
Routledge
Taylor & Francis Group

Journal of Curriculum Studies

ISSN: 0022-0272 (Print) 1366-5839 (Online) Journal homepage: https://www.tandfonline.com/loi/tcus20

# Towards a framework for financial literacy in the context of democracy

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J. CURRICULUM STUDIES, 2015
Vol. 47, No. 2, 300–316, http://dx.doi.org/10.1080/00220272.2014.934717



# Towards a framework for financial literacy in the context of democracy

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This paper contrasts the prevailing individualistic approach of financial literacy measurement and financial education with an educational framework that seeks to equip young people to play an active democratic role and to develop a broader understanding of the financial world. In particular, the framework suggests how important dimensions of financial literacy may be addressed in terms of the individual, the financial industry and government.

Keywords: financial literacy; citizenship education; curriculum policy; economics education

## Finance and the future of democracy

The Financial Crisis which began in 2008 has precipitated widespread change in national policies, reduced incomes, toppled governments, provoked riots and provided headlines (Kyriakidou, 2010). The political programme of the Coalition government in the UK (HM Government, 2010, p. 9) begins with a statement about banking:

> In recent years, we have seen a massive financial meltdown due to over-lending, over-borrowing and poor regulation. The Government believes that the current system of financial regulation is fundamentally flawed and needs to be replaced with a framework that promotes responsible and sustainable banking, where regulators have greater powers to curb unsustainable lending practices and we take action to promote more competition in the banking sector. In addition, we recognize that much more needs to be done to protect taxpayers from financial malpractice and to help the public manage their own debts.

But there are longer run concerns as well. Sinn and Uebelmesser (2003) outline the pensions problem created by demographic change in Germany. They forecast a 'gerontocracy' for that country by 2016. Similar warnings might be addressed towards many OECD countries. It is not surprising, therefore, to find commentators (e.g. Kling, 2010) regarding the future of the financial system and forms of democratic government as

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inextricably linked. It is surprising that definitions of financial literacy make no reference to citizens' understanding of the roles of banks or governments in the conduct of financial systems. The rationale for including financial literacy in the school curriculum (e.g. Banco de Portugal, 2010; Commonwealth Bank Foundation, 2003; U.S. Department of the Treasury, Office of Financial Education, 2006), is more or less universally, cast in terms of the personal responsibility of the consumer.

This paper reviews recent issues in finance and financial policy, examines the extent to which these issues are addressed in definitions of financial literacy and offers some tentative suggestions for improving financial education.

## The median voter, misconceptions and the environment for government and financial services

The section develops an argument for the importance of financial literacy for the environment in which governments and financial companies operate. The first step is to establish the understanding and attitudes of the median voter that really matter. Public participation in the policy process comes in many forms (Bishop & Davis, 2002; Fischer, 2003). Many of these forms (e.g. pressure groups, think tanks and focus groups) involve a small fraction of the electorate. In the financial sphere, public voices also have to compete with the voices from a global financial industry. According to Paul Krugman, 'the Financial Industry has had way too much influence on policy' and French President Francois Hollande has claimed 'my enemy is the world of finance' (both reported through a news item on Youtube (http://www.youtube.com/watch?v=elZg60lhVug). Yet, democratic governments still have to persuade the median voter that they should be re-elected. They also have to manage public discontent. Citizens in Greece (Petrakis, Stoukas, & Paul Tugwell, 2012) and Spain (Goodman, 2012) have expressed their dismay on the streets as democratic processes struggle to provide a way for these nations to find a way out of the financial difficulties they face.

