should therefore be interpreted with caution.

There was an even distribution of students across year levels 9 to 12 (with year level representation decreasing by 0.5–1 percent at each subsequent year level), and a drop from about 20 percent to 16 percent at Year 13. As students turn 16 (the legal age to leave school in New Zealand) it is unsurprising to see a drop in student numbers at Year 13.

For more detail about all response characteristics, see Appendix B.

Coding and analysis of the data

The open-ended comments from students were coded into themes. Some typical comments made by these students were recorded. All open-ended responses from teachers were retrieved from

SurveyMonkey and then coded into themes. The data were cleaned and analysed in SAS, and graphed using R (R Core Team, 2013).

Responses were coded according to the key themes that emerged from analysing the responses to each question. Some responses included several themes and so attracted several codes, and not all respondents answered all open questions. Coding frequencies therefore did not necessarily total to 100 percent. The themes varied between questions depending on the purpose of each question. For example, some questions asked for a description of relatively straightforward items whereas other questions aimed to elicit behaviour or attitudes, which required more complex consideration of related factors.

Regression models, whereby potential explanatory variables such as gender, ethnicity, school decile and student year level could have been related to various outcomes, have not been used due to resource and time constraints. Instead, decile and ethnicity effects were explored using cross-tabulations. Sample sizes for the minority ethnic groupings were relatively small. Relationships for decile or ethnicity were only reported if the trends within and between them were consistent. Only tables where a statistically significant relationship existed were considered (with significance set at the 95 percent level on the chi-squared test for contingency tables, the likelihood ratio chi-squared test, or Fisher's exact test for two by two tables).

In some cases, odds ratios were computed, comparing ethnic grouping with the NZ European group (this is so that all comparisons have the same reference point). These were treated as significant if the 95 percent confidence interval² did not span 1 (the point where the two groups have similar ratios).

In order to compare results for student ethnicity by the methods described above, it was necessary to assign each student one ethnicity by prioritisation. This means that a student is assigned one of the ethnicities they have indicated—for this research, the order of prioritisation was defined as: Māori; Pasifika; Asian; NZ European. For example, if a student indicated Māori and Pasifika as their ethnic groups, their prioritised ethnicity would be Māori. If a student ticked Pasifika and NZ European, their prioritised ethnicity would be Pasifika.

Differences between the pattern of results for different year levels or for gender have not been explored.

Teacher subject area

Discussions with the reference group carried out prior to this study suggested that this study could expect to see financial literacy teaching appear in specific subject areas (e.g., Business Studies). Therefore, some analysis was planned around investigating differences between teacher subject

² The confidence interval tells you something about the reliability of the estimated odds ratio; the values are the lower and upper bounds that the odds ratio could be expected to fall between. As this is a 95 percent confidence interval, there is a 5 percent chance that the true value for the odds ratio does not sit inside this interval.

areas in aspects such as professional development access and barriers to including financial literacy in teaching. As teachers could indicate more than one main subject area, some form of prioritisation and grouping of subject areas would have to be carried out for this information to be useful in analysis.

A further question about the amount of financial literacy that teachers included in different subject areas was asked. Instead of simply focusing on main subject area, this question was used to form a binary variable to distinguish between two groups of teachers: those who thought they included ‘a lot’ of financial literacy teaching in at least one subject area, and those who felt they didn’t include ‘a lot’ of financial literacy teaching in any subject area. In addition to being more informative than teachers’ subject area, this variable also turned out to be something of a proxy for subject area as the majority (although not all) of these teachers were Business Studies, Mathematics or Social Studies teachers.

3. Results

The case for financial literacy in schools

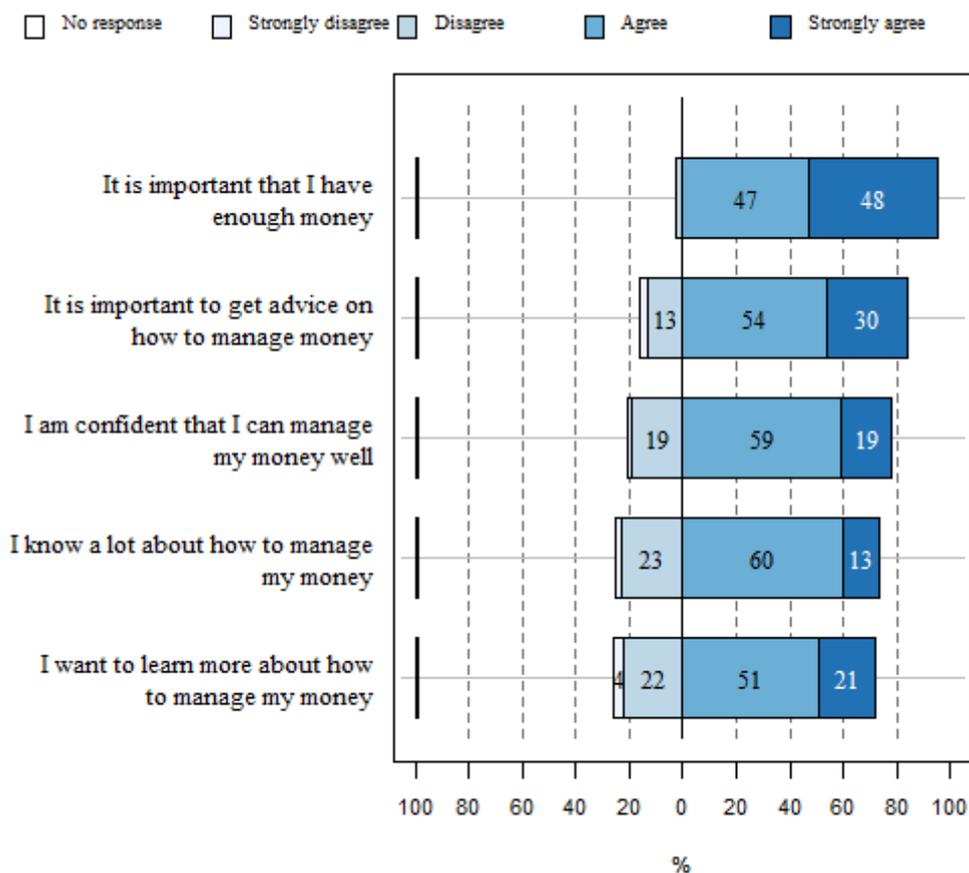
The demand

Both teachers and school leaders agreed it was important that all students learn about financial literacy with virtually all either strongly agreeing or agreeing with this (99 percent and 98 percent respectively). Most teachers and school leaders also agreed or strongly agreed that financial literacy should be included in their school. They were not asked about what they thought was the appropriate amount of financial literacy teaching. Teachers and school leaders groups also could see that financial literacy could be integrated across a range of curriculum areas at their school (88 percent and 82 percent respectively).

While students were not directly asked about the importance of money management, 83 percent agreed or strongly agreed that it was important to seek advice on how to manage money, specifically around saving or borrowing money. Many students (62 percent) stated that they had received advice on how to manage money. Students also reported being keen to learn more on how to manage their money, with 73 percent responding positively to this. It comes as no surprise that 96 percent of students thought it was important to have enough money. Neither decile nor ethnicity showed any relationship with the student attitudes reported and shown in Figure 1.

Teachers believed that their students' money management skills were, generally speaking, low (just 19 percent saw them as high). Clearly they saw room for improvement. On the other hand, the majority of students (74 percent) believed that they knew a lot about managing money, and a similar percentage (78 percent) were confident that they could manage their money. While there was a divergence of opinions between students and teachers here, students still valued advice on money management.

Figure 1 Student attitudes to money and money management (n=2,646)



The supply

While the majority of school leaders saw the importance of teaching financial literacy, only 5 percent strongly agreed and 33 percent agreed that this had a strong emphasis at their school. Two school leaders mentioned that financial literacy was a compulsory subject in Year 9 at their school. Around 59 percent of teachers reported that they included money management in their teaching, even though 66 percent said that financial literacy was relevant to the subjects they taught, and 81 percent agreed or strongly agreed that they could integrate it into their teaching.

It could be concluded that the demand for teaching financial literacy in secondary schools exceeds the supply. A later section of this report will look in more detail at where financial literacy is taught in the school, and the barriers that prevent its wider uptake.

Perceived benefits

It was widely agreed that teaching financial literacy at secondary school would help students become financially literate, with 96 percent of teachers and 90 percent of school leaders either agreeing or strongly agreeing that this would be the case.

Financial behaviours of secondary school students

The responses to the individual sections of the student questionnaire are listed below. They follow the questionnaire structure outlined previously. Sections contain a mix of behaviour and experience, attitude, and knowledge questions. The last section combines the final two parts of the questionnaire, which explore the sources of students' financial learning and education.

- Money
- Income
- Spending
- Saving and investing
- Borrowing money
- Budgeting and financial management
- Managing risk
- Money and financial learning—learning about money at school

Money

This section is broken down into three components: students' attitudes to money; financial products or services that students have access to; and how students make decisions about their own money. The first of these has already been covered in the preceding section 'the demand'.

Students made wide use of financial products or services. Nearly 90 percent had a bank account, and well over half had an EFTPOS card, and some had debit cards. About a half had used Internet banking, and nearly two-thirds had used foreign currencies to make purchases (see Table 9). The frequency of use of some of these is explored further in the Income and Spending sections that follow.

The percentage having a bank account is consistent with the 89 percent reported in the *PISA 2012: New Zealand financial literacy report* (Ministry of Education, 2014b). There is small upwards trend where the incidence of having a bank account increases with school decile (up from about 75 percent in low decile schools to over 90 percent in high decile schools).

Table 9 Student use of financial products or services ($n=2,646$)

Financial product/service	Yes		No	
	<i>n</i>	%	<i>n</i>	%
Have a bank account	2,335	88.3	289	10.9
Own an EFTPOS card	1,608	60.8	1,017	38.4
Own a debit card	440	16.6	2,163	81.8
Used foreign money	1,647	62.2	966	36.5
Used Internet banking	1,384	52.3	1,231	46.5
Used telephone banking	517	19.5	2,092	79.1

There is also an indication of an increased use of foreign currency with school decile. It increases from about half of students in lower decile schools up to about three-quarters in high decile schools.

Half of the students said that they made all of the decisions about their own money, with a further 44 percent stating that they shared the decision with someone else. Only 4 percent said that someone else made all the decisions about what happens to their money.

There were some differences in the use of financial products and services and in financial decision making between different ethnic groups. These were particularly notable for Pasifika students, who appeared to be less engaged with financial products. This finding must be taken with some caution, as there were only 103 Pasifika students in the sample. The results for the different ethnic groups are shown in Table 10.

Table 10 **Odds ratios for student interaction with financial products by ethnicity**

Interaction	Pasifika		Asian	
	Odds ratio	95% C.I.	Odds ratio	95% C.I.
I do not have my own bank account	8.3	5.5, 12.9	2.4	1.7, 3.5
I have not used foreign money to buy something	1.5	1.0, 2.3	2.2	1.4, 3.6

This shows that Pasifika students in this sample were 8.3³ times more likely than NZ European students to NOT have a bank account. The range of values that this ratio likely sits between is 5.5–12.9 (see footnote 2 on page 13 of this report for an explanation of confidence intervals). Both Māori and Asian students were also less likely than NZ European students to have bank accounts, but this was not as pronounced as it was for Pasifika students. Māori, Pasifika and Asian students were consequently less likely to own EFTPOS cards, or to use Internet banking than NZ European students. Māori and Pasifika students were a little less likely to have used foreign currency than NZ European students, but only marginally so.

Income

This section looked at how students obtained money, and about their knowledge and behaviours associated with paying tax.

Earning money

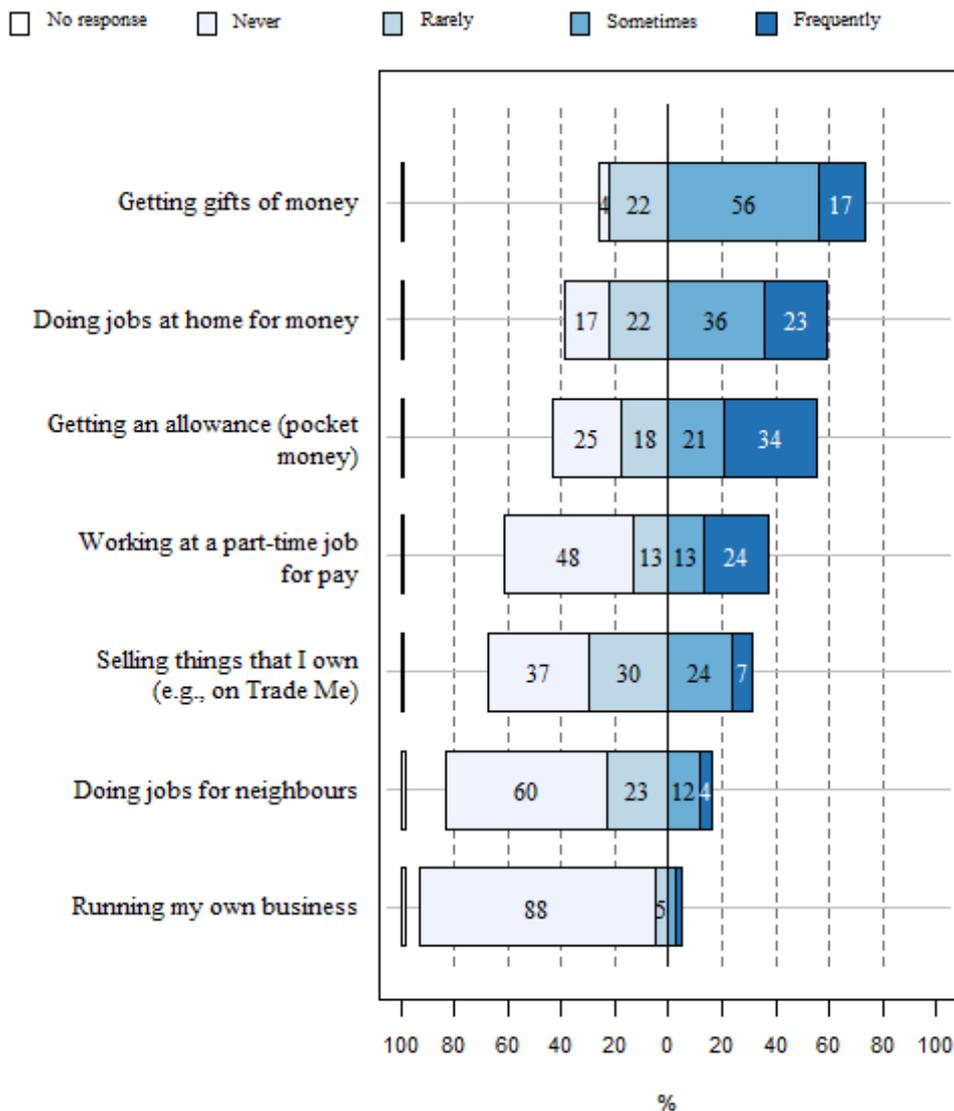
Figure 2 shows the different ways that students reported obtaining money. Doing jobs at home, getting an allowance, or having a part-time job were the most common sources of regular income. However, many students reported either ‘frequently’ or ‘sometimes’ receiving monetary gifts (73 percent).

