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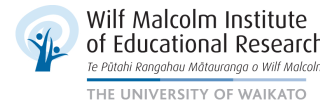

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Financial education is in need of a shake-up: Three guiding reorientations

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Financial education is in need of a shake-up: Three guiding reorientations

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New Zealand

Abstract

The COVID-19 pandemic has forced a rethink of many areas of our society. Financial education should be no exception. Based on the assumptions of 20th century neoclassical economics, and not catering for cultural, social and ecological considerations in our purchasing decisions, the New Zealand offering of resources to teach financial wellbeing are lacking in several key areas. I expose the gaps in the current approach by discussing the financial reality for many people in New Zealand. I propose three reorientations towards financial education based on 1) changes to people's current financial situations and financial prospects; 2) changes to our understanding of the importance of ecological and social factors in purchasing decisions, and the role of cultural factors in access to financial products; and finally, 3) developments in our knowledge of how we make decisions. I conclude that a new set of assumptions should be adopted, and that educators commit to preparing our young people for a future of both financial instability and change, and financial wellbeing and success, encouraging them to define their own success measures individually and in their communities.

Keywords

Financial education; financial literacy; financial wellbeing; financial capability; learning; curriculum development.

Introduction

The Covid-19 pandemic has provided a real-life experience of financial stress, coupled with insecurity over work, income, health and more. Financial education programmes in New Zealand, despite performing strongly in comparison to other developed countries, could hardly have been expected to anticipate such a shock. However, the insights that all New Zealanders have gained point to some lacunae in the approach of our financial education. These gaps relate to the content and the assumptions and fundamental teachings of an area of pedagogy which aims to develop long-term financial wellbeing. This article makes the case for a reorientation in financial education in order to holistically prepare young people to be financially capable adults.

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There are three main parts to this paper. First, I discuss the current state of financial education in New Zealand and clarify financial capability and wellbeing. Second, I make the case for three major reorientations towards our approach to financial education. These reorientations are based on three groupings of societal and knowledge-based changes: the changing financial environment and financial prospects of young people; changing economic ideas resulting from social, ecological and health crises; and finally, insights from cognitive science which challenge the *homo-economicus* model of individual action. Third, I lay out some avenues through which teachers, curriculum designers and enterprises could develop our financial education programmes, offer some large-scale changes with concrete examples and provide questions for further investigation, if we are to truly prepare our young people for financial wellbeing in their adult lives.[i]

Conceptual clarification and overview of financial education

It is first helpful to understand the way we are currently teaching financial literacy. There are several closely related terms here, including literacy, capability, wellbeing and education, all considered with the prefix ‘financial’. Other literature discusses financial fragility, vulnerability and hardship: terms which present the other side of the coin. Let’s begin by distinguishing between these terms.

Conceptual clarity

For the purposes of this paper, financial literacy and financial capability have the same meaning. They are both measures of the ability of an individual to act in the financial space, and financial education aims to enable this. What this action looks like is different, for different organisations and from different viewpoints, but the goal of financial education remains the same: to equip individuals with the knowledge, understanding and tools to act in an informed manner in their financial decisions. The Commission for Financial Capability (CFFC) outlines that financial capability looks like “everyone saving and investing, managing debt to their advantage, having a current financial plan, being prepared for the unexpected, learning about financial capability and being comfortable talking about money” (CFFC, 2021). We should note here that this definition refers to a financial plan based on immediate and present risks (a ‘current’ plan) and does not specifically state that individuals know what money actually is and how it works. The OECD have put together frameworks to measure core competencies in financial literacy for young people and adults, containing four areas of competency: money and transactions, planning and managing finances, risk and reward, and the financial landscape (OECD, 2016). New Zealand has its own, largely similar, version of these documents, the Financial Capability Progressions (FCPs) (Ministry of Education, 2020). Financial literacy as a term seems to carry the baggage of an overly theoretical approach to financial education; referring to capability is a way to emphasise the need for practical, experiential learning processes that generate financial know-how.

Financial wellbeing, however, is a recent term used to describe the end goal of financial education in a more holistic manner. Research from Kempson et al. (2017) and Muir et al. (2017), among others, took into account psychological and socio-economic conditions when defining financial wellbeing in order to understand the influencing factors in a person’s overall financial status. Kempson et al. defines financial wellbeing as “the extent to which someone is able to meet all their current commitments and needs comfortably, and has the financial resilience to maintain this in the future” (2017, p. 19). This is open enough to suggest that there are multiple factors influencing the extent to which someone can meet their current financial needs but seems to miss the fact that the financial system is not a closed system, just like our financial resilience is not only influenced by financial factors. Yet, for now, financial wellbeing provides the best holistic financial indicator, including the capabilities, knowledge and environmental factors of a person.