There are three ways in which citizens' financial understanding and attitudes help to frame the environment for government and financial companies. First, financial ignorance and misconceptions determine support for, acquiescence or hostility towards government actions. Governments seeking re-election and peaceful streets face incentives to pursue policies which are acceptable to the knowledge and understanding of the median voter regardless of the misconceptions on which voters' views are based. Moreover, there is little reason for governments to resist policies advocated by other voices if the median voter is unaware of possible adverse effects on their interests. Second, aside from their personal interests, the median voter may have views on the rules which should regulate financial interactions in a social context. These views will embody beliefs about how the financial system works as well as beliefs as what should be considered fair in relation to the distribution of welfare benefits and the tax burden, access to credit, regulation of financial transactions and the level of the national debt. Median voter ignorance and misconception bear upon the formation of social rules with as much force as upon personal interests. These arguments support Mishkin's (2008) assertion that 'better-informed citizenry makes for better economic policy-making'. Financial literacy can only form part of such an agenda if it is defined as including citizen's understanding of the behaviour of the financial system (Davies, 2006). Third, the operation of financial rules depends on the opportunities for making gains from information asymmetries and 'free riding' and the extent to which these opportunities are exploited. The financial literacy issues here are found in the alertness of citizens to risks from information asymmetries in their financial interactions and their attitude towards exploiting 'free riding' opportunities (e.g. through tax evasion).

The remainder of this section addresses the argument that shortcomings in public financial literacy are adequately redressed by market discipline. According to Shiller (2003), despite their imperfections, financial markets provide the best hope for assessing and managing risk. Writing after the financial crash of 2008, Congdon et al. (2009) are much less sure, identifying failures in market discipline and financial regulation as well as the business model adopted by the banks in pursuit of profit. So what does the record of the financial sector look like? There are three problem areas: (i) mis-selling; (ii) market malpractice and (iii) under estimation of financial risk.

From July 1988, workers in the UK were encouraged to switch out of a State Earnings Related Pensions Scheme to private providers. Five and a half million people did so over the following five years (Bennett & Gabriel, 2001) although the evidence to support a policy of expecting individuals to plan adequately for pensions is weak (Erturk, Froud, Johal, Leaver, & Williams, 2007; Rowlingson, 2002). The UK Securities and Investments Board estimated that, despite the favourable tax terms which the government had put in place, about 10% of these transactions had been against the customer's interests. According to the Consumers' Association, a total of two million people were affected by the pensions mis-selling scandal in the late 1980s, whilst five million people were affected by a later scandal involving the mis-selling of endowment mortgages (Farrow, 2002). In 2008, the FSA fined Financial Advisors AWD Chase de Vere £1.12 million for mis-selling pensions after the introduction of more flexible rules on pensions in 2006. Mis-selling is a continuing problem. Commenting on a report that more than half of people receiving financial advice over their pensions were wrongly advised to switch out of final pension company schemes, a representative of the Financial Regulator (Nicoll, 2012) commented, 'As things stand, there is a high risk that members *receive* unsuitable advice'. The use of the present tense in this statement suggests an endemic problem.

How do consumers make sense of this risky advice? Bennett and Gabriel (2001) constructed a small survey to investigate the effects of the pensions mis-selling scandal of the late 1980s on individuals' perceptions of high-profile companies. They conclude that participants in their survey averaged out 'good' and 'bad' images of companies, with advertising playing a key role in the weight of 'good' images in this averaging process. They also conclude that most consumers base their decisions about financial products more on their overall image of the company than on the particular characteristics of the product. The most serious problem with this is that it exerts little market pressure on industry norms which are against the public interest. Claims that instances of mis-selling have been restricted to one or two rogue operators have been undermined by subsequent evidence of the breadth and regular recurrence of the practice.

Market malpractice comes in a variety of forms. Following an interest-rate fixing scandal which led to the resignation of the chief executive of Barclays Bank, the Head of the UK's regulatory body, the Financial Services Authority (Turner, 2012) claimed that Barclays 'was an outlier in the UK because of its "cultural tendency to be always pushing the limits"'. The following day, a US Senate Committee published a report into money laundering by another UK-based bank, HSBC. The chair of the committee described the compliance (to financial good practice) culture of the bank as 'pervasively polluted for a long time' (Levin, 2012). One week later, the former Head of the Anglo-Irish Bank, Sean Fitzpatrick, was arrested in connection with financial irregularities during the lead-up to the collapse of the bank which was subsequently nationalized at a cost of 24 bn to the Irish taxpayers (BBC, 2012a). In the same year, the former chairman of Spain's fourth largest bank was also under criminal investigation (Goodman, 2012). These and other cases prompted one news broadcaster (BBC, 2012b) to post a litany of examples on its website. Economists pay plenty of attention to damage to the public interest through market distortions due to union activity. The scale of the losses to the public through these examples of financial malpractice alone looks fairly serious.