³ 95 percent confidence interval is (5.5, 12.9).

Few students mentioned undertaking entrepreneurial activities. Only 10 percent of students reported running their own business. In contrast, 61 percent said that they had sold their possessions to obtain money, although this was reported as happening mainly ‘sometimes’ or ‘rarely’.

Around 6 percent of students stated that they had other sources of income. Most of these specified what the source was. These income sources largely included: activities that could be seen as jobs (e.g., paper runs, babysitting, or holiday jobs); money that was given to them; or small ventures (e.g., selling whitebait, making things and selling them, or payment/winnings for musical or sporting activities). Some of these things fit into the categories shown in Figure 2, but cannot be included here without knowing how frequently these things happen. However, they would have little impact on that graph as there were low numbers of these responses.

Figure 2 Sources of student income (n=2,646)



There were also some differences between ethnic groups in reported money earning. These were particularly notable for Pasifika and for Asian students, both of whom were less likely to earn money either at home, working for neighbours or in a part-time job. Again, these findings must be taken with some caution, as there were only 103 Pasifika and 294 Asian students in the sample, and no account was taken of other variables (such as school decile).

Table 11 shows the results for Asian and Pasifika students. Both Asian and Pasifika students in this sample were less likely than NZ European students to be earning money from either jobs at home, for neighbours, or in part-time employment.

Table 11 **Odds ratios for Pasifika and Asian student involvement in earning**

Earning money	Pasifika		Asian	
	Odds ratio	95% C.I.	Odds ratio	95% C.I.
I never do jobs at home for money	3.5	2.3, 5.3	3.0	2.3, 4.0
I never do jobs for neighbours	2.2	1.4, 3.6	2.3	1.8, 3.1
I never work at a part-time job	2.2	1.5, 3.4	1.8	1.4, 2.3

The only trend with school decile that showed a consistent pattern was selling things, where about 50 percent of students from low decile schools had never sold things. This dropped to about 30 percent in the high decile schools.

Paying tax

About two-thirds of all students were aware that tax is automatically deducted from a person's pay. However, only a third thought they knew the difference between gross and net income. Of the students who either had a job or who ran a business, many knew how much tax they paid, but far fewer completed their own tax returns.

The percentage who knew that tax was deducted from pay increased consistently from about 55 percent in lower decile schools up to about 75 percent in high decile schools.

The percentage who knew the difference between gross and net income was about 25 percent in lower decile schools and increased consistently up to about 45 percent in high decile schools. The only difference between ethnic groups was that Asian students were about twice⁴ as likely to know about the difference between gross and net income as NZ European students.

⁴ The odds ratio is 1.9, with confidence interval (1.4, 2.4).

Spending

This section explored three aspects. It looked at the amount students spent relative to their income, the form of money used to make purchases, and the factors influencing what they purchased.

Level of spending

Students were asked what their spending levels were compared with the amount of money they have (Table 12). The largest group (42 percent) were keeping some sort of balance between saving and spending. However, there are still the ‘spend-thrift’ third, and the low spending fifth of students.

Table 12 **Levels of student spending (n=2,646)**

Level of spending	n	%
Often spend more than the money they get	215	8.1
Generally spend all the money they get	633	23.9
Often spend less than the money they get	1,121	42.4
Often spend very little or none of the money they get	500	18.9
Do not get any money	59	2.2
No response	118	4.5
Total	2,646	100.0

Methods of spending

The survey looked at what financial products students used when they spend (including cash). The frequency that these were used is displayed in Figure 3.

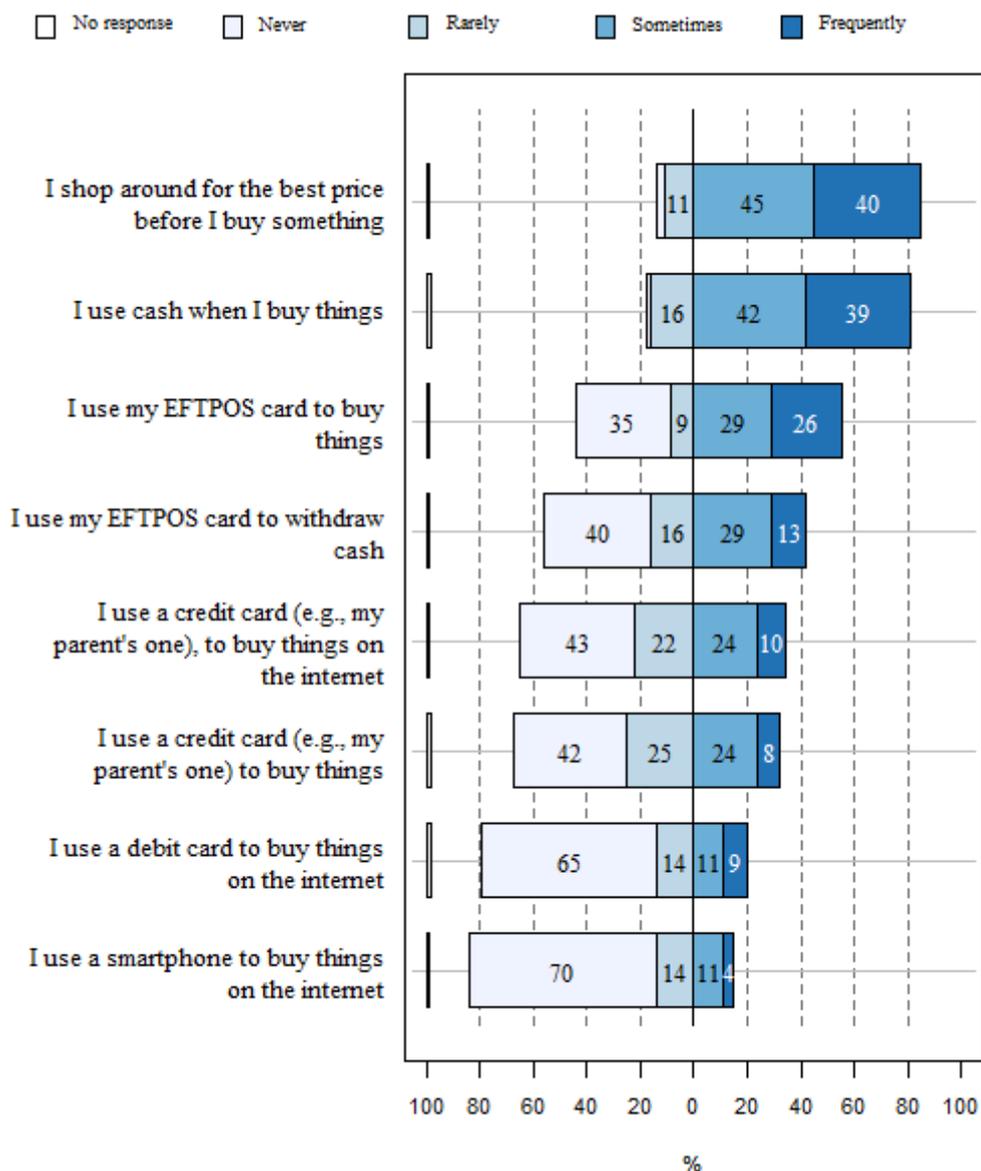
The first bar of Figure 3 shows that most students shopped around either frequently or sometimes, with hardly any who never compared prices. This shows a good level of consumer ‘savvy’.

By far the most common method of purchasing was with cash (with 81 percent using it frequently or sometimes). However, the use of EFTPOS cards to make purchases is common. Of those students who have an EFTPOS card, half still use cash ‘sometimes’—but a fifth still use it ‘frequently’. As expected, the majority of those who don’t have EFTPOS use cash ‘frequently’.

Over 40 percent of students had never used a credit card to make a purchase; about a third of students frequently or sometimes used credit cards. As the legal age for owning a credit card is 18, this means that students are using credit cards belonging to other people (presumably parents, siblings, or primary caregivers).

A substantial percentage of students were making purchases on the Internet. The most common way to do this was by using a credit card. Smaller percentages of students were using debit cards. Some students had used smartphones as a way of accessing the Internet to make purchases.

Figure 3 Patterns of student spending (n=2,646)



The percentages for buying things or withdrawing cash with EFPOS reflect total usage of the cards. Of those who do own one, only 3 percent never use it to purchase goods, and just 10 percent use it rarely. The remainder are evenly split between ‘frequently’ and ‘sometimes’ using it for purchases (43 percent and 44 percent respectively). About 14 percent of students who do not have their own cards report using EFTPOS cards to make purchases, presumably a card belonging to a friend, parent etc.

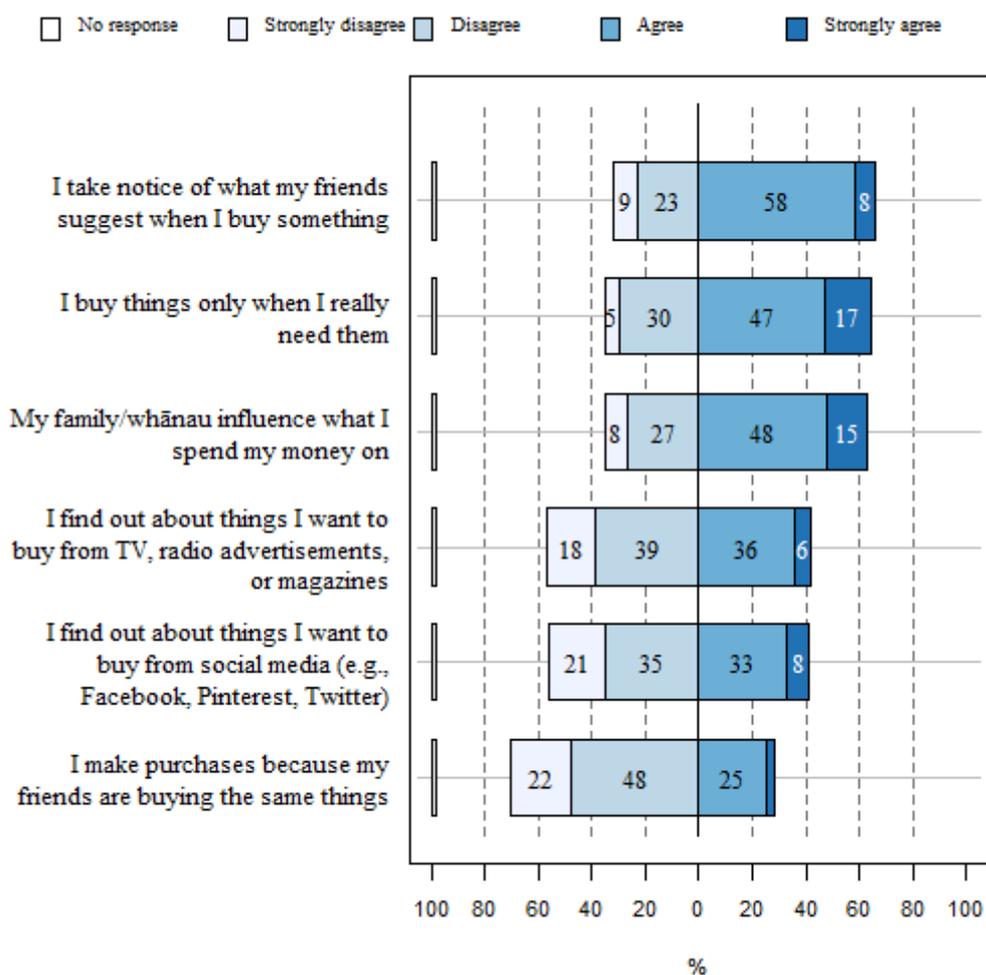
A similar pattern exists for withdrawing cash: of students who own EFTPOS cards, 21 percent use them frequently to withdraw money, 45 percent use them sometimes, 23 percent rarely, and 10 percent never use them. Again, about 12 percent who report that they do not own cards must be using someone else’s to withdraw money.

There was no clear relationship between use of EFTPOS cards and school decile. There were some differences by ethnic group on the use of EFTPOS cards, but this was largely because some groups were less likely to have a bank account and so couldn't get an EFTPOS card.

Influences on spending

The final question explored several of the main things that influenced students to spend money. These are shown in Figure 4.

Figure 4 **Influences on student spending (n=2,646)**



The advice of peers and the influence of family/whānau members upon purchases have two of the biggest effects upon student spending.

Students displayed reasonable levels of personal judgement about their spending. The majority (63 percent) state that they only buy things that they really need. However, the split between 'need' and 'want' has not been explored in this study. Far lower percentages of students are making purchases because their friends are buying the same things. This again indicates individual decision making.

Students reported that they found out about things they wanted to buy from mass media and from social media in about equal proportions. Somewhat less than half of students reported using either forms of the media.

Saving and investing

Students were asked about the regularity of their saving. Students who did save were asked where they saved their money as well as various aspects of the behaviours or attitudes to saving money. Table 13 shows the frequency of student saving. This indicates a strong saving ethic across students, with very few indeed reporting that they had never saved money.

Table 13 **Frequency of student saving (n=2,646)**

Frequency	n	%
Yes, regularly	1,341	50.7
Sometimes	983	37.2
Rarely	215	8.1
Never	60	2.3
No response	47	1.8
Total	2,646	100.0

Both Māori and Pasifika students were less likely to save than their NZ European counterparts. Pasifika students were about a third as likely as NZ Europeans to be regular savers,⁵ and Māori about half as likely.⁶ Regular saving tracks upward from about 40 percent to about 60 percent of students as the school decile increases.

Methods of saving

Students used a variety of ways to save money. These are displayed in Table 14. The most common was a bank savings account. Far fewer used term deposits, while a few mentioned KiwiSaver. Many of the ‘other’ responses were unclear. Eight students mentioned Bonus Bonds (these are administered by a bank). Just four mentioned more sophisticated forms of saving, such as buying and selling foreign currencies or investing in the stock market. Several students were more upfront about exactly where they kept their cash. The most common was their wallet or piggy bank, but pillowcases, snowboard bags or jars were also mentioned.

⁵ The odds ratio is 0.34, with confidence interval (0.22, 0.53).

⁶ The odds ratio is 0.48, with confidence interval (0.38, 0.60).

