Knowing Growing Showing Literature Review

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Abstract

Throughout the world, young people are having to learn about consumer and financial literacy, especially in the wake of the Global Financial Crisis which hurt many families and communities, including young people. This global challenge naturally extends to Aboriginal and Torres Strait Islander young people in Australia who are particularly vulnerable to financial stress and consumer scams.

There is not a great deal of literature directly on the topic of Indigenous financial literacy particularly as it pertains to quality teaching and learning. This paper explores Indigenous financial literacy and its wider contexts and seeks to pull three important conceptual and empirical threads together:

- what young people need to know about consumer and financial literacy,
- how Indigenous learners learn, and
- how to best teach these particular literacies to Indigenous learners.

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The big picture

The GFC and the global momentum of financial literacy

Today's world is changing fast, and is more complex and technologically advanced than at any other time in our collective history (Vyvyan, Blue & Brimble, 2014). In a history characterised by rapid shifts and advances in technology, the nature of money has itself also changed (Blue & Brimble, 2014). Currencies are no longer based on precious metals; paper-based currency has replaced gold and silver coins (Selgin, 2015) and now digital currency (the internet and plastic debit and credit cards) is fast making paper-based money obsolete (*ANZ Survey of Adult Financial Literacy in Australia*, 2014). These paradigm shifts have enacted sweeping, systemic change and naturally this flux has carried over into individual personal finance (ASIC, 2015).

There has been an exponential growth in consumerism in the young, with marketing campaigns specifically targeting children with the purpose of creating lifelong patronage (Beder, 2009; Jenkin et al., 2014). Spending by today's youth and young adults is often based on ill-informed consumer choice, unwillingness to save and increased willingness to take financial risk (Ali, Anderson, McRae & Ramsay, 2014a; 2014b). Today, increasing debt at individual and national levels is commonplace, filtered through a marketplace economics metalanguage of profit and loss. Adding further complexity, future financial security is increasingly moving from a system level, social welfare orientation (pension, state sponsored health care) (Xu & Zia, 2012) toward individual retirement management frameworks (superannuation, investment portfolios) (Lusardi, 2015; Worthington, 2013).

Though relative to this recalibration, evidence suggests that individuals are not well-placed to make such decisions (Lusardi, 2003; Lusardi & Mitchell, 2005). The urgency of the situation was underscored by the fallout from the Global Financial Crisis (GFC) (Blue, Grootenboer, & Brimble, 2014; Pinto, 2013) and its relationship to mortgage default which is often associated with financial illiteracy (Xu & Zia, 2012). Consequently, policy makers internationally have responded to the fluid complexity of this state of affairs and the public's inability to understand it by increasingly recognising the importance of investing in financial literacy and consumer protection educational programs (Godinho, 2015). Since the GFC, financial literacy is seen to be a complementary mechanism in the regulation of financial markets, in facilitating consumer protection and as a core element in constituting financial inclusion policies (Perotti et al., 2013). This importance - combined with the global recalibration following the GFC - has led to what the policymakers term the ultimate 'teachable moment' (Ali et al., 2014a, 2014b; Arthur, 2012; Brimble & Blue, 2013; Kell, 2014; Pinto, 2013, 2012).

In 2012, G20 leaders endorsed the OECD *International Network on Financial Education High-level Principles on National Strategies for Financial Education (2012)* and as of August 2014, the international momentum generated by this initiative had been taken up by 55 economies worldwide, either in consideration, design or implementation phases (Kell, 2014). Domestically, Australia's *National Financial Literacy and Consumer Protection Strategy* 2014 – 2017 (ASIC, 2014) aligns with this momentum and is in its second phase, placing Australia amongst the leaders worldwide (Kell, 2014). The current strategy is built around five strategic priorities, designed to influence the individual situation and inform policy development.

Individuals, families and communities

1. Educate the next generation, particularly through the formal education system
2. Increase the use of free, impartial information, tools and resources
3. Provide quality targeted guidance and support

Policy and program development

4. Strengthen co-ordination and effective partnerships
5. Improve research, measurement and evaluation (ASIC, 2014, p. 22).

The strategy is multifaceted and driven by educational programs located in schools (ASIC, 2014). Defining the role of education in this national mandate, Priority 1 of the strategy reads as follows (ASIC, 2014, p 22-23):

Building teacher capability

· Increase the number of teachers trained through ASIC's *MoneySmart* Teaching professional learning program

· Develop resources for teachers and students with a key focus on the Australian Curriculum for Economics and Business.

· Increase the engagement and confidence of teachers to teach consumer and financial literacy through the Australian Curriculum.

Post-school opportunities

· Increase the number of vocational education and training (VET) students participating in financial literacy education.

Parents, families and peers

· Educating students about money management at school is one way of engaging parents and other family members, especially in regional and remote areas where the school is often the centre of the community.

This strategy is aligned to the *National Consumer and Financial Literacy Framework* (MCEECDYA, 2011). The framework comprises a set of standards designed to augment the educational sector's ability to integrate consumer and financial literacy in line with the national curriculum (Bosshardt & Walstad, 2014). The final mechanism in this tripartite approach is ASIC's *MoneySmart* online space at www.moneysmart.gov.au/teaching. This domain is designed to integrate consumer and financial literacy in classroom teaching, via a clearinghouse of resources linked to the Australian Curriculum content for primary and secondary students (ASIC, 2014).