Finally, there is the issue of underestimation of financial risk. When banks offer loans which entail high risks of non-repayment, who bears the responsibility, the borrower or the lender? The growth in consumer credit and debt at the end of the last century and the first decade of this century was accompanied by strong marketing and the introduction of 'innovative' products which offered loans on terms which were previously unimagined. At the turn of the century, the average US household received three invitations to take out a new credit card every month (Davies & Brant, 2005). In the period preceding the financial crash in 2008, potential homeowners in the UK were offered loans that were greater than the house they intended to buy. In a world where house prices go up as well as down, these loans were very risky.

But the increasing exposure of banks to risky loans, especially in the housing market, was fuelled by rising confidence in the capacity of new complex financial products to redistribute risk in ways which became ever more difficult to trace. This growth in lending was encouraged by politicians with an interest in boosting private home ownership and in boosting consumer demand in their economies (Ferguson, 2009). It was also difficult to reconcile with received economic wisdom about how economies operate (Hume & Sentance, 2009). Some apologists for the financial sector such as Kling (2010) argue that banks only got into a perilous position because they innocently misunderstood what they were getting themselves into. This is a perfectly legitimate explanation, but it hardly engenders trust in the judgements made by the sector, even in its own self-interest. On 22 February 2008, the underlying financial stress caused by risky loans became evident in the bankruptcy and nationalization of the British Bank Northern Rock, at a cost to the tax payer of £27 billion. In a speech made in July of the same year, US Federal Reserve Chairman, Bernanke (2008) observed that 'unfortunately, in the past few years, many mortgage loans were extended that were poorly underwritten or whose terms were inadequately disclosed, particularly in the subprime market. As you know, those poor lending practices have contributed to a sharp increase in mortgage delinquencies and foreclosures.' He used the speech to explain why the Fed had intervened to prevent the bankruptcy of investment bank Bear Stearns and to announce several regulatory changes intended to bring financial stability. On 15 September, the fourth largest US investment bank, Lehman Brothers, was allowed to go into bankruptcy. Four years later, the position for banks has been stabilized at the cost of pushing a number of sovereign states to the position of wondering whether they are going to be treated like Bear Stearns or like Lehman Brothers.

Evidence from recent decades supports a case (Mishkin, 2008) for improving public financial literacy to change the information environment in which governments and the financial industry act and interact.

## How has financial literacy been defined?

The first part of this section reviews the way in which financial literacy has been defined in assessments and curricula by the OECD, in the US, Canada, Portugal, Hong Kong, Singapore and South Africa. The second part briefly reviews the relationship between financial literacy and economic literacy.

In the US, Financial Literacy has been a mandated part of the curriculum since the 'No Child Left Behind Act' (U.S. Department of Education, 2001) and this has encouraged the development of a raft of materials to support teaching and assessment. A recent review (Huston, 2010, p. 303) of measurements of financial literacy suggests four dimensions to the construct: (i) money basics—including time value of money, purchasing power, personal and financial accounting concepts; (ii) borrowing—bringing future resources into the present through the use of credit cards, consumer loans or mortgages; (iii) investing—saving present resources for future use through the use of savings accounts, stocks, bonds or mutual funds and (iv) protecting resources—either through insurance products or other risk management techniques. This categorization restricts financial literacy to personal consumer responsibility.

A similar picture emerges from US initiatives not included in Huston's review. The US Jump$tart survey (Lucey, 2005) investigates knowledge and understanding of personal income, money management, spending and credit and savings and investment. Mandell and Klein (2007, p. 110) report results from a question posed to students participating in the US Jump$tart programme. One of the questions is shown in table 1. Mandell and Klein interpret the responses as indicating that respondents believe that families experience financial difficulties as a consequence of their own financial mismanagement. This is an interesting conclusion because the question only allows respondents to attribute financial difficulty to individual responsibility or serendipity. There is no mention of the financial services industry or the government.