The 2018 ANZ Financial Wellbeing study presents some interesting results regarding the influence of different factors in financial wellbeing in New Zealand. Detailed knowledge of financial products and services only explained seven percent of the variation in financial wellbeing scores. More likely to explain these differences were psychological factors, with 10 percent, and socio-economic factors, with 23 percent (ANZ, 2018). As we will see, capabilities in psychological and socio-economic areas appear almost nowhere in the current financial education programmes, despite their 33 percent impact on our financial wellbeing.

The OECD/INFE's financial literacy framework does not appear to be particularly holistic or inclusive when it comes to learning about the context of financial decisions and the impact of socio-economic factors. The framework includes 'D.a.vii—External Influences' which covers the role of economic and outside influences on an individual's financial conditions. The ability to respond to these changes, enacted by others and forced upon the individual, is the core competency involved (OECD, 2016). The New Zealand FCPs include a similar reference to describing and explaining external influences, which include advertising, peer pressure, GST, exchange rates and inflation (Ministry of Education, 2020).

In a 2019 update to the longitudinal survey conducted by the Westpac-Massey Fin-Ed Centre, over 40 percent of respondents (aged 24–28 years) took action to improve their money management skills in the 12 months predating the survey (Reyers et al., 2020). Knowledge of the financial world does play a role in financial wellbeing, but we should not expect knowledge to explain all the differences in financial wellbeing.

Financial education in New Zealand

We now know that a multitude of factors influence a person's financial wellbeing. What, therefore, is in our financial education programmes? This paper focuses specifically on financial education given to young people, largely in schools. There are likewise many solutions to educate adults, and much of the analysis here could also be applied to those situations.

There are two main types of financial education resources in the New Zealand market; those that target the Financial Capability Unit Standards, which set the outcomes of the Progressions into a curriculum where students can gain credits[ii] (e.g., those by Instant Standards, Kura Solutions, Young Enterprise, Sorted), and those who provide programmes and resources to schools and organisations and individual learners (e.g., Banqer, MoneyTime, MoneyHub, SaVy, MyMahi). There are three main delivery methods for these resources: online learning platforms with simulation capabilities, traditional interactive PDFs or printable workbooks, and facilitated, in-person programmes. To provide an overview of what the sector offers in the context of financial education in schools, I will briefly explore four providers.

The Sorted in Schools/Te whai hua—kia ora! resources target financial capability unit standards, with learning booklets on goal setting, budgeting, managing debt, saving, retirement planning, insurance, KiwiSaver, investing and financial scams. Many of the examples in these resources seem out of date—the purchase of music on iTunes, for example, has now been replaced by streaming services such as Spotify. These resources are available online to every New Zealand school for free. As this is a relatively new programme, these resources were evaluated in 2019/20 by NZCER; however, due to Covid-19 restrictions and the short duration that the resources have been in schools, the report made limited comments as to the success of the programme. The authors did note that positive changes around money behaviour and the ability of students to talk about money were already noticeable outcomes. Comments surrounding the content of the course and the effectiveness of the Māori/Pasifika course approach were limited (MacDonald et al., 2020).

The Young Enterprise Financial Education Hot Topics had their last major update in 2016. These workbooks are likewise available for free to all New Zealand schools and are aimed at teaching financial education to students in Years 10–12. Topics covered are almost identical to those of Sorted in Schools, with resources on budgeting, banking, impulse buying, credit cards, borrowing, the share market, exchange rates, insurance, KiwiSaver, taxation, student loans and flatting. Young Enterprise do not have any research on the relation between their resources and measurable improvements in financial capability, but from informal discussions with staff, they seem to be well received by New Zealand teachers and appreciated for their aid in teaching financial capability.

The digital tools provided by the fairly recent social enterprise Banqer, founded in 2015, represent a new form of teaching financial education to students in both primary and secondary schools. These resources cover similar topics. Banqer's curriculum teaches through experiential learning with fake markets and exchanges on their digital platform. Students can go through the motions of real-world decision making and money questions and see their bank balance change as a result of their decisions. There are case studies on the website about the ease of adoption of Banqer solutions in classrooms but no formal studies on the impact in terms of financial capability/wellbeing levels. CEO Kendall Flutely notes in a blog post that the ideal scenario for Banqer is one where "young adults make more informed decisions and contribut[e] to thriving communities—foster[ing] further community economic development" (Flutely, 2019).