Table 14 **Methods of saving (n=2,646)**

Saving places	n	%
In a bank savings account	1,836	71.0
Keep it myself	1,477	57.1
Have parents keep it	480	18.6
Invest in KiwiSaver	323	12.5
In a term deposit	147	5.7
Other	46	1.8

Percentages sum to more than 100 percent because multiple options may be chosen.

Attitudes to saving

Students who saved were asked a number of questions about the relationship between saving and spending goals. About half of these students (49 percent) said that they set a goal, and regularly saved the amount of money needed to reach the goal. Conversely, 35 percent said that they save, but spend it before they reach the goal. This was more commonly reported in lower decile schools (about 45 percent) than in high decile schools (about 30 percent).

Another group (43 percent of those who saved) reported that they have savings from which they never withdraw money. This latter group was more prevalent in higher decile schools (about 50 percent) than in low decile schools (about 30 percent).

The students who saved were also asked three questions around their attitudes to savings. Ninety percent of the students thought it was important to save for something expensive, and almost as many (88 percent) said that saving some of their money was important. Seventy percent of students agreed that it is important to get advice on how to save money. This indicates that saving is valued highly by students.

Financial knowledge

Two questions were asked in this section that required students to exhibit financial numeracy. The first of these explored students' awareness of the effect of compound interest, and the second related to the effect that inflation had on the value of money. The two questions are presented in Figure 5.

The first question was answered correctly by 41 percent of students. These students could probably recognise that simple interest would give exactly \$110 and therefore this figure would be bigger if the interest was compounding. A further 32 percent gave \$110 as their answer, indicating that they could do the required percentage calculations for simple interest, but did not factor in compound interest.

The second question had slightly more students getting it correct (46 percent). This indicates that they understood the idea that the value of a set amount of money is eroded through time by inflation.

Figure 5 **Financial numeracy questions (n=2,646)**

Suppose you put \$100 into a bank account with a set interest rate of 2% paid into the account each year (compound interest). You don't make any further payments into this account and you don't withdraw any money. The bank charges you no fees.

How much would be in the account at the end of 5 years (remembering there are no fees)?
(Tick **one** of the circles below)

<input type="radio"/> ¹ More than \$110	41% (correct)
<input type="radio"/> ² Exactly \$110	32%
<input type="radio"/> ³ Less than \$110	9%
<input type="radio"/> ⁴ It is impossible to tell from the information given	8%

Imagine that you are given a \$100 gift voucher but you can't use it for 2 years.

In two years time is it likely that the voucher will buy:
(Tick **one** of the circles below)

<input type="radio"/> ¹ More than it would today	11%
<input type="radio"/> ² The same amount as it would today	18%
<input type="radio"/> ³ Less than it would today	46% (correct)
<input type="radio"/> ⁴ It is impossible to tell from the information given	17%

Borrowing money

This section asked students about their behaviours and their views on borrowing money. The first question asked if students had either borrowed or lent money at some time in the past, and whether they were currently owing or owed money. The results are displayed in Table 15. This shows that both owing money and lending money are common. While we did not explore the sources of borrowing, it may be that the amounts are relatively low and of an informal nature where the lending takes place between friends or within families.

Just over a third of students agree that you should not lend money to other people, compared to 60 percent who disagreed with this, indicating that students largely have a positive attitude towards lending (Figure 6).

It is somewhat curious to note that more students think that they are owed money than think that they owe money to someone else. One possible explanation is that students lend money more often than they borrow it, and in addition are lending money to people outside their peer group, perhaps to family members. Another potential explanation is that students have a stronger recall of what is owed to them than what they owe.

Table 15 **Student status on debt (n=2,646)**

Owing money	<i>n</i>	%
I have owed some money in the past	1,789	67.6
I owe some money now	586	22.2
Someone else has owed me some money in the past	2,098	79.3
Someone else owes me money now	1,004	37.9

Percentages do not sum to 100 percent as students could indicate multiple responses.

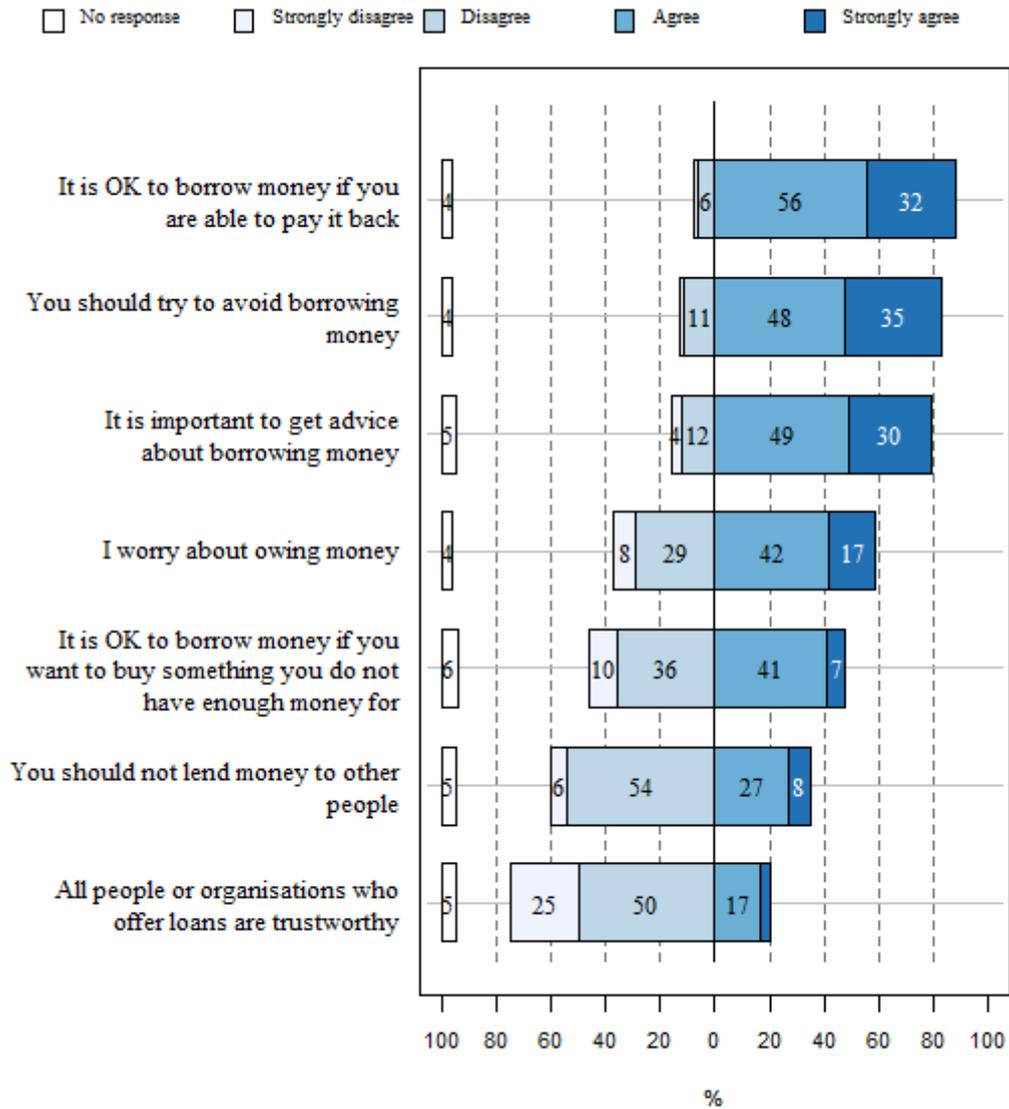
Students' attitudes towards borrowing

Students responded to a number of statements on their attitudes about borrowing money (Figure 6). The statements are not put into any context, so they could range from simply borrowing money to buy lunch or more formal borrowing such as mortgages, student loans, bank loans etc.

The largest level of agreement was that it is OK to borrow money if you are able to pay it back, with 88 percent agreement. However, only 41 percent agreed that it was OK to borrow money for something you do not have enough money for, and 83 percent thought that they should avoid borrowing money. These mismatches may be partly explained by students being comfortable with borrowing money when they do not have sufficient cash on hand, but know they have enough money to pay it back immediately. It may also exhibit an unwillingness to enter into a longer term debt. This is consistent with more than half of students (59 percent) expressing worry over owing money. Running counter to this is that only a minority (35 percent) thought that you should not lend money to other people. This may again be because students are willing to give temporary bridging finance to friends who are short of available cash.

Most students (79 percent) thought that it was important to seek advice about borrowing money. The dilemma of who to ask becomes apparent, when the survey found that three-quarters of students thought that at least some organisations that lend money are not trustworthy. The level of distrust was higher for students from higher decile schools. About 65 percent of students from lower decile schools expressed this reservation, and about 80 percent of students from high decile schools.

Figure 6 Student attitudes towards borrowing (n=2,646)



Budgeting and financial management

The questions in Table 16 were mainly about students' knowledge and their behaviours, but also included some attitude questions.

Table 16 Student knowledge, behaviours and attitudes towards planning (*n*=2,646)

Aspects	Statements about financial planning	Yes		No	
		<i>n</i>	%	<i>n</i>	%
Budgeting	I know how to make a personal budget	1,510	57.1	983	37.2
	I have a personal budget	703	26.6	1,785	67.5
	I have been given advice on how to budget or manage money	1,350	51.0	1,126	42.6
	I have asked for advice on how to budget or manage money	792	29.9	1,684	63.6
Setting goals	I know how to set goals for my money	1,955	73.9	531	20.1
	I have set some goals for my money	1,505	56.9	979	37.0
Planning	It is important to plan what I do with money	2,097	79.3	387	14.6
	I plan to have a student loan	1,147	43.4	1,262	47.7
Knowledge	I know how to find out how much money is in my bank account(s)	1,980	74.8	503	19.0
	I know how much money I have saved or invested (e.g., in a bank)	1,675	63.3	808	30.5
Other attitudes	I would like to learn more about managing money ⁷	1,522	57.5	948	35.8

While Table 16 has detailed information about managing money, the most salient feature of it is the divergence between students' knowledge or attitudes, and their reported behaviour. In many cases, knowledge or attitudes exceed actual behaviours. For example:

- While 57 percent know how to make a budget, just 27 percent actually have one.
- About 74 percent know how to set goals for their money, and just 57 percent have done this.
- While 75 percent know how to find out their bank balances, just 63 percent know how much money they have saved or invested.
- While 51 percent have been given budgeting advice, only 30 percent have sought it (though this latter figure shows a heartening level of proactivity on the part of students).

While this reflects Stangl and Matthews' (2012) findings that there is a gap between knowledge and attitudes and actual behaviour, this could also be interpreted as part of a developmental stage for young New Zealanders whose behaviour may change as their situation changes.

Of those students who had been given budgeting advice, roughly half indicated that they had asked for advice, and half indicated they had not asked for advice. Eleven percent of students who

⁷ This question was asked very similarly at the start of the survey ("I want to learn more about how to manage my money") with 73 percent agreeing or strongly agreeing with this statement. The reason for this disjuncture is uncertain; one potential is the difference in response options, another is the different set of items that the statement sits with.

hadn't had budgeting advice indicated that they had asked for it. While this is a small number of students in total, this implies that some students are not able to access advice or information when they want it.

Forty-three percent of students indicated that they expect to have a student loan. This figure is surprisingly high in light of the aversion to longer term borrowing noted in the previous section. It may well be the case that student loans are perceived differently from other debt, where many students leaving school accept it as a given that they will have a student loan if they want to study further. The gap between intent and action is clearer when comparing the importance students put on planning (79 percent), and the far lower percentages who have a budget or have set a goal for their money (27 percent and 57 percent respectively). Despite this gap, the number of students have set money goals or have set a budget is encouragingly high.

Managing risk

A number of aspects of students' behaviours relating to risk were asked (Table 17). There were questions on risks (knowing about or being approached by scammers), some on security of their bank accounts, and some on their knowledge and behaviours around consumer rights.

Table 17 **Student knowledge, behaviours and attitudes towards risks or rights (n=2,646)**

Aspects	Statements about risks and rights	Yes		No	
		n	%	n	%
Scams	I know what a financial scam is	1,745	66.0	724	27.4
	I have been approached to respond to a scam	818	30.9	1,644	62.1
	I have been the victim of a scam	180	6.8	2,283	86.3
Security issues	I have told others my EFTPOS or Internet banking password	448	16.9	2,018	76.3
	I let other people use my EFTPOS card	420	15.9	2,038	77.0
Consumer rights	I know my rights when I buy something	1,664	62.9	778	29.4
	I have returned products that I have bought because they are faulty	1,637	61.9	823	31.1
	I read guarantees or contracts that are on things I buy	1,236	46.7	1,194	45.1

Percentages do not add to 100 percent because of non-response.

About two-thirds of students know about scams, 30 percent of them report having been approached to respond to a scam, and about a fifth of those approached report as having been the victim of a scam. While Pasifika students were less likely to know about scams, they reported that they have not been approached by scammers nor had fallen prey to them any more than other

groups. The prevalence of being contacted by scammers seems low, given the high traffic of scams through email.

The majority of students state that they know their consumer rights, and this claim seems reasonable (or even an underestimate) given that about 60 percent of all students report having returned faulty goods. Pasifika students were only about a third as likely to have returned goods compared with NZ European students, with Māori students being about half as likely. This could be related to what these students tend to purchase as well as cultural factors. Somewhat fewer students report reading guarantees or contacts (47 percent).

Financial literacy in secondary schools

Sources of financial education

Both teachers and students were asked about the main sources of students' knowledge on money and financial matters. Firstly, the general sources of information were asked, and then the curriculum areas within a school where financial literacy teaching took place.