A test developed by Walstad and Rebeck (2005) for the US Financial Fitness for Life Program has 50 multiple choice questions on the themes: (i) the economic way of thinking; (ii) earning income; (iii) saving; (iv) spending and using credit; and (v) money management. This test has been used in New Zealand and Japan to measure the financial literacy of young people in different countries (e.g. Cameron, Calderwood, Cox, Lim, & Yamaoka, 2013). Lusardi, Mitchelli, and Curto (2010) report results from three questions added in 2007/2008 to the US National Survey of Youth. These questions focused on the implications of different interest rates, inflation and risk diversification for optimal choices in personal saving. A set of 20 questions used by Hill, Meszaros, and Tyson (2011) covered similar grounds but also included questions on taxation and transfer payments. Remund (2010) offers a review of the teaching materials that have been produced to promote financial literacy in the US. He categories these as defining financial literacy as (i) knowledge of financial concepts; (ii) ability to communicate about financial concepts; (iii) aptitude in managing personal finances; (iv) skill in making appropriate financial decisions; and (v) confidence to plan effectively for future financial needs.

Definitions of financial literacy in Europe have followed a similar path. A survey conducted by the Banco de Portugal (2010) investigated (i) access to a bank account; (ii) personal budgeting, borrowing and saving behaviour; (iii) criteria used in selection of financial products; and (iv) understanding of interest rates and inflation. Atkinson, McKay, Collard, and Kempson (2007) define four dimensions of financial capability as: managing money, planning ahead, choosing products and staying informed. The entire responsibility is placed on the individual with a stronger emphasis on the desirability of particular financial behaviours. They developed their definition through a literature review, focus groups and through semi-structured interviews. They cite (2007, p. 31) the focus groups as demonstrating the validity of the four domains they identify. The authors of this report have used their definition of financial literacy in their work for the OECD (Atkinson & Messy, 2012; Kempson, 2009).

**Table 1. Multiple choice question reported by Mandell and Klein (2007, p. 110): Which of the following do you feel is the greatest cause of serious financial difficulty, where families cannot pay their bills?**

| Response | % of respondents |
|---|---|
| (a) Bad luck, such as unexpected illness or job loss | 8.6 |
| (b) Not enough savings | 9.4 |
| (c) Buying too much on credit | 28.9 |
| (d) Not following a financial plan | 28.9 |
| (e) Not being able to earn enough money | 24.0 |

This story is repeated elsewhere in the world. An emphasis on the cultivation of desired financial behaviours is also evident in the programmes offered by the Singapore-based Institute for Financial Literacy (2013): Making sense of your money, Financial planning begins now, Do I need every type of insurance?, Are you borrowing too much? Building your nest egg, Managing CPF money for your retirement, Introduction to Personal Investing. Messy and Monticone's (2012, p. 22) review of financial education in Africa found that 'most financial literacy training courses focus on such issues as budgeting, saving and borrowing. Some initiatives, however, have a more specific content, regarding for instance pensions or insurance. A few programmes are mainly focused on consumer issues, including their rights and responsibilities, how to make complaints and obtain redress, etc.' A Hong Kong study by Pang (2010) emphasizes conceptual development for financial literacy but maintains the individual emphasis found throughout the literature.

This global consistency may have been fostered by publications and active promotion by international organizations such as the World Bank (see e.g. Clarke, 2013) and the OECD (Atkinson & Messy, 2012). But, it has also been fostered by 'assessment borrowing'. The design of reliable assessment items can be an expensive business and it is convenient to make use of tests that have been developed elsewhere. There has been a tendency across the globe for government to require schools to provide some form of financial literacy whilst not defining detailed curriculum content, assessment criteria or assessment items. The work of the OECD illustrates both these processes.