Definitions and concepts

Financial literacy is a multifaceted concept, which can be thought of in a number of ways:

- Definitional concept (ANZ Survey of Adult financial Literacy in Australia, 2014)
- Paradigm of educational proficiency (Kell, 2014; Mandell & Klein, 2009; Walstad, Rebeck, & MacDonald, 2010)
- Body of thought (Lusardi & Mitchell, 2013; Willis, 2009)
- Skill set in application to individuals (Behrman, Mitchell, Soo, & Bravo, 2012), to the business and the corporate sector and to that of government and policy directions (Fernandes, Lynch, & Netemeyer, 2014)

These concepts are not definitive or fixed (the area is undergoing development), nor do they exist in isolation. There are multiple definitions that reflect their ongoing refinement and evolution (ASIC, 2014). In a general sense, 'financial literacy' is a globally interchangeable term that relates to a practically orientated (Ali et al., 2014b) core life skill (ASIC Report 339, 2013). As Xu and Zia (2012, p. 2) point out, it is a term that can encompass concepts ranging from:

- Financial awareness and knowledge (including financial products, institutions, and concepts)
- Financial skills (such as the ability to calculate compound interest payments)
- Financial capability more generally (in terms of money management and financial planning)

The concepts underpinning these definitions highlight strongly relevant elements in the financial sector. ASIC notes that being financially literate relates to the ability to be able to "understand and negotiate the financial landscape, manage money and financial risks effectively and responsibly, and pursue and attain financial and lifestyle goals" (ASIC, 2014, p. 6).

The concept of financial literacy shifts in meaning across socio-economic demographics of countries also; for example, in high income countries this term is related to financial planning and consumer protection (Atkinson & Messy, 2012), while in lower income countries, it signifies merely having a bank account, access of financial services, the acquiring of entrepreneurial capital and microenterprise (Xu & Zia, 2012). Specifically in the Australian context, the *ANZ Survey of Adult Financial Literacy in Australia* (2014, p. 5) argues that the definition comprises five interrelated dimensions which consist of:

1. Keeping track of finances
2. Planning ahead
3. Choosing financial products
4. Staying informed
5. Financial control

The ASIC 2014–2017 strategy emphasises the interplay between environmental factors and personal circumstances and the causal relationship they share with attitude and behaviour in a dynamic, evolving process. The definition highlights this diversified perspective:

> *Financial literacy is a combination of financial knowledge, skills, attitudes and behaviours necessary to make sound financial decisions, based upon personal circumstances to improve financial wellbeing (ASIC, 2014, p. 6).*

From this it becomes clear that financially related proficiency, attitudinal and behavioural dimensions are interlocking components; financial literacy is but one element. From this viewpoint the concept of financial wellbeing highlights the interconnected nature of the broader aspects of financial life (Joo, 2008), and the wider array of factors that contribute overall to economic health and wellbeing need to be taken into account.

Similarly, Brascoupé, Weatherdon, and Tremblay (2013) adopt a model for financial wellness that extends beyond income security to embrace financial attitudes and behaviours. With specific reference then to Indigenous people, there are four definitions which illuminate the holistic nature of financial wellbeing as it pertains to the Indigenous worldview and experience. Applying Brascoupé's model to *Knowing Growing Showing* allows for a flexible understanding of consumer and financial literacy interventions. Students moving through these stages can acquire the competencies related to each level. In this way they are able to move from financial illiteracy and exclusion, progressively through to a final state of financial wellbeing, enabled by mastering financial literacy. There are five key stages including;

1. Financial wellness
2. Financial fitness

3. Financial capability

4. Financial inclusion

5. Financial exclusion

The initial concept of ***Financial inclusion*** (Australia) is defined as the ability to make decisions about managing money and having access to information to choose appropriate financial products (National Indigenous Money Management Agenda (NIMMA), 2007). The term ***Financial capability*** (Australia) is given preference in the literature due its flexible use in a diversity of contexts (Saunders & Piper, 2011). It comprises a set of skills and knowledge that facilitate the individual's ability to lead the kind of life valued inside their larger social cultural context (Sen, 1999). ***Financial fitness*** (Canada), which is a working ability to make appropriate financial decisions in order to achieve relative states of wellness (Kraneveldt, 2011). Finally, ***Financial wellness*** (Canada, USA, New Zealand and Australia), indicates the whole state of financial proficiency, informed by:

- ***Education and policy*** (financial literacy, income security, financial inclusion)

- ***Motivation*** (financial behaviour and financial behaviour)

- ***Outcome*** (financial wellness) (Brascoupé et al., 2013)

In this model, financial literacy is one component of financial wellness. Financial literacy, can also be understood in the terms offered by Bay, Catasus and Johed, (2014, p. 38), as being more than just the "ability to be able to read and write in the language of finance, [it] needs to be situated in practice, as it varies with time and place". Financial literacy can be understood as four essential components:

1. Financially based and related concepts

2. Underpinned by numeracy and mathematical elements

3. Behaviourist dimensions

4. Creative, critical and higher order thinking

These notions will be discussed in greater detail in the teaching and learning section of this review.

The placement of Indigenous consumers: The reality of the Indigenous

Money as a central commodity underpins the world we live in, occupying a foundational role in determining choice and relative quality of life (Saunders & Piper, 2011). The necessity of money, financial proficiency and sound financial behaviour is a manifest requirement of the socio-economic system, in a close relationship constituting wellbeing (Moodie, Roost, &

Dommers, 2014; NIMMA, 2007; Saunders & Piper, 2011). While the concept of money today in its present form is foreign to the historical cultural experience known and lived by Indigenous people in this country (Briggs in Saunders & Piper, 2011), the notion of trade, commerce and economics are not unknown to Indigenous people from a culturally contextualised viewpoint.

There is, however, a prevailing perception that money and culture, are mutually exclusive (Briggs in Saunders & Piper, 2011). This perception is strengthened by a general belief (from urban to remote) that money is an external imposition (Godinho, 2015) and as a result Indigenous Australians generally find dealing with it difficult (Saunders & Piper, 2011). In fact the Indigenous experience is diverse across location, language and cultural disposition (Moodie et al., 2014), and money, as determined by the dynamics of the system, figures as a key enabler inside this diversity of circumstances in family and community (Adams, & Vemuri, 2004; Bin-Sallik); as well as across organisations and businesses (Foley, 2012).