General sources

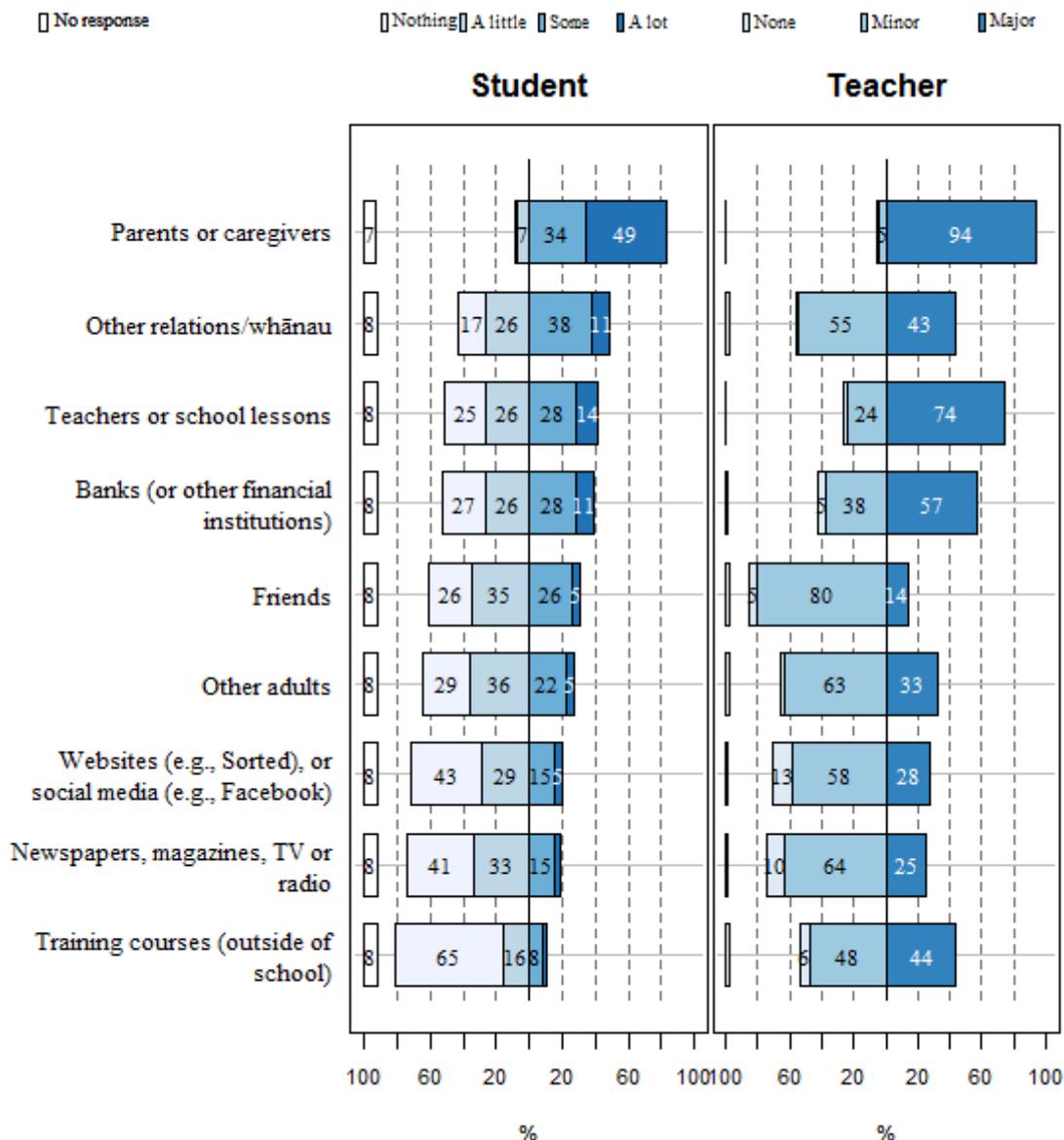
Students were asked how much they learned about money management from a number of different sources. The responses to this question are displayed in Figure 7. This was rated from 'a lot' through to 'nothing'. Teachers were asked a similar question—"Where, or from whom, do you think young adults should be learning about money and money management?" They were asked to respond on a slightly different scale, identifying the major sources and the minor sources, as well as sources that they believed were inappropriate (categorised as 'none'). Only a few teachers thought some sources had no contribution at all.

Both students and teachers saw parents or caregivers as the most important source by far, with 94 percent of teachers seeing this as a major source and 83 percent of students saying they had learned a lot or some from parents. Students saw the wider whānau as the second most common source of information about financial literacy, whereas teachers thought this was a less important source. Māori⁸ and Pasifika⁹ students were more likely to get financial literacy advice from their relatives/whānau than NZ European students.

8 The odds ratio for Māori is 2.4, with confidence interval (1.7, 3.5).

9 The odds ratio for Pasifika is 2.4, with confidence interval (1.2, 4.8).

Figure 7 **Financial education: student sources (n=2,646) and teacher views (n=196)**



Students saw school as the third most common source of their financial literacy education, and 74 percent of teachers thought that teachers or school lessons should have a major role in financial literacy learning. While this response from teachers is heartening, there were still 24 percent of teachers who indicated that teachers or school lessons should have only a minor role. Teachers who thought they taught a lot about money and money management in their classrooms were more likely to see school as a major source of financial literacy education than those who taught less.

Banks or other financial institutions rated third highest for teachers (57 percent), which is a similar rating to the students' reported sources of learning about financial literacy. Teacher and student rating of the role of other adults was similar to each other, being relatively low for both groups. The traditional media and social media rated lowly for both teachers and students.

Training courses outside of school were accessed the least, with two-thirds of students saying they had learned nothing from them. This contrasted with teachers' views, 44 percent of whom indicated these should be a major source of financial learning.

There were a number of differences between teachers' views of where financial learning should occur and actual student sources of financial learning in several areas. Most obvious was the teachers' keenness to see non-school-based advice or training courses as major sources. Teachers thought that banks should be a major source, however just 11 percent of students reported using them a lot as a source of financial learning. Teachers thought that training courses outside of school should be a major source of financial literacy learning (44 percent) but students rated them as their least common source, with only 11 percent utilising this a lot or sometimes, and 65 percent learning nothing from them. Māori¹⁰ and Asian¹¹ students were more likely to have learned about financial literacy at these courses than NZ European students.

Teachers were asked to rate budget advisory services and the Citizens' Advice Bureau as sources of financial literacy learning. They saw the former as an equally important source as banks (57 percent as a major source), and 33 percent rated the latter as a major source. Again, this emphasises the teachers' views on the importance of non-school sources of financial literacy learning.

A second major difference was seen in the role of friends or peers. About one-third of students reported getting at least some money management information from their friends (roughly equal with getting information from 'other adults'), whereas teachers saw friends as the least preferred source of learning, with 80 percent seeing it as a minor source, and 5 percent stating 'none'.

These figures show that the importance of the immediate family is paramount, with the wider family/whānau also being important. Links between these and schools would be a useful way of enhancing financial education and financial literacy. Home-school partnerships of this kind have been employed in numeracy and in literacy (Fisher & Neill, 2007)

School-based sources of learning

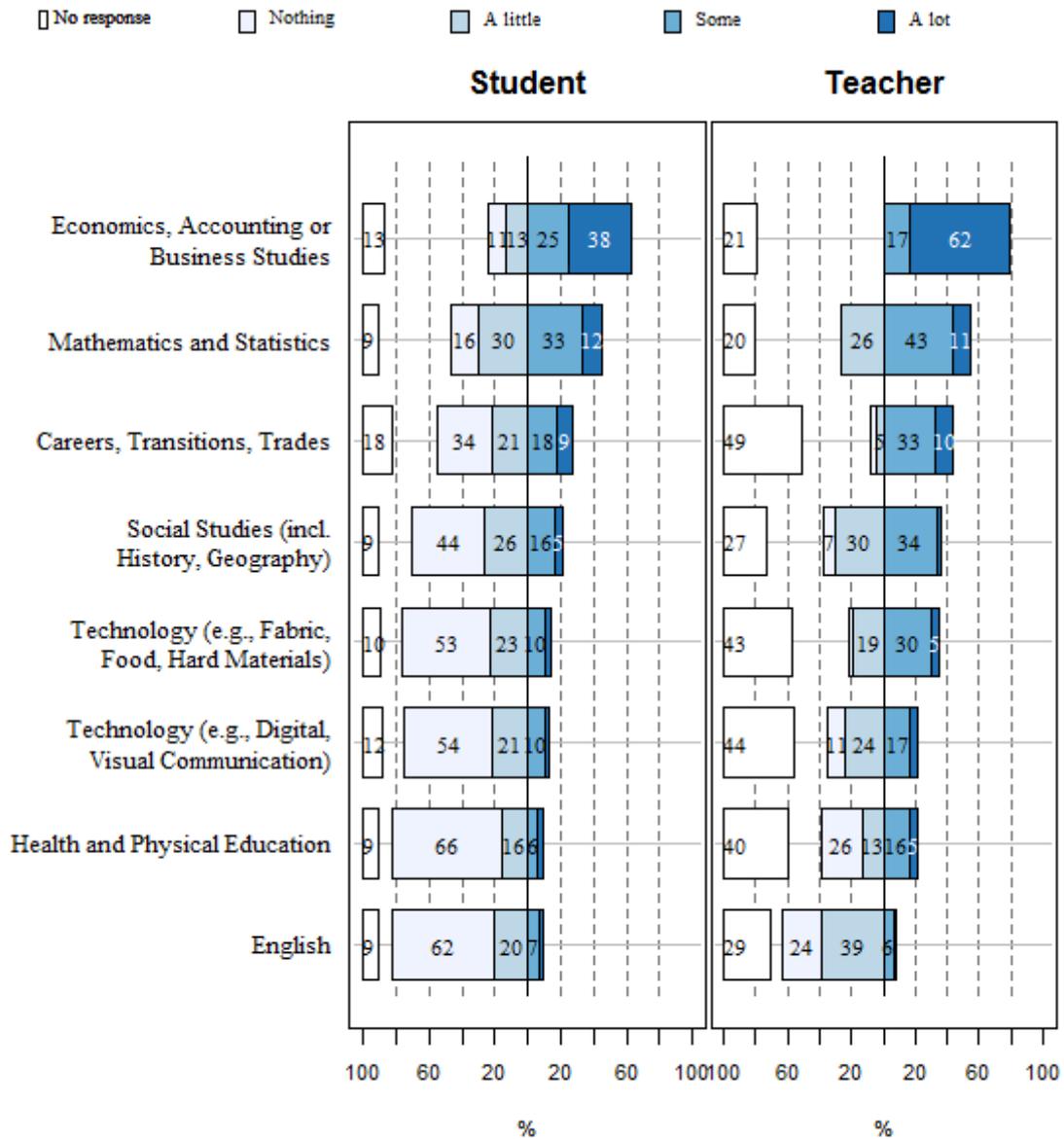
Students were asked how much they had learned in each of the main curriculum learning areas, or in supplementary courses, such as Careers, Transitional, or Trades courses. These are displayed in Figure 8. Clearly, the areas of Economics, Accounting, or Business Studies are by far the most common areas for students to learn about money and money management. The areas of Mathematics and Statistics, and Careers, Transitions, or Trades courses follow. Students rated Social Studies as the next most common source though close to half said they had not learned anything about money management during it. Most of the remaining areas showed lower levels of learning about financial literacy, with around 10 percent who said that they had learned a lot or some in them.

10 The odds ratio for Māori students is 1.8, with confidence interval (1.4, 2.3).

11 The odds ratio for Asian students is 1.7, with confidence interval (1.3, 2.2).

Teachers tended to report similar patterns as students on the rankings of how much financial literacy they included within the curriculum areas. The areas of Economics, Accounting, and Business Studies were most common, followed by Mathematics and Statistics. Careers, Transitions and Trades had fallen to third equal with Social Studies. Teachers ranked Technology subjects above the remaining subjects.

Figure 8 Learning about money and money management at secondary school: student and teacher perspectives¹²



¹² *n* varies for both students and teachers for each subject area, as students and teachers could tick the options 'have never taken this subject' and 'not currently teaching'. For the student survey, percentages are calculated out of 2,646 minus those who have never taken a subject. Similarly, the teacher *n* for each subject is 196 minus those who do not currently teach the subject. As the non-respondents are still included in these groups, non-response is inflated by the smaller *n* and therefore looks larger than it actually is. Arts and languages have not been included, as their *n* is small; 31 and 26 respectively.

While the teachers and students gave similar rankings on the relative amounts of teaching in the different curriculum areas, teachers gave far higher estimates of the absolute amounts. For example, 40 percent or more students responded ‘no learning’ in all but the two subjects that financial literacy has clear links with. The teachers’ survey, on the other hand, showed that only small percentages of teachers reported that they taught no financial literacy. Typically the percentages of teachers including no financial literacy were far smaller than the percentages of students reporting that they had received no financial literacy.

Students were asked a final open-ended question about examples of how they had learned about money and how to manage it. One very common response was that they had learned nothing or very little.

Many of the responses did not address this question, stating other sources of learning outside of secondary school. This was most usually about learning from their parents (especially the mother), or having learned it through their own experiences. A small number mentioned primary school, or presentations given by visitors to their primary school. The ASB programme *GetWise*¹³ received a number of mentions.

I haven’t learned anything new about money in school this year (so far). My knowledge of money management is from Primary & my parents.

I just taught myself to sort of go bargain shopping and look for nice stuff that is cheap and don’t spend money unless you need it or can afford it.

My mum ALWAYS goes on to me about my money. She never wants me to spend any money and probably wishes that she could control my bank account & spending (she can’t). She made me learn about saving and I am now good at it.

Once a speaker from a bank came into our class and told us about managing money. He told us about compound interest, and how and why to save our money.

I have been taught from a young age about money due to parents owning their own business. So I know it’s important to save money but keep a budget for yourself during the week. Having my own job and own money has also taught me.

Many who responded did include learning at secondary school. Most often this referred to the curriculum area, with Economics being the predominant one. References to ‘consumer studies’, ‘financial literacy’ or other similar areas were also common.

It was also common to mention a specific area of learning such as ‘shares and other money topics’; ‘Consumer Guarantees Act’; or ‘compound interest’. Students also mentioned some specific strategy about money management, as these examples show:

Plan what your saving goals are, give an approximate amount and bank it immediately to avoid temptation. Place \$10 or \$20 in the EFTPOS card for emergencies and vital items that need to be bought.

13 <http://www.getwise.co.nz/>

Never spend more than you have and always make sure at least 10% of the money is in a savings account.

My teacher has told me about how to save money and spend and don't give your card Pin away etc.

Explicit statements about learning that had occurred in secondary school classrooms were relatively rare.

I learned during maths which was really handy when we were buying things with fake money we learned advice and helped each other.

In economics we 'invested' money into shares that we would if we were to have the money in real life.

I took business and had to create our own business. I was CEO and had to take care of the money because I was also finance manager.

In social studies, we did an activity called the 'Real Game' where we were assigned jobs and given choices about our lifestyle (house, vehicles, etc.) and taught how to budget things.

In social science in year 9 and we learned about budgeting and financial scams.

Sometimes the learning was related to activities undertaken at school, but not part of the curriculum. Several of these were related to food or to the school canteen. Others mentioned school trips where financial planning was needed.

On a school trip someone's EFTPOS card declined whoops. I then learned saving can 'save' embarrassment.

