

FINANCIAL LITERACY OF YOUNG AUSTRALIANS



What they know, what they don't know,
and what we can do to help.

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Financial
Basics
Foundation

SUNCORP
BUILDING FINANCIAL CAPABILITY



Dedication

Joe Cole was Honorary Treasurer of the Financial Basics Foundation for five years, from July 2013 to April 2018. On Joe's untimely death in 2018, the Financial Basics Board resolved to honour Joe's commitment to the financial literacy of young people through establishing a perennial research project, to be called the Joe Cole Monograph.

The research is published in a series of monographs that explore the state of financial literacy among young people, and its potential to enrich their lives through deeper understanding of how to manage their finances. The monographs are intended to be published widely, ranging from financial and tertiary institutions through to schools, families and carers.

Joe Cole knew the power of education in enhancing the ability of young people to fulfil their potential and pursue their dreams. It is the hope of the Financial Basics Board that this initiative will build on Joe's optimism by contributing to that potential, and nurture at least some of those dreams into reality.

About the authors



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Executive Summary

Young Australians have been identified as having low financial literacy. This has led to increased efforts to improve these levels, in particular, the inclusion of financial literacy in the Australian Curriculum. This research was commissioned to investigate why young women, compared to young men, have poorer levels of financial literacy.

To investigate this issue, interviews and focus groups were conducted at four Queensland schools; two in a regional area, and two in an urban area. In total, 16 focus groups and 32 interviews were conducted. These were analysed using thematic analysis.

Key findings

a) **Students generally do not know a lot about personal finance.**

While some students were aware of financial concepts such as interest, inflation, investing, insurance and superannuation, most had little or no knowledge and/or understanding of personal finance.

b) **Students predominantly learn about money and financial concepts from home, Maths, or Business Studies.**

Most students identified learning about money at home, however many recalled learning about interest and shares at school in Maths. Business students were by far more informed than other students. Making financial concepts assessable results in more engagement.

c) **For many students, Maths is not the most effective curriculum area for learning about personal finance.**

Maths tends to result in students fixating on formulas and calculations without understanding the underlying concepts. Many students also dislike Maths, resulting in more disengagement.

d) **Most students appear to be good savers, however there is evidence that this is passive rather than active, and they are just not spending their income.**

Most students spoke about how much they had saved, however on closer examination, these students do not have a lot of expenses. Discussions with older students who did have expenses revealed that they did not always know how to moderate spending in order to save.

e) **Stories are important for learning.**

Students who could recall financial concepts would often be recalling an experience or something from history when talking about it. This indicates that stories may be more effective in communicating financial concepts.

f) **Context is really important.**

It is important to match the learning activities with what the students are experiencing, and to use real life scenarios.

g) **Home life can have a huge impact.**

The students we spoke to were incredibly diverse. There is huge variation in the structure of their households, with many not living with their parent/s. There is also evidence of parents not being able to provide financial guidance.

h) There are gender differences.

Compared to boys, many girls have less confidence in themselves when it comes to financial knowledge. They may also have a more collective approach to finances where they consider others when making financial decisions. Girls also require more context when considering financial questions to understand what the question is asking, and as a result we find girls would benefit from other forms of assessment.

i) There is less evidence for regional differences.

While regional differences were evident, it is most likely these are driven by socio-economic background.

Given the research findings, we make the following recommendations:

1. Given the importance of financial literacy for student wellbeing, financial literacy education should be elevated within high schools. Ideally this is within a standalone program, however we should also seek ways to inject principles of financial literacy into as many areas as possible across the curriculum. In particular look for opportunities in the wellbeing/pastoral care area of the school's offerings.
2. The delivery of financial literacy education in Maths needs to be improved. A range of approaches – not limited to calculation activities – should be implemented to address financial literacy.
3. Delivery of financial literacy education should be expanded to subjects outside of Maths and Business, in line with shifting the focus from financial calculations, to financial concepts.
4. A range of assessment methods should be offered to students to enable them to show what they have learnt. Assessment tasks should be varied in nature, going beyond calculations. Tasks could include written pieces, visual or dramatic presentations, or oral explanations. These could be group presentations as well as by individuals.
5. Learning activities should be aligned with the general level of financial experience of the students.
6. Students need more exposure to effective financial strategies, in particular moderation (or control) of spending for saving.

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Introduction

A significant number of Australians struggle to manage their money, and one in three people find dealing with money stressful and overwhelming (ASIC, 2018). Increasingly complex financial choices and products bring a need for consumers to be empowered with knowledge and to understand the consequences of their financial decisions. The first National Financial Literacy Strategy set the foundation for “using educational pathways to build financial literacy for all Australians” (ASIC, 2011, page 6). The second National Financial Literacy Strategy set the first priority to “educate the next generation, particularly through the formal education system”, which resulted in financial literacy education being formally integrated across Australia’s network of approximately 9,500 schools (Blue et al., 2014). Despite this strategy, the Program for International Student Assessment (PISA) tests of 15-year-old school students show a decline in average financial literacy scores from 526 in 2012 to 504 in 2017. Worryingly, school students indicated they would reply to scam emails, provide their ‘lost’ online banking details or click on a link provided within an email and follow the instructions instead of contacting their bank (Singhal, 2017).

Regarding general financial literacy indicators, evidence consistently shows that being young, female, a single parent, in poor health, unemployed and with low income and wealth increases the likelihood of low levels of financial literacy (West and Worthington, 2017). The latest National Financial Capability Strategy (released in August, 2018) highlighted four cohorts of particular interest:

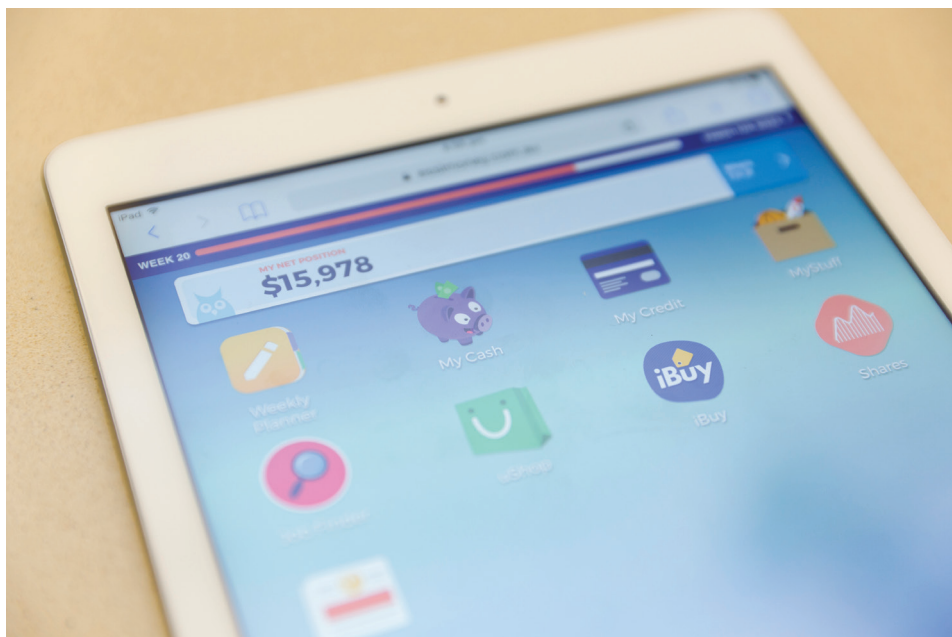
- | |
|--------------------------|
| • Women |
| • Young People |
| • Older Australians |
| • Indigenous Australians |

This project focuses on two of the cohorts of interest: women and young people, i.e. young women. An extensive number of studies have found females outperform males overall in high school, outnumber males in university, and are higher qualified in the workforce. However, there remains consistent evidence that women, and in particular young women, have lower financial literacy levels than men (Chen and Volpe, 2002; Mandell, 2008; Lusardi, Mitchell and Curto et al., 2010). Financial literacy education at high school is often delivered within mathematics courses (Blue and Brimble, 2014), and it is well documented that young women perform lower in mathematics tests. Gaulin and Hoffman, (1988) theorised this could be due to males’ enhanced spatial awareness giving them an advantage in mathematics. While this may seem plausible, several researchers have proposed that non-cognitive factors may be causing the discrepancy in performance. For example, Gneezy and Rustichini (2000) found that more valuable monetary incentives increase test performance, providing evidence for the impact of external factors on performance. In addition, several researchers have found stereotypes have a significant impact on confidence and performance (Dee, 2007; Carrell, Page and West, 2009; Hyde, 2005; Jacobs, 1991; Spencer, Steele, and Quinn, 1999). Thus, if males are stereotypically perceived as being better at mathematics, this may affect females’ results in mathematics tests. Following this, Niederle and Vesterlund (2010) proposed that differences in mathematics test performance may actually be due to how the different genders experience the testing environment, with females underperforming in these conditions.

Given mathematical concepts are a key component of financial literacy, the studies discussed above indicate that there may be non-cognitive reasons that explain why young females score lower in

tests of financial literacy. This would mean that instead of being a reality, young women having lower levels of financial literacy is a socially constructed concept – a stereotype. There are other established differences between the genders in adolescence, such as young women experiencing a decline in self-esteem, and young girls being more sensitive to the school environment (Davies, 1978). The Gender Identification Hypothesis (Hill and Lynch, 1983) proposes that during adolescence, there is increased pressure to conform to stereotypical gender roles, which may also explain why young women’s ability in mathematics decreases. It could be theorised that these same non-cognitive impacts would also impact on young women’s financial literacy.

This leads to the question: are the observed lower average financial literacy levels of young women a product of social construction, or are young females intrinsically unable to understand financial concepts as well as males? Are the lower financial literacy levels we observe in young women a result of how we measure and define this ability? Or are we observing the same phenomenon that persists in other social studies, where females who perform as well as males early on in school¹ appear to ‘lose’ this ability (Callahan, 1979; 1981)? Could the developmental stage of the young female brain, and its associated changes in self-perception, self-esteem, confidence, and priorities, be the real cause of the observed lower average financial literacy scores?



1. Callahan (1979) summarises the observed differences as there not being any difference between the genders until ages 9-13 when boys begin to do better.

Study Method

This project aimed to understand the interaction of young women and financial literacy. While existing literature has assessed young women and financial literacy using quantitative methods, we are unaware of any research that has used a qualitative approach to learning about high school students' financial knowledge.

Financial literacy is a complex latent variable that is influenced by several aspects of a young person's life. *Figure 1* below details the conceptual framework we developed for this study.

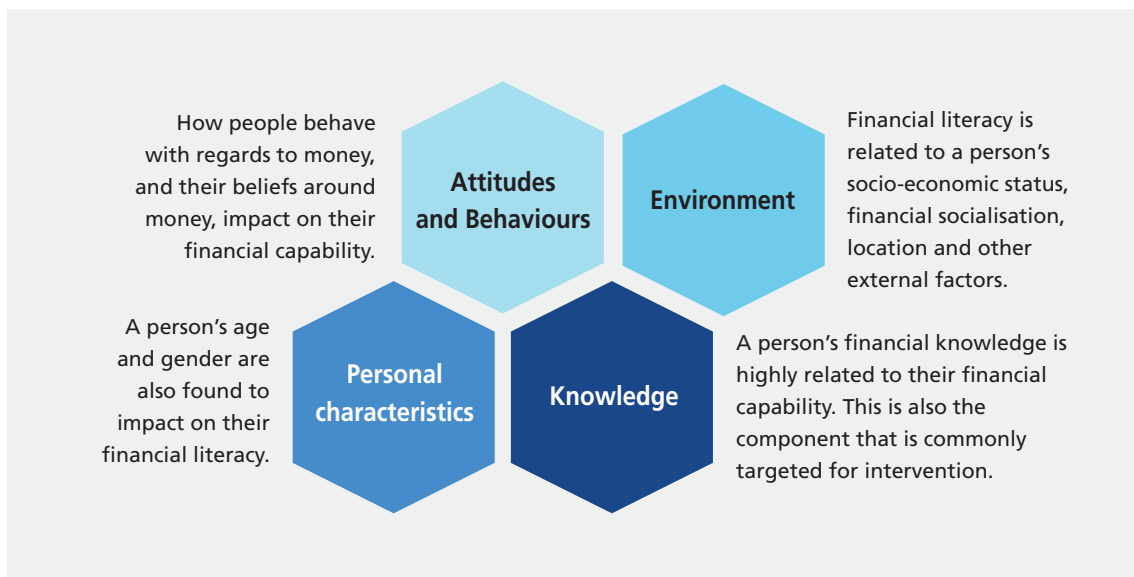


Figure 1 Conceptual Framework for Young Australians' Financial Literacy and Capability

Qualitative research allows researchers to gain a deeper understanding of complex issues. In this case, we were looking for the context or reasons behind why young women appear to have lower levels of financial literacy. Qualitative approaches can overcome the limitations of the existing quantitative research. However, in order to triangulate our results, we also employed a survey to capture more data on the personal characteristics and attitudes and behaviours of students.

Our target participants were high school students, both boys and girls. Given financial concepts are often not relevant until a student is working, we targeted students in Years 10, 11 and 12 – an age range of 14-18 years old. The research aimed to explore not only students' knowledge of financial concepts, but also their attitudes and behaviours to financial decision-making, their experiences with money in the household, at school and amongst peers, their financial decision-making in relation to significant life events like starting work and buying a car, and other financial socialisation factors.

Four schools were recruited to participate in the research: two from a regional area, and two from an urban area. Importantly, we focused on state high schools and purposively recruited from both a regional and urban area. These schools should be more representative of the population compared to Catholic and Independent high schools (which are more likely to have socially advantaged students) or schools that are only located in urban areas with better access to services.

Broadly, the research aimed to address the following research questions:

1. What do students know about personal finance and managing money?
2. Where do they learn about financial concepts?
3. Are there observable differences in the young women and men in how they talk about money?
4. How can we improve the financial literacy and capability of young Australians?

Ethical Clearance

In order to conduct research in a Queensland State Government school, an application had to be made to the Queensland Government Department of Education. Research is only approved if the proposal meets the following criteria:

- benefits education and school communities in Queensland
- uses an appropriate methodology that's likely to produce valid and reliable results
- protects the wellbeing and privacy of staff and students
- has no negative impact on teaching and learning.

The Department of Education approved the research to be conducted – Reference number: 550/27/2226.

In addition to seeking approval through the Department of Education, the research proposal and data collection instruments were all submitted for ethical approval through the Griffith Human Research Ethics Committee. Approval was granted with the Griffith Reference Number 2019/570.

Background on Schools

School A is an independent public school located in a regional city in Queensland. The high school is co-educational and has approximately 750 student enrolments, and 67 full time equivalent teaching staff. The school has an Index of Community Socio-educational Advantage (ICSEA)² score of 946, representing a somewhat disadvantaged socio-educational student background. The school's average NAPLAN results compared to all of Australia indicate the school has below average scores for reading, spelling, grammar and numeracy, and well below average for writing and Year 9 reading. When compared to students of similar background, only writing is below average.

School B is located in the same regional city in Queensland. It is co-educational and has student enrolments of 1,473, and 126 full time equivalent teaching staff. The school has an ICSEA score of 952, similar to School A. In terms of NAPLAN results, School B performs better than School A. The school is below average for most aspects, and well below average in Year 9 writing and spelling when compared to all of Australia. When compared to students with a similar background, it is above average in Year 7 reading and grammar, and below average only in Year 9 writing.