What emerges from this complex relationship is that Indigenous Australians have been identified amongst the sub-groups of those most at risk in the wake of a complex and rapidly changing financial landscape (ASIC, 2014; Blue & Brimble, 2014). As well as being disadvantaged by knowledge deficits and unfamiliarity with technological advances, Indigenous Australia is further restrained by further layers of complexity, added by the collective experience of colonisation and the historical consequences that have resulted from its drastic unbalancing of Law and culture. These consequences today, from the viewpoint of their financial situation, place Indigenous Australia in a position of relative vulnerability underpinned by what the literature labels financial exclusion (NIMMA, 2007) and a general state of financial illiteracy (*ANZ Survey of Adult financial Literacy in Australia*, 2011). Addressing Indigenous financial vulnerability has been recognised as a priority due to the prevailing belief in the necessary relationship between economic stability and wellness (Blue et al., 2014). However this positioning of Indigenous Australia in a state of relative financial exclusion is not a recent phenomenon (Altman, 2000; Bin-Sallik et al., 2004). Based then on these well-established views, those in the field of advancing Indigenous financial agency stress the urgent need for this relationship to be redefined (Briggs in Saunders & Piper, 2011).

The demographics of illiteracy

Prior to engaging with the specifics of Indigenous vulnerability, a discussion of the general disposition of illiteracy is required. The factors associated with general illiteracy are quite often shared across the Indigenous diaspora, and they combine with and amplify those that are Indigenous specific. When framing the characteristics of financial exclusion, the literature is largely consistent on the risk factors, with the following being cited as causal of financial illiteracy:

- ***Gender bias against females*** (Australian Government Office for Women, 2007; Lusardi & Mitchell, 2011; Moon Ohk, & Choi, 2014; Pinto, 2012, 2011; Kell, 2014; Xu

& Zia, 2012)

- ***Low socio-economic status*** (Bin-Sallik et al., 2004; Godinho, 2015; NIMMA, 2007;)
- ***Low levels of education*** (Ali et al., 2014a; Thompson, 2014; Van Campenhout, 2015)
- ***Age*** (ASIC, 2014; Hawkes, 2008)
- ***Location*** (Altman & Taylor, 2002; The Allen Consulting Group, 2012; Xu & Zia, 2012)
- ***Low levels of prior involvement with the financial sector*** (Ali et al., 2014b; ANZ Survey of Adult Financial literacy in Australia, 2011, 2014; Van Campenhout, 2015; Xu & Zia, 2012)

As observed above, the compounding factors of the colonisation process have left Indigenous Australia in a relative state of imbalance. The *Overcoming Indigenous Disadvantage Report of 2007* (COAG, 2007) highlights Indigenous financial disparity as emerging from a history of oppression, and consistent with the broader context of challenges that face Indigenous Australia. The following issues are compounded when having to negotiate financial literacy on low incomes (NIMMA, 2007):

- Schooling
- Labour force participation
- Home ownership
- Employment strategies
- Lack of access to financial counselling, banking products and services (COAG, 2007).

Consequently, these categories further compromise the relative state of Indigenous financial wellbeing, resulting in further layers of risk that need to be addressed.

The literature clearly points to a direct relationship between financial literacy and consumer rights and protections (Ali et al., 2014a, 2014b). Consequently Indigenous Australia, in all its diversity, consistently figure poorly in assessments of financial literacy, and this vulnerability is increased in the current complex and financially diverse landscape. This is in spite of the fact that Indigenous student performance in financial literacy testing has shown to be stronger than their performance in PISA and other standardised tests (Dreise & Thompson, 2014; Thompson, 2014).

Indigenous consumer protection

Consumer protection can be defined as the knowledge of how to successfully negotiate the financial aspects of acquiring goods and services from a position of consumer safety. In

Australia, the Trade Practices Act (1974) has afforded extensive protection for nearly four decades. However the global recalibration of the financial landscape in Australia has seen the introduction of the new Australian Consumer Law (ACL) forming part of the Commonwealth Competition and Consumer Act (2010) (Goldacre, 2012). Under this legislative banner, operating as a regulatory apparatus working to provide surety and safety for Australian consumers, are both the Australian Securities and Investments Commission (ASIC) and the Australian Competition and Consumers Commission (the ACCC).

Despite these protective barriers, for Indigenous Australians the prevalence of risk and susceptibility to improper dealings is greatly increased by the previously outlined factors. This disparity is highlighted in The National Financial Literacy Strategy (ASIC, 2014).

> *Cultural, geographic and historic issues [are] faced by some Indigenous Australians, particularly in remote areas... These issues may include balancing family responsibilities, availability of appropriate and affordable banking services, access to culturally sensitive financial counselling, generally poor literacy and numeracy skills, and lack of confidence and experience in dealing with certain financial products.*

The ACCC and ASIC (2013) in their *Fair Store: Engaging with Indigenous Consumers,* highlight that Indigenous consumers may be vulnerable in the marketplace because of:

- limited English skills
- having trouble interpreting written contracts and comparing them either verbally or in writing, as well as
- not regularly engaging in complex commercial transactions and may be at risk if key terms and conditions are unclear

Further increasing the susceptibility to risk is the cultural tendency to respond in the affirmative to direct questioning, compounded by a lack of information and agency support, especially in regional and remote contexts, where distance further aggravates financial illiteracy (Loban, 2010). It was noted by South Australian Consumer Affairs Minister, Gail Gago (2010), at the launch of the 2010–2013 National Indigenous Consumer Strategy, *'Taking Action – Gaining Trust'* that:

> *Consumer agencies throughout Australia acknowledge that the needs of Indigenous communities are unique when it comes to consumer protection. Due to factors such as geographic isolation, low English literacy levels and fewer choices when it comes to what is available for purchase, Indigenous consumers in remote areas can be exploited more easily.*

The National Indigenous Consumer Strategy Action Plan (2014-2016) (the third iteration) (NSW Fair Trading, 2014) stipulates the following strategic directions:

- The promotion of basic consumer rights recognised by the United Nations for Indigenous people in Australia
- To build knowledge, confidence and awareness for Indigenous people to action their consumer rights
- To improve access to consumer protection services
- Improving market outcomes for Indigenous consumers

The gaps in understanding of consumer rights and the layers of protection needed are the focus of the work of Loban (2010, 2011, 2012) which reports on rogue traders operating in Indigenous communities throughout the regional and remote contexts of northern Queensland, (2010, 2012), which had a direct bearing upon mental health and wellbeing (2011). Adding to the complexity is the young median age of the Indigenous population and the inherent deficits of youthful understanding of financial illiteracy, a state further compounded by the lack of intergenerational foundations of financial security and socialisation (Bin-Sallik et al., 2004).