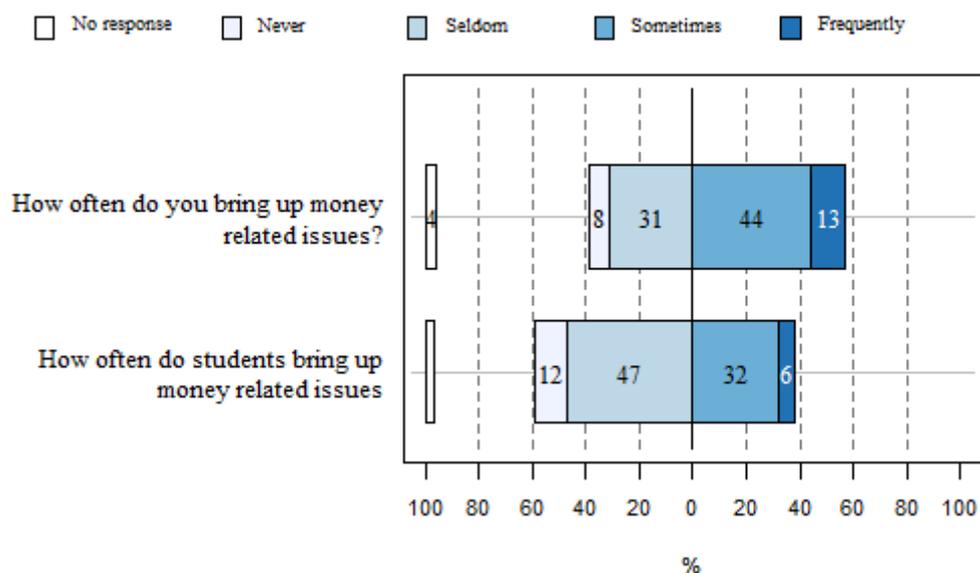
Not buying stuff from the Tuck shop, using that money to go to a dairy/Bakery and buy cheaper things with better quality.

I've learned if people daily ask for money at the canteen ignore them or they'll keep asking.

Teaching financial literacy in the classroom—teacher perspectives

Teachers were asked a number of questions about how financial literacy was addressed in their classroom. Firstly they were asked who initiated issues relating to money and money management when this was not the focus of the lesson (Figure 9). They saw themselves as the main initiators of these episodes, but also recognised that students would also bring up issues.

Figure 9 **Initiation of financial literacy issues (n=196)**



Teachers were also asked about the most common way that they included financial literacy into their teaching. By far the largest group (64 percent) said that it was through teachable moments. These are those unplanned opportunities that arise in the classroom that provide a platform for specific learning. Regular teaching within a curriculum area was the next most common way, with 18 percent of teachers responding this way. Just 3 percent of teachers mentioned regular cross-curricular activities. The remainder said that they did not include money or money management in their teaching (14 percent), and one teacher did not respond.

Teachers who taught relatively low amounts about money and money management were more likely to use teachable moments,¹⁴ whereas those who taught it more often were more likely to include it on a regular basis.

In an open response question teachers were asked to give an example of how they had taught about money and money management in their class, even when it had not been the focus of a lesson. The examples given in response to this question provide a snapshot of ways teachers incorporate financial concepts into their teaching. Approximately 75 percent of those surveyed described at least one example. Of the 158 responses to this question, one said “I only teach Accounting therefore every lesson I teach it”. Six stated that they did not include financial concepts in their teaching at all. Two of these simply stated, “I haven’t” and “never”, but other responses such as, “it is not part of my job” and “focus is science concepts” suggest that financial literacy is seen, by a few at least, as a ‘separate subject’ which is not related to their subject area. This raises the question about who is believed to be responsible for ensuring that students learn about money (c.f. Question 2). Though only a very small number, it is interesting to note that five out of these six (who did not include financial concepts at all) rated schools as important as

¹⁴ The odds ratio is 3.8, with confidence interval (1.8, 8.4).

parents as the source of this learning. While it is beyond the scope of this study, it could be useful to investigate what lies behind such responses, and whether they could be correlated to any particular effect such as subject areas, teacher knowledge or confidence, resourcing, or school and individual teacher attitude. These ideas are considered further in the section on barriers to teaching financial literacy and in the discussion on professional development (PD).

Looking at the open responses in more detail, it was found that they almost always relate to the teacher's nominated subject area. Only a few responses appeared to contradict their teaching area, and in some cases could have been because teachers were only asked to nominate their 'main' teaching areas and may not have listed secondary teaching areas. Otherwise, these responses reflected spontaneous discussions. Mathematics and Statistics, Economics/Accounting/Business Studies, Careers, and Social Sciences teachers all described units in which some aspect of money matters were included. These teachers are of course also likely to take advantage of teachable moments, but nevertheless chose to describe something they do regularly. Interestingly, Technology, PE, Health, Art, and a few Science teachers also described regularly integrating financial concepts and discussions such as budgeting, as part of practical projects within their subject areas.

Of the 151 valid responses, 97 (approximately 64 percent) appear to include financial literacy as a deliberate part of their teaching programme either as an important topic in its own right, or as a useful context for other learning (e.g., maths). Fifty-four (approximately 35 percent) of the respondents described scenarios where they had taken advantage of a 'teachable moment' which arose either from discussion instigated by students, or other events (e.g., a topical news item). Responses coded as 'teachable moments' were sometimes described as subject-related topics that had 'generated a discussion' about a financial idea. Often it relates to students on a personal level. For example:

As part of a literacy activity in a Level 1 Practical English class, we were looking up the word 'interest' in the dictionary. Students had to find the relevant definition for our task. As part of our discussion about the different definitions we talked about interest paid on a loan (even though this wasn't the definition we needed for our task). I used the example of buying a new jacket and how much it could end up costing if a loan was used to buy it. We also talked about the dangers of credit cards. Most students were unaware of how credit cards worked before this discussion.

Spontaneous discussions occurring outside the class or teachers' subject areas were not reported as frequently, and this may simply have been because it was easier to recall a regular activity than a particular spontaneous instance. The wide range of topics brought up in spontaneous teachable moments is evident in these examples.

Discussion with students during Pastoral Care time about recent purchases of cell phones—were they sensible etc. (Form class)

Maybe anything to do with money made from royalties of songs, music business financial matters etc. (Maths teacher)

While the class is working on their artwork, conversations on money and finance sometimes spark up among the senior students. I shared my opinion with them and asked open end questions to spark up more in-depth discussion. I still remember a male student asked me what caused the global recession while he was doing his artwork. I explained briefly what caused it and effect of it. (Maths teacher)

The sourcing and costing of materials in making artworks. The time and labour involved in making artworks. The price of artworks. Artworks as investment. (Science teacher)

There is some evidence which suggests that the concept of financial literacy is not clearly defined or indeed understood; for example, whether there should be a focus on personal money management or wider economic concepts, as suggested in the following comments.

Money such as G.S.T, profit, loss, wage calculations, rates (best price for buying goods) is taught in the number unit but I am not sure that I teach much to do with Money Management???? Example: today the students calculated the G.S.T inclusive price of items, the G.S.T exclusive price, G.S.T content. (Maths teacher)

When talking about Business culture I talk about trade-off with profit. (PE/Health teacher)

Open responses were also analysed according to whether they incorporated *personal* money management concepts or *non-personal economic* concepts. While the boundary between these is not clear cut, non-personal concepts were defined as those not explicitly linked to students' personal experience within the context of the comment. Concepts defined as personal included banking, saving, borrowing, budgeting, mortgages and rent (when framed from an individual or family perspective). Those reported in a non-personal context included references to national or international financial and business concepts such as exchange rates, profit margins, OCR, interest rates, fixed/variable rates, compounding interest, loans, currency exchange rates, inflation, investment, shares and share markets. Fifteen responses were not able to be categorised, either referring explicitly to mathematical concepts or were not relevant; 86 responses included personal financial concepts and 65 included economic concepts; 15 included both. This suggests that 'financial literacy' in this context is most commonly understood to be about the skills and knowledge relevant to students' personal lives, but a general comment from one teacher shows how this is often perceived as subject specific.

I find that when it is taught as part of a junior business program it is very specific and the kids learn actual financial literacy skills. The problem is that this program is an option within our school so not all kids will have access to it. When taught as part of Social Science it is more concept driven and about the big picture of the economy and economic world which is great general knowledge but is not about specific tools for individuals. (Social Studies teacher)

The types of topics or scenarios that teachers described also reflected their subject areas. For example, in Mathematics, teachers used scenarios relevant to the students' everyday lives as contexts for teaching maths calculations related to money, such as flatting, grocery shopping, and wages. These scenarios frequently included the notion of personal consumption, by relating wider financial or mathematical concepts to students' own experience of purchasing goods. Thirty-four

responses referred to buying or planning to buy goods. Topics include shopping around, consumer rights, comparing prices/discounts, deciding on quality versus price. The products cited included phones, cameras, workbooks, sports equipment, music, musical instruments and equipment, takeaways, concert tickets, leather jacket, trips (including school trips), ‘label’ items, even a \$1,500 cat. A concept related to this, and perhaps remembered from a primary school programme, ‘wants and needs’, was specifically mentioned by two respondents.

In addition to personal money management and economic or business matters, 43 of the financial concepts described in these examples by a range of different subject teachers were framed as wider social issues, including poverty, housing, employment, and retirement.

Teachers reported using class events and activities to introduce ideas about budgeting, for trips or creating a product; estimating and calculating ‘best prices’. One teacher described an exercise in a health class that could easily have been used in a Mathematics class context, an English teacher manages to combine compound interest and Shakespeare, and a History teacher highlights the economic hardships of the great depression.

Did an exercise on how much it would cost a person who was both a smoker (20 cigarettes per day) and a drinker (2 beers a day) over their life time—18 years to 65 years. It would buy a moderate house! (Health teacher)

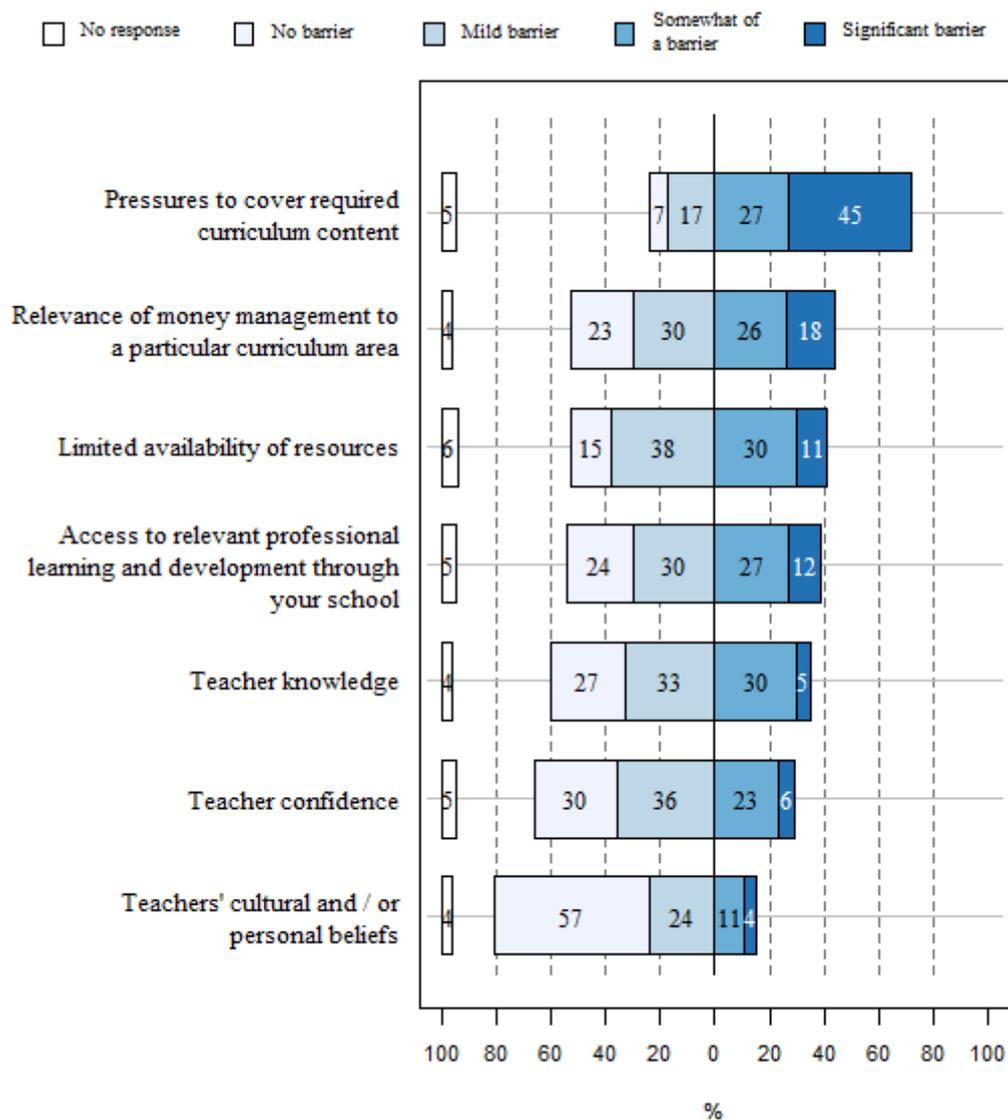
Teaching ‘The Merchant of Venice’ by William Shakespeare I include a section on compound interest—I always discuss compound interest, student loans, credit cards, money management with Year 13 students. (English and Digital Technology teacher)

Overall, the responses to this question suggest that most teachers recognise the relevance of money-related topics, but with varying degrees of importance, or sense of responsibility to teach them. The examples that were given in response to this question suggest that financial concepts can be, and are frequently integrated into most subject areas, even those not traditionally thought of as involving financial matters, and points to some awareness of the need to integrate such ‘life skills’ across the curriculum. This is reinforced by almost all teachers agreeing or strongly agreeing that it is important for students to learn about personal money management.

Barriers to the implementation of financial literacy

Both teachers and school leaders were asked a set of questions about the main barriers to teaching about money and money management. Each group was asked to rate the extent to which each of seven aspects was a barrier. The results for teachers are displayed in Figure 10. The pattern of school leader responses to these questions was very similar to that of the teachers with leaders tending slightly more towards there being somewhat of a barrier or a substantial barrier for most questions.

Figure 10 **Barriers to teaching about money and money management (n=168)**



By far the most significant barrier was the pressure to cover the required curriculum content, with near one half seeing this as a significant barrier. Teachers had already been asked a similar question about whether they had enough time to include financial literacy in their class. While this question used a different rating scale (level of agreement rather than the level of a barrier) the responses were reasonably consistent with the curriculum pressure. About 44 percent agreed that they had enough time for teaching financial literacy ideas, with 56 percent disagreeing. Some comments about this follow.

The curriculum is so full that teachers struggle to cover everything that is already required of them as it is (e.g., principles, values, key competencies, learning objectives from learning areas etc.). Therefore, learning areas have to rationalise what is being taught. (School leader)

We must meet the prescribed AOs in our curriculum areas. To bring in extra material which is not covered when we are pressed for time to adequately cover our own material would be detrimental. (Science teacher)

The second most common barrier was the relevance of financial literacy to the curriculum area that was being taught. This is clearly linked to the first, as there is little opportunity to spend limited time on an area that does not have clear links to financial literacy, and when those that do exist do not form part of the assessment of that subject.