School C is located on the Gold Coast in Queensland. It is co-educational and has enrolments of 1,195

2. ICSEA values are calculated on a scale which has a median of 1000 and a standard deviation of 100. ICSEA values typically range from approximately 500 (representing schools with extremely disadvantaged student backgrounds) to about 1300 (representing schools with extremely advantaged student backgrounds).

students, and full time equivalent teaching staff of 92. The school has an ICSEA score of 995 which is just below the median of 1,000. NAPLAN scores compared to all of Australia are below average for most aspects, well below for Year 7 writing, and close to average for Year 7 spelling and numeracy. When compared to students with a similar background, only writing was below average.

School D, also located on the Gold Coast and co-educational, is one of the larger schools in Queensland and has enrolments of 2,596 students, with 179 full time equivalent teaching staff. The school has an ICSEA score of 1,027 indicating it has a somewhat advantaged socio-educational student background. However, there is a wide range of socio-economic backgrounds in the student cohort. In NAPLAN, the school performs close to average for all aspects. When compared to students from a similar background, the school is above average for Year 7 reading, spelling, grammar and numeracy, and below average for Year 9 writing. Out of the four schools, this school had the highest NAPLAN results.

Each school was contacted after receiving approval through the Queensland Department of Education. Once schools consented to participate, further arrangements were made to seek consent for students to participate.

Research Approach

We used an inductive research approach given the exploratory nature of the research questions, and the lack of extant qualitative research in this area. Inductive research involves relying predominantly on observation of the students to determine patterns, and building theories based on those observed patterns.

To provide enough observational data, we used both focus groups and interviews. Focus groups were employed to listen to the conversations that students had amongst themselves and analyse the language that was used. Students were asked what they knew about money and where they acquired that information. We also asked students to participate in activities that involved personally identifying spending priorities and working together in a group to order asset classes in levels of riskiness.

Interviews were used to gain a deeper understanding of the students and their knowledge of money. These discussions included more personal questions about their household and their parents' experiences with money - including whether they or their family had experienced financial difficulties - and more detailed discussions around financial decision-making.

Data collection commenced in February 2020 and was completed in March 2021. Table 1 below provides the breakdown for the number of focus groups and interviews that were conducted at each school. Both interviews and focus groups were semi-structured to guide discussions whilst still allowing for deeper exploration into different topics.

Table 1 Number of focus groups and interviews at each school

Area	School	Focus Groups	Interviews
Regional	School A	3	5
	School B	4	6
Urban	School C	6	6
	School D	3	14
Total		16	31

Data analysis

All focus groups were recorded and then transcribed. Our analysis involved thematically coding the transcripts to identify common themes in the discussions. These can be topics of discussion, ideas, or patterns that emerge from repetition. The findings below are presented in terms of the broad themes that were identified.

In addition to thematic coding of transcripts, the audio recordings were also used to gain contextual understanding of the data. This could involve listening for changes in voice such as laughter, or uncertainty. It allows a deeper understanding of the data when used in conjunction with the coded transcripts.

Following initial coding, data was then grouped, focusing on

- 1) gender of participants, and
- 2) the location of participants (regional vs urban). These groups were then compared in order to search for other themes that may differentiate the different groups.

The next section will discuss the findings in terms of the broader themes, followed by the comparison of genders and regional responses. To preserve anonymity, participants are referred to by a code. Appendix A sets out the codes for each of the data collections at each school.

Findings

Where they learn about money

Parents

We asked all of the students where they learn about money. Most students mentioned learning about money at home from their parents, although there were wide variations in what they were learning.

One student, whose mum runs her own small business, explained:

“ When we were little, we were always taught how to do things, like with money, and like save it – at least half your pay every pay or all of it – and I would watch my mum do her taxes and she would explain what she was doing. My mum always taught us how to do things in the real world rather than do homework.” (C10)

Commonly, students who have parents running a small business had more detailed knowledge about money, even for very small businesses.

“ Mum, she has a market stall, another place where I learnt how to deal with money.” (A8)

Similarly, students whose parents were accountants or other finance professionals demonstrated a more advanced knowledge.

Maths, Business and Accounting

One of our prompts was to ask students if they have learned about money or financial concepts at school. Most students mentioned learning about financial concepts in Maths.

“ We learned about interest... and shares we learned about this year. We had an assignment in Maths first term, where you either had an apprenticeship or you were going to uni. You had to make a budget out of how much money you get.” (B7)

While students recognised they had learned these concepts in Maths, very few could accurately recall the meaning of what they learned.

The next most common response was:

“Definitely Accounting and Business.” (A6)

Throughout all four schools, students who were studying business had much broader and more detailed knowledge of financial concepts. Business studies helped some students learn about, or at least become aware of, concepts such as investing in shares, insurance and superannuation.

Interestingly, students who were studying business had a better understanding of the profit motives of financial services companies. For example, when commenting on insurance providers, a student noted:

“ They’re out to make money. They want to make money.” (A6)

Generally business students had a better understanding of corporate structures as well.

Business students were also more engaged when it came to extra-curricular programs. While students at all schools mentioned the Commonwealth Bank Program, business students recalled much more detail about what they were learning. Both urban and regional students referred to learning about shares through the ASX share market game. Regional students also referred to participating in ECOMAN - a 3-day simulation workshop (hosted by a local accounting firm) about owning a business. A student at an urban school mentioned they participated in an Australian Business Week program.

“ We did all that stuff. We had to make our own business, and like, I did some financial stuff.” (D6)

Other subjects

Students also recalled learning about money and personal finance in other subjects. For example, one student mentioned work studies, where they learned:

“ If something looks too good to be true, it usually is.” (B2)

They explained that they learned not just about jobs, but also about money. Another student mentioned geography. They explained that they learn about the economies of other countries in that subject (D2). Finally, a student studying Building and Construction talked about one of their projects which required costing a garden build (C11).

Media

Some students talked about learning from TV and social media. For example, one girl mentioned:

“ There’s this Podcast and Facebook group – She’s on the money.” (B3)

Another talked about how:

“ I watch a TV show and like some 13 year old has to budget for a family to make them spend less money.... I picked up something from that.” (D7)

Work

Students who were working had an advantage over students who had never worked, in that they were more familiar with receiving and managing money regularly. Some gained other more specific knowledge from work.

“ I found out how to do my taxes from one of my bosses that I used to work with. He taught me how to do it.” (C2)

One student who lives in residential care spoke about how they are paid for chores, and were able to figure out how much money they would have by the end of the year from completing chores regularly (A7).

Financial decision-making

As part of trying to determine where students learned about money and finances, we asked individuals and focus groups about significant purchases that they have made and how they went about making those financial decisions. Purchases were typically a phone, a laptop, a TV or a car.

Most students reported relying on a family member, usually a parent, to help them make the decision. This was especially the case for purchasing cars. For phones or laptops, the students reported more of their own reasons for wanting to buy that particular item. In many cases they

reported doing their own research, however that was not as common as talking to friends and family. It was also more common for students to do more of their own research when they had to make their own significant financial contribution to the purchase of phones, laptops, and other electronics.

Maths

Most students mentioned learning about personal finance in Maths, so we asked more specific questions about what they have learned in this subject.

“ Just the interest kind of stuff, learning about simple interest and that kind of thing. But yeah, not much more to do with money in Maths other than when you talk about that or if there’s a Maths problem that involves Maths with money kind of thing.” (A6)

Some students clearly recalled learning about interest rates, compound interest and depreciation in Maths, while others only had vague recollections of learning about these financial concepts. Different assignments were mentioned, indicating that making learning about financial concepts assessable helps kids to retain this knowledge.

“ Ah, we did it last year and we’re still doing it. Like we’re doing it now for our assessment. We have a budget to build our own house, our own property and everything. And we’ve got to try and stick to that budget if possible.” (A1)

Similarly, a group of boys mentioned a Maths assignment where they had to buy a car and had the option to save, get a loan, or lease a car. Importantly, they recalled car loans when we asked what they knew about loans, so this was an effective way of helping them to learn about loans. (C7)

A lot of students mentioned that they really struggled with Maths.

“ I don’t like how hard they make it seem; you know? It’s like you’ve got one thing to do, but you have to do it this special way.” (A6)

Others noted they particularly didn’t like the repetition in Maths.

“ I’ve never been good at understanding Maths, and even though it’s easy now, because I learnt how to do it all, it’s just kind of like the same stuff, just repeated, like graphing and just getting information and writing about it. Like it’s just always the same. In tourism we learn about all different stuff.” (D9)

“ I used to like it, but it’s gotten really dull. Like, I don’t like the repetitiveness of it. You have to learn the ways to do things, but then it’s like you do different questions but it’s the exact same procedure each time, so it’s just repetitive.” (D14)

Other students noted that Maths still wasn’t teaching them everything they need to know, particularly students taking a higher level of Maths. Comments such as:

“I just find some of the concepts of Maths useless to my future career.” (A6)

were common. One student identified the problem with having to take either a Maths subject that would help them get into TAFE, or Essential Maths where they learn about personal finance.

“ Maths, not the general one but like essential one, like the work one. But the thing is if people want to go to TAFE then they have to use the general, but I

don't think they learn about the taxes and everything they need so it's like they can't exactly choose either Maths. They should make it so that you learn about everything in the general one." (A1)

That student also noted that even essential Maths didn't cover everything.

" When we were doing Maths [essential]... we didn't do anything on wills, life insurances, charities, records, we didn't do any of that." (A1)

Whilst financial literacy education can be addressed across a range of Australian curriculum areas, most exposure is delivered in Maths, usually in the lower level Maths subjects. A majority of students we spoke to, particularly girls, identified Maths as their least favourite subject. This means that this really important life skill is being embedded in Maths where many students are already disengaged.

A lack of knowledge

While most students offered examples of what they know about personal finance and where they learned it, there were a few that truly felt they know nothing about financial concepts.

" I just don't get it. I just don't understand it." (B6).

Knowledge of financial concepts

In order to gauge what students do know about money and personal finance, we asked all students about the following financial concepts.

Savings

All students reported a good understanding of savings; they were aware that saving was a positive behaviour, and the majority had some form of savings system. Those who were more organised reported having two bank accounts: one for spending and one for savings. Others reported having their parents handle their savings, and one student kept their savings in a locked box in their room.

Students used different methods for determining how much to save. Some indicated that they would transfer over a certain percentage into their savings account, but it was more common for students to refer to a dollar amount, which is consistent with literature stating people struggle with percentages (Lusardi, 2012).

The number of students who saved all of what they earned or received was significant. Comments such as:

" I'm pretty good at it (saving). I don't really shop or spend money." (D16)

were very common. And then comments such as:

" I really don't spend anything. If I need something normally I'll get someone else to buy it for me." (D17),

started to reveal that some of these students were not actively saving as such, rather, they were not just spending.

We found further evidence of this behaviour with some of the older students, with comments such as:

" I've never felt like I was saving, more just earning more than I spent." (D17)

Talking to year 12 students, there were several who reported having difficulty saving.

“ I used to be really good with money, like I used to be able to save up and get whatever I wanted and have one goal and stick to it. Now that I’ve got more used to having money come in, I’m like I’ll just splurge on that, money will come in next week. But it’s gotten to the point where I’m not earning as much as I’m spending, like I’m getting \$90 a week, on a \$100 night out. It’s not working.” (D17)

“ I try to save but I have to pay for lots of stuff around my schooling and stuff, so not really much of it gets saved.” (C9)

“ I did manage to save \$24,000 on my own. But that kind of went away pretty quickly, all that savings, when I lost my job. And now I pay for everything myself, and I pay my rent, and now I don’t really have savings because I pay for everything.” (C9)

Saving seems to become an issue for students once they start having substantial expenses. This indicates that these students don’t necessarily have the skills to prioritise saving and moderate spending. In other words, they have not really been learning how to save, they just didn’t have to spend. Once they are responsible for certain expenses and spending increases, then they are no longer able to save.

There is strong evidence of this being the case with comments from students who save, such as:

“ If I have like \$70 then I will just transfer \$65 into my savings and just have \$5 if I need it.” (D15)

This student doesn’t have any expenses that need to be managed, so they are able to ‘save’. Reviewing a lot of the comments on saving revealed this was the case for many students.

Those students who were struggling with expenses and not able to save were very interested in learning more about how to manage this.

Loans

Most students understood the concept of a loan, but they had to be prompted to remember that loans attract interest. A lot of students saw positives and negatives associated with loans, for example:

“ I think they can be good, or they can be bad, because I know some people can have trouble with loans.” (A6)

There was evidence of some students not really understanding the implications of borrowing, with comments such as:

“ Free money.” (B9)

In addition, very few students understood eligibility. Most assumed loans were something you could just get if you needed.

An interesting finding was that students who had had exposure to investments, usually through their parents, had more of an idea of good debt. These students were more aware of mortgages and borrowing for other purposes:

“ Like when you start up your own business.” (D16)

Knowledge of loans came mostly from home, but one student at School D mentioned learning about loans in Economics and Business.

Credit cards

There was no strong knowledge of credit cards demonstrated. While most students recognised credit cards were a form of borrowing, there were other comments that indicated a lower level of understanding.

“ You want a credit card so if you ever have any small expenses, something you want to pay for that’s probably good.” (A6).

Comments such as:

“ They’re dangerous” (D15)

were common from students who had heard negative stories about credit cards, often from parents or other family members having financial difficulties because of debt.

Interestingly, students were less aware of credit cards than expected. Given the prevalence of ‘tap and go’, there is less mindfulness of credit cards as they all appear the same.

“ I always get confused with the two. Like you know how there’s like credit, debit, keycard. I don’t know, like credit card – is that where you ask for some money and there’s a certain amount of money on there that you can spend that’s not your money?” (D16)

Insurance

Students who have been exposed to insurance at home had a fairly good understanding of what it was for.

“ My family has had to get insurance quite a few times because my father went overseas so Mum got life insurance for him. My sister went on the ski trip, she got insurance for that with the school. I’m going on the ski trip, I’m getting insurance for that. Mum...went to a show and one of the requirements to have a market stall there was to have insurance on the stall. And she’s had that stall for ages, back when my Grandma used to make treats and all. So, Grandma would pay for the insurance and Mum would take the stuff down there.” (A8).

Interestingly, some students had learned about insurance through media advertising.

“ Oh! I know this one. It’s like, um, like health insurance and like if you pass away your family get the money that you have. So there’s life insurance, health insurance, house insurance...” (A7)

A lot of students in Focus Group A8 spoke about negative experiences their family had had with insurers. They had a better understanding of the purpose of insurance, but a negative perception of insurance because of those experiences.

A lot of students with cars had discussions with their parents about insurance, usually related to compulsory third party insurance as evidenced by one student’s comment.

“ We’ve got third party insurance for other people.” (A8)

One student also spoke about the discussion they had with their parent about having to update their car insurance once the student got their licence and started driving the parent’s car (B4).

Investments

Generally, students knew little about investments unless they had been exposed to them at home. Students from families with more wealth were likely to understand the investments their family owned. When asked about property, they would respond with answers like:

“ Yeah, I’d like to own a home, probably buy some other ones to rent out to people so I get some money.” (B6)

“ I feel like I know a bit, because in my family we own a couple of properties in different countries... I just kind of have second-hand knowledge of it.” (C9)

Students whose family had investment properties also demonstrated fairly advanced knowledge of property as an investment. A student whose father is a property developer stated:

“ Property is riskier than you guys think. It’s quite risky.” (D17)

Students with less exposure to investments thought of property in much more practical terms.

“ Well, if you need to pay rent you have got to save up for your rent money. You got your water bills, and you got your electrical, and all that kind of thing.” B9

Legal studies students also demonstrated a better understanding of property from a legal perspective.

In terms of shares, most students had heard of shares, but they did not really understand what they were. One of the regional high schools had an assignment on shares which a lot of the participants recalled. However, the piecemeal approach was acknowledged as a limitation by students.