Finally, ASB's Get Wise programme is targeted at primary-intermediate age school students and is aimed at helping students become confident with money. The programmes are facilitated in schools, delivered free of charge and at years seven and eight offer access to AR (augmented reality) technology. The goals and content of these programmes seem to include financial basics such as spending and saving and encouraging children to be confident in handling and using money on a daily basis. ASB note that they have programmes in more than 1,500 schools throughout the country. Likewise, with the other private programmes, little research seems to exist on their effectiveness, beyond teacher testimonials.

Learning programme designers and curriculum developers thus have very little research to use, and researchers to be able to evaluate, how well these programmes prepare New Zealanders for their financial futures. We could stop here and believe that we have provided a good insight into what is going on in the financial education 'classroom' in New Zealand. To gain a complete understanding, we must also ask, what assumptions are made by those designing these programmes, regarding the role that each student will end up playing in the economy when they become an 'independent player'?

The hidden curriculum of financial education

The concept of a *hidden curriculum* is used to describe how practices and materials in a curriculum come to reinforce social inequality in societies.[iii] With this concept, we see that there are a set of assumptions behind the curriculum of financial education, and these assumptions determine what we teach, how we teach it and why we think it is important. This section aims to uncover these assumptions. For this, we need to turn to economic theory.

Following the thesis of Seda (2013), the assumptions made in financial literacy programmes are the same assumptions made by neoclassical economists: that we are rational, individualistic and optimising consumers. The way to make the best financial decision is to gather all the information, rationally analyse it and follow logical rules in comparing price and quality in relation to our needs to reach a decision.

In describing the development of the neoclassical *homo-economicus*, Weintraub (2002) provides three key assumptions in this model: "1) People have rational preferences among outcomes; 2) Individuals maximise utility and firms maximise profits, and 3) People act independently on the basis of full and relevant information." The first assumption means that when we are making decisions, we

make them in a rational manner, by considering our possible outcomes. For example, when deciding on what to eat, one assesses the options, compares their relative costs and comes to a conclusion. The second assumption lays out the actors in the financial market—consumers and producers—who aim at a different kind of optimisation. Consumers act as individuals and want to optimise their personal utility, the relative benefit from the consumption of goods and subsequent loss of money; producers want to optimise profits, selling as much as possible at the optimal price. The third assumes that this whole process of 'shopping' happens inside our heads: individuals are not influenced by factors outside our knowledge or control. As Seda (2013) explains, "The power of the consumer is limited to the *informed choice*, where *informed* assumes the consumer has access to full and reliable information, and *choice* assumes the consumer understands the relevance and implications inherent in the choice".

How do these assumptions play out in our financial education resources? Take, for example, the classic problem of buying a car. Students are given two mechanisms with which to make their decision—the price of the car and the quality/type of car that they want. They must look at the market offerings and make the right decision based on what is available so as to maximise their own utility. It is generally not considered to be a key learning outcome, for example, to consider alternatives and effects: for example, carpooling, the ecological impacts of fuel combustion and pollution, public transport, bargaining with the car salesperson, or considering buying a car together with the joint resources of family members.

Seda continues, "The fundamental assumption is that the individual purchaser affects pricing only as a member of a nebulous group that form the demand side of supply and demand. The *hidden curriculum* of personal financial literacy perpetuates a limited conception of a consumer's power and social agency" (Seda, 2002). In teaching programmes based on the assumptions of neoclassical economics, we are teaching young people that the mechanisms at their disposal in the financial space are price and quality and that in each decision they should be self-interested actors. Very little emphasis from the curriculum is placed on the effect of their decisions on the wider community or the environment, and the student is not encouraged to see their purchasing power as being a lever through which they can change the offerings of the market in their favour (though teachers may emphasise this at their own discretion).

It is important to note that neoclassical economic theory is not a way to explain *all* the actions that occur in the economy, nor is it an all-encompassing view of humanity's essence or true nature. It is *one possible perspective* out of many others. The question the remainder of this paper aims to tackle is the same as one might find in other curriculum reviews: "To what extent has their schooling prepared [students] to face the challenges ahead?" (Sawatzki, 2016, p. 2). There is, as we will continue to see, a gap between what is taught and what is required to deal with the financial challenges presented to recently graduating students.

Three key reorientations towards financial education

Now that we are clear on the nature of financial education in New Zealand, let's think about the financial conditions addressed by financial education. What is the financial reality that our young people are entering and will enter in the near future? Is there a difference between the assumptions of the current financial education model and the financial reality that New Zealanders find themselves in? The answer to this question will form our guiding light to see why a reform of financial education is necessary. Here, I assume that we should be designing curriculums that fit with our understanding of financial wellbeing and that prepare students for the future that they will be living when they become independent actors in the financial and economic spaces. It is important to be aware of this because it justifies why we are analysing the educative theory in light of the present conditions.