Teaching and learning orientation

The verdict is still out: is financial literacy education effective?

There is growing recognition of the role that education plays in furthering an individual's ability to understand and work through financial complexity (Lusardi, 2015). However financial literacy is framed from diverse standpoints inside the literature, ranging from those who claim that it is the 'magic bullet' to those who view it with a measure of suspicion. As an educational intervention this process is referred to as financial literacy education (Lusardi, 2015; Blue & Brimble, 2014) and is included in school curriculums in Australia, using a tripartite approach via

- The National Financial Literacy and Consumer Protection Strategy (ASIC, 2011, 2014)
- The National Consumer and Financial Literacy Framework (2011)
- The Australian Curriculum (ACARA, 2013)

However as noted by Taylor and Wagland (2013), schools should not be asked to bear the burden of addressing the issues alone. They contend that financial illiteracy is a community problem and therefore whole community responses, across sectors are required. This is sound logic given that the attainment, development and refinement of financially literate behaviours are a lifelong journey which cannot be undertaken by a particular intervention alone (Xu & Zia, 2012). As such, improving education will not be enough to achieve the desired reformation across a global landscape, with further initiatives required for consideration and adoption (ASIC, 2011). As an extended and additional layer to the measures of school-based interventions the literature asserts the need for:

- System wide overhauls, with an emphasis upon making it easy for institutions to do the right thing (Arthur, 2012)
- The overwhelming need for financial products to be simplified into plain English by providers in order to reduce the burden of complexity (ASIC, 2014)
- The need for public awareness campaigns to increase the public concern for financial literacy generally (Taylor & Wagland, 2013)

The weight of discussion and policy momentum directed at the realm of financial literacy education by administrators, regulators and policy actors imply that financial literacy is the logical measure that will generate the necessary change (OCED, 2012; ASIC, 2014; Kell, 2014). However, on the contrasting side of this discussion is opposition framed in terms of two subsets of concern, one concerned with landscape and structure and the other with teaching and learning. Structural concern is organised around the following issues:

- The lack of a clear evidence base which can guide and ground the developing initiatives (Worthington, 2013; Brimble & Blue, 2013; West, 2012; Taylor & Wagland, 2013; ASIC, 2014)
- The scope and effectiveness of the current measures (Brimble & Blue, 2013; Worthington, 2013)
- The neutrality of such educational frameworks (Pinto & Coulson, 2011; Pinto & Chan, 2010)
- The position of questioning access to a system that is openly oppressive (Arthur, 2012) without endorsing systemic change and demystification (Taylor & Wagland, 2013)

While from a teaching and learning standpoint, opposition centres on:

- The lack of an agreed structural framework to effectively embed financial literacy inside school curriculums (Blue & Brimble, 2014).
- The question of schools being the ideal sites of curriculum delivery (Taylor & Wagland, 2013),
- The limitations of current approaches being narrow, overtly value-laden and bottom-up in concentration (Pinto, 2013; McCarthy, 2015; Hastings & Mitchell, 2011; Maier, Figart, & Nelson, 2014; West, 2012; Silvester, 2011)
- Teacher reservations upon the placement of a new subject area inside an already

overcrowded curriculum and the lack of support to deliver this new knowledge (Taylor & Wagland, 2013; Danes, Rodriguez, & Brewton, 2013; Gill & Bhattacharya, 2015)

'Bottom up' vs. 'top down' approaches

Notwithstanding the previous concerns, there are misgivings in relation to the current breadth and depth of financial literacy education programs. There is debate over how simple content transfer is limited in working to fulfil the grand narratives that have been outlined by policy in relation the role of financial literacy education in the wake of GFC. This debate can be characterised as two opposing curriculum and pedagogy positions, the ***'bottom up'*** vs. ***'top down'*** approaches to teaching and learning. ***'Bottom up'*** refers to traditional practices of pedagogy, focusing on content and the delivery of surface knowledge, while ***'top down'*** approaches deal in the complex reasoning elements of the learning process, looking to foster and develop higher order thinking. These contrasting approaches illustrate the dilemma facing financial literacy education, the need to effect actual behavioural change rather than just imparting basic content at a superficial level (Hastings & Mitchell, 2011; Danes et al., 2013).

Highlighting further the broader conceptual implications at play in effecting the prescribed change, McCarthy (2015) found that financial literacy alone is not an effective predictor for student debt, citing first generation status, parent income and student major, as being more reliable indicators than the lack of knowledge of subject content matter alone. West (2012) also maintains that financially literate people do not necessarily make good financial decisions, noting the gulf between knowledge and behaviour. Maier et al. (2014) assert that America's *National Standards for Financial Literacy (K-12)* provide a sound structural foundation; however they would be more practically useful if, as well as information about the workings of the market they included reference to the forces that constrain and shape individual choice. West (2012) also notes that financial literacy programs should not only educate about financial markets and their associated products, but by extension should be directed toward the latent psychological biases and the limitations of human capacity. Davies (2015, p. 1) makes a similar point:

> *The prevailing individualistic approach of financial literacy and educational measures is contrasted against a framework that [needs] to equip young people to play an active democratic role and to develop a broader understanding of the financial world, highlighting the dimensions of financial literacy in relation to the individual, industry and government.*

Finally, Taylor and Wagland (2013) question the balance and timing of financial literacy education; how much education and at what age. Getting that balance right enables effective change, with motivation to learn and retain knowledge being a crucial factor, often overlooked. They argue that ability to absorb information is offset against maturity, with the young limited in their relative ability to perceive the inherent importance of what they are being taught about, while those in their late teens and early twenties are more psychologically capable of reconciling information with the grand narrative of the subject (Taylor & Wagland, 2013).