“ We haven’t really covered it since we did that assessment. So, we really covered it, then did the assignment, then moved on.” (B4)

Students were not aware of term deposits. Most of them had heard of Bitcoin and some students were particularly knowledgeable, but there was a fair bit of misinformation as well.

Superannuation

Surprisingly, a lot of students had heard of superannuation and could identify it as money set aside for retirement. However, most did not recall ever learning about it in school.

Again, students who had been exposed to conversations about superannuation had a better understanding.

“ My mother works for a place in [place] and she has quite a few suspicions that her boss, one of my aunts, is not paying her superannuation because she was unable to give her an account number or even a phone number to call up the account. And also, her friend who she works with has actually taken her pay cheques to her lawyer and said, and the lawyer has said that she is not paying superannuation.” (A8)

“ Recently I quit my job and apparently she wasn’t paying my superannuation. So I had to contact her for it, and she owes me like one and a half grand.” (D16)

When asked how that student found this out:

“ My mum noticed that I didn’t have an account or anything.”

Inflation

There was very little knowledge of inflation and most students had never heard of it before. One teacher suggested they may be aware of it as Consumer Price Index (CPI), but when we tried that approach, students did not recognise that term either.

The inflation finding is important as Lusardi and Mitchell's 'Big 3' financial literacy questions, often used to measure financial literacy, contain a question on inflation. If students do not know or understand what inflation is, they will not be able to answer this question correctly. It is also important to understand that if a person's wage does not increase in line with inflation, then that person's purchasing power is eroded over time. As students are making decisions on career and lifestyle pathways, insights into the importance of wage growth can help make informed decisions.

Insights

Through the data analysis process, several themes emerged that have significant implications for our current practices with teaching financial concepts.

Calculations are probably not the best approach

We observed several instances of students trying to focus on the mathematics or calculations when asked about financial concepts. For example, when we asked a girl what she knew about savings or compound interest, rather than explaining what it is or how she knew about it, her response was:

" I know what it is, I just have to have like the working out in front of me and then I can do it all. Like I just need to have it there, and then I'll be able to remember it." (B6)

Her ability to understand interest was tied to the calculations or working out, rather than an applied understanding, and there were several more instances of this. When asked about interest, a female year 10 student said:

" I think we did that in Maths, so that's like how you work it out." (A2)

We showed students one of the Big 3 financial literacy questions which is a very simple question about interest³ and asked the students what their thought process was when reading the question.

" I think I learnt this last year. Is it like the interest rate, and the P. I forgot what the P meant." (D2)

A year 10 girl from School A, when asked what was going through her brain responded:

' Math.'

She froze and couldn't really consider the question because the Maths was standing in the way. She was trying to recall formulas rather than just trying to understand the question.

3. The question reads: If you invest \$100.00 today and the interest rate was 2% per year, your bank account balance after 5 years would be exactly \$102.00

1. Yes
2. No
3. Unsure
4. Don't care

Another girl stated:

“ If I was in class doing that, I would just read it, keep reading it, but not actually process it or try it because I’d just give up.” (D1)

But it was not just girls who had this reaction. One boy commented:

“ I’m kind of confused. As soon as I see percents and stuff like that, I get really confused straight away.” (D3)

The most interesting part of this reaction from the students is that the question does not require a calculation to be able to answer it. As long as they understand the financial concept, they can answer it quite easily.

One student provided some insight into why this might be occurring.

“ I only really remember the formula because that’s all we got taught.” (B4)

When the focus for financial concepts in maths classrooms is on formulae and calculations, it may be that students just don’t recall the other aspects. This is an issue as many students appear to ‘switch off’ when confronted with Maths, especially girls.

The importance of stories

Throughout our analysis it became clear that when students recalled a financial concept, there was usually a story attached. They showed a fairly advanced understanding of all sorts of financial concepts when they could relate it to a particular story. For example, the limited number of students who had any knowledge of inflation could explain it in some detail.

“ I know that in Business when I did it a few years back there was, we did learn about it. You know, say one pack of gum could have been like 90 cents and then like in a few years it could have been a dollar ten.” (A6)

Another student learned about the concept of inflation by watching shows on YouTube.

“ Over time, because obviously more money is being printed...people think printing money creates more money and you’re richer, when in reality you’re just making the currency you have worthless, because there’s so much of it, that it’s not difficult to acquire it at all. I learned most of that from history.” (A3)

The student went on to give examples of ancient Rome and the impact of minting coins.

Some students were aware of financial concepts – such as investing in shares – from movies.

“ I think of, like, Wolf of Wall Street.” (A1)

Another understood the concepts around loans from the media coverage of the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry in 2019⁴.

“ As far as I know it was pretty much about banks giving loans out to people that really shouldn’t be getting them because they can’t afford to pay them back. So it’s like banks going yeah well we’re going to get money out of you either way

4. Hearings of the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry were live-streamed throughout 2018 as well as widely discussed in the news. For more information, visit <https://www.royalcommission.gov.au/royal-commission-misconduct-banking-superannuation-and-financial-services-industry>

so we're winning but you're not and it's really not right to give a loan to maybe a disabled person that can't pay it all back so then they become in debt to this bank." (A6)

Throughout the conversations that we had with students about what they do know, those who had detailed knowledge had a story to refer to. Often that was an experience of their family, though it did often come from media. The importance of stories could be missing in the current method of delivering these important learning topics through Maths where the focus is on calculations.

The importance of context

Talking to young people about money needs to be within a context they understand. Age in particular is a really important consideration for context. We observed year 10 students having very little experience with money. Many do not have jobs and are still completely reliant on their family for spending money. However, most students reported learning about financial concepts such as budgeting in year 9. So there appears to be a large disconnect between when most students are **learning** about personal financial management in year 9, and when they are starting to **experience** personal financial management in years 11 and 12.

Several students also spoke about the relevance of what they are learning.

" I feel like one of the big things for school that we should be learning since year 7 to 12 is in budgeting and taxing (sic), instead of learning about gardens and area. That just doesn't make sense." (C1)

They also gave examples of assignments not being related to real life. For example, one student spoke about:

" I'm learning about - I'm hosting a dinner party, and I have to cater for I think it was 180 people. I have to come up with a recipe to give everyone, and one person has to be vegetarian." (D1)

A year 12 student also talked about their assignment, which they described as 'confusing'.

" It's about like petrol prices, so we have to compare like a rural city, like a town, to Gold Coast. And comparing like diesel and why country towns are more expensive." (D10)

While this student acknowledged that at their age they should be interested in petrol prices, they were confused by the wider scope of the assignment and that it is:

" all different graphs."

There are opportunities to provide learning experiences that fit within a context which is more familiar for students. Phones are highly relevant, especially for year 10. Looking at the value of what is being spent on food is relevant, as most report spending a lot of money on food, even up to:

" \$30 a week at McDonalds." (B8)

Having age-appropriate and relevant activities will help students to engage.

The impact of home life

Parents are highly influential on students and their understanding of financial concepts and financial decision-making ability. When students were asked who they would go to if they had a question about personal finances, responses such as:

“Parents. Definitely.” (B7)

were the most frequent response. Other common sources of information were the internet and other family members, but parents or primary carers were the main source for most participants.

Students whose parents were actively involved in helping them to learn about money definitely had more knowledge. For example, when asked about his goals for his savings account, a regional student explained that:

“ My parents are telling me to buy a house with that ... like the deposit for a house.” (B1)

This student’s parents are strongly encouraging their son to buy a house as an investment and have helped him to stay in school and set up a career.

Young people from homes where parents are active in financial guidance are likely to be more financially literate. These students have plans for their future and understand how they are going to make money and pay for things. But these students were the minority.

Another note on the influence of parents is that discussing financial concepts – such as loans or investments – with their children helped to provided context. For example, while most students had a basic awareness of loans, those who had experienced loans at home and had discussions with their parent or carer had more detailed knowledge.

“ Uh, yeah, Dad’s still paying one off for his house. Mum had one for her old car.” (A4)

“ I know my parents have done it and um, family members helped them out ... my dad wasn’t working so we were in a bit of a crisis area and then one of my aunties gave us the money to pay off the car...because they were asking for about two hundred a week and we couldn’t change that.” (A1)

One of the most unexpected insights was around how few students in years 10, 11 and 12 live at home with two parents. There was huge variation in the household structures of these students. Some students had moved out on their own or with another person. Some lived with their grandparents. Quite a few had single parents, and there were many blended families with custody arrangements.

There is an assumption that most students will get help at home, however in so many of these students’ situations, home life is not conducive to receiving personal financial guidance. There were numerous comments that indicate that sound financial habits were not demonstrated in the home.

“ My sister is technically my mother’s Nimble because since she got a job Mum’s been using her and like borrowing money and then paying it back (laughs) eventually.” (A8)

“ My parents borrow money off me.” (C9)

“My mum uses it [Afterpay] so much.” (D16)

However there can be a silver lining for young people who are not exposed to healthy financial habits at home.

“ My mum’s spending habits were really bad, and the things she spent it on were really bad, and I don’t want to go down that path.” (B5)

“ My dad was more influential... He had a gambling addiction when I was a kid, so he kind of ... tries to teach me ... you need to like look after your money and spend it on things that you know you’ll use.” (B8)

When discussing a parent with a lot of credit card debt, one student said:

“ I don’t want to be in that spot.” (C4)

This wasn’t just restricted to parents either. One student spoke about a cousin who had moved in with her family.

“ He’d gone off the rails, ruined his life, but he came and lived with us to get his life back on track. And all he would do was just buy stuff on Afterpay, so then he had no money to pay boarding to live with us, because it was all going into his Afterpay.” (B6)

Another student mentioned their sister.

“ My sister uses it a lot – she even asked to use my details instead of hers.” (D16)

Another interesting aspect came from the students who don’t have conversations about money at home. One girl noted:

“ They don’t really like to talk about money in front of me because I get worried about it a lot, I guess. I don’t like spending their money.” D2

There are also implications depending on the level of wealth at home. Students from wealthier backgrounds often didn’t have experience or knowledge of bad financial behaviours or outcomes. They were less familiar with financial products like buy now pay later services, and often had not experienced financial stress or limited choices.



Gender differences

A large part of this project was to investigate whether boys and girls demonstrated differences in financial literacy. We refer to gender as the characteristics of girls and boys that are socially constructed, such as norms, behaviours and roles associated with being a girl or boy (World Health Organization, n.d.). We purposely had focus groups consisting of groups of girls, groups of boys, and mixed groups to observe if there were differences in how they talk about money. We also asked students directly if they see any differences in the behaviour or abilities between the genders.

Perceptions of gender differences

Most students saw no gender-specific differences in their peers in how they manage money or in their ability to manage money. Most agree that it depends on the individual.

“ It depends on what they know.” (A7)

“ You can’t really judge, ‘cause people are different.” (B1)

“ I think it just depends on the person, like what they want to do.” (D15)

When asked about Maths ability, we received similar responses.

“ No, it’s kind of mixed. Like it can be either.” (D15)

We asked students about who manages the money or has more ability with managing money at home, and who they would ask for help with financial decisions. Most students responded that their mum had more ability, although often if the father was in business or an accountant, students would go to their father instead.

Girls and spending

There does appear to be more of a social aspect to how girls were spending money. While both genders spent money predominantly on food, girls would also spend money on their friends. Spending on birthday presents, or shouting friends came up in discussions with girls, but did not with boys. One girl talked about how she socialises with her friends.

“ For those who can’t put in the money, someone else will be like, I’ll pick up for their end.” (C6)

There is some evidence of a more collective approach to spending for young girls.

Students offered many examples of differences in spending habits for each gender, however these were very mixed with no strong consistent patterns. These differences appear to be related to their individual experiences rather than gender-based factors.

Finally, girls reported more responsibility for personal expenses than boys. The resulting negative effect on girls’ savings is more likely associated with higher spending on essential expenses rather than poor savings habits.

Confidence

There was an observed lack of confidence for some girls, particularly when they were in focus groups without boys present. One girl, when talking about Maths and money stated:

“ I try but it just doesn’t click. That’s why I hate trying.” (B6)

In both regional and urban areas, we observed girls saying that they had no knowledge of the financial concepts introduced in the discussion groups. However, when we were discussing specific financial concepts, they were fairly knowledgeable. More than once we would point out that they actually knew quite a lot.

Social constructs and financial knowledge

We did observe instances of girls' requiring more context. For this part of the study we used a deductive approach based in part on other research⁵ we have completed. Women have been found to 'opt out' of questions, rather than risk getting them wrong. We theorised that the same may hold for young women in schools.

We observed girls have a more abstract thought process on some questions, contemplating aspects that would not normally be considered as part of the question. For example, when talking about the riskiness of cash, one girl said:

" I was actually thinking cash would be risky as in where did it come from. Like do you know if it's counterfeit?" (A8)

Boys were often more certain about how they had interpreted ideas.

" Cash would be like the bottom one because we're talking like cash in hand, coins, notes." (A8)

They understood the context and didn't question it.

Another example was found when we asked students their thought process when reading one of the 'Big 3' financial literacy questions⁶.

One young girl responded:

" You might need those \$2.00 for like something else and you could actually buy something from the canteen here for \$2.00." (A1)

Her thought process involved thinking about what if the person needs to withdraw the money in that time, rather than being able to leave it in the bank so the interest will compound. Some more description or context in the question would make it clearer for that student.

It should be noted that this difference was also observed in the highest performing male student we interviewed. He queried different aspects of the questions, such as asking if it was simple interest or compound interest, and then overthinking the inflation question. This finding was therefore not only restricted to girls, but it could help explain why some students, even high-performing students, perform poorly on these types of questions.

Generally, we observed no noticeable difference in the financial knowledge of boys and girls. When given the chance to discuss the financial concepts and reflect on what they know, girls were just as knowledgeable as boys. Therefore, our findings on Maths and the context of assessment may be more likely to account for gender differences in financial literacy/capability for young Australians.

5. See: West, T., de Zwaan, L. & Johnson, D. (2021). 'Do women have lower levels of financial literacy, or are they opting out?' *Financial Services Review*. In press.

6. See footnote 3

Regional differences

Responsibilities

Students from the regional area were more likely to have responsibilities with regards to helping out at home. Parents generally seemed more reliant on the children to cook meals and buy groceries for the home. It's interesting to note that this was often a requirement of boys.

More of the students in the regional area were looking for work. For the urban area schools, generally students had jobs, although quite a few had lost their job or had hours reduced due to COVID-19. The lack of work for regional students could explain why those students have more responsibilities at home, but it is also likely that young people in regional areas are expected to contribute more at home.

Knowledge of money

There were several observable differences in what students knew in different areas, however these appear to be mostly driven by socio-economic differences.

Regional students generally had more knowledge of using credit, with comments like:

“ If you do good on your bills the...people can give you a certain loan but you'll have to pay it off as time goes by and they want a certain amount of money and you can't change that like per week or something. So you can get a loan for a car or a house or something and you have to pay them back.” (A1)

Generally, they were more familiar with loans, but not for good debt.

This could be contrasted with students from the highest socio-economic school who were more familiar with mortgages and borrowing for investment properties.

Another observed difference was in relation to savings goals. A couple of urban students mentioned saving for travel. That was not something that came up in regional areas where they tended to have very practical savings goals, like buying a car or moving out. Another noticeable difference was the focus on the year 12 formal in the urban area. This was a high savings and spending priority for girls in urban areas, but not in regional areas.

One student (A6) in the regional area noted that as it is a lower income area, more people would likely need Afterpay or Zip Pay. However, many students from urban areas were also familiar with Afterpay and Zip Pay, so level of knowledge of “buy now pay later” services was not an observed difference. Its use appears to be more related to their individual socio-economic background.