This section again comprises three subsections, corresponding to the three main areas of reorientation the curriculum needs to take. These are termed reorientations because each involves a change in the way we think about our participation in the financial space and the economy in general. These changes may, for many of us, seem almost natural because they correspond to currently occurring conditions. In this case, you will immediately recognise the disparity between the educational assumptions and the reality.

Changing financial environment and financial prospects

The millennial generation are the first generation projected to be less wealthy than their parents. New America report that in the United States, millennials earn at least 20 percent less than boomers in the same stage of life (Addo et al., 2019). The same trend is noticed in the UK: “The 1980s cohort in Britain is the first post-war generation in which people do not have higher median incomes in their early 30s than those born a decade earlier” (Cribb, 2019, p. 275). In 2018, Stuff reporter Susan Edmunds wrote about the same phenomenon in New Zealand. In the article, economist Shamubeel Eaqub notes that baby boomers were buying houses that were six times their average yearly income, whereas millennials are trying to buy houses that are forty times their current wages. He says, “If you're a millennial, you're likely to earn less than your parents over the course of your life and that doesn't take into account the higher cost of living, your student loan” (Edmunds, 2018). Real incomes have increased by 0.6 percent per year above the rate of inflation, over the last 30 years, so it is not the case in New Zealand that wages are necessarily lower for millennials than they were for baby boomers, rather, basic living costs have increased significantly as a proportion of income. Mortgage rates are also at record lows in 2020–21, facilitating those with the means to pay off a mortgage to purchase a property.

Young people are also worrying about money, and this has been exacerbated by the Covid-19 pandemic. According to the CFFC’s research, 69 percent of New Zealanders are reported to be concerned about money, and a staggering 82 percent of those aged 18–34 are concerned. The report release states,

> This concern manifests in a variety of ways, with 49% of people feeling stressed, 34% missing out on social activities, 31% not accessing health services when they might have otherwise, and 28% making unhealthy eating choices. … Ten per cent of those aged 18–34 take regular days off work due to money worries. (CFFC, 2019)

Not only are young people worried about money, they are facing crises as a result. As a preliminary question, why emphasise saving and investing, or even the pension system, if many of them are going to end up in situations where they need all the money they earn (and more) for basic expenses? According to results by the Massey Longitudinal Study Update in 2016, 45 percent of participants believe that NZ Super will not be sufficient in retirement, and 63 percent believe that means-testing will be introduced for the pension (Stangl et al., 2016).

The third aspect of this reorientation is the precarity of the economic situation of many young people. The rise of the gig economy—that is, freelancing and doing many small jobs, often competing for low pay rates among other highly skilled workers—is leading to increasingly unstable and insecure financial situations for many workers. Freelance positions are attractive for both workers and employers wanting flexibility, but that comes at a cost. There is no guarantee of income, and as much as half of one’s time is spent finding new clients to work for. As the ANZ (2018) report notes, people who had considerable variation in their income scored an average of 15 points below the national average financial wellbeing score (44 vs. 59/100).

In sum, young people are finding it increasingly difficult to match their expectations, skills, knowledge and viewpoints to the economic and financial situation they are thrust into after leaving

school. This education should, however, enable young people to thrive in the environment they find themselves in. Young people are finding that they lack the resources for what were previously entirely possible financial behaviours, such as saving, investment and retirement planning.

Changes in ecological, social and cultural consciences

In the first section, we briefly explored the neoclassical economic model. This is the model many economists still use and the one being taught in our classrooms. However, across the globe we are increasingly becoming aware of its shortcomings, in light of rising inequalities, climate change, changing financial conditions and increasing cultural awareness and the decentration of our worldviews. This subsection explores the role of these changes in understanding our financial situation.

Neoclassical economics places economic growth as the goal of our societies, and this results in progress, measured through improved living standards, education and more. Both researchers and everyday citizens are realising, however, that economic growth is not necessarily a precursor to a better quality of life, and progress can be defined in other ways. Climate change is also another large factor putting pressure on our current systems of consumption and international trade. As research by the United Nations demonstrates:

> While technological and financial policies undoubtedly have a role to play in climate change, broader structural, cultural, perceptual, behavioural and ideological shifts are also necessary. In other words, transformative shifts in how people think and act, and how they relate to present and future generations are necessary. This is where education has a crucial role to play in climate responses. (Mochizuki & Bryan, 2015, p. 7)

Financial education has a particularly important role to play here because financial education teaches us how to manage and consume resources necessary for life. It is these very choices regarding the consumption of resources that are impacting the ability of the planet to maintain a stable temperature. If we continue to choose plastic products, invest in schemes that support fossil fuels and create massive amounts of waste each year, we will certainly miss the Paris Agreement target of 1.5 degrees of warming. Financial education needs to prepare students not just for the financial system they are entering into but the consequences of their financial decisions as well—consequences which impact their ability to live a secure and safe life, impacting their financial decisions in the future. Money might be our primary measure of value, but if consumers do not value the environment in which they live, it will cease to exist in a way that supports human life.