Teach the world

Arguments about methodology and balance aside, the necessity of practical, realistic education is at the core of real world pedagogy. The need for real-world curriculum is further urged by Hawkes (2008, p. 1):

> *I have been manifestly unfaithful as an educator as I have been teaching inadequate curriculum. The only certainties in life are death and taxes, do we teach death in our schools? Do we teach financial literacy? There is a chasm between what a student will use when an adult and what a student is usually taught at school... Western education is failing to offer students relevant material.*

It is important for effective financial literacy to be delivered that the relative gap that exists between curriculum outcomes and the necessities of the real world is acknowledged. While today much effort is geared toward vocational progression and readiness for the post school educational sector, the practical skills of life have been devalued progressively. Home economics, manual arts and life skills are no longer perceived as core elements of education. The progressive abandoning of these important preparations for life has left a hole in educational processes which will have downstream effects on the students currently passing through the system. While there is still debate about the details of financial literacy education, the fundamental need for such education is amply demonstrated by the global disparity which faces young people trying to operate inside the financial system of today.

Hannon, Gillinson, & Shanks (2013) in their seminal text, *Learning a Living,* point to the importance of learners building their own 'agency'. The authors write about the tremendously important task of facilitating learning processes that move learners from the mere 'consumption' of learning to its active 'production'. In financial literacy terms, this could suggest that educational practice and pedagogy cannot afford just to impart 'information' about the world of finance but rather learning needs to work toward 'applied knowledge'.

This is consistent with the Paulo Freire's concept of "reading the world before reading the word" (Freire & Macedo, 1987) in applying a critical literacy approach to adult illiteracy in Brazil. Youth empowerment, facilitated by real-world educational measures in order to foster transformative behaviours, has real currency in light of the inequitable situation facing them in the world of finances. This practical approach to pedagogy has value for Indigenous students, especially in light of the weight of social alienation, the restriction of access to financial services and products, and the way that the concept of money is framed in those circumstances. Such realism being inscribed in the mechanisms of pedagogy would allow realistic examples of situations which align with the reality of Indigenous student experiences to be developed in curriculum moments which are highly real. The outcome of this educational approach is highlighted by Freire in a statement from his seminal work, *Pedagogy of the Oppressed* (1970):

> *Education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world.*

While the "transformation of their world" is a critical goal for Indigenous students in light of the prevailing situation of financial exclusion, it is also fundamentally important that this form of education allows them to understand the realities of the contemporary financial world. Since they operate in a knowledge vacuum, they need a systemic approach in gradual scaffolded stages. Such an approach would use a bottom-up framework that deals with the basic content, terminology and common apparatuses, which would then lead into a top-down, reasoning-based framework. This would be an effective approach to critical thinking, connecting theoretical content to the real world around Indigenous students, allowing a grasp of material and concepts to be applied constructively and logically. It is crucial that Indigenous students are given every opportunity to be able to meet the broader challenges of the world as it applies to and faces them; such is the challenge of correctly framing financial literacy education. Such are the global aims of education, producing competency in the world that faces students when they exit the school gates.

Silvester (2011) taught a basic financial literacy program to Indigenous communities so that their members could better manage a reduced amount of discretionary money as an outcome of Centrelink quarantining in line with the Northern Territory "intervention." Silvester (2011) noted that the failings of the program were caused because:

- it was compulsory
- it used culturally inappropriate materials developed by non-Indigenous people
- it was suited to a classroom based learning context and not a remote setting
- it explored non-Indigenous concepts within an Indigenous context
- its curriculum centred around traditional mathematics and not the journey
- it ignored the context in which the maths were taking place
- it focused only upon the correct answer

Silvester's main contention of the program was that is wasn't designed for the place where the issues arose, effectively ignoring the systemic issues that impact upon the social and emotional wellbeing of communities. She further asserts that the focus of the program was only upon saving and reducing debt and was a tokenistic attempt at addressing the real issues of the community, without exploring or addressing the environmental, social and cultural issues that ultimately triggered the intervention and income management.

Birbili and Kontopoulou (2015) also emphasise integrated approaches that combine financial education with social, citizenship and character education in order to teach children how to make responsible, ethical and compassionate decisions that affect the social and environmental well-being of communities. Approaches which combine consumer and financial literacy with top-down reasoning and a critical perspective that translate to positive environmental and community outcomes are consistent with the assertions of the transformative educational measures discussed above. This reaffirms the crucial need to integrate financial literacy programs with everyday life to maximise their capacities for success across the aspects of knowledge acquisition and behavioural change (Clark, 2014).

Quality teaching in consumer and financial literacy

Taylor and Wagland (2013) note that radical approaches are needed in bringing the necessary change to financial literacy education, which better align with the intentions of current global policy. It is noted by Drexler, Fischer, and Schoar (2014) that the “low hanging fruit” of teaching financial education (e.g. the rule of thumb accounting concepts) although easier, reaches saturation point quickly, and beyond that point a more comprehensive intervention becomes necessary. Blue and Brimble (2014) claim that despite the global momentum there is currently no agreed framework for uniformity of outcomes and student experience. They propose a four-tiered framework that incorporates enabling factors, levels of content and desired outcomes, looking to align the expectation of financial literacy education and its actual delivery and content.

Studies globally offer anecdotal examples of effective financial literacy that has had a positive effect on student behaviour. The literature offers the following key areas where effective strategies have been developed.