While students in both areas reported experiencing financial difficulties at home, this was definitely more prevalent for regional students, and the extent was more pronounced. As noted above, experiencing these difficulties means students can learn from them, and some of the regional students did talk about that.

Students in urban areas were far more likely to have not had any financial difficulties at home and to also come from a household that had investments. Some regional students' families did hold investments, one notably a share of a horse, but this was not as common. Consequently, regional students generally had less knowledge of investments.

Regional differences will have an impact on context for students. From what students have said, teachers were taking these differences into account when designing learning activities.

Survey results

Demographics

Surveys were administered to students at all four schools, with the full list of survey questions including in Appendix B. After data cleaning we had 121 useable responses. Table 2 shows the gender and age breakdown of our sample. Students were also asked if they identified as Aboriginal or Torres Strait Islander and 5% of respondents indicated they do.

Table 2 Respondent Demographics

	Count (n = 121)	% of responses
Gender		
Female	70	57.9
Male	46	38.0
Other	5	4.1
Age		
14	10	8.3
15	38	31.4
16	26	21.5
17	42	34.7
18	5	4.1

Students were asked which subjects they studied, and these are shown in Figure 2.

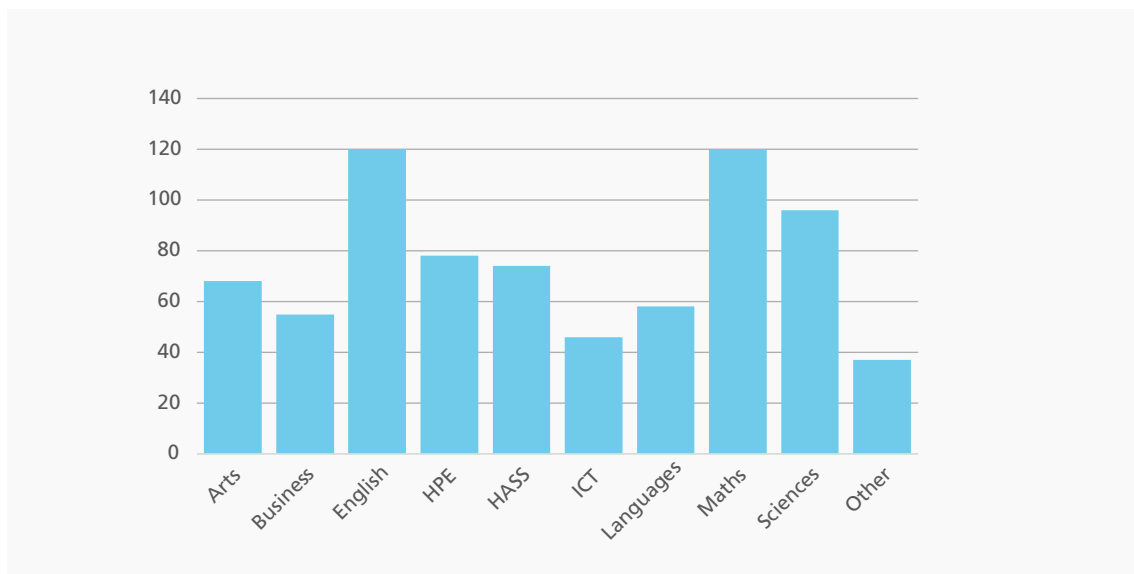
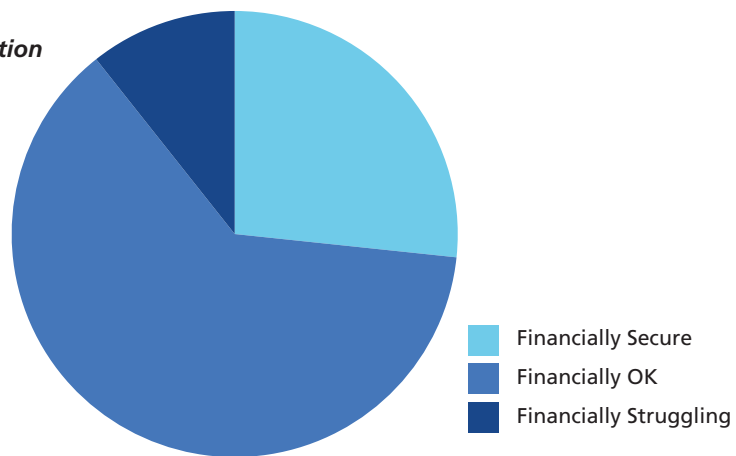


Figure 2 Subjects studied at school

In order to gain an understanding of the socio-economic background of the students we asked about their primary carer/s' financial situation. In many cases students skipped this question, however of those who responded, 10.7% reported their carer/s as financially struggling, 65.3% as financially OK, and 34.7% as financially secure. These proportions are shown below in Figure 3.

How would you describe your primary carer's financial situation?

Figure 3 Carers' financial situation



We asked students about their work experience as paid work is often linked to financial literacy. The results are shown below in Figure 4.

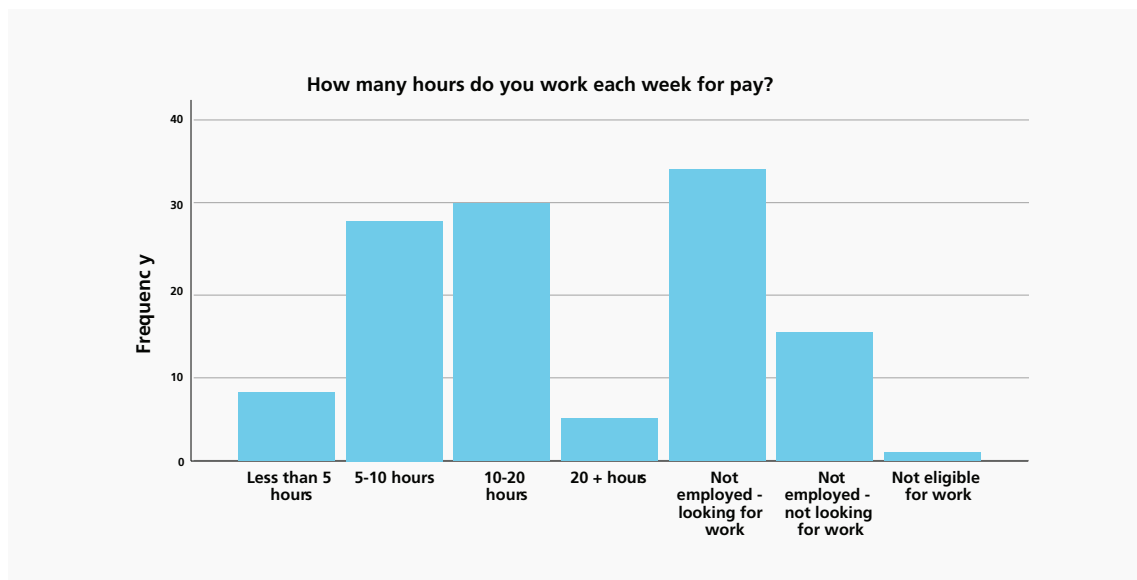


Figure 4 Hours of paid work

Firstly, we can see from this graph that a lot of students are looking for work. We acknowledge that this research took place during the COVID-19 pandemic, and as a result many students lost work or did not have the normal job seeking opportunities available pre-pandemic. Work is a valuable experience for students, particularly in developing their financial capability, so this is a concerning result.

The second point is the high number of students (24.8%) working 10 to 20 hours a week, and 4.1% working 20+ hours a week. This corresponds to our observations of the interview and focus group participants, where there were a considerable number of students supporting themselves financially, even to the extent that they are missing school in order to work.

Self-rated abilities

Students were asked to rate their financial literacy on a scale of 1 – 5 where 1 is very poor and 5 is very good. The results are presented below in Figure 5. The most common response was the midpoint ‘Fair’ with 43% of students selecting that. The next most common was ‘Good’, which was selected by 28.9% of students, while 5.8% ranked their financial literacy as ‘Very good’. Of those on the negative side, 17.4% for students rated their financial literacy as ‘Poor’ and 5% as ‘Very poor’. There was no statistically significant difference found between boys and girls’ self-rated financial literacy.

Figure 5 Self-Rated Financial Literacy



We also asked students to rate their ability to manage money on a scale of 1 – 5 where 1 is very poor and 5 is very good, and these results are shown in Figure 6. While most students rated themselves as either ‘Good’ (40%) or ‘Fair’ (25.3%), 16% rated their ability as ‘Poor’ and a further 5.3% as ‘Very poor’. Again, there was no statistical difference between boys and girls in their self-rated ability to manage money.

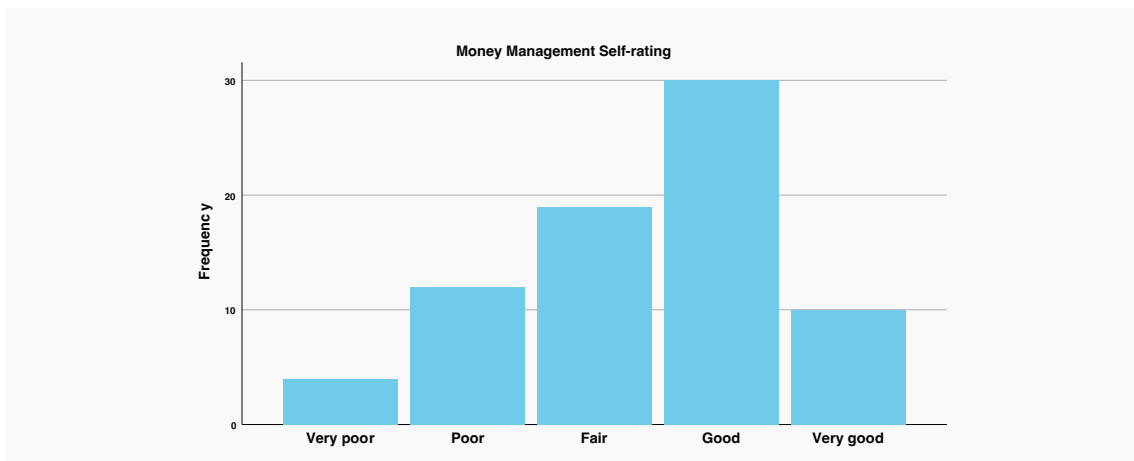


Figure 6 Self-Rated Ability To Manage Money

Attitudes towards money

We then asked students a series of questions to measure their attitudes to money. These are presented in the following Figures.

Figure 7 - Coping Financially

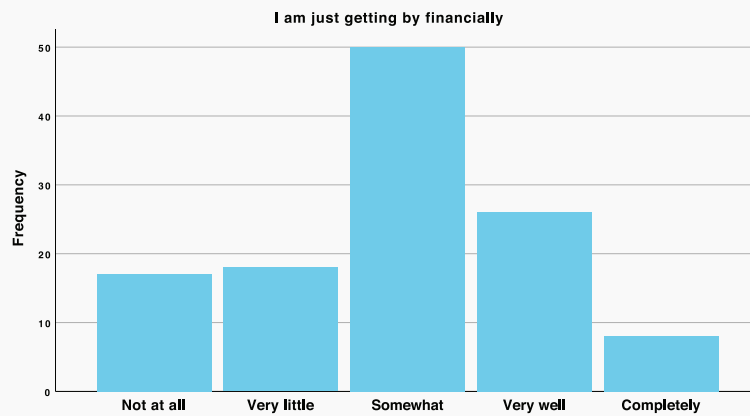


Figure 8 Difficulty In Managing Finances

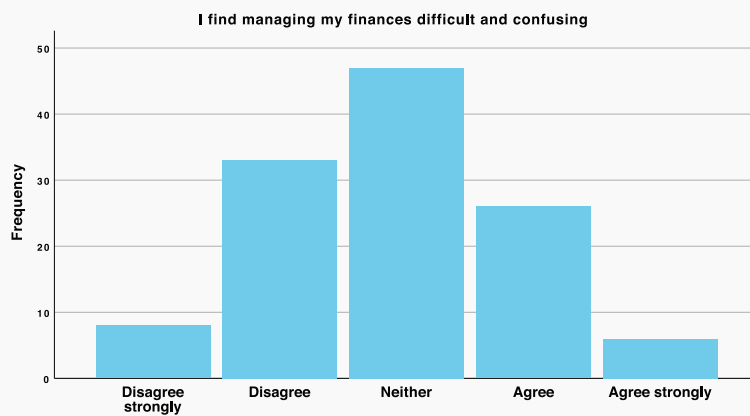


Figure 9 Avoidance Of Financial Situation

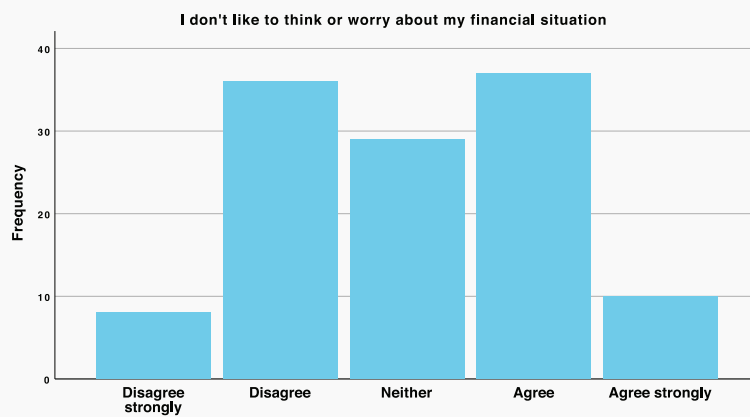


Figure 10 Purpose Of Money

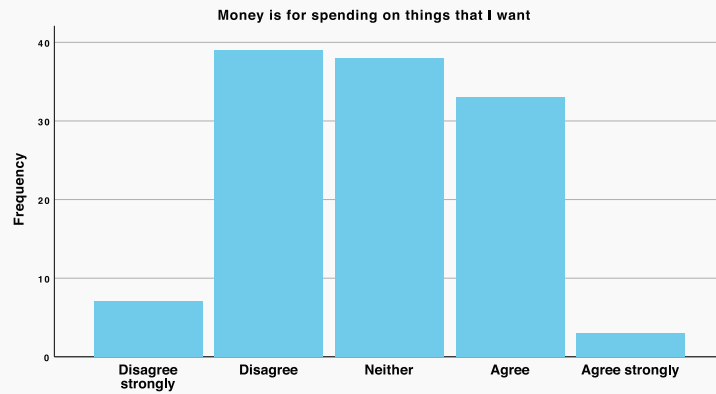
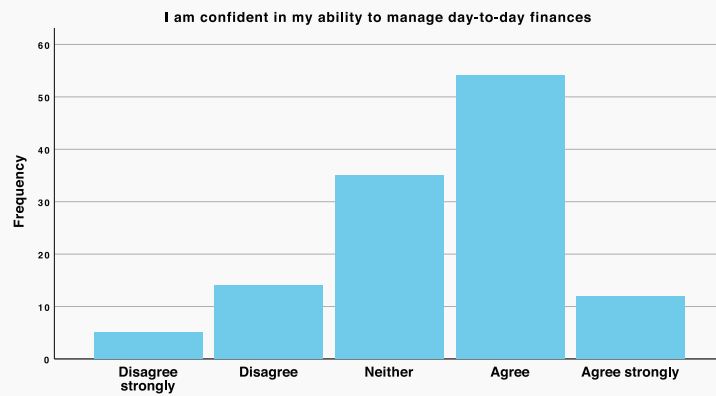


Figure 11 Confidence In Financial Management



Overall, when we view the different responses to the questions that measure financial attitudes, we see a trend of students selecting either the mid-point, or options either side. However, for some questions we do see more students selecting responses that match positive financial attitudes. For example, more students are confident in their ability to manage day-to-day finances (Figure 11). There are some worrying results, such as more students not wanting to think or worry about their financial situation (Figure 9). There is also a persistent proportion that we identify as having poor financial attitudes.