The lack of resources and the lack of access to relevant professional development were rated as being the next biggest barriers. These were closely followed by teacher knowledge, and slightly lower still, teacher confidence. Teachers' cultural or personal beliefs were by far the least common barrier, with just 4 percent of teachers seeing it as a significant barrier.

While teacher knowledge and teacher confidence were seen as lesser barriers to teaching financial literacy, teachers who taught only a relatively small amount of money and money management were more likely to see these as barriers compared with teachers who taught higher amounts of financial literacy.¹⁵ The confidence intervals for these, however, are large, so this finding should be taken with caution.

Open-ended responses on barriers to financial literacy teaching

Teachers and leaders were asked to also comment on the seven potential barriers listed. Nine curriculum leaders and 44 teachers offered further comments about the listed barriers. The frequency of comments about each barrier reflected the numbers given in the closed responses with six leaders and 26 teachers citing time and the pressure to cover the curriculum as the most significant barrier to including financial literacy in the classroom.

Have limited time in the classroom. (Economics teacher)

Pressure to get results in own subject area—merit/excellence drive etc. is a huge barrier to including more financial skills in my area. (Maths teacher)

No time to cover curriculum material at present let alone do extra. (Maths teacher)

How to naturally integrate financial literacy contexts into a broader range of learning areas in a manageable way without teachers having to sacrifice time spent teaching the other aspects that they have to cover in a very full curriculum. (School leader)

Teacher knowledge or confidence, and resourcing were mentioned as a barrier in only three comments by teachers or leaders.

Comments also highlighted the tension between financial literacy as an extra subject and a topic or skill to be integrated within other subjects or across curriculum areas. Both perspectives expressed the view that it is not currently a high priority.

As mentioned above, it would be good to have more financial literacy built into our schemes of work. (Digital Technology teacher)

¹⁵ The odds ratio for teacher knowledge is 9.8, with confidence interval (3.3, 29.1).

The odds ratio for teacher confidence is 9.3, with confidence interval (2.7, 32.0).

All students need this financial literacy (just like careers advice). These should not be randomly stumbled across in multiple subjects but taught to all students in a specially scheduled class rotation-fashion. (Technology teacher)

It's all I can do to cover the minimum requirements of the curriculum. Students are arriving at school with very low literacy levels and I have to use many teaching strategies to engage them. It's almost like they need a subject category called 'Life skills' which is compulsory to cover such requirements as financial literacy and becoming a good citizen etc. Money management is low down when I am trying to teach basic understanding of complex texts. (English teacher)

The current curriculum is overloaded and it is a question of how to include it and get it across the curriculum. This school needs to address the issue for its long-term strategic planning. (School leader)

However, it should be noted that the reported lack of time, and the uncertain place of financial literacy in the curriculum, may not always match teachers' actions. The examples of how they had recently included financial concepts in their classes, in an earlier question, clearly show that teachers feel that helping students learn about money management, or that money is a useful context in which to present other learning, is important, yet it can be a struggle to do so. Several comments suggested that 'time and pressure' is a simple way of expressing a range of more complex constraints. For example, it was often acknowledged "that all students need this financial literacy", but that need should be addressed in a variety of ways such as raising the priority and making it a compulsory part of the curriculum.

Parents and students often comment that it should be compulsory for all students to do Financial Literacy. It is a life skill and it would be great to see schools recognise this and cater for it in the school curriculum especially at junior levels and again at Year 13. (Economics teacher)

All junior classes should have a component of financial literacy offered but time allowance for this is not built into the programme. (Learning support teacher)

Is very difficult to have financial management made compulsory at any level. Senior Management do not see it as necessary. (Economics teacher)

I personally agree that financial management is important. But school can't continue to put things into the school day and expect to be accountable for everything. Where is the role of the family in all of this? Or society? e.g. What happened to school banking and the banks visiting schools with special deals for the students. (School leader)

These comments reflect a perception that there is a lack of formal acknowledgement of the importance of financial literacy, and therefore any requirement to teach it. This may also be related to comments about teachers' lack of knowledge about financial matters, and their confidence to teach it. It is in the curriculum, but unless specifically part of an Economics or Business course, is only as an example of a way to link learning areas.

Teacher knowledge—my idea of what 'Financial Literacy' involves may be incorrect. (Maths teacher)

Some teachers across the school either lack the knowledge themselves, or pass on misconceptions. Much should be done to develop their knowledge first. (Economics teacher)

The third most common barrier reported in the closed section of this question was a lack of resources, and three further comments stated that teachers would include financial literacy in their teaching if suitable resources were available.

A further six responses noted that it was either not relevant to their subject area, or that it was not primarily the school's responsibility. Three responses claimed there were no barriers or that any would be easily overcome. When considering these responses in relation to those in the earlier question about how teachers had included financial literacy in a recent class, it seems that while many teachers feel it is an important topic, only some are able to find ways to integrate it into their subject area. What is perceived and reported as an insurmountable barrier by one teacher may be unproblematic or easily overcome by another, despite the apparent 'unnatural affiliation' with the subject. For example, two PE teachers gave very different responses to the earlier question about an example of how they had included financial literacy in a recent class. One said that financial literacy was not relevant to their subject and it was not the school's responsibility, while the other was able to describe integrating budgeting and value for money into a unit about food supplements and exercise in the PE context.

Teachers and leaders were also asked about any additional barriers not already identified. Most of the fifty-four responses from teachers reiterated the previously listed barriers, and only two additional barriers were noted. Firstly, a few teachers suggested that students' own financial background or family socioeconomic status (SES), or different cultures' attitude to money, might be difficult to accommodate.

Would need to take into account the mixed socio-economic groups within our classes. Could be very embarrassing or intimidating subject for some students. (Social Studies teacher)

Limited practical experience of students in actually handling money. (Mathematics teacher)

One barrier not previously identified that emerged from this question was about resourcing, but was specifically stated as funding for staffing as opposed to classroom materials. Out of 11 comments that referred to resourcing as a barrier, nine of these noted a lack of staffing or funding for staffing, and one funding for professional development.

We need teaching hours to do this. A great initiative but is the government going to fund an extra teacher to each school? And a classroom? We are under such tight budgets, barely have enough teachers to offer core subjects, our subject choice is significantly limited at our school as it is—unless this is taught under the existing business enterprise course it will not be prioritised by our school due to lack of funding. (Social Studies teacher)

Staffing for new courses. (Economics teacher)

Staff to teach these subjects. (Language teacher)

No money for PD or resources. (Economics teacher)

However, time pressure, curriculum load and the importance or prioritisation of financial literacy were nevertheless the main issues noted.

Teaching time is already put under so much strain in the school; struggle to teach the main content. (Mathematics teacher)

Time constraints and pressures to cover curriculum content. (Economics teacher)

The big barrier is finding time in an already overcrowded curriculum. (PE/Health teacher)

We have not given serious enough priority to financial literacy, largely due to the pressure of providing as wide a range of subjects as we can in a small school environment: our timetable would struggle to accommodate another subject choice at this time. (English teacher)

Just time and planning to stress the importance of financial literacy. (School leader)

Prioritisation was particularly noted as an issue in those comments in which financial literacy was not portrayed as an additional subject, but as a topic within a curriculum area such as Mathematics and Statistics. These commented that the pressure to “gain credits”, especially in senior years, meant that financial literacy was unlikely to be prioritised.

It would need to be linked to credits, to warrant it being included in our senior courses as time is already tight for fitting in enough assessments to offer a reasonable amount of credits to the students. (Mathematics teacher)

Some students are following very demanding academic courses and don't have time for it. (School leader)

Overcoming barriers

Forty-three teachers offered a range of strategies they use to overcome barriers to teaching about financial literacy. Thirty-one described in-class teaching strategies that they personally use, such as encouraging students to ask questions, using authentic scenarios, making things relevant to students—for example, “they are not interested in mortgages but may be interested in buying a car”—and drawing on students' own experience. Ten of these also specifically referred to using teachable moments or opportunities as they arise.

Use ‘play money’ and create scenarios where money can be used. Provide students with real life additions to their curriculum that allow use of money and budgeting opportunities. (Mathematics teacher)

By introducing it in my art classes, though running an event gallery sale the students are to run. (Art teacher)

I always take opportunities to discuss work/income/money management when they arise. Usually, it comes from a question from a student. Several of our students work part time. (English teacher)

Use teachable moments the most. (Economics teacher)

The remaining 12 described external sources of help such as specific schemes and classes or discussing issues and sharing resources with other teachers, departments or senior management.

In social studies we will be introducing a new scheme of learning for all Year 9 pupils on budgeting personal finances. (Social Studies teacher)

We have a class every week that is 25 minutes long, we take a small group (12) of students and we talk about student life, achievement, their goals and planning for the future... (Social Studies teacher)

The following two sections outline responses to resources for and access to professional development that enhance teaching financial literacy. These were ranked the third and fourth most common barriers to teaching about money and money management.

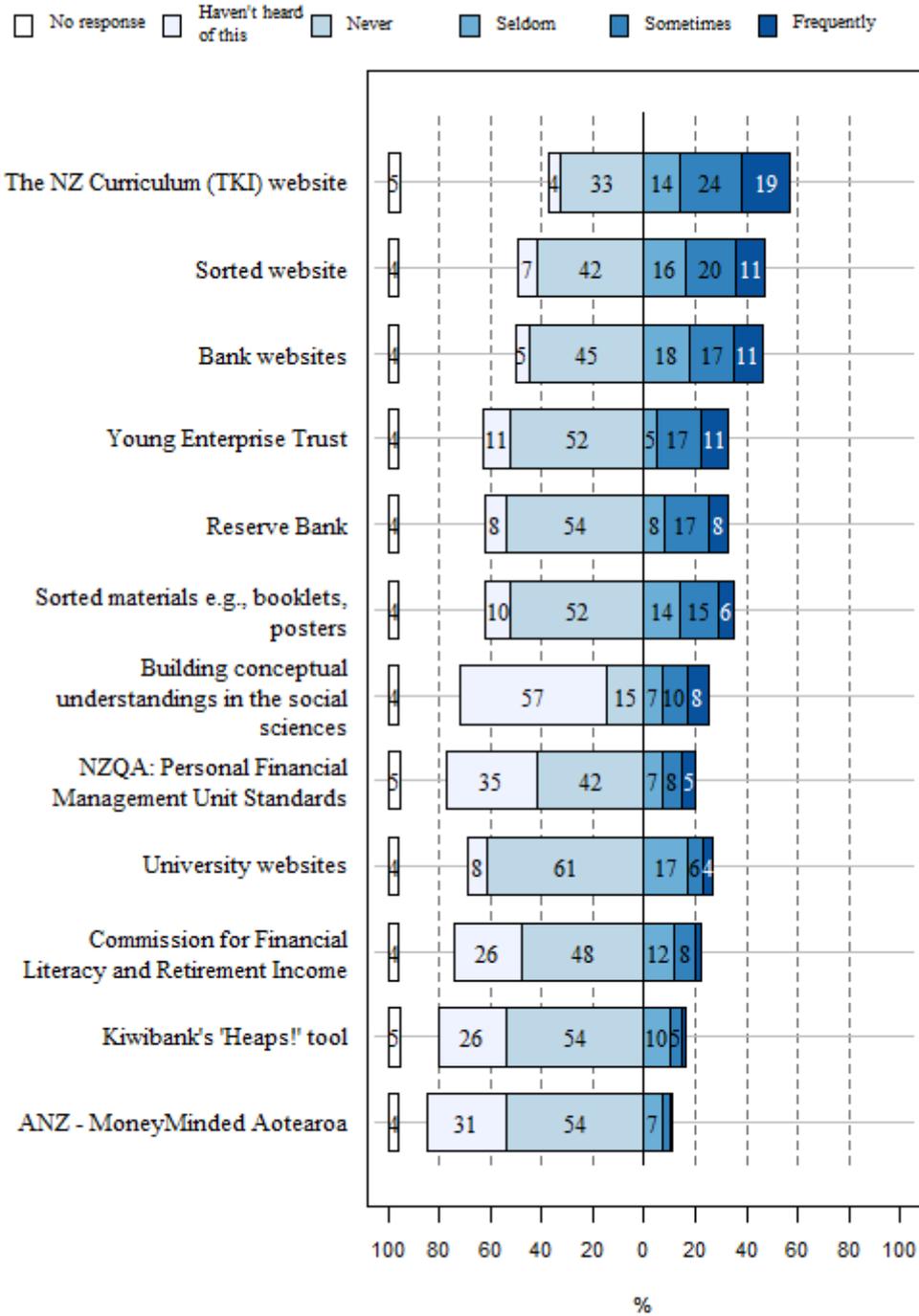
Resources for teaching financial literacy

Teachers were asked how much they used a range of financial literacy resources. (These are displayed in Figure 11.)

The most commonly used resource was the NZC (TKI) website (with 57 percent using it at least occasionally), followed by the Sorted website and bank websites. Of the listed resources, teachers were least aware of the resource *Taking part in economic communities* (Ministry of Education, 2012), with 57 percent having never heard of it. This resource is aimed at students in Level 4 or 5 of the curriculum. Around a third were unaware of the Personal Financial Management unit standards (New Zealand Qualifications Authority, 2014). About a quarter of teachers were unaware of the resources available from the Commission for Financial Literacy and Retirement Income (2012b) (with just 22 percent saying that they used them). However, nearly a half (47 percent) had used the Sorted website, and 35 percent had used Sorted materials.

School leaders were also asked whether the same set of resources were being used in their school. Although the number responding is small for school leaders, the pattern of responses on their usage matched reasonably closely with the teachers. School leaders did overestimate the usage of resources compared with their actual use by teachers, particularly of the Young Enterprise Trust programme, and to a lesser extent the universities and Reserve Bank websites. This is not surprising, as leaders are likely to be aware if the school has a resource rather than knowing its level of use. It is probably also the case that teachers in relevant curriculum areas are more likely to be using resources such as Young Enterprise Trust.

Figure 11 Teacher usage of financial literacy resources (n=168)



Both teachers and school leaders were asked to list other resources that were used in classrooms to teach financial literacy. These could include resources that had been developed within their school or externally prepared materials such as websites or textbooks.

Fifty-three teachers described the types of resources they use to teach financial concepts and a further 11 respondents entered 'nil' or 'none' responses. The latter had all previously noted that

they use ‘teachable moments as they arise’, and evidently did not seek out resources. Amongst those teachers who did describe the resources they used, there were some variations according to the subject areas. The main teaching area for the majority of teachers answering this question was either Mathematics (16) or Economics-related subjects (17). The rest were teachers of Social Sciences (10), English (three), Careers (three), Science (two), and Technology (two).

Eighteen teachers referred to or described resources that they created themselves or with other teachers. These were described as worksheets and workbooks, activities and games. Many noted other materials such as bank pamphlets, newspaper articles, and old unit standards tests that they adapted for particular purposes. Social Sciences teachers were more likely than others to draw on personal experience.