Researchers have developed alternative models that we could be introducing into classrooms. Kate Raworth's *Doughnut Economics* is one of such models which has also been interpreted and redesigned in light of te ao Māori.[iv] The aim of this model is to live within certain predefined social and environmental limits, such as inequality, education and ocean acidification, in order to meet our needs within the resources of the planet. People are no longer simply consumers but individuals and communities with certain needs (political voice, social justice, education, food, water, shelter, among others), who have the potential to use the earth's resources either within their capacity, or by exceeding this capacity. In Raworth's words: "We are reciprocating, interdependent, approximating people deeply embedded within the living world" (Raworth, 2017).

This new model and viewpoint of the economy as the intersection of social needs and environmental capacity is not some far-flung theory. It is already being used by the city of Amsterdam to guide their development and by Costa Rica to guide their transition to a renewable economy, to name a few. Our understanding of what the economy is, and how individuals and groups participate in it, goes

well beyond the narrow scope of individuals maximising self-interested value. We rely on each other, and the earth and its resources, considering others in our decisions and our social structures. To teach financial education with the assumption that *homo economicus* defines the human being, and that the best decision is the one that benefits us individually, seems narrow-minded and unrealistic. Furthermore, as Mochizuki and Bryan note,

> People are also more likely to feel responsible for the wellbeing of future generations and geographically distant others if they recognise that there is an identifiable 'causal relationship' between their ordinary, day-to-day actions and the climate-induced harm that others will experience. (2015, p. 10)

These ordinary day-to-day actions are mandated and flow through our financial decisions, and thus recognising and understanding how this works in financial education programmes is key to creating the solidarity needed to reduce aggregate emissions. Australian financial education researcher Carly Sawatzki (2019) identifies climate change as one of the risks that young people now face, placed alongside debt, scams and banking as the four most important risks to be taught in financial education. Financial education is therefore not just about teaching financial risks, because if we are aiming to achieve greater financial wellbeing through this education, we must take into account the risks that ecological and climate-based threats pose and teach students to manage and deal with these risks in their everyday financial decisions.

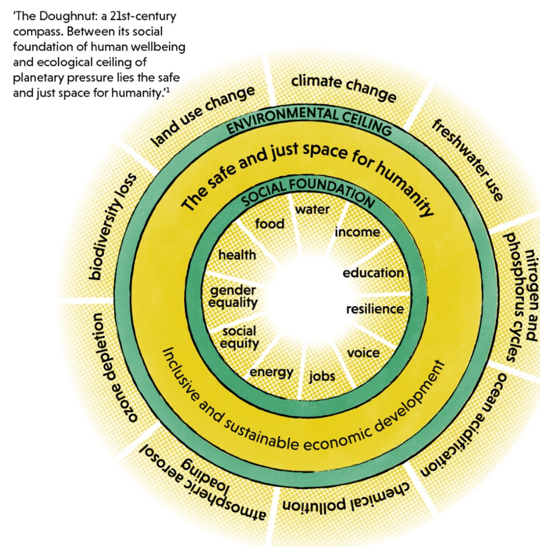

Figure 1. Doughnut Economic model showing the planetary boundaries and social limits (Raworth & Hens, 2019).

The ecological flow on effects of our consumption often do not play a central role in financial education decision making, yet "climate change has far-reaching repercussions for where people can settle, grow food, maintain built infrastructure and rely on functioning ecosystems" (Mochizuki & Bryan, 2015, p. 9), which in turn clearly impacts our financial wellbeing. When we think of buying a car, we should not only think of the price in dollars but also of the price in tonnes of carbon dioxide emitted into the atmosphere and of the millions of people expected to be displaced as a result of climate-induced disasters, of which we could be included. Sawatzki (2019) notes, in tasks involving cars, problems often ask how the participants could save money but provide no information as to the price of

alternatives—public transport, cycling, and more. The only ‘correct’ solution is to stick with the car. These other factors have real-world implications and generate risks that should play a role in a responsible decision. Price is not the only factor to consider in order to maximise our own utility because there are long term consequences associated with all our purchases that lie outside the financial realm.