Financial behaviours

We then asked a series of questions aimed at establishing different financial behaviours. The results for these are presented below:

Figure 12 – Organised With Managing Finances



Figure 13 Balancing Income And Expenses



Figure 14 Saving Intentions

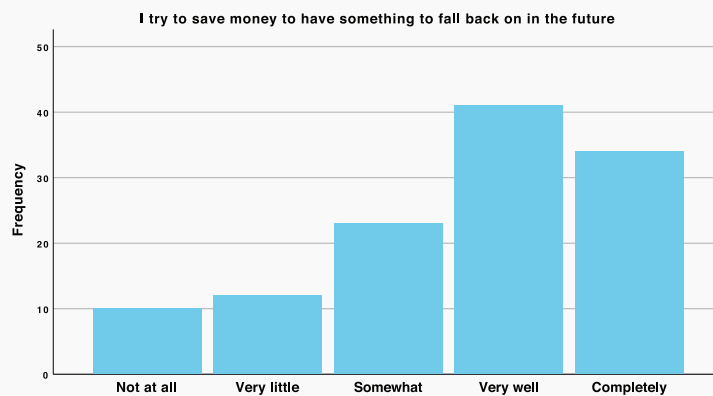


Figure 15 Overspending



Figure 16 Impulse Buying

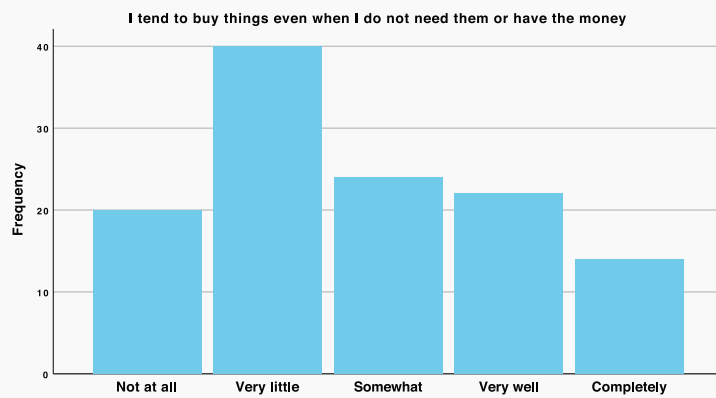
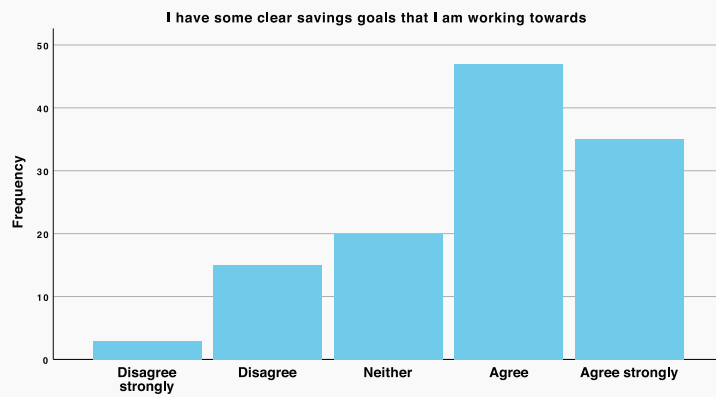


Figure 17 Savings Goals



Again, we see a trend of students selecting either the mid-point as we did for the questions on financial attitudes. However, in these questions we start to see support for our earlier finding around the trade-off between spending and saving. We see high aspirations for a large proportion of respondents around saving in Figure 14 which looks at savings intentions, and Figure 17 which looks at savings goals. However, we also see quite high responses to questions around overspending (Figure 15) and impulse buying (Figure 16). When viewed in conjunction with our qualitative findings, it appears that students have great intentions when it comes to saving but perhaps lack some control when there are opportunities to spend.

Financial products

We asked students about which financial products they use. Most have used an everyday transaction account (85.1%), however 14.9% had not. This is similar to the interviews and focus groups where most participants did have a transaction account, but a surprisingly large number did not. Of those who did have a transaction account, 54.7% also had a separate savings account specifically for saving.

Around half (50.7%) used online banking through a computer, while a higher proportion (57.3%) used an app indicating a slight preference for app-based banking.

We asked about credit usage, be it their own or their parents, and 23.7% reported using a credit card, while 6.7% reported using Afterpay or Zip Pay.

Finally, from our sample, 18.7% reported having a superannuation account, and 9.2% reported having insurance (including CTP for their vehicle).

What have they learned at home?

We asked students if they had learned about specific financial concepts at home while growing up. Table 3 right, lists the percentage of students who reported learning about each of the different financial concepts at home in order of prevalence. Saving was reported as being learned at home by just over 70% of students. This would indicate that a significant proportion, close to 30%, are not learning how to save at home.

Table 3 illustrates the extensive scope of financial concepts that are not being learned at home. In particular, many important everyday financial concepts such as taxes and interest rates are only being addressed at home for a small percentage of the population (27.5% and 22.9% respectively). In particular, 5.3% of our sample indicated they had learned about none of the listed financial concepts at home.

Table 3 Financial Concepts Learned at Home

Financial Concepts	Percentage of students who learned about these at home (%)
Saving	71.1
Budgeting	55.0
Getting a job	54.7
Credit cards	45.4
Smart shopping	42.7
Buying a car	37.3
Loans and debt	33.1
Taxes	27.5
Insurance	24.8
Keeping records	23.5
Giving to charities	23.1
Interest rates	22.9
Superannuation	21.2
Investing	20.2
Life insurance	15.4
Running a business	14.7
Wills	12.8
Shares	5.3
None	5.3

Preferences for learning

After asking students if they had learned about different financial concepts at home, we then asked if they would like formal education or instruction for each of these concepts. The percentage of students who indicated they would like formal education for each topic is shown in Table 4.

Table 4 Financial Concept Preferences for Learning

Financial Concepts	Percentage of students who would like formal education on these topics
Taxes	72.8
Investing	68.4
Loans and debt	66.4
Budgeting	56.6
Life insurance	54.5
Superannuation	53.5
Running a business	53.3
Interest rates	53.1
Buying a car	52.0
Saving	50.9
Wills	49.1
Credit cards	48.2
Insurance	43.8
Shares	41.3
Keeping records	40.7
Smart shopping	38.7
Getting a job	33.3
Giving to charities	25.0
None	2.7

The high proportion of students who indicated they wanted to learn more about taxes (72.8%) confirms the findings from the interviews and focus groups. There is high interest for topics that are not taught in all schools, such as life insurance (54.5%) and wills (49.1%). Perhaps the most telling statistic is that only 2.7% of respondents indicated they did not want to learn about any of the financial concepts listed.

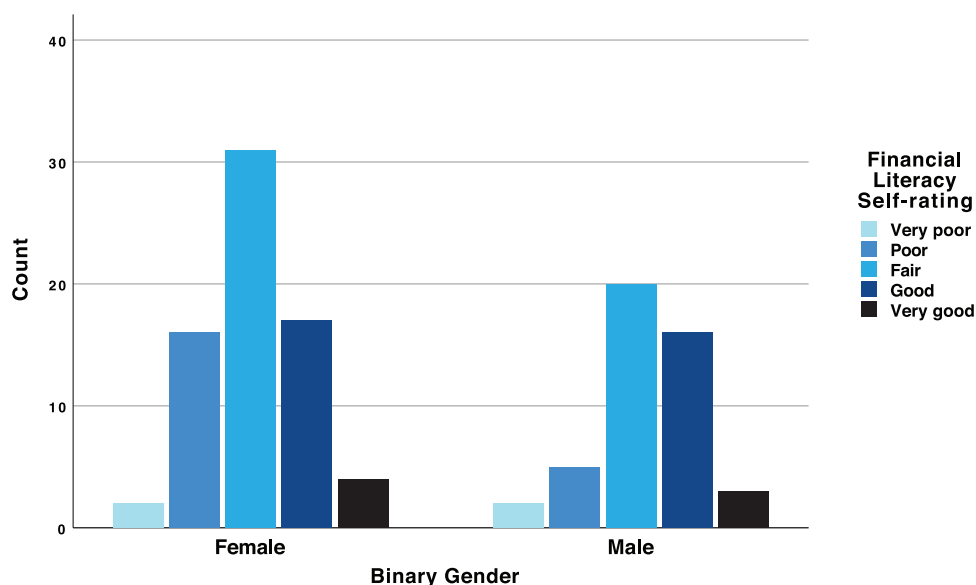
Gender Analysis

In order to further investigate any difference in gender, we analysed several aspects of the survey data based on gender. We performed a statistical analysis suitable for categorical variables known as a chi-squared test⁷. This analysis tests for differences in the responses between different groups, in this case the responses from males and females.

To start with, there was no statistically significant difference in the self-rated financial literacy of males and females. The clustered responses are shown in the chart below. This indicates that overall, males and females are rating themselves around the same level.

7. A chi-squared test is used to test for statically significant differences in the observed counts compared to the expected counts for categorical variables.

Figure 18 Self-Rated Financial Literacy By Gender



Attitudes and Behaviours

We next compared responses for the financial attitudes and behaviours questions. The question, “I find managing my finances difficult and confusing” is significantly different $\chi^2(4, N = 115) = 13.780, p = .008$. Generally more females agreed and strongly agreed with the statement than expected. Likewise, less females disagreed with the statement than expected. Males are the opposite. The observed and expected counts are shown in the table below.

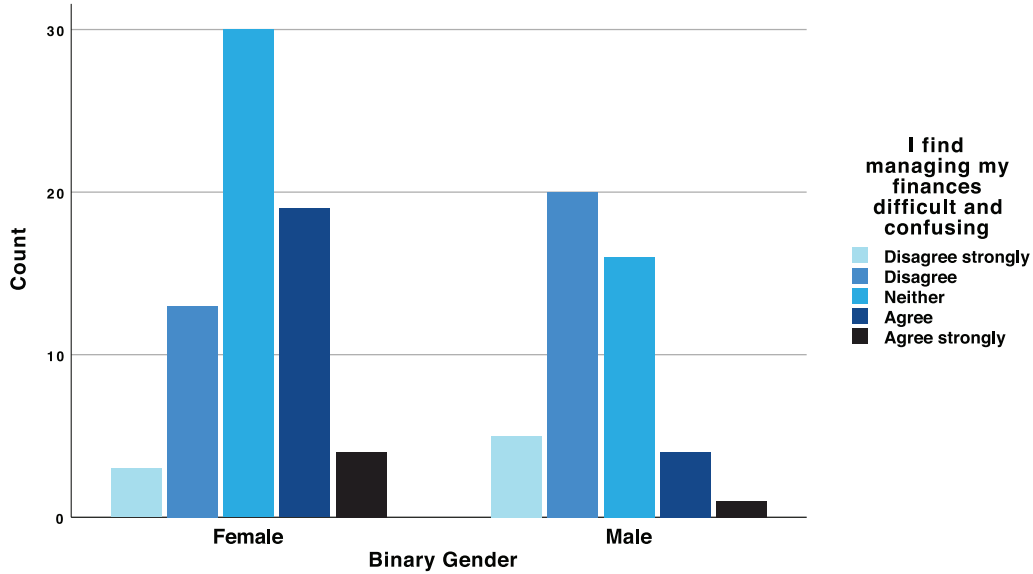
Table 5 Cross-Tabulation of Gender By Difficulty In Managing Finances

Crosstab

I find managing my finances difficult and confusing

			Disagree strongly	Disagree	Neither	Agree	Agree strongly	Total
Binary Gender	Female	Count	3	13	30	19	4	69
		Expected Count	4.8	19.8	27.6	13.8	3.0	69.0
	Male	Count	5	20	16	4	1	46
		Expected Count	3.2	13.2	18.4	9.2	2.0	46.0
Total	Count	8	33	46	23	5	115	
	Expected Count	8.0	33.0	46.0	23.0	5.0	115.0	

Figure 19 Difficulty Managing Finances By Gender



This difference is also observable in the figure above when we see disagree is much higher as a proportion of results for males, while agree is much higher as a proportion for females.

The question, “I am very organised when it comes to managing my money” is also significant $\chi^2(4, N = 115) = 10.672, p = .031$. As shown below in Table 6, males generally felt the statement described them more than females, and no males thought the statement did not describe them. This is also shown in Figure 20.

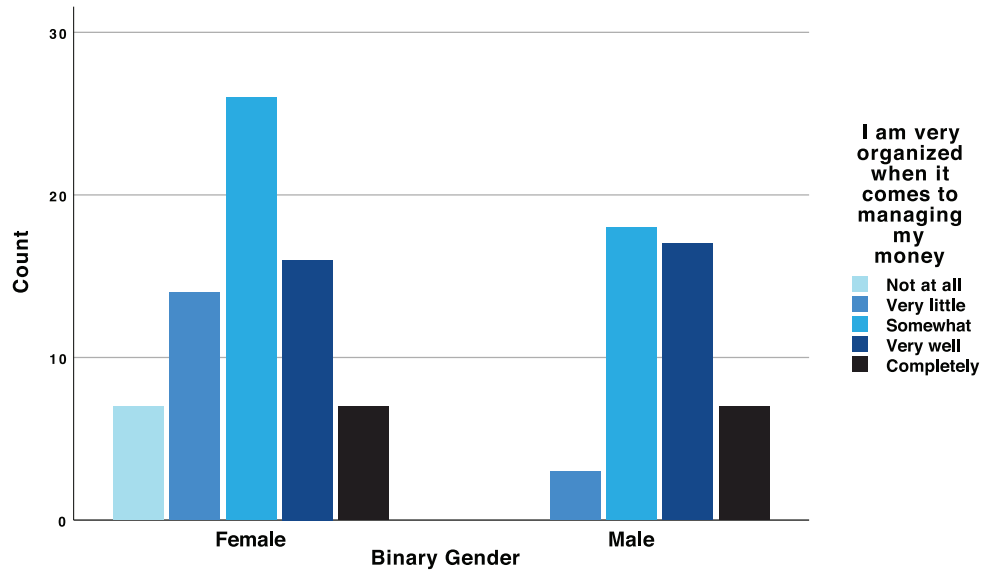
Table 6 Cross-Tabulation of Gender by Organised with Managing Finances

Crosstab

I am very organized when it comes to managing my money

			Not at all	Very little	Somewhat	Very Well	Completely	Total
Binary Gender	Female	Count	7	14	26	16	7	70
		Expected Count	4.3	10.3	26.8	20.1	8.5	70.0
	Male	Count	0	3	18	17	7	45
		Expected Count	2.7	6.7	17.2	12.9	5.5	456.0
Total	Count	7	17	44	33	14	115	
	Expected Count	7.0	17	44.0	33.0	14.0	115.0	

Figure 20 Organised with Managing Finances by Gender

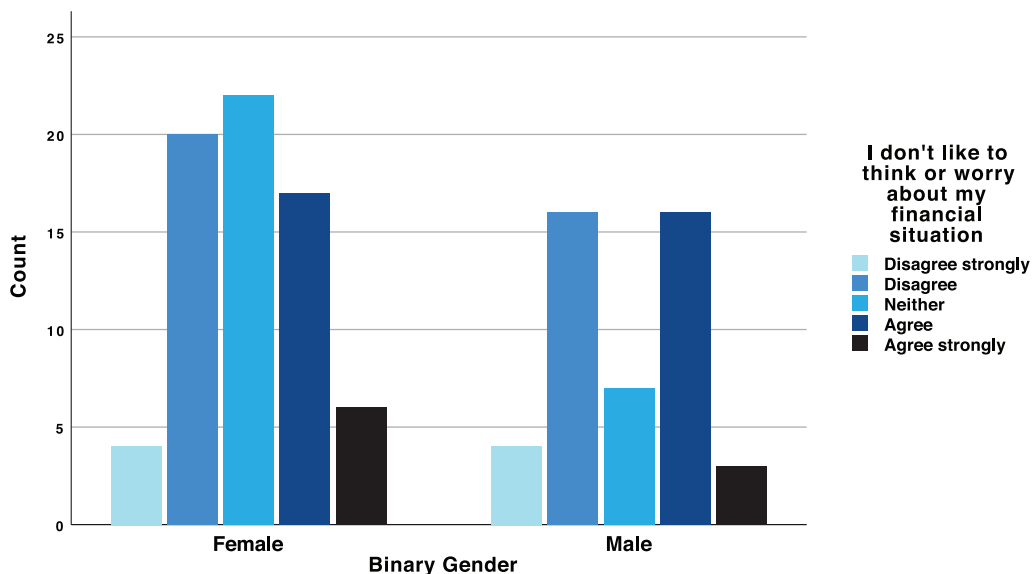


Looking at the two significant results combined, females generally report being less organised with managing their money and that they find managing their finances difficult and confusing compared to males. These two areas offer an opportunity for targeted education in school to reduce these gender gaps.