The OECD follows (Atkinson & Messy, 2012) the definition of financial literacy developed by Atkinson and colleagues in the UK (table 2). The OECD assessment of financial knowledge (Atkinson & Messy, 2012) uses a mixture of mathematical calculations and questions requiring a true/false judgement. Understanding of inflation was judged according to whether respondents judged the statement 'High inflation means that the cost of living is increasing rapidly' as true or false. Financial behaviour and attitudes were assessed using Likert scales.

In short, the definition of financial literacy and the assessments designed to measure levels of financial literacy have uniformly placed all of the responsibilities on the individual. This contrasts with the various accounts of the financial difficulties which have been experienced in recent years. We turn now to the argument that 'financial literacy' should be restricted to personal financial behaviour in order to avoid overlap with 'economic literacy'.

**Table 2. OECD definition of the elements of financial literacy (Atkinson & Messy, 2012).**

| Dimension | Elements |
|---|---|
| Knowledge | Simple and compound interest, inflation, time value of money, and risk diversification |
| Behaviour | Judging affordability, paying bills on time, monitor personal finance, set and use long term financial goals |
| Attitudes | Satisfaction from spending and saving; myopia |

There are several reasons for not accepting this separation. First, the definition of financial literacy in terms of personal financial behaviour necessarily includes understanding of some ideas, which are usually considered as central to economic literacy. Personal budgeting entails some consideration of 'opportunity cost' which is commonly treated as a core idea in economic literacy (e.g. Salemi, 2005). Understanding of inflation is not only routinely included in definitions of economic literacy, but it is also reported to be weak amongst secondary school students (Davies, Howie, Mangan, and Telhaj, 2002; Walstad & Soper, 1988) and important to economic behaviour (Burke & Manz, 2011). Second, restricting financial literacy to personal financial responsibility assumes that everything else is addressed through the curriculum for economic literacy. This is not the case. The behaviour of the financial sector, arguments about the appropriate extent of regulation and policy towards the national debt are routinely absent from curricula and assessment for economic literacy (e.g. National Center for Education Statistics, 2013; Walstad & Soper, 1988). Moreover, it is not safe to assume that all school students will experience a curriculum for economic literacy. Third, the objectives as well as the content of financial and economic literacy cannot be neatly separated. A recent study of the positive association between economic education and access to financial services begins (Grimes, Rogers, & Campbell Smith, 2010, p. 317) with the assertion 'The ultimate goal of all high school economic education programs is to enhance the economic and financial literacy of our citizenry'. Jappelli's (2010) 'international comparison of economic literacy' relies heavily on responses to questions about the purchase of a second-hand car (the type of problem routinely posed in materials for financial literacy). Therefore, the view taken here is that (i) it is more appropriate to view economic literacy as an overarching construct of which financial literacy is one part; (ii) some overlaps (in content, problems and assessment) between areas of economic literacy are to be welcomed in order to help students to build a coherent understanding. After all, we expect to find overlap between curricula for chemistry and biology and (iii) a citizenship objective for financial literacy is a necessary consequence of viewing school education as a servant of democratic development.

## An alternative approach to the definition of financial literacy

The financial sector and governments have emerged from the last few years with tarnished records and this makes it very difficult to heap all the responsibility for financial problems upon individuals. It is not surprising, therefore, that some commentators (e.g. Arthur, 2011; Gibson, 2008; Pinto, 2013) read advocacy of financial education by bankers and politicians as a deliberate attempt to distract populations from their own culpability. This section proposes an expanded approach to financial literacy which, alongside personal financial responsibility, also extends to citizens' understanding of the financial sector (and by implication the rationale for regulation) and government finances. The underlying motivation is that democratic processes and economic well-being require voters whose financial understanding creates functional rather than dysfunctional incentives for government.