- Teacher targeted and professional development (Little, 2014)
- Whole school approaches (Little, 2014)
- Participation vs. Non participation – (Danes et al., 2013; Sherraden, Johnson, Guo, & Elliott III, 2011)
- Early access (Van Campenhout, 2015; Taylor & Wagland, 2013; Sherraden et al., 2011; Birbili & Kontopoulou, 2015; Holden, Kalish, Scheinholtz, Dietrich, & Novak, 2009)
- Education interlocked by practical participation (Taylor & Wagland, 2013; Sherraden et al., 2011)
- Education levels being causal in success (Roszkowski, Glatzer, & Lombardo, 2015; Xiao, Ahn, Serido, & Shim, 2014; Thomas & Spataro (2015)

- Linked to social justice frameworks (Sabbaghi, 2013; Taylor & Wagland, 2013; Pinto, 2012)
- The role of Parent's and Families (Van Campenhout, 2015; Conley & Udry, 2010; Duflo & Saez (2003).
- Relevance of programs (Hung & Yoong, 2010; Hawkes, 2008; Varcoe, Martin, Devitto, & Go, 2005)
- Teaching via games and the online space (Richards, Williams, Smith, & Thyer, 2015; Xu & Zia, 2012; Spader, Ratcliffe, Montoya, & Skillern, 2009; Miller, 2013; Robertson, 2011)
  http://www.makingcents.com.au
  http://financialbasics.org.au/essi-money/about-register.aspx

Quality teaching in numeracy and mathematics

Effective financial literacy education, then, should have four basic principles:

1. Financially based and related concepts
2. Underpinned by numeracy and mathematical elements
3. Behavioural dimensions
4. Creative, critical and higher order thinking

Emphasising the close tie between numeracy and financial literacy, Lusardi and Wallace (2013) note that this association may be exploited inside learning contexts, with the hope of increasing the volume of both, as a direct benefit to real world outcomes for students. However, as Carpena, Cole, Shapiro, & Zia (2011) indicate, it may in fact be easier to design financial literacy interventions which shape behaviour positively rather than address the numeracy-based deficits associated with those previously located within the subcategories of risk. Based then upon these interconnections and the acknowledged deficits found in Indigenous standards nationally, a stocktake of quality teaching practice in this domain is provided below.

In *Teaching Mathematics: Using research informed strategies* Sullivan (2011, p. 24) espouses six key principles for effective maths teaching.

1. Articulating goals
2. Making connections
3. Fostering engagement

4. Differentiating challenges

5. Structuring lessons

6. Promoting fluency and transfer

Morony's *Desktop Review of Mathematics: School Education Pedagogical Approaches and Learning Resources*, (2015, p. 3) argues that teachers need to:

- Implement inquiry based pedagogies to provide classroom experiences that are engaging for students

- Create and maintain a culture in schools that supports and expects teachers to consider and actively explore new ways of teaching and learning in mathematics as part of their everyday professional responsibilities

- Have access to high quality resources and the commitment and capacity to use those resources

- Design resources, where possible, to promote and support professional learning

Morony's emphasis on inquiry-based pedagogies has currency in this discussion as it is highlighted in the Rationale for the *Australian Curriculum: Science* (ACARA, p. 8):

> *The science curriculum emphasises inquiry−based teaching and learning.*
>
> *A balanced and engaging approach to teaching will typically involve context, exploration, explanation and application. This requires a context or point of relevance through which students can make sense of the ideas they are learning. Opportunities for student−led open inquiry should also be provided within each phase of schooling.*

This point of inquiry-based exploration ties into the previous discussion regarding top down approaches and in this example, emphasis is placed upon the importance of context in curriculum and pedagogical design. This importance placed on inquiry-led explorations is consistent with research findings about the teaching of Indigenous students and the role of context generally (Lucas & Guy, 2013; Yunkaporta & Kirby, 2011). Research into Indigenous learners and mathematics has seen the spread of the concept of ethno-mathematics, a model which applies cultural context as a framework that works to scaffold Indigenous learning inside the traditional European foundations of mathematics (Nutti, 2013).

While the logic of ethno-mathematics is sound when working in cross-cultural contexts, research also counsels caution (Pais & Mesquita, 2013; Pais, 2011) regarding the epistemological and pedagogical use of ethno-mathematics in relation to traditional mathematics. Pais (2011, p. 1) highlights tensions surrounding the notion of transference of cultural knowledge from one setting to another, noting the inherent risks of reducing ethno-mathematics as a ready to apply tool, "where the other is squeezed from its otherness".

However, the momentum gathered by ethno-mathematics is derived from its inverse positioning to traditional notions of mathematics and their covert ethnocentrism (Rivera & Becker, 2007). In highlighting the inverse perspective Luitel (2013, p.1) from a Nepalese context, cites traditional mathematics as being synonymous with the:

- Disempowering features of essentialism
- Singularity of ideology
- Epistemology of objectivism
- Language of universality
- Logic of certainty
- Hegemony and dualism as a culturally de-contextualised entity

Consequently, the importance of cultural capital in the delivery of education, specifically numeracy and mathematics concepts across culturally diverse settings is supported inside the literature; with elements of effective ethno-mathematics in practice noted below:

- Indigenous epistemologies and cultural context inside curriculum (Matthews, 2012, 2015; Sarra, Matthews, Ewing, & Cooper, 2011; Nutti, 2013; Averill, 2012; Neel, 2010; Nyoni, 2014; Lipka, Andrew–Ihrke, & Yanez, 2011; Fryberg, Covarrubias, & Burack, 2013; Abrams, Taylor, & Guo, 2013; Grootenboer & Sullivan, 2013)
- Maths should be socially connected and not abstract or isolated (Silvester, 2011)
- A funds of knowledge approach to situate mathematical knowledge from a specific cultural context (Ewing, 2012, 2014)
- Cultural embedding inside games (Nyoni (2014)
- The utilisation of Indigenous language (Lonsdale, 2013; Schafer 2010; de Vries, Young, & Warren, 2008)
- Indigenous epistemological bridges for non-Indigenous teachers (Schafer (2010; Sterenberg, 2013; Sterenberg & Hogue, 2011; Sterenberg et al., 2010).
- The role of place in learning (Chinn, 2015; Restoule, Gruner, & Metatawabin, 2013; Silvester, 2011; Neel, 2010; Sterenberg, 2013; Sterenberg & Hogue, 2011; Sterenberg et al., 2010; Hertting & Alerby, 2009)
- Relationships (Elders, Community, Family, School) (Lipka et al., 2011; Ewing, 2014, 2012)
- Shifting from a problem based orientation toward a possibility focused cultural

pedagogy (Nutti, 2013)

- A culturally appropriate learning environment (Ewing & Sarra, 2014)
- High expectations (Rauland & Adams, 2015; Cooper, Baturo, Warren, & Grant, 2006; Sarra, 2003)
- Strength based approaches (Lonsdale, 2013; Fryberg, et al., 2013).