While the other attitudes and behaviours questions were not found to have a statistically significant difference, there are sustained observable patterns in responses between males and females. To interpret these charts, we look at the shapes of the distributions for males and females, allowing for differences due to the higher number of female respondents.

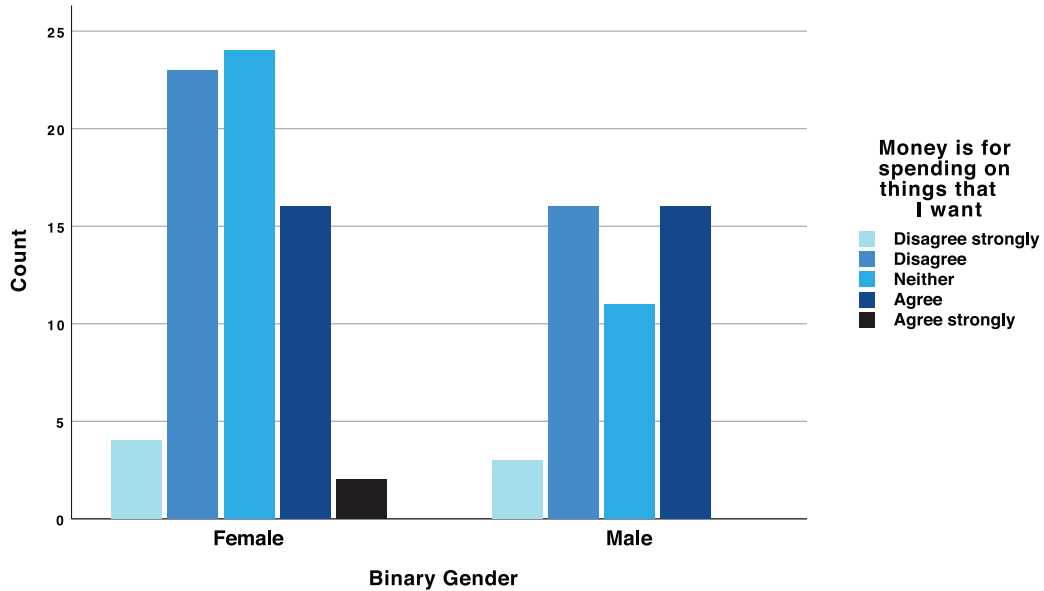
For the statement, "I don't like to think or worry about my financial situation" there is a slight difference with more females agreeing with the statement, however the main difference is that more females are neutral for this.

Figure 21 Avoidance of Financial Situation By Gender



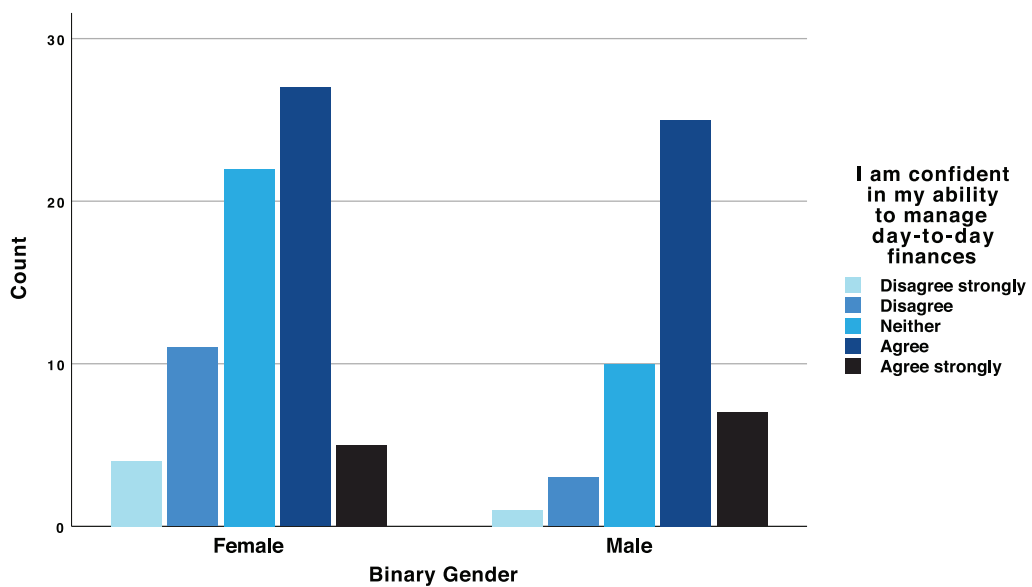
For the statement “Money is for spending on things that I want” no males agree strongly, and again, there is a higher proportion of females choosing the neutral response of neither agree nor disagree.

Figure 22 Purpose of Money by Gender



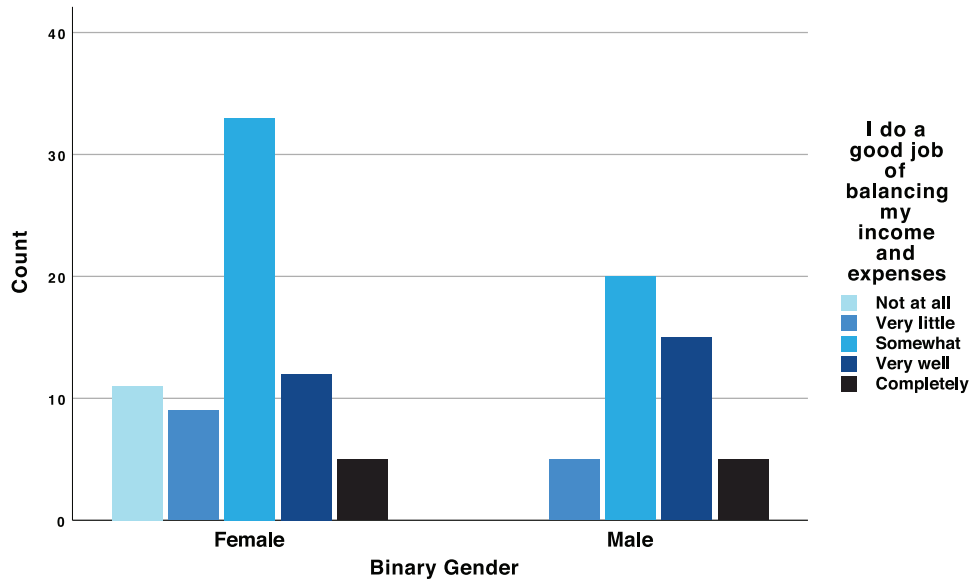
For the question “I am confident in my ability to manage day-to-day finances” more females disagreed or were neutral with this statement than males.

Figure 23 Confidence in Financial Management by Gender



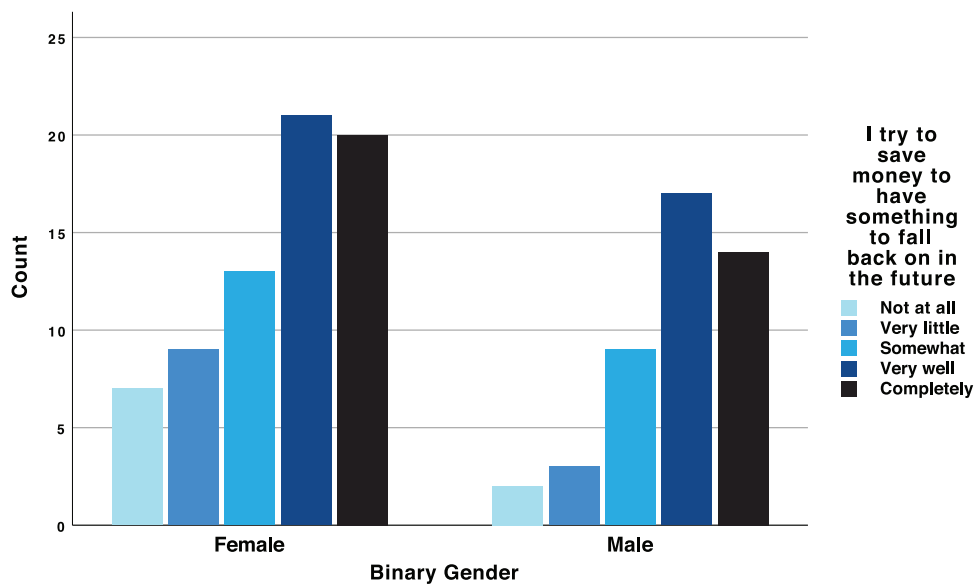
Similarly, for the question “I do a good job of balancing my income and expenses,” more females responded that this statement does not describe them at all, or very little, than males.

Figure 24 Balancing Income and Expenses by Gender



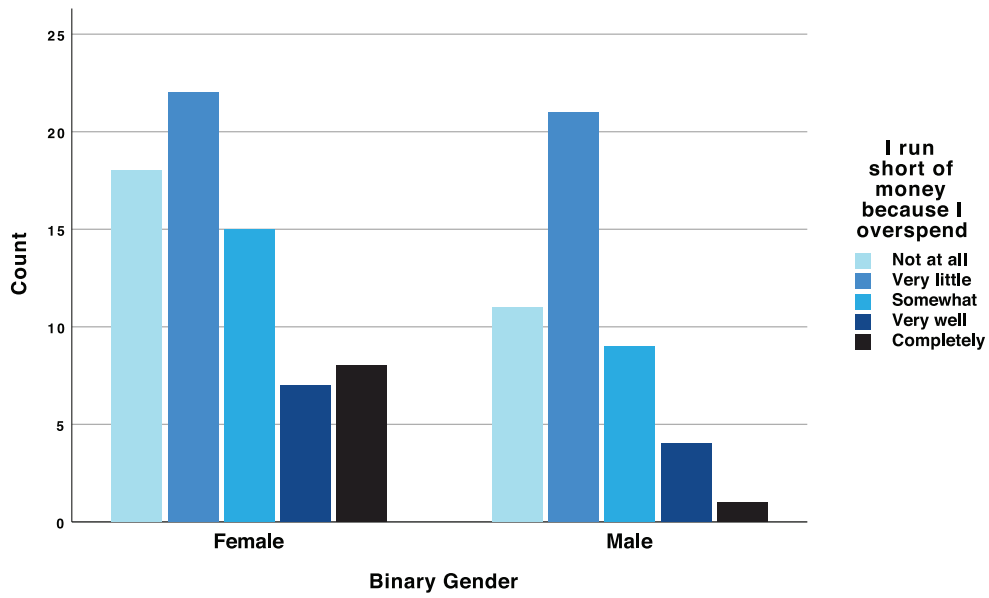
More females also responded that the statement “I try to save money to have something to fall back on in the future” described them not at all or very little than males.

Figure 25 Savings Intentions



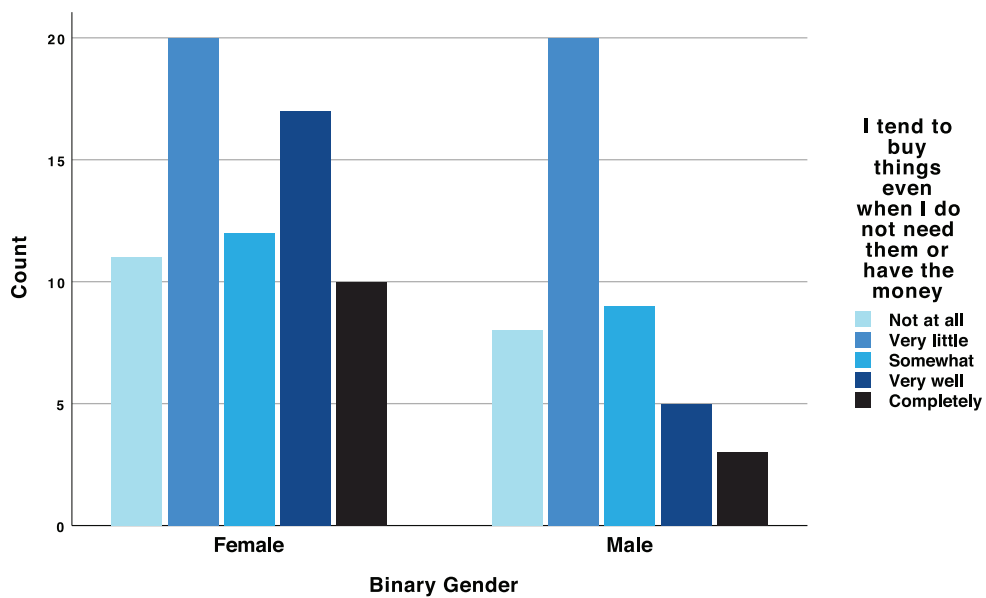
For the statement “I run short of money because I overspend” it is promising to see high proportions of females saying the statement does not describe them at all, however we also see a high proportion of females agreeing that it describes them very well and completely.

Figure 26 Overspending by Gender



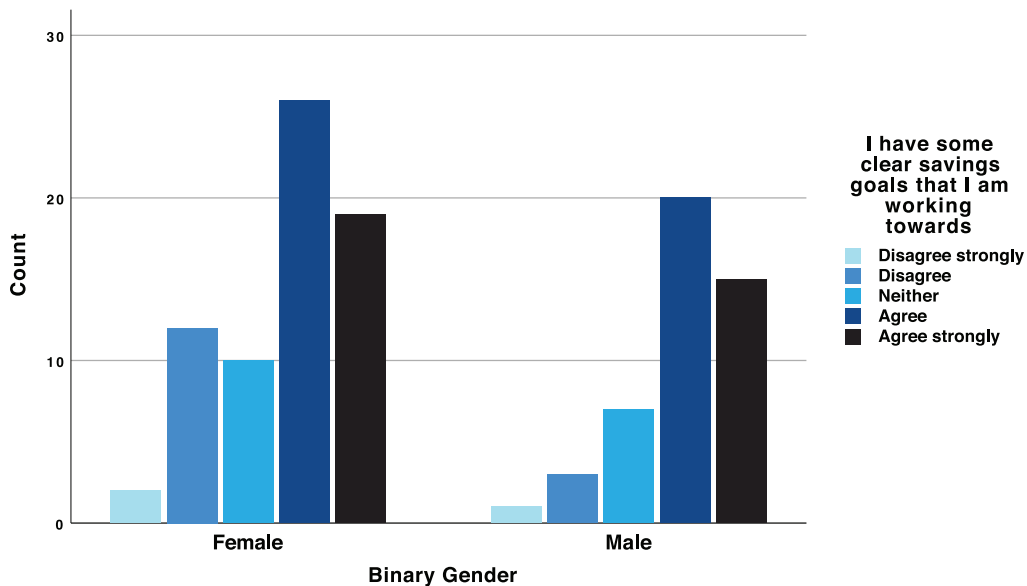
Again, the statement “I tend to buy things even when I do not need them or have the money” has a higher proportion of females responding that this describes them very well or completely.