Almost all teachers reported that they accessed subject-specific or general resources from the Internet, as well as ‘googling’ specific questions.

- Social Sciences, Careers, and Technology teachers reported accessing material from Careers NZ, Geostuff, Studylink, and Money Instructor and software such as MYOB.
- Economics and Business teachers reported using subject-specific material from Commerce Economics Teachers Association (CETA) and Young Enterprise Trust. They noted financial websites such as Australian and British Personal Financial Management websites, Westpac quarterly forecasts, Money Week website and Figure it Out. They also included financial games and software into their programmes and drew on outside expertise and speakers.

Use resources that have been developed by CETA (Commerce Economics Teachers Association)—there is a variety of resources available to for Year 9–Year 13. Resources developed by teachers in our school. References to a variety of textbooks, and we have written our own workbooks for students. Booklet from Reserve Bank. Craigs Investment Partners—helped us set up an Investment Club. Westpac bank comes into school to deliver a one period programme on Budgets and general financial literacy. Also use the resources on the Money Week website—some great questions. Games—*Monopoly*, *Gumption*. (Economics teacher)

- Mathematics and Statistics teachers noted a wide range of websites for mathematics and financial-related material and also included more resources attached to unit standards (Instant Resources and YET—Young Enterprise Trust), though some were also critical of these.

INSTANT—purchased resources for US 24709. It is really hopelessly set out for the students that we teach. No thought has been put into how students read and process. Far too many words and not enough concrete examples. The assessment part is good though. I am developing worksheets as I go to fill in the gaps in the purchased material. YET had some better resources but has not updated to the new version for NZQA. Why is the Ministry constantly changing standards so teachers are constantly having to create new resources as the commercial companies do not keep up? (Mathematics teacher)

Of the 12 leaders’ responses to this question, seven referred to specific programmes, resources or outside providers. These programmes are listed below. A further three responses

included non-specific references to “Local Rotary chapter”, “relationships with individual businesses through Business Studies” and simply “outside speakers”.

- **SAVY** is a student-run charitable trust that seeks to equip young people with good financial habits, regardless of their background and aspirations. It does this by running financial literacy workshops in high schools across the Auckland and Waikato regions specifically designed for this age group.
<https://www.bnz.co.nz/about-us/sustainable-development/supporting-our-communities/building-financial-literacy>
- **MAIBIZ** is a 3-day competition intervention focusing on entrepreneurship.
<http://www.maibiz.co.nz/>
- **Skint to Mint** board game is targeted at secondary school students and has been created by the Reserve Bank in conjunction with the Young Enterprise Trust.
<http://www.rbnz.govt.nz/skinttomint/>
- **GetWise** ASB Literacy programme targeted at Years 7/8 students (not offered in secondary).
- **Money Smart** was mentioned as having previously being offered, but that few students had chosen this option.

Only one leader referred to achievement standards offered in Business Studies classes. In-school programmes included a 10-week financial literacy course for Year 9; a Social Science topic called ‘Money money money’ and two non-specific references to incorporating some financial literacy into Economics and Statistics classes.

Professional development

There is a noticeable gap between the amount of professional development (PD) on teaching financial literacy that teachers receive and the perceived level of its usefulness. While about three-quarters of teachers (76 percent) said that they would benefit from PD, just under a quarter (23 percent) reported that they had received some. A similar trend was observed with the school leaders, where 88 percent thought that PD would be useful. Figure 10 shows that only a quarter of teachers saw the lack of PD as being ‘no barrier’ to teaching financial literacy in their school.

Teachers who included high levels of financial literacy appeared to be more likely to have attended PD. These teachers, however, had a main focus on teaching either in the areas of Economics, Business Studies, and Accountancy, Mathematics and Statistics, or Social Studies and so it is not surprising they had the most PD. For teachers who didn’t teach a lot of financial literacy, demand was only a little higher for PD than for teachers who didn’t teach a lot (77 percent compared to 70 percent, a difference that is not statistically significant).

The call for more PD was despite three-quarters (74 percent) of the teachers reporting that they were confident about teaching money management, and 82 percent who reported that their financial literacy knowledge was high. Almost as many (75 percent) reported that they had sufficient knowledge to address personal money management issues that arose in their class.

The length of the PD courses appears to be reasonably short. About half the teachers who had PD within the last 2 years said that it was less than 2 hours in duration. Another quarter said that it was between 2 and 8 hours, while just a quarter reported PD that was more than <http://www.cflri.org.nz/financial-literacy/financial-education> hours.

Thirty-two teachers described the PD for teaching financial literacy that they had received in the last 2 years. These responses showed that PD was overwhelmingly taken up by Economics/Business Studies/Accounting teachers (22). The remaining 10 were made up of teachers of Digital Technology (3), Hard Materials Technology (2), Mathematics and Statistics (3) and one each Science and English. They also indicate that PD opportunities were mostly informal and self-driven. The most regular subject-related PD was in the form of in-service workshops:

- five referred to subject-related workshops, in-service courses and curriculum training courses with one of these citing NZQA: *Interpretation of NZQA External Achievement Standard resources*.
- six referred to Young Enterprise or Enterprise New Zealand workshops and webinars
- four reported attending subject-related conferences, mostly Business Studies or economics-related and a further four specifically mentioned CETA
- three referred to departmental meetings or support with lesson planning
- three mentioned personal contacts from whom they sought advice regarding their own finances, and one who implied a high level of financial competence through a description of their own enterprises
- two described independently “keeping up with the news”
- one remembered a course linked to a resource (game) provided by the Reserve Bank “some years ago”
- five reported that they had undertaken no PD related to financial literacy in the past 2 years
- four listed formal study courses that they had, or were currently attending, including:
 - *Te Wānanga o Aotearoa—Certificate in Money Management—L4—2 hours/week over 10 weeks (2)*
 - *Have done a 6 week course on personal money finance (1)*
 - *Post-graduate Diploma in Personal Financial Management (1)*.

One comment that sums up several similar responses to this question includes a variety of in-school and external sources of support for teaching or including financial literacy in the classroom:

No paid professional development. Did go to a free Enterprise NZ Business Conference in Wellington over the holidays in December with other Commerce Teachers and helped with Money week in the school and was slightly involved with a Financial Fitness course this school offers to all Year 13s. Will be going to a Sorted Financial Fitness one-day PD in Auckland next month—but feel strongly that enough is not done in this area for ALL NZ citizens. Even other teachers lack financial ‘savvy’.

School leaders' views on the PD that was on offer to their teachers confirm that PD is almost always self-selected, either sought by teachers themselves or offered to schools by outside providers. The variety of providers mentioned include: NZQA Best Practice Workshops (mentioned by three respondents), and conferences and courses for subject teachers (as noted most often by teachers of Commerce, Economics, Accounting, and Business Studies); 'Sorted'; ANZ 'MoneyMinded Aotearoa'; Retirement Commissioners PD programme; Young Enterprise Scheme. Only one reported that there was no PD offered.

School leaders and teachers were also asked what PD opportunities they could see that were not currently available but that may be of use. Leaders most frequently (eight out of 21) reported that ways to integrate aspects of financial literacy into current teaching, especially across curriculum areas, but also within specific subjects, were the most needed areas for PD.

How to naturally integrate financial literacy contexts into a broader range of learning areas in a manageable way without teachers having to sacrifice time spent teaching the other aspects that they have to cover in a very full curriculum.

Seven leaders responded with 'unsure' or 'don't know'. As in the comment above, consideration of time and workload pressure is evident in these answers too.

Unsure as we have already got two lots of PD happening across the staff—do not want to increase workload further.

Only one suggested specific topics that teachers could be informed and updated on.

Current regulations and laws regarding banking and credit facilities; how to teach students budgeting; current updates on minimum wages.

Two leaders referred to a need for resource material to aid teaching rather than PD, and one implied outside providers could offer courses for students with achievement standards attached. Others commented on time and workload pressures involved in trying to include or increase the focus on financial literacy in an already full curriculum and questioned if there is a perceived need for financial literacy teaching in the community. The implication here was that if such a need was expressed then the PD would be provided.

Responding to this question about the types of PD needed, teachers also had a relatively high 'don't know' response rate with 24 out of 78 saying they were unsure, didn't know or 'hadn't thought about it'. This might be a case of 'we don't know what we don't know'. Of those teachers who did offer ideas, many suggested specific topics that could be covered, such as budgeting and future planning (16), investing (6), saving and retirement (5), running a business (1), insurance (1), and two wanted to learn about what standards are related to financial literacy. Three respondents said any PD would be helpful, acknowledging the wide range of appropriate contexts and relevance. Nine wanted to learn about ways to integrate financial teaching across the curriculum, or for their particular subject.

Effective ways and interesting resources to be used with junior students as well as senior ones.

Assessment resources for topics.

Cross-curricular activities.

A further eight referred to resources, either wanting effective, age-appropriate, interactive resources, or wanting to know what resources were already available. One inference that could be drawn from a number of these responses to a question about desired PD is that resources themselves are somehow expected to ‘fill a gap’ in teachers’ knowledge.

A set of age-appropriate interactive lessons—this could be brought in or developed as part of a teacher training course.

Learning where to source financial literacy resources that are suitable for teenagers. Ongoing PD to network with bankers and people within the financial world to come and talk with students and give up-to-date advice to teachers.

Overall, almost all teachers and leaders recognise that financial literacy is an important life skill that should be included in students’ learning and most believe that this should occur at school.

Leadership

School leaders were asked a range of questions about school-wide approaches and attitudes to financial literacy within their school. These covered leadership of financial literacy, the cross-curriculum nature of teaching, and the place of unit standards within the school. A total of 39 leaders responded. As already noted, just 5 percent of leaders saw their school having a strong emphasis on financial literacy (with another 33 percent to a lesser extent). Most of these school leaders (74 percent) were aware of the place of financial capability in the New Zealand curriculum (Ministry of Education, 2007, p. 39).

School leaders were asked where the leadership for financial literacy comes from in their school. This was primarily seen as being from individual teachers (79 percent of leaders reported this) followed by a senior manager or a senior management team (31 percent). Most school leaders (64 percent) reported just the one source of leadership. Nine schools (23 percent) reported two sources, four (10 percent) mentioned three sources, while one school mentioned five sources.

Table 18 Sources of leadership for financial literacy ($n=39$)

Source of leadership	<i>n</i>	%
The principal	6	15.4
The board	2	5.1
Senior management	12	30.7
Individual teachers	31	79.5
Parents	1	2.6
There is no leadership	5	12.8

Percentages do not add to 100 percent as leaders could choose multiple sources.

Leaders were also asked where financial literacy was mentioned in school documentation. Again, the teacher’s individual teaching plans was most common (71 percent), closely followed by department- or syndicate-level plans (67 percent). Nearly half (41 percent) had it on their school-wide curriculum plans, and 38 percent had it in their student reporting.

Table 19 **Documentation on financial education (n=39)**

School documentation	Yes		No		Don't know	
	n	%	n	%	n	%
Policy documents	1	2.6	31	79.5	7	18.0
School-level curriculum plans	16	41.0	16	41.0	7	18.0
Department- or syndicate-level plans*	26	66.7	10	25.6	2	5.1
Teachers’ own curriculum, teaching, or assessment plans	28	71.8	5	12.8	6	15.4
Teacher appraisal process	2	5.1	33	84.6	4	10.3
School newsletters	6	15.4	30	76.9	3	7.7
Reports of students’ learning/achievement to parents	15	38.5	23	59.0	1	2.6
On the school website	3	7.7	32	82.1	4	10.3

* Frequencies sum to 38 due to one non-response.

Cross-curriculum nature of financial literacy

NZC places financial literacy education in a cross-curricular setting. It states:

Links between learning areas should be explored. This can lead, for example, to units of work or broad programmes designed to ... develop students’ financial capability, positioning them to make well-informed financial decisions throughout their lives. (Ministry of Education, 2007, p. 39)

Importance of integration

Both school leaders and teachers saw the importance of integrating financial literacy teaching across curriculum learning areas. In a set of closed questions about the importance of integrating money management across different subject areas, the majority of the leaders either strongly agreed with this statement (eight; 21 percent) or agreed (26; 67 percent) that it is important, with just five (13 percent) disagreeing.

Leaders also responded with comments about the importance of cross-curriculum approaches to financial literacy learning. Sometimes this was in recognition of a curriculum requirement that must be covered, but also because it is valued as an important set of skills for students.

I don’t think that there has ever been a real emphasis placed on this area. It would be fair to say that this has not been a school-wide focus at this point, but that’s not to say that it shouldn’t be at some stage. (Leader)

The current curriculum is overloaded and it is a question of how to include it and get it across the curriculum. This school needs to address the issue for its long-term strategic planning. (Leader)

Some teachers have put more thought into implementing the ethos of NZC and have included financial literacy because it is a real-life skill with elements that can be used for problem solving. (Leader)

In their final general comments, 32 out of 50 teachers commented on the importance of teaching financial literacy, noting that it needs to be prioritised so that it can be resourced, in both material and staffing (including professional development) and of course, given space in the curriculum. Leaders reiterated that, while financial literacy was incorporated into a number of subject areas, mainly Mathematics and Social Studies, as well as Economics, Business Studies, and Accounting, the obligation to teach financial literacy is often addressed through junior programmes such as Year 9 or Year 10 'enterprise' units. There were also comments that pointed to lack of priority in an environment that measures success in terms of achievement standards.

I think that it has a real place in setting students up to be successful people in the real world. At this stage, there hasn't been a lot of emphasis on this area, but that doesn't mean that there shouldn't be or wouldn't be given more profile or increased individual need. (Leader)

Extremely important, can teach financial literacy in Junior College, but does not fit achievement standards in Senior College. (Leader)

I taught for a year in Queensland, Australia and they had a great section of their curriculum on financial literacy. I could never understand why we didn't include it here. (Maths teacher)

Teachers and leaders on the whole recognise the importance of teaching financial literacy and in some cases this study itself stimulated discussions within schools as well as within classes.

As students completed a survey at tutor time we discussed money matters. (Teacher's subject not given)

It is clearly undervalued and this survey has highlighted some shortfall in our curriculum and teacher PD. (Leader)

Nature of cross-curricular financial literacy teaching

The school leaders were asked a number of questions about the cross-curricular nature of financial literacy teaching in their schools. The most common response was that it occurred in one or two subject areas (24 leaders; 61 percent). Another nine (28 percent) said it happened in several but not all curriculum areas and the remaining four (10 percent) said that it was not included across any particular subjects/learning areas. None of the leaders responded that it is treated in a completely cross-curricular way.