As is demonstrated by financial education research in Georgia, “in order to develop a relevant financial education strategy, it is necessary to decipher the mental psychological tendencies of a particular society and find the sensitive points to which they respond more” (Margvelashvili & Kostava, 2020, p. 6). In the diverse New Zealand context, there are many examples of cultural differences that influence financial decision-making. For example, the role of whānau and hapū in Māori communities, and other community groups like family and church in Pasifika communities, play a much larger role in financial decision making than learning programmes currently suggest. From these standpoints, the goal of any personal investment is often both to benefit oneself and the community or group to which one belongs. The idea of personal gain, individual wealth, and even concepts such as investment and insurance, are not traditionally part of the te ao Māori worldview. As such, we should not assume that these financial products and services are valued inherently, without justification, and that their use and relative benefits will be understood and used by all those who learn about them at school.

Teahooterangi Pihama, the Head of Māori Advisory at Kiwibank New Zealand, notes that Māori have low involvement in financial institutions, low home ownership rates and general distrust in the banking industry:

> “The main reason [we are not very involved] is, we can’t see ourselves in the bank, in the people we are communicating with and the services being provided. We also can’t see our values in that individualistic nature of wealth creation. (Day, 2021)

Why is home ownership not as easy as getting an individual loan, like our current financial education would prescribe? Pihama explains,

> There’s a difference in the way [Māori] look at something like home ownership. The idea of kaitiakitanga or ahi kā versus ownership—in te ao Māori nobody owns anything. It’s about understanding how iwi achieve their aspirations. There are multiple ways we can show up in that space, using the tools we have but evolving the way we understand how they work for Māori. (Day, 2021).

What is needed to ameliorate this situation are “teaching behaviours and strategies that inform recognition and understanding of social/financial injustice and motivate the pursuit of social change” (Lucey & Tanase, 2012, p. 9).

To build a financial education curriculum, which aims at financial wellbeing, knowing that socio-economic factors make up 23 percent of the differences in outcomes, without considering the fact that presenting one role for the consumer, one way of making a decision, and one way to act in the economy, misses much of what actually goes on in real life and what matters to a large number of people in New Zealand. The FCPs only state financial external factors from the Government and the economy, leaving out ecological, moral and social factors. Students thus miss the opportunity to see that they can act in different ways in the marketplace. Financial education is well placed to offer instruction on ecological and social factors because it is through our financial behaviours—our consumption and use of resources—that we will be able to act in ways that support life on a warming planet, reduce inequalities and generate a greater level of financial wellbeing for everyone in the population. Financial education itself does not only lead to financial wellbeing for individuals, but it appears there is also a greater financial wellbeing for the society as a whole as well.

Changing knowledge of human behaviour

By now it seems clear that the narrow perspective and assumptions of our current financial education model do not conform with who we are as people and as actors in the marketplace. This final subsection will explain some of the recent research on heuristics. If we are to understand how we should make good financial decisions, we should not only focus on what good and financial mean but also on how we come to make decisions ourselves.

In the marketplace of the 21st century, the internet and social media play a huge role in connecting companies to potential customers. The marketing and advertising industry in 2015 made up 2.4 percent of New Zealand's total GDP (Commercial Communications Council, 2017). The effects of this industry are noticeable in our everyday lives: when walking down the street, when browsing online, we see adverts; when in the supermarket, we see packaging with deals, promotions, and more. Every company attempts to gain our business and convince us that we need their products. Thankfully, the rational decision-making approach of current financial education is a good way to cut through this type of marketing. It encourages consumers to consider what they are really getting with the money they spend and whether the deals or promotions on offer are worthwhile. Instead, with so many products discounted, they tend to stick with the same brand that they know meets their tastes and rarely consider buying other products.

Additionally, shoppers are assumed to be inputting the *right* information into the tables and charts to make budgets, costings and comparisons. However, with the spread of false news, false advertising and false or misleading information, is it realistic to assume that they are able to gather the right information to make informed decisions? The CFFC offers resources on financial scams, but does this go far enough to teach students how to find the right information, to then put this into the right decision-making process? Consider another example: buying a pair of headphones. Most young people who are interested in technology will shop around online and will look at reviews and specification information from other purchasers. Those who are not particularly interested in technology, however, might end up on a review website which incorrectly lists the product's specifications, watch a YouTube video and read a Reddit channel, and end up believing that they require a $600 pair of headphones, instead of spending $100. The decision-making process of identifying needs and comparing prices has still occurred with this second student, but the influences on their decision making were not appropriate for their situation, giving them the wrong information.

To help us understand the nature of decision making from a research perspective, let's turn to the notion of *heuristics* in cognitive science. Heuristics are mental shortcuts that our brains take, largely without us realising, to help us make decisions. In the financial world, heuristics are most often studied in the context of making good investment decisions. This is because if students can understand how our brains come to conclusions, they can avoid making bad decisions based on false assumptions. Heuristics are often helpful, however, as they allow us to make decisions using incomplete information, based on what has worked for us before or what our brains are naturally programmed to do.