Figure 27 Impulse Buying by Gender



Looking at the shape of the distributions for “I have some clear savings goals that I am working towards” does show some lumpiness for females disagreeing with this statement.

Figure 28 Savings Goals by Gender



Generally when looking through the clustered bar charts, we see a higher proportion of females reporting problematic financial attitudes and behaviours around spending and saving. Males tend to have much smaller groups of respondents, and in some cases no respondents, for the most negative response. For example, for the question, “I do a good job of balancing my income and expenses” males had no respondents that said this did not describe them at all.

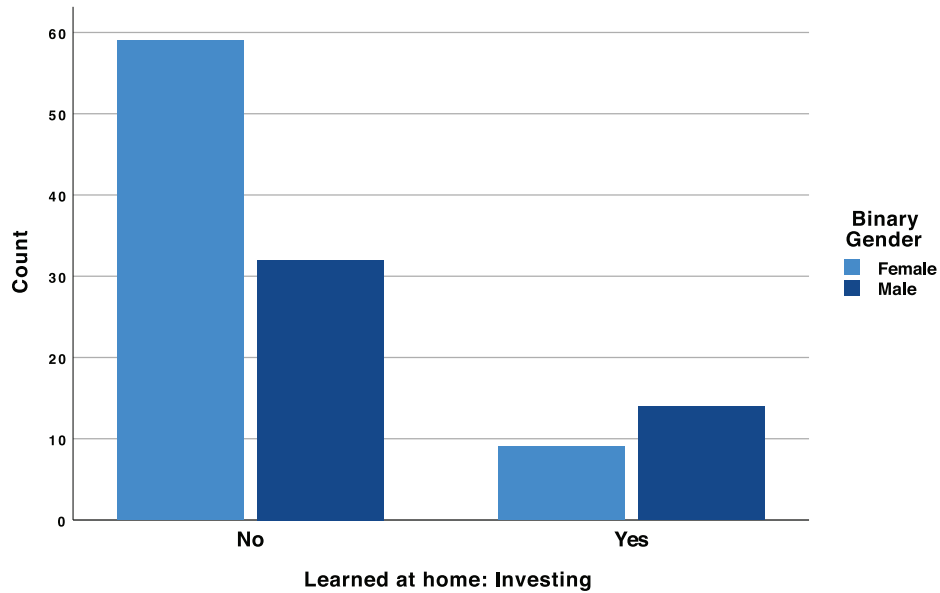
Financial Socialisation

We conducted the same analysis for whether the students had learned different financial concepts at home, comparing males and females through a chi-squared test.

We find budgeting, wills, life insurance, general insurance, superannuation, giving to charities, smart shopping, running a business, buying a car, and getting a job to not be significantly different between what males and females learn at home. These topics fall into either advanced financial knowledge (e.g. wills and superannuation) or what we would term day-to-day financial knowledge (e.g. budgeting and smart shopping).

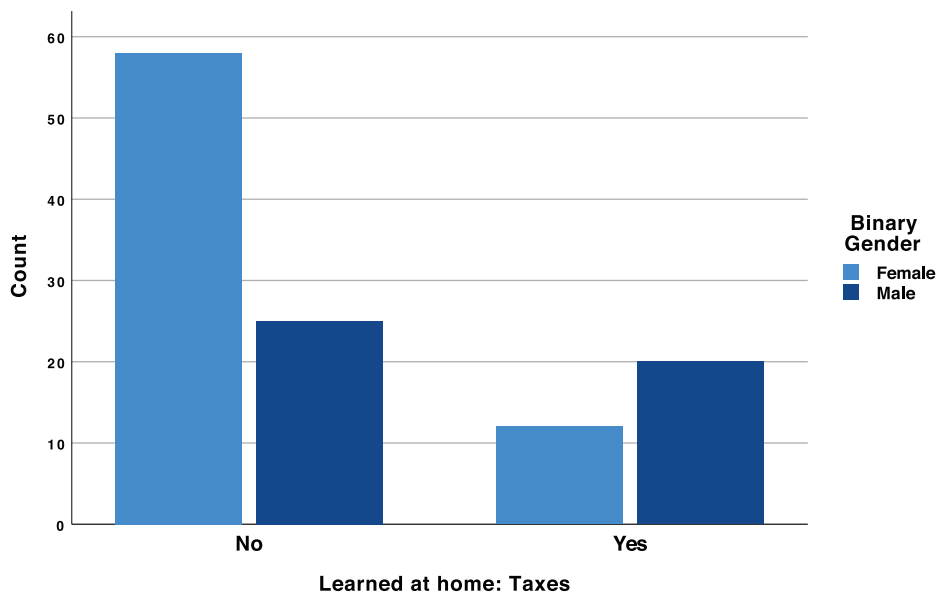
For other financial concepts, particularly those related to investing, we find significant differences. In all cases more males learned about these concepts at home than females. The significant results and clustered bar charts are shown below.

Figure 29 Learned Investing at Home by Gender



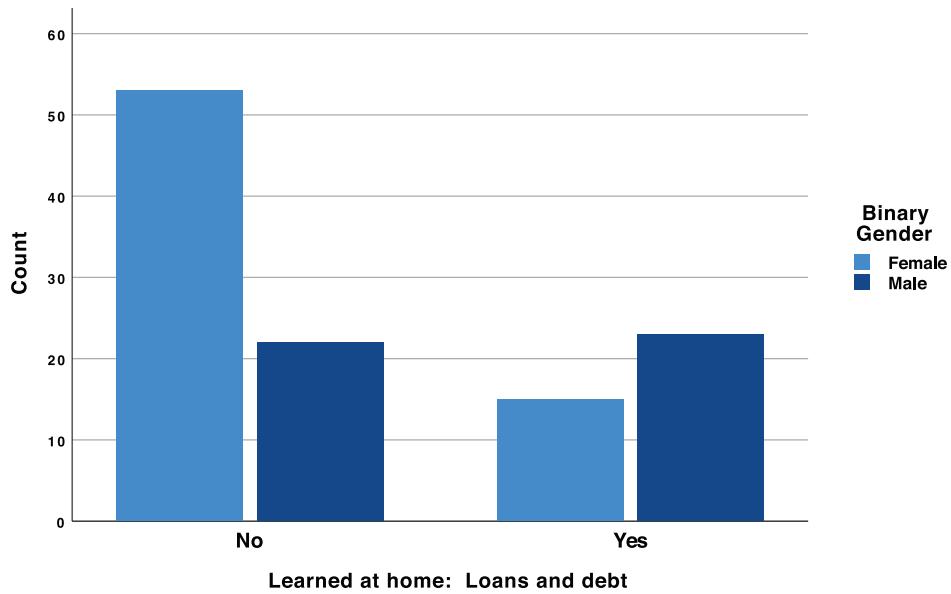
Learning about investing at home is significantly different between genders $\chi^2 (1, N = 114) = 5.040, p = .025$. More males learned about investing at home (30.4%) compared to females (13.2%). Learning about taxes at home is also significant $\chi^2 (1, N = 114) = 10.166, p = .001$, with 44.4% of males learning about taxes at home compared to 17.1% of females.

Figure 30 Learned Taxes at Home by Gender



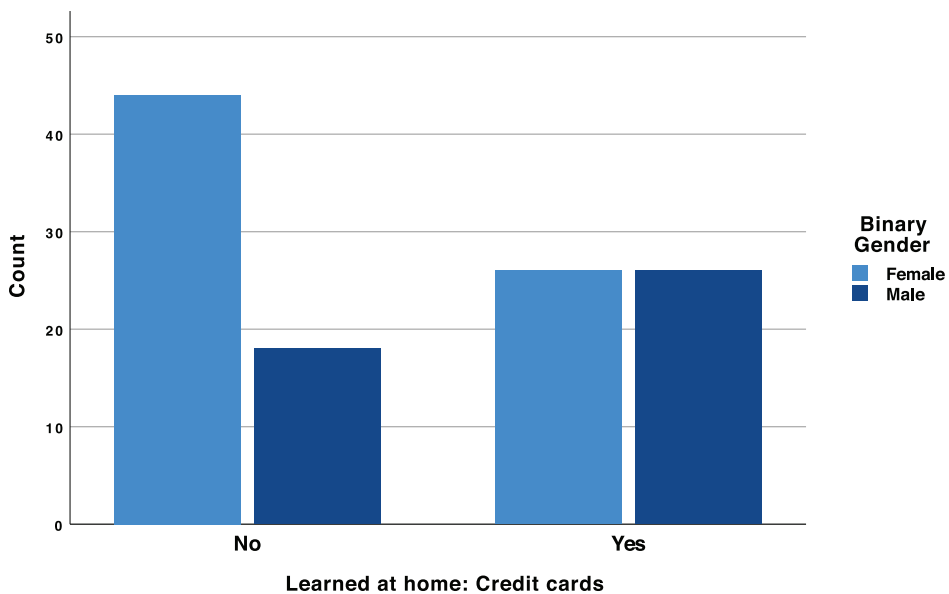
Loans and debt is also significant $\chi^2 (1, N = 113) = 10.240, p = .001$, with 51.1% of males learning about it compared to 22.1% of females.

Figure 31 Learned Loans and Debt at Home by Gender



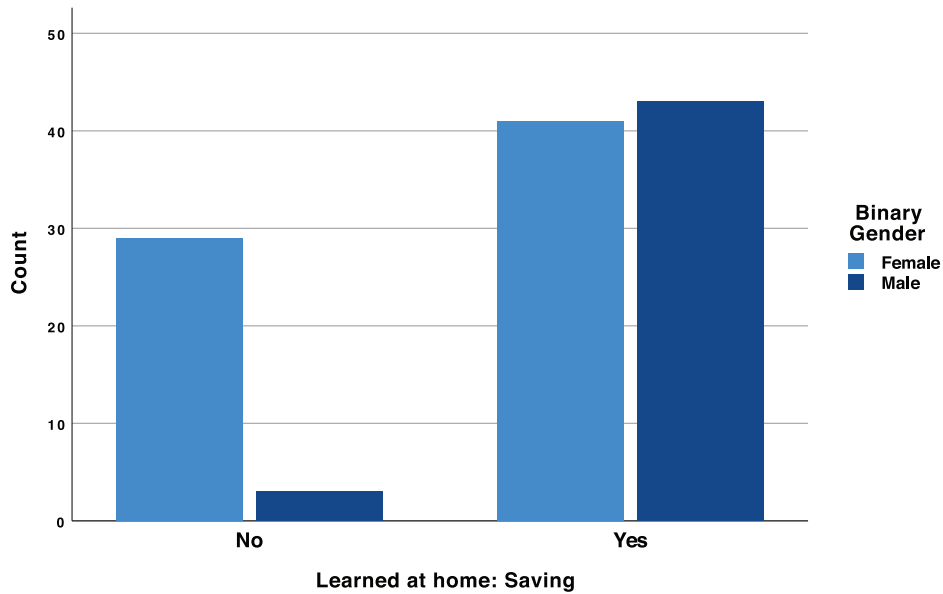
Credit cards is also significant $\chi^2 (1, N = 114) = 5.246, p = .022$. There is a reduced difference between genders, but there are still significantly more males (59.1%) than females (37.1%) learning about credit cards at home.

Figure 32 Learned Credit Cards at Home by Gender



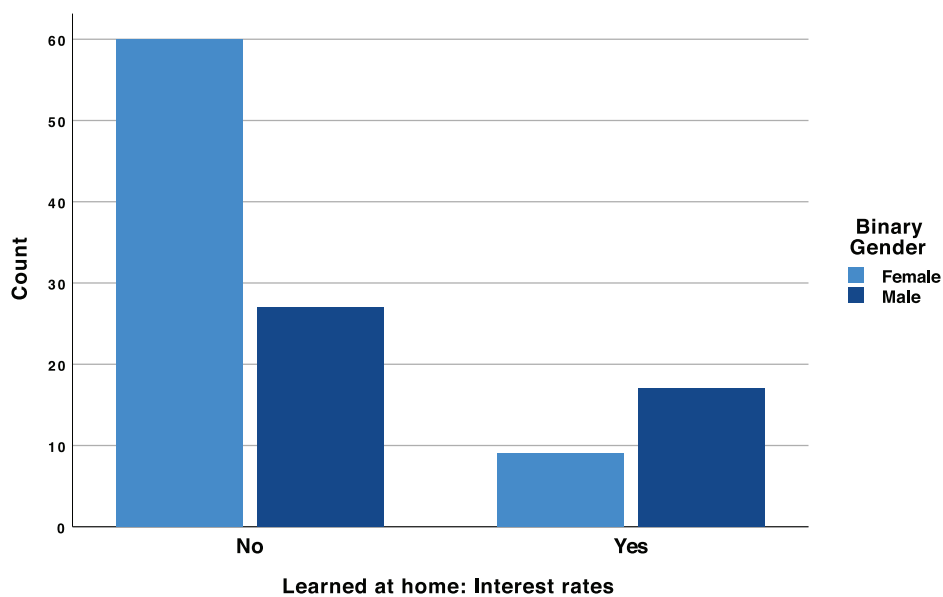
The difference between genders and learning about saving at home is highly significant $\chi^2 (1, N = 116) = 16.932, p = <.001$. As can be observed in the chart below, significantly more males (93.5%) learned about saving at home compared to females (58.6%). This finding is concerning given the importance of saving to financial resilience and wellbeing.

Figure 33 Learned Saving at Home by Gender



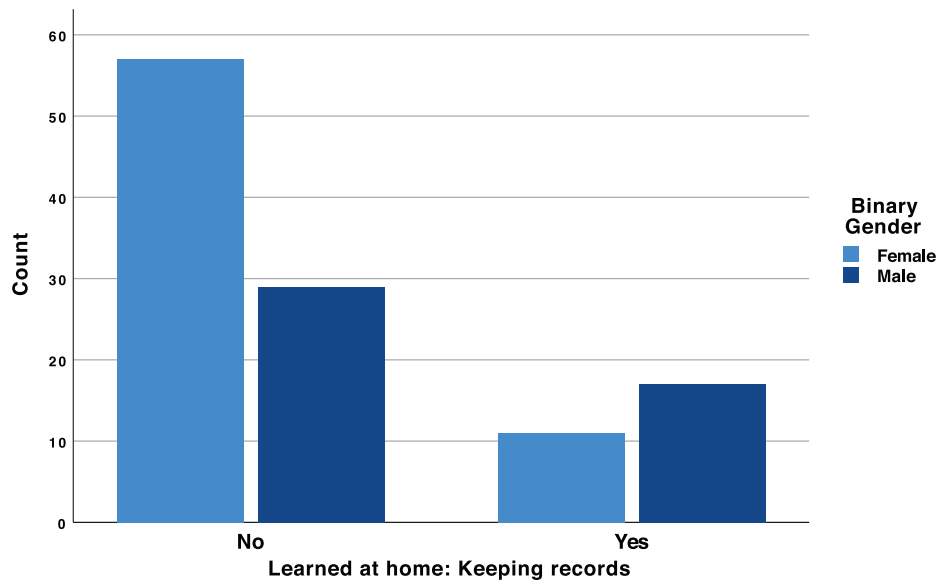
Learning about interest rates is significant $\chi^2 (1, N = 113) = 9.934, p = .002$. Again, more males learned about interest rates at home (38.6%) compared to females (13%).