Using these approaches to the teaching of mathematics with embedded elements of cultural practice (Silvester, 2011), which emerge naturally from the community where the teaching is occurring (Neel, 2010), is a key mechanism in overcoming the inherent connotations of ethno-centrism (Luitel, 2013), as well as facilitating agency in a field where Indigenous success is hard won (Ewing & Sarra, 2014; Ewing, 2012, 2014).

Quality teaching in Indigenous contexts

Requirements of Indigenous-centric programs

As a body of thought financial literacy education is not value-free (Brimble & Blue, 2013; Pinto, 2012, 2013) and consequently it must be critical in its orientation (Arthur, 2012). This premise is fundamental in the context of the Indigenous experience, in background of the enterprise of colonisation and the broader challenges faced today in reconciling participation with surety inside the financial sector (Briggs in Saunders & Piper, 2011). Today there is a growing number of measures designed to integrate Indigenous consumers into the reality of financially literate behaviours. However these interventions are generally focused upon communities as a neatly packaged whole, largely ignoring widespread research evidence that curriculum based interventions should not be school based, or gender or age specific. Brimble and Blue (2013) argue that in order to negotiate specific Indigenous needs, the successful integration of financial literacy programs into curriculum frameworks must naturally recognise gender and cultural differences. Programs need to be adapted to accommodate the diversity in Indigenous communities and across contexts. With reference to specificity of cultural contextualisation, Battiste (2002, p 24) offers seven key principles which look to build upon rich and varied cultural contexts. In reconciling the specific location of a particular school and the program’s intended outcomes, she recommends:

1. Review school or district level goals, policies and practices with regard to curriculum and pedagogy
2. Examine home environments and parenting support systems for the upbringing of the community’s children
3. Devise locally appropriate ways to review student and teacher performances and

how they relate to nurturing and practicing culturally healthy behaviour

4. Strengthen the community's commitment to revitalising the local language and heritage and fostering the involvement of Elders as an educational resource

5. To guide the preparation and orientation of teachers in ways that help them attend to the cultural wellbeing of their students

6. To guide the formation of state level policies and regulations and the allocation of resources in support of equal educational opportunities

7. To evaluate educational programs intended to address the cultural needs of students

In building upon the assertions of Battiste (2002), in greater detail a summary of the key components of Indigenous programs in the financial literacy education can be constructed, categorised into two broad areas, the first considering overarching elements and the second highlighting situated program design. The overarching elements are as follows:

- Community-based, focused and driven (Kyoung, Landais, Kolahdooz, & Sharma, 2015; Brascoupé et al., 2013; Saunders & Piper, 2011),

- Based on culture and culturally appropriate foundation (Godinho, 2015; Kyoung et al., 2015; Brascoupé et al., 2013; Financial Literacy Foundation, 2007)

- Learning from and celebrating success (Saunders & Piper, 2011),

- Provided practical benefits, enabling and empowering (Kyoung et al., 2015; Lucas & Guy, 2013),

- Worked with partnerships (Saunders & Piper, 2011; Financial Literacy Foundation, 2007)

- Youth based and youth driven (Kyoung et al., 2015; Brendtro, Mitchell, & Jackson, 2014)

- Orientated around a strengths based approach (Godinho, 2015; Purdie, Reid, Frigo, Stone, & Kleinhenz, 2011; Brascoupé et al., 2013)

- Sharing of knowledge (Financial Literacy Foundation, 2007)

- Long term commitment (Saunders & Piper, 2011)

The situated program design components are:

- Develop effective delivery methods (Financial Literacy Foundation, 2007)

- Two way learning through meaningful community engagement (Lonsdale, 2013;

Saunders & Piper, 2011)

- The Indigenous world views on money and money management (Godinho, 2015)
- Utilising the role of Elders in learning how to use money wisely (Godinho, 2015)
- Empowering pedagogical approaches and socio-culturally relevant content (Foley, 2012)
- Facilitated by Indigenous facilitators (Briggs in Saunders & Piper, 2011; Briggs & Reilly, 2010; The Allen Consulting Group, 2011)
- Supporting early years learning in creative ways (Lonsdale, 2013)
- Flexibility in adapting to the immediate needs of the participating community (Briggs in Saunders & Piper, 2011; Riley, Parsons, & Bortolot, 2010; The Allen Consulting Group, 2011)
- Indigenous narrative based pedagogy (Yunkaporta & Kirby, 2011; Weber-Pillwax, 2001),
- Assessment underpinned by learner growth mind sets (Paunesku et al., 2015; Masters, 2013)
- Project based learning (Meier, 2002)
- Personalised learning for Indigenous learners (What Works program, 2011)
- Literacy and numeracy “Built in not Bolted on” (Bradley et al., 1999)
- Learner agency (Hannon, et al., 2013)

Indigenous success inside the classroom is dependent upon individual considerations as well as whole-of-school approaches:

- The importance of a good start in schooling
- The need for regular attendance and engagement
- Supportive teaching strategies
- Strong links between school and their communities and environments
- The need to recognise Indigenous cultures
- School leadership
- Good teaching

- Student attendance and engagement
- Involving parents and communities in schools to support learning
- Using whole of school approaches to recognise Indigenous culture
- Indigenous presence inside the schools (Lonsdale, 2013, p iv)

Quality teaching in diverse contexts

This review concludes with a consideration of quality teaching for diverse learners. In the Australian context, there is a spread across sectors of private, independent and state-based schooling programs. This spread is further organised around geographic location with the Indigenous diaspora occurring in urban, regional and remote contexts. As well, there is a great array of curriculum measures, student and teacher based abilities and innate complexity borne from location-orientated issues, such as funding, staff retention and turn over, school access, attendance and low socio-economic status. Consequently there is a great diversity found inside the literature when the topic of quality teaching in diverse contexts is explored. In categorising the standpoints emergent from the literature, key themes are noted which help to classify the great spread of ideas concerning quality teaching across a diversity of contexts. The sub-categories ***School, Teacher and Student and Curriculum and Pedagogy*** help orient the key components of success across this domain.