When making a purchasing decision according to the 'perfect information, rational procedure' model of neoclassical economic theory, consumers are expected to first find out everything there is to know about the product on offer. This assumes firstly that it is possible for us to find the information out there, and that they do in fact find *all* the information before making a decision. In many cases, if they were to actually find all this information, they would be overwhelmed. Humans are also prone to bias, one of the more simple heuristics, whereby often we have a preconceived idea of what a particular good will offer us and only select or use the information that confirms our ideas (confirmation bias).

If curriculum developers and teachers build in an understanding of heuristics into our financial education curriculum—that is, teach our students how their brains make decisions under conditions of imperfect information and environmental pressure—then exercises will be much closer to simulating how money decisions are made in everyday life. Students will not, therefore, operate on assumptions that do not occur in most of our financial decisions, even for those who have strong financial capabilities.

Possible changes and avenues for further investigation

By now, it seems clear that the current reality we are living in does not conform to the neoclassical assumptions implicit in the financial education curriculum. We are in need of a reorientation towards financial education if we are to improve financial wellbeing in New Zealand. It seems quite apparent that the current financial education curriculum is lacking in a significant number of areas. That is not to say that it is completely useless, nor to say that it offers nothing and does not work. It does—it just has a limited efficacy, in a limited area, with a limited range of people. We have seen this, for example, in the cultural impacts on financial decision making in the previous section. As Kaiser and Menkhoff have found in a meta-analysis of 126 impact evaluation studies, financial education does have a positive effect on the financial literacy of a population. However, "teaching low-income participants (relative to the country mean) and target groups in low- and lower-middle–income economies has less impact" (Kaiser & Menkhoff, 2017, p. 612). It has also been shown in Australian meta-analysis that the approximate 'lifetime' of financial education in impacting financial behaviour is around 20 months (after this time, the impact is negligible) (Fernandes et al., 2014). What is often not measured are the effects of financial behaviours that impact financial wellbeing in the future: ecological, social and cultural effects that influence the whole population. Unfortunately, we do not have substantial research that demonstrates these links at this stage.

What, therefore, are possible avenues to make changes in our financial education curriculum? The most obvious thing is to explain the relativity of neoclassical assumptions and change the activities in our resources to include multiple ways of making decisions, with multiple decision factors. The next step would be to think about context and culture as important factors in the development of teaching and learning activities. Drawing on Whitebread and Bingham (2013), Hunter and Sawatzki (2019, p. 3) note that "as children have little in the way of financial resources they control independently, teaching explicit forms of financial knowledge is unlikely to be as effective as pedagogies that allow children to experience ideas and practice processes like problem-solving and self-regulation". We should add columns to our comparison tables to consider the ecological effects and the impacts on our friends and whānau; we should add options of collective ownership and pooling of resources; to not even look at the 'buying a car' activities because we recognise that we will not use a car, and instead take public transport, carpool or cycle to work or school. We should lessen our focus on buying a house, given that this is fast becoming an impossible dream for many New Zealanders, instead focusing more generally on how to provide shelter for oneself and one's family in financially sustainable ways.

Further, we should teach students about how we actually make financial decisions in real life. We use heuristics, which lead to almost-automatic decisions most of the time. We are influenced by advertising and marketing in sometimes unconscious ways, and we need to be aware of false information, false marketing and inappropriate sources for our needs in the context of financial decisions. Consumers do not just need to list information they find; they also need to consider the long- and short-term effects of their purchases on the many other factors impacting their quality of life. Human beings can act in the financial space in ways other than consumers maximising cost/benefit, and they can do so in ways that benefit them as collectives, not just as individuals. Commerce subjects often explain the theory; however, within financial education, this can remain unexplored.

These guiding suggestions might seem too large for financial education, but if we incorporate them in the way we give examples, the way we explain different options and the way we structure our resources, we avoid trying to teach too much. The point is not to teach students about every cognitive heuristic, for example, but rather to make them aware that their financial decisions are made against a certain background, and, if they decide they want to make financial choices that are as informed as possible, there are certain areas which they will need to consider. Financial education can open the doors to financial wellbeing by delivering the necessary basics of financial skills, as well as the necessary

background, to allow young people to feel confident to learn more as they make more financial decisions in their everyday lives.