Figure 34 Learned Interest Rates at Home by Gender



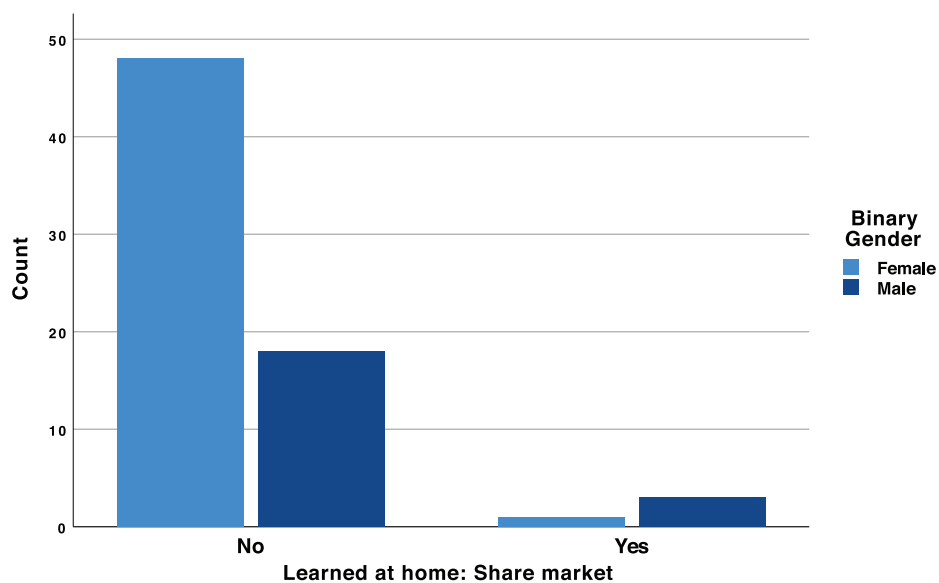
Keeping records is significant $\chi^2 (1, N = 114) = 6.395, p = .011$, with 37% of males learning about this at home compared to 16.2% of females.

Figure 35 Learned Keeping Records at Home by Gender



While not many students learned about the share market at home, there is still a significant difference between genders $\chi^2 (1, N = 70) = 4.091, p = .043$. A higher proportion of males learned about the share market at home (14.3%) compared to just 2% of females.

Figure 36 Learned Share Market at Home by Gender



Overall, we see a marked difference in financial socialisation of the genders, in particular around wealth creation concepts such as saving, interest rates, and investing. More males are learning about these important concepts at home compared to females which will have follow on effects for females' financial literacy and capability.

What can we do to help?

At School

All students were keen to learn more, and they wanted to learn it in school. They had a lot of suggestions for how best to go about this:

“ Having a couple of classes... like only a few would probably be helpful, like learning about this so we can actually understand it, in case like – because not everyone has someone who will help them with this stuff, so having it at school would be beneficial, I think.” (A7)

“ Learn more at school about real life situations. Before they start working, maybe year 8 or 9.” (B1)

“ Practical activities... would definitely make the lesson more interesting. So hands on ... physical hands on type kinaesthetic learning. So a mock bank, so every lesson you come in...and you just have some activity which would make it so much more interesting.” B2 (and future teacher).

There is a really strong call from students to learn about tax. The only student who could correctly describe every financial concept they were asked about, said the following:

“ I have no idea what taxes are. No, let me rephrase that. I know what taxes are, but I don't know how to actually complete the process when I actually finally have to pay them.” (A3)

Students also commented on needing the classes to be easier for them to understand:

“ The only real time that you get taught money is in like in business class or maths class, and they are two very different drastics (sic). One's got big words that not everyone can understand – me – and then the other one's more of the numbers, not like explaining how everything works. I reckon there needs to be like a medium for in the middle. Something that explains how to go about it and then gives examples with money and stuff. Something that does both, but easier.” (B5)

Another point that was raised was around repetition. Students talked about how they cram for an exam but don't remember what they learned afterwards. They spoke of how this was a problem with learning about budgeting and other financial concepts. They completed it several years ago and now forget what they learned. While repetition was considered a downside in Maths, students were asking for it for financial literacy.

Another student raised a similar point that while they had learned about budgeting, it was only in year 9, and she strongly felt that it should be throughout years 7 to 12. This idea was also raised by another student who said:

“ I feel like starting the idea of budgeting earlier would probably be a good idea, so that people can understand, at least, that making just a plan for how much you might spend each week isn't a difficult and outlandish process.” (A3)

At Home

Parents can play a role in helping to develop their child's financial literacy and capability through financial socialisation. From our data we can see that students whose parents work with money, such as accountants and mortgage brokers, or have their own business, have much higher financial literacy than others. These parents were more likely to have discussions with their children about money.

Parents not working in those areas can still have a very positive impact. Several students spoke of their parents helping them to set up their first transaction account and a savings system. Helping children be responsible with their spending is also a very valuable lesson learned at home.

One of the biggest impacts that parents could have is to have money conversations at home, with both boys and girls. We can see from the financial socialisation data that it is mostly boys having these conversations. These conversations need to be had with girls as well to help increase positive attitudes and behaviours with money.

While parents have an important role to play, we acknowledge that not all students have access to parents who are knowledgeable, or even live with their parents. That is why it's important to also include financial literacy concepts in the school curriculum.



Conclusions

A range of factors, not always associated with formal education, influence the level of financial literacy and capability of young Australians. However, there are opportunities to influence the development of financial literacy and capability within the school curriculum. Our research has revealed the following ways to improve this education.

Offer financial capability education

We spoke to many students who were taking a wide variety of subjects including aquatic studies, food studies, and even surfing. Given the importance of financial literacy for students' personal and social development, we highly recommend the introduction of a course or program that can cover the basics of personal finance and financial concepts, economics, and investing. Ideally this would be offered as a standalone course or co-curricular program. Given the crowded curriculum, it would also be appropriate to look for opportunities in the wellbeing/pastoral care area of the school's offerings to incorporate financial capability education.

Improve delivery of financial literacy in Maths

Maths does have the potential to effectively deliver personal finance education for our students. Whilst Maths doesn't currently address all financial concepts, the major advantage of delivering personal finance education through Maths is that it is a compulsory subject for all students in high school. However, as identified in our discussions with students, there is a need to improve current approaches. Mathematical formulas have one correct answer, whereas in real life a financial problem may have a variety of options that solve the problem. When embedding financial literacy in the curriculum in such a linear way, the dynamics of real-world problem solving are ignored. Thus, the curriculum needs to include development of financial skills as well as knowledge. Our proposed solutions are discussed below.

Use different approaches to learning

Drawing on our findings around the importance of stories, we recommend using stories to help deliver the content. For every financial concept, there is an interesting historical event that can illustrate the point. Updating teaching resources for Maths to include more stories may help to increase student interest and engagement with the content.

Another point is to gradually build the skill over time. The current approach appears to teach a concept and then move on. As with most skills, some revisiting over years would be beneficial in helping students to build financial capability.

Finally, financial literacy needs to be addressed in all Maths courses. Students taking Maths Methods do not appear to receive as much instruction in this area of the curriculum, but it is just as important for them to learn. Currently financial literacy is predominantly taught in General and Essential Maths.

Continue to use assessment, but change the focus

Apart from stories, the most effective means of having students recall financial concepts is when learning is tied to their assessment. In that regard, assessment drives participation in learning about financial concepts and retention of that information. However, it must be noted that when assessing learning about financial concepts, it is important to use other forms of assessment rather than those just based on calculations. The current approach in Maths is to assess the formulas and calculations. This approach may actually disadvantage some students, in particular girls, who need more context. Including more written assessment that assesses the concepts without focusing on calculations would benefit these students.

Match context to students

It is really important that the content of financial concepts delivered in the classroom has meaning for students. Students indicated that some financial concepts have limited relevance for their age group. From our conversations with students, phone ownership and managing the cost is a great option for teaching these skills, as every single student, even the most financially disadvantaged, had a phone. Managing aspirational savings goals, including cars, and formals or schoolies (especially for girls) are also good topics. Maths lessons involving interest, especially compound interest, need to be better connected to real life motivations for saving, including unexpected life events.



Financial literacy outside of Maths

While addressing financial literacy education predominantly in maths may be the most wide reaching approach in the short term given that Money and Financial Mathematics is a core component for years 1-10 in the Australian Curriculum – Mathematics – there are opportunities to teach financial concepts in other subjects. Many students reported learning about a lot of financial concepts in Business Studies and Legal Studies, however there is also scope to include these concepts in History, English and even Art. For example, Art and English projects can explore feelings about money and experiences within the household, while history could explore how our knowledge of finance evolved. Once we stop viewing financial literacy as exclusively a Maths-based responsibility focused on calculations, then there is potential to address financial concepts across the curriculum, benefitting students who are disengaged with Maths. Spreading the delivery of financial literacy education across several subjects may also alleviate some of the problems with the overcrowded curriculum and trying to limit financial literacy to any one subject.

Learn how to actually save

There is significant evidence of students not actually knowing how to moderate spending in order to save. Saving was approached as a ‘not spending’ behaviour, which appears to not hold once students begin to experience necessary expenses. Learning how to save even when on a tight budget, and understanding the lifelong benefit of that behaviour, would be of significant assistance to all students.

School Resources

A final note should be made about the need to provide support to teachers and schools to better prepare students for life after school. The teachers we spoke to often went above and beyond to deliver this content to their students. Professional development opportunities that provide teachers with support to deliver personal finance knowledge across a variety of subjects would be beneficial. Career guidance officers may also be able to play a role to incorporate financial skills into conversations with students about work. There could also be an opportunity for teachers within a school to take a leadership role with responsibility for exploring ways to inject financial capability education into existing subjects across the curriculum.

Finally, we did not detect from our discussions with students or teachers any reference to any existing financial literacy program resources. More work is to be done in schools to help incorporate existing resources to reduce workload for teachers and make these the go-to resources when seeking information about financial concepts, for both teachers and students.

Limitations

Qualitative research is, by its nature, a more subjective research approach. Efforts have been made to reduce researcher bias in analysing and interpreting the data. Further research would be required to quantitatively assess statistical significance.

The COVID-19 pandemic impacted on the data collection process given the requirements for social distancing and a pause on research activities within schools. In order to progress the research, we utilised virtual focus groups and interviews for part of the data collection. Virtual data collection relies on microphones and internet connections which in some cases impacted on our ability to hear participants.

In addition, some students have been financially disadvantaged either personally through lost work, or if their family was impacted due to the pandemic. Some families may have benefitted from JobKeeper or other programs. This may have affected their perceptions of personal finance and money management during the data collection period.



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Appendix A

Table 7 - List of Interview and Focus Group Codes

School A	Date	Participants	Code
Interview	19/02/20	Girl	A1
Interview	19/02/20	Girl	A2
Interview	19/02/20	Boy	A3
Interview	20/02/20	Girl	A4
Interview	20/02/20	Boy	A5
Focus Group	19/02/20	3 boys	A6
Focus group	20/02/20	2 girls	A7
Focus Group	20/02/20	2 girls and 2 boys	A8
Total		14	

School B	Date	Participants	Code
Interview	28/1/21	Boy	B1
Interview	28/1/21	Boy	B2
Interview	16/10/20	Girl	B3
Interview	16/10/20	Girl	B4
Interview	16/10/20	Girl	B5
Interview	21/10/20	Girl	B6
Focus Group	20/02/20	3 boys	B7
Focus Group mixed	28/8/20	4 boys and 1 girl	B8
Focus Group boys	16/10/21	5 boys	B9
Focus Group girls	16/10/20	5 girls	B10
Total		24	

School C	Date	Participants	Code
Interview	04/03/21	Girl	C1
Interview	04/03/21	Boy	C2
Interview	04/03/21	Boy	C3
Interview	05/03/21	Boy	C4
Interview	05/03/21	Boy	C5
Interview	05/03/21	Girl	C6
Focus group boys	19/10/20	3 boys	C7
Focus Group Girls	15/10/20	4 girls	C8
Focus group girls	15/10/20	2 girls	C9
Focus Group	04/03/21	Girl and boy	C10
Focus Group	05/03/21	2 boys	C11
Focus Group	05/03/21	Girl and boy	C12
Total		21	

School D	Date	Participants	Code
Interview	11/02/21	Girl	D1
Interview	11/02/21	Girl	D2
Interview	11/02/21	Boy	D3
Interview	11/02/21	Boy	D4
Interview	11/02/21	Girl	D5
Interview	11/02/21	Girl	D6
Interview	18/02/21	Boy	D7
Interview	18/02/21	Boy	D8
Interview	18/02/21	Girl	D9
Interview	18/02/21	Girl	D10
Interview	18/02/21	Girl	D11
Interview	18/02/21	Girl	D12
Interview	18/02/21	Boy	D13
Interview	18/02/21	Boy	D14
Focus Group girls	11/02/21	5 girls	D15
Focus group mixed	11/02/21	3 girls, 3 boys	D16
Focus Group mixed	11/02/21	4 girls, 2 boys	D17
Total		31	

Appendix B

Survey Questions	
What is your age?	
With which gender do you identify?	
With which ethnic group do you identify?	
What is your religious preference?	
What subjects have you studied at school?	
How would you rate your financial literacy? Please explain why using the text box provided	
Do you feel you need further education or information in relation to your personal finances/ managing money?	
How do you rate your ability to manage money? Please explain why using the text box provided	
Which of the following would you like information/education on?	
<ul style="list-style-type: none"> • Budgeting • Investing • Taxes • Loans and debt • Wills • Life insurance • Other insurance • Credit cards • Saving • Superannuation • Giving to charities 	<ul style="list-style-type: none"> • Interest rates • Keeping records • Being honest in all dealings • Smart shopping • Running a business • Share market • Buying a car • Getting a job • None of the above • Other
Which of the following financial matters did you learn about while growing up?	
<ul style="list-style-type: none"> • Budgeting • Investing • Taxes • Loans and debt • Wills • Life insurance • Other insurance • Credit cards • Saving • Superannuation • Giving to charities 	<ul style="list-style-type: none"> • Interest rates • Keeping records • Being honest in all dealings • Smart shopping • Running a business • Share market • Buying a car • Getting a job • None of the above • Other
Approximately how much combined income do the parents / caregivers in your household earn per year?	
<ul style="list-style-type: none"> • Financially secure (plenty of money to pay for things) • Financially ok (enough money to pay for the things we need) • Financially struggling (not always enough money) 	
How many hours do you work each week for pay?	
How many hours do you work each week without getting paid?	

Survey Questions

How well do the following statements describe you or your situation?

- I am just getting by financially.
- I am very organized when it comes to managing my money.
- I do a good job of balancing my income and expenses.
- I try to save money to have something to fall back on in the future.
- I run short of money because I overspend.
- I tend to buy things even when I do not need them or have the money.

Have you used or do you have any of the following financial products?

- Savings/bank account (everyday bank account)
- Separate savings account (used specifically for saving and not regular transactions)
- Debit card
- Online banking
- Banking app
- Credit card or store card
- Superannuation account
- Insurance (for example CTP for your car that is in your name)
- Afterpay/Zip pay
- Hire purchase/deferred payment agreement including interest free purchases
- None of these
- Other

When it comes to how you think and feel about your finances, please indicate the extent to which you agree or disagree with the following statements.

- I find managing my finances difficult and confusing.
- I don't like to think or worry about my financial situation.
- Money is for spending on things that I want.
- I am confident in my ability to manage day-to-day finances.
- I have some clear savings goals that I am working towards.

Do you feel like you have learnt enough about managing money? Please explain why in the text box provided.



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