School

Among the school-related measures intended to positively address the notion of diversity, 'school' is understood as a holistic site in which to implement measures across the entire apparatus, uniformly and in totality (McMaster, 2015; Riley et al., 2010). Examples required the reorientation of the boundaries of the school itself, by extending the idea of the school to include extended notions of community (Tully, 2010; Veel & Bredhauer, 2006). In this way, notions of whole school (Pickett, 2009), interdisciplinary planning (Bissaker, 2011; Sloane, 2010), learning and change (Burridge & Chodkiewicz, 2012) were all invoked as being positive agents of progress. Further holistic notions of culture and values (Deppler, 2012; Keddie, 2011; Tully, 2010; Griffiths, 2009; Veel & Bredhauer, 2006) were used to combat emergent tensions of racism (Keddie, 2011), to further foster climates of inclusion (McMaster, 2015; Mastropieri & Scruggs, 2012) were based upon issues of gender and disability (Scior, 2015) and in the sense of creating positive, creative, innovative and emotionally safe environments for children to prosper inside. The role of information and communication technology was also addressed (Lonsdale, 2013; Holden, 2011) via planning and whole-school roll out which worked to elevate poor community standings and increase enrolments and school-based success (Danson, 2012).

Teacher and student

Contained within the subcategory of the teacher it was noted that the teacher's role in dealing with diversity was a crucial agent of success. The research literature identifies the teacher's personal constitution and how that was manifested in application as being the key ingredient in dealing with diversity across the contexts previously (Tully, 2010). It was noted that the following elements of the teacher's personality were all important internal agents necessary in working in diverse environments:

- manage emotions and navigate emotional intelligence (Ramana, 2013)
- commitment, attitude, values and passion (Burridge & Chodkiewicz, 2012; Mansouri & Jenkins, 2010)
- ability to innovate (Poissonnier & Kathryn, 2010)
- problem solve and lead (Bissaker, Davies & Heath, 2011; Borreo, 2009)

Externally, the issues centred on the measure of training teachers had received to be able to better handle and operate inside diverse contexts (Jensen, 2010; Allard & Santoro, 2010). This was in addition to the ability for the teacher to be able to work effectively in a team-centred environment, characterised by all of the complexity diversity has to offer.

In relation to the diversity implicit inside the student experience, themes centred on:

- Physical diversity (Brown & Byrnes, 2014)
- Cultural and linguistic diversity (Rasch, 2010)
- Socio-economic status and academic ability (O'Brien, 2009)

Students were also referenced in relation to their life worlds, (Van Haren, 2010), their cultural and community knowledge's (Zipin, Brennan, & Semmens, 2010) as well as the desire for them to be independent, self-directed thinkers (Harris, 2011; Richards, Pearce, & Gusman, 2010; Vale, Weaven, Davies, & Hooley, 2010) and learners over the course of life (Lynch, 2011).

Curriculum and pedagogy

In the actual mechanics of the teaching and learning process, curriculum and pedagogy were also cited as key agents of change, with the literature highlighting the following characteristics as being influential in the accommodation of diversity:

- The use of ICT mechanisms, such as literacy and numeracy tools (Rasch, 2010; Epstein, 2009; Costin, 2009)
- One-to-one teaching arrangements (Thornton, Galluzzo, Quianne, & Taylor, 2010)
- The creation of a third cultural space (Exley, 2014)

- Creation of a metalanguage that allowed students to feel comfortable inside an evolving educational space (Van Haren, 2010)

- Substantive intellectual and socio-cultural content to give richness and depth to the emergent learning inside the classroom (Luke, Woods, & Dooley, 2011)

- The need for creativity and innovation to be implicit inside curriculum (Harris, 2011).

Further, from a theoretical standpoint the following were cited as being effective inside the contexts in which they were used:

- Application of Gardiner's Multiple Intelligence theory (Jackson & Raymond, 2009)

- The mobilisation of neuro-scientific perspectives on the learning of maths (Ermentrout & Terman, 2010)

- Bloom's taxonomy for the promotion of higher order thinking skills (Noble, 2004).

The benefits of differentiated classrooms and curriculums were also emphasised as being positive measures in dealing with diversity (Mastropieri & Scruggs, 2012; Miller, 2011; Richards et al., 2010; Riley et al., 2010), with authors citing the current push to move to student-centred and self-directed, independent mechanisms of learning into the future (Alder, 2011). In this way an emphasis was placed upon personalised learning plans (PLPs), as being crucial in some schools effort to boost success rates for students and to allow schools to address issues of complexity (Brown & Byrnes, 2014). It was noted that there is great diversity across sectors and across jurisdictions with regard to the use and relative effectiveness of PLPs (Dempsey, 2012), with the relationship between ICT being an important one that will continue to grow into the future (Ingvarson, 2013; Holden, 2011).

Conclusion

In working to use the lessons of the literature, *Knowing Growing Showing* in its scope, composition and application will operate from an evidence-based foundation and from a strengths-based, best practice approach to quality teaching across diversity (location, ability as well as cultural disposition). In this way *Knowing Growing Showing* aims to adopt a culturally contextualised resource that accommodates the literature's findings about financial risk and opportunities in a creative and critically rigorous approach.

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