This motivation presumes positions on several issues (see e.g. Flinders & Thornton, 1997) in curriculum theory, which need to be made explicit before proceeding to a statement of recommendations. First, in common with existing definitions of financial literacy, it is assumed that financial education in schools should be defined in terms of preparation for adult life, rather than being restricted to the emerging life experience of young people. This stance is required by an intention to educate the median voter for their role. Second, it is assumed that the role of citizens is to work together in the development of democratic society, its institutions, norms and regulations, rather than always to act to preserve received practice, policy and power (Davies, 2006). Third, the broad citizenship imperative in this argument precludes a definition of financial literacy in terms of sharply defined behavioural objectives. This contrasts with the OECD approach (Kempson, 2009) which includes objectives defining desirable behaviour (e.g. 'whether people keep records of their spending') and desirable attitudes (e.g. 'I save money for a rainy day'). The definition of financial literacy which follows aims to direct the curriculum towards equipping young people with knowledge and skills for informed judgements and is broadly in line with Young's (2013) delineation of a 'knowledge-based' curriculum. Table 3[1] suggests some areas of knowledge and understanding as the objects of critical enquiry in teaching and learning. The proposal in table 3 is for education in schools, with an emphasis on secondary level education. Appropriate levels for children at different ages would need to be established through further research.

The label 'sustainability and ethics in interactions and outcomes' in the top left-hand corner of table 3 positions the framework in the wider context of citizenship education with a commitment to values education, which is implicit in this perspective (Naval, Print, & Veldhuis, 2002). It expresses the aim to assess understanding, skills and attitudes in relation to financial sustainability, ethical conduct and fairness in financial outcomes in a range of contexts.

Much of the literature on financial literacy has distinguished between short-term and long-term financial choices and this is reflected in the two rows in table 3. Atkinson, McKay, Kempson, and Collard (2006) refer to the short term as 'money management' and the long term as 'planning ahead'. Three (borrowing, investing and protecting resources), of Huston's (2010) four categories falls into table 3's 'longer term' row. A distinction between the short term and the long term in the financial education curriculum can align the introduction of financial ideas with different contexts for financial choices. In the short term, individuals have to make decisions given their current levels of money income and current prices. In the long term, their income will be affected by choices they make about work, education and leisure as well as decisions about borrowing and saving. The merits of longer term financial decisions are affected by inflation and future interest rates. Understanding of real and nominal

**Table 3. A framework for financial literacy.**

| Sustainability and Ethics in Interaction and Outcomes | Individual | Financial Services | Government/Country |
|---|---|---|---|
| 1 Short Term e.g. income, spending, Liquidity, Borrowing and Saving | A Budgeting weekly/monthly; maintaining liquidity; Variation in saving and borrowing constraints for people on low and high incomes | B The interest rate margin between lending and borrowing; Financial Services judgements on the liquidity problems of individuals and businesses; Bank liquidity problems, how they may arise and how they are resolved. | C The Government Budget; Government Debt and Interest payments; Relationships between Taxation, Spending and Debt; Multiplier effects; Welfare payments and poverty; Government lending to and borrowing from banks |
| 2 Longer Term e.g. Wealth, Debt, Interest, Time preference, Inflation, Risk and uncertainty | A Real and nominal values; general and personal inflation; Income and Expenditure forecasts; Borrowing risks; information problems about providers | B Real and nominal interest rates; Security in Lending; Bad debts; Lending risks, asymmetric information; bank lending, investment n industry and economic growth | C Lending to the government: how safe is it; The current 'financial crisis'; Defaults and their effects between countries; Low inflation as a policy; Inflation and National Debt |

values is given more prominence in table 3 than in previous definitions of financial literacy. For the individual, it is important to distinguish between real and nominal values and to recognize that the inflation rates experienced by any individual may be different from the quoted average rate of inflation (Shafir, Diamond, & Tversky, 1997). Weaknesses in students' understanding of inflation are well established in the literature (Davies et al., 2002; Leiser & Drori, 2005). Variation in interest rates, inflation and income introduce much greater uncertainty into predictions of the outcomes of financial choices. The way in which individuals assess and take account of financial risks is a critical issue for longer term rather than short-term decisions (Lusardi & Mitchelli, 2007; Oehler & Werner, 2008).

The distinction between the short term and the long term is equally important in understanding the problems faced by banks and governments. Students who understand differences between short- and long-term financial issues are more likely, for example, to understand media references to a 'liquidity crisis' in the banking sector (e.g. The Guardian, 2012). They might also be more able to recognise the difference between a 'government deficit' and 'the national debt