The leaders were also asked to describe why teaching financial literacy might occur more in some subject areas than others. Of the 18 responses to this question, half thought that financial literacy was more likely to be taught in association with or as part of subjects that seem to 'naturally' lend

themselves to discussion of money and finance. Despite this impression that financial literacy ‘fits’ better in some subject than others, the specific subjects mentioned covered a wide range. They included: Business Studies, Accounting, Economics, Commerce, Digital Technology, Mathematics, Foods, Careers, Global Living programme, and Textile Technology. The sense of financial literacy ‘belonging’ somewhere is illustrated in these responses from leaders:

Financial literacy is seen as the domain of ‘the Commerce dept.’, maths because of the numeracy skills and careers/transition/study as where ‘life skills are taught’.

Some subjects have a greater ownership and feel it relates more to their subject.

Financial literacy is better suited to some areas than others with curriculum content.

... some learning areas do not see the relevance of teaching financial literacy explicitly within their subject context. E.g. within the languages, the students might learn how to say ‘dollars’ and ‘cents’ in the language, and they might learn how to go into a shop and buy something in that language, but they are unlikely to learn about how to manage their finances in that language because there are other contexts that are considered to be more relevant to their curriculum.

This question also elicited explanations for not including financial literacy teaching in some areas. Unsurprisingly, seven mentioned the pressure on time and an already full curriculum, or that it was not compulsory to teach financial literacy as a subject or topic, and that the lack of time and space in the timetable means it is often not prioritised. Four responses referred to a lack of teacher knowledge or confidence to teach financial literacy as a reason for not including it in some areas.

Both teachers and school leaders reported that financial literacy learning could be readily transferable across a range of curriculum areas (with 88 percent and 82 percent responding positively to this). Nearly 70 percent of leaders believed that all teachers should have the capacity to address financial matters in their classroom. Teachers saw strong potential for financial literacy to be integrated into their teaching, with 81 percent agreeing that this is the case.

As discussed earlier, many teachers do find innovative ways to integrate financial concepts into their classes on a regular basis and a number are aware of the importance and take advantage of teachable moments as they arise. They also expressed the tension between current curriculum and workload requirements and the desire to integrate such an important area for learning, but one that has little status especially in regard to gaining credits.

Financial literacy unit standards

School leaders were asked about the role of financial literacy unit standards within their school. Only one school stated they were made available to all Years 11–13 students. The majority of leaders (22, or around 56 percent) reported that they were available to some students while 15 leaders (around 38 percent) said that they were available to none of their students.

Leaders from the 15 schools where unit standards were not available to any students were asked to state their level of agreement with four specific statements about unit standards. All but two of these stated that there was an emphasis on achievement standards in their school. A third of them indicated that they offered alternative unit standards. These leaders were split roughly 50–50 on whether unit standards should be available to all students. Sixty percent of leaders agreed that the financial literacy unit standards would be a useful way of helping their school’s students’ progress towards a formal qualification.

The 15 schools that did not offer unit standards to any students were asked why. Several school leaders were not sure but the most common reason, given by five schools, was that the school prioritised achievement standards.

Because unless a student is on a very specific IEP,¹⁶ we offer Achievement Standard programmes only.

The unit standards do not have excellent and merit credits attached, and therefore less meaningful to the students, and their overall results.

A couple of leaders indicated a lack of demand from students, and another couple commented on the lack of staff to teach it or to develop a course for it. One commented on the non-compulsory nature of financial literacy.

The 23 schools that offered financial literacy unit standards to just some students were also asked their reasons for this choice. The most common response (from six leaders) was that it was dependent upon the subject options that students choose. Three leaders explicitly said that it was only offered to low-ability students, with another three hinting at this through comments such as the following:

Standards are offered on a needs basis; if the teacher or student feel that a particular unit standard will be useful for a student’s educational pathway, then it would be offered. If it doesn’t meet a need, then we wouldn’t push a square peg into a round hole.

Three schools stated that unit standards were only offered at some year levels. One only offered them at Year 12, and in another school they were only available to vocational pathway students in later years.

Leaders from all schools were asked to state their level of agreement with some specific statements about unit standards. One school leader did not respond to these questions. The levels of agreement are displayed in Table 20. Schools that offered unit standards to at least some students had a similar pattern of responses to the schools that did not offer them, except to the third question (the usefulness of unit standards in helping students gain a formal qualification).

¹⁶ Individual Education Plans (IEPs) are aimed to support students with special education needs.

Table 20 **Statements about unit standards (n=39)**

Statements about unit standards	Strongly agree		Agree		Disagree		Strongly disagree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Our school offers other US that provide more important learning than financial literacy US	1	2.6	12	30.8	22	56.4	3	7.7
Financial literacy US should be available to all students at this school	1	2.6	17	43.6	17	43.6	2	5.1
Financial literacy US (would be/are) useful in helping this school's students' progress towards a formal qualification	2	5.1	28	71.8	7	17.9	1	2.6
There is more emphasis on students taking achievement standards at this school	12	30.8	22	56.4	4	10.3	0	0.0

Frequencies do not sum to 39 due to non-response.

The 22 schools that offered financial literacy unit standards were split as to whether they saw the standards offering a high level of financial literacy learning for students, with 43 percent agreeing, and 52 percent disagreeing (and one not responding).

All but four school leaders stated that there was an emphasis on achievement standards in their school. The majority of the open-ended responses from leaders reflected an overall preference for achievement standards over unit standards. Achievement standards are clearly more highly valued. Four leaders indicated that this leads to students choosing subjects that do not offer, or are not 'aligned with', unit standards. One leader noted that staff tend not to encourage or 'drive' unit standards. Four leaders noted that specific courses that had offered unit standards had been changed or discontinued, presumably through lack of demand.

I look forward to talking about it with students. I believe there is a stigma related to money management that needs to be addressed. And more knowledge in good money management can help everyone. (Arts teacher)

The difficulty in teaching this is mainly getting it recognised as important and having Deans etc. encouraging students to take it rather than viewing it as only an option for those who can't do anything else. (Economics teacher)

About a third of leaders indicated that their schools offered alternative unit standards that provide more important learning than financial literacy unit standards.

Teachers in the schools that did offer financial literacy unit standards were evenly split about whether they offered a high level of financial literacy learning for students at their school.

4. Concluding comments

In this section we highlight some of main findings, and provide our *interpretation* of some of the general themes that emerged in this research.

- While financial literacy is seen as important, the extent to which it is seen to fit into classroom programmes varies. It appears as though the extent to which financial literacy is valued by schools and by individual teachers influences the extent to which it is integrated into subject areas. Perhaps a more coherent approach to teaching financial literacy at secondary levels would ensure better coverage for New Zealand secondary students.
- Financial capability is not perceived to have the same status as the curriculum learning areas, nor the key competencies even though it is located in the NZC. Financial literacy appears in the NZC as more of an example rather than as a necessary component (Ministry of Education, 2007; p. 39).
- Financial literacy is variably interpreted by teachers and students as wider economic concepts, personal financial concepts and numeracy. This variability only became apparent in the responses to open questions. This is problematic because there may be an assumption that financial literacy is being covered by a school within a subject area, but may overlook important elements of personal financial management.
- It appears from teachers' comments that a perceived lack of status of financial literacy unit standards, and the subjects that offer these unit standards, is related to the lack of status given to financial literacy itself and the consequent lack of prioritisation and resourcing.
- While financial literacy is partially assessed through unit standards, these standards and their associated assessments are subject to schools' willingness to provide them and in some cases students' selection of them.
- Lack of time and the pressure to cover required curriculum areas are the main barriers to including specific financial literacy courses, or incorporating financial literacy teaching across other curriculum areas.

The research also suggests some future directions of work. This current study places a firm baseline upon which to build.

- More in-depth qualitative research could be undertaken. This current study was conducted by questionnaires only and so gathered information on a wide range of areas

but lacked opportunity for deeper understanding of specific issues. For example, it would have been useful to investigate the variable understandings of financial literacy.

- While PISA indicated that, overall, New Zealand 15-year-olds have high levels of financial literacy, it also revealed differences in students' capability related to socioeconomic status and ethnicity (Ministry of Education, 2014b). Unfortunately, this could not be explored in the current study as the target groups of Pasifika and, to a lesser extent Māori, were not adequately represented. Additionally, school decile (which is often used as a proxy for socioeconomic status) was not adequately represented in the sample and therefore could not be explored. More in-depth or confirmatory studies could address this.
- While the gap between knowledge or attitudes, and actual behaviour has been noted in the wider New Zealand population, this study relied on self-reported behaviours, and has not been able to address why this might be the case.

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¹⁷ The financial literacy progressions used in designing the survey were those as at January 2013, but the URL reference given is to the most recent version.

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Appendix A: Sample frame and sample

Sample frame characteristics

The sample frame was stratified by school size and decile to draw the sample. Schools were grouped into size defined by the total number of students attending: small (less than 301 students), medium (301–1,000 students), and large (more than 1,000 students). School decile was grouped as: low (deciles 1 and 2), mid (deciles 3–8) or high (deciles 9 and 10).

Table 21 **Sample frame school size and decile band distribution ($n=387$)**

Size	Decile band	Schools	
		<i>n</i>	%
Small	Low	17	4.4
	Mid	48	12.4
	High	9	2.3
Medium	Low	37	9.6
	Mid	138	35.7
	High	37	9.6
Large	Low	5	1.3
	Mid	62	16.0
	High	34	8.8

Table 22 **Sample frame school type, authority, and location ($n=387$)**

School characteristic		Schools	
		<i>n</i>	%
Type	Composite (Years 1–15)	67	17.3
	Secondary (Years 7–15)	99	25.6
	Secondary (Years 9–15)	221	57.1
Authority	Private	29	7.5
	State-integrated	83	21.5
	State	275	71.1
Location	Main urban area	242	62.5
	Secondary urban area	33	8.5
	Minor urban area	76	19.6
	Rural area	35	9.0
	N/A	1	0.3

Sample characteristics

The sample is compared to the sample frame, to check that the schools sampled match those in the population.

All 186 schools in the full sample were approached to take part in the teacher and leader surveys.

Table 23 **Full sample school size and decile band distribution (n=186)**

Size	Decile band	Schools	
		<i>n</i>	%
Small	Low	8	4.3
	Mid	23	12.4
	High	4	2.2
Medium	Low	18	9.7
	Mid	67	36.0
	High	18	9.7
Large	Low	2	1.1
	Mid	30	16.1
	High	16	8.6

Table 24 **Full sample school type, authority and location (n=186)**

School characteristic		Schools	
		<i>n</i>	%
Type	Composite (Years 1–15)	16	8.6
	Secondary (Years 7–15)	44	23.7
	Secondary (Years 9–15)	126	67.7
Authority	Private	12	6.5
	State-integrated	36	19.4
	State	138	74.2
Location	Main urban area	126	67.7
	Secondary urban area	14	7.5
	Minor urban area	37	19.9
	Rural area	9	4.8

Half of the schools in the full sample were approached to take part in the student surveys, in addition to the teacher and leader surveys.

Table 25 **Student sample school size and decile distribution (n=93)**

Size	Decile band	Schools	
		<i>n</i>	%
Small	Low	4	4.3
	Mid	12	12.9
	High	2	2.2
Medium	Low	9	9.7
	Mid	33	35.5
	High	9	9.7
Large	Low	1	1.1
	Mid	15	16.1
	High	8	8.6

Table 26 **Student sample school type, authority, and location (n=93)**

School characteristic		Schools	
		<i>n</i>	%
Type	Composite (Years 1–15)	7	7.5
	Secondary (Year 7–15)	23	24.7
	Secondary (Years 9–15)	63	67.7
Authority	Private	5	5.4
	State-integrated	16	17.2
	State	72	77.4
Location	Main urban area	64	68.8
	Secondary urban area	4	4.3
	Minor urban area	21	22.6
	Rural area	4	4.3

Appendix B: Respondent characteristics

The sample frame was carefully defined to create a list of schools from which the sample for this research was drawn. At the end of the data collection stage, it is important to check whether the characteristics of the respondent schools match the original list from which the sample was drawn, especially as this research had high non-response. As the sample in this research was stratified, the comparison to school size and decile (the sample strata) is highlighted.

Although the same set of schools was sampled for teachers and leaders, while there is some overlap, the schools that teachers and leaders responded from is not the same set of schools.

Leader respondent schools

Table 27 Decile group for leader respondent schools ($n=39$)

Decile band	Sample frame		Leader respondent schools	
	<i>n</i>	%	<i>n</i>	%
Low	59	15.3	7	17.9
Mid	248	64.1	23	58.9
High	80	20.1	9	23.1
Total	387	100.0	39	100.0

Table 28 Size group for leader respondent schools ($n=39$)

Decile band	Sample frame		Leader respondent schools	
	<i>n</i>	%	<i>n</i>	%
Small	74	19.1	4	10.3
Medium	212	54.8	22	56.4
Large	101	26.1	13	33.3
Total	387	100.0	39	100.0

Teacher respondent schools

Table 29 Decile group for teacher respondent schools ($n=53$)

Decile band	Sample frame		Teachers		Teacher respondent schools	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Low	59	15.3	23	11.7	8	15.1
Mid	248	64.1	120	61.2	33	62.3
High	80	20.1	53	27.0	12	22.6
Total	387	100.0	196	100.0	53	100.0

Table 30 Size group for teacher respondent schools ($n=53$)

Size group	Sample frame		Teachers		Teacher respondent schools	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Small	74	19.1	16	8.2	5	9.4
Medium	212	54.8	103	52.6	28	52.8
Large	101	26.1	77	39.3	20	37.7
Total	387	100.0	196	100.0	53	100.0

Student respondent schools

Table 31 Decile group for student respondent schools ($n=24$)

Decile band	Sample frame		Students		Student respondent schools	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Low	59	15.3	109	4.1	1	4.2
Mid	248	64.1	1,673	63.2	16	66.7
High	80	20.1	864	32.7	7	29.2
Total	387	100.0	2,646	100.0	24	100.0

Table 32 Size group for student respondent schools (*n*=24)

Size group	Sample frame		Students		Student respondent schools	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Small	74	19.1	162	6.1	2	8.3
Medium	212	54.8	1134	42.9	11	45.8
Large	101	26.1	1350	51.0	11	45.8
Total	387	100.0	2,646	100.0	24	100.0

Table 33 Student year level (*n*=2,646)

Year level	<i>n</i>	%
9	581	22.0
10	568	21.5
11	540	20.4
12	509	19.2
13	421	15.9
No response	27	1.0

Table 34 Student ethnicity, total and prioritised (*n*=2,646)

Ethnicity	Total		Prioritised	
	<i>n</i>	%	<i>n</i>	%
Māori	431	16.3	431	16.3
Pasifika	148	5.6	103	3.9
Asian	321	12.1	294	11.1
NZ European/Pākehā	1,396	73.2	1,654	62.5
Other	236	8.9	157	5.9
No response	7	0.3	7	0.3