In March 2021, the Ministry of Education released the proposed commerce standards for NCEA Level 1, and the proposed standard '1.1: Explore perspectives of financial decision making for a whānau'[v] presented the perfect opportunity to include these insights into New Zealand's national curriculum. Here's an example situation we might find in an updated workbook:

> Jimmy's mother wants him to tidy his room. He has enough money to buy 10 new plastic boxes, but he chooses to make two out of wood instead, and learn carpentry skills from his koro along the way. He takes the risk of not having 8 spare plastic boxes the next time he needs one, but knows he'll be better able to make a box next time, and the ecological impact of the wooden boxes is much less than the plastic ones. They'll last his whole life, and he will have the memory of working with his koro, who also teaches him about care and effort in carpentry. Jimmy understands that the best decisions are ones that optimise price/resources, but also ecological and social costs and benefits.

Finally, what else can be researched in the space of financial education that would help us to put together a comprehensive curriculum? It would be helpful to know more about the effectiveness of digital simulated learning environments like Banqer. With this information, we could develop financial education tools that take into account these reorientations and link to real world problems, financial difficulties and offer culturally specific examples to each learner.

Likewise, in what ways can financial services be adopted to serve the needs of other communities that do not adhere to the individual wealth model in the first place? In addition, a cross-cultural longitudinal study analysing the impacts of different financial education curriculums and tools, with 5-yearly updates, would allow us to assess the impact of the current resources and the improvements in financial capability that may or may not result. With these lines of thought, there is much work to be done in the space of financial education, yet they present an exciting research programme which promises to increase the financial wellbeing of all New Zealanders, in a holistic way. In addition, organisations and Government agencies should inform themselves of this research, updating their knowledge frequently, so that their strategies are not based on opinions but on real-world, measurable conditions. That way, we might raise living standards and achieve the prosperity that traditional financial education systems promise.

Conclusion

This article incites a fairly significant reorientation to our approach towards financial education. We have seen that human beings are not always rational, and they do not always have rational preferences among a given set of outcomes. Humans use heuristics in their decision making and sometimes make emotional or moral decisions, not rational ones. Optimisation of utility and profit are not their only goals; rather, they strive for equality, political justice, ecological respect and to maintain the environmental conditions necessary for life, within the resource limits. They do not act independently in an empty space; rather, they act within an environment, which includes friends and family, culture and religion, advertising and media, and more. Our desires and our interaction with financial products and services do not always come from individual will but from cultural and social practices, and, as is largely the case with Māori and Pasifika communities (but also with other cultural groups), the financial offerings themselves are not aligned with the cultural principles and expectations that form these worldviews. Behavioural economists have advanced the reach of financial education curriculums, but there is more to be done.

Financial education programmes need to prepare young people for situations of financial and emotional hardship as well as financial success. They might never reach their savings goal of $1.5 million to buy a house; they might not reach their goal of $300,000 for a 20 percent deposit either. Their uninsured house might be levelled to the ground by an extreme weather event; they might be forced inside for weeks and not be able to go to work, or they might be involved in a complex leak of personal details which means they lose significant amounts of money. They might miss out on financial opportunities because of culturally limited presentations of financial services within their communities. All of these are not imagined scenarios, they are real possibilities with financial consequences. Dealing with unexpected risk became something real with the Covid-19 pandemic, and now we have the experiences and the tools to transmit this knowledge through our financial education. In light of this, Kempson et. al's (2017, p. 19) definition of financial wellbeing, "the extent to which someone is able to meet all their current commitments and needs comfortably, and has the financial resilience to maintain this in the future", takes on a whole new meaning and comes with a new set of responsibilities for all those in the financial sector.

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[i] It may be asked by an inquiring reader what my own background is with financial education. Some years ago, I was contracted to write the highly successful Financial Education Hot Topics by Young Enterprise. Believing in earnest that these would truly prepare students for financial education post-school, these resources continue to be used. However, my own changing perception of what is really necessary in financial education, and what is missed out, based on the changing economic, social and environmental situation we find ourselves in, has opened the space for a different approach, which I wish to lay out in this article.

[ii] See more about these on the Ministry of Education website https://www.nzqa.govt.nz/framework/explore/domain.do?frameworkId=2884591858

[iii] See in particular Margolis, E. (Ed.). (2001). The hidden curriculum in higher education. Routledge.

[iv] See Raworth, K. (2017). Doughnut economics. Chelsea Green. And Shareef, J. (2020). An indigenous view on doughnut economics from New Zealand. Project Moonshot.

[v] At the time of writing only the matrix of the standards had been released for consultation, so there is little information about what they might include, or how they might be taught. The Ministry seem to have not adopted the standard proposed in the text. The standards now in place at Level One are available here: NCEA Education. (2021). *Commerce Assessment Matrix*. https://ncea.education.govt.nz/social-sciences/commerce?view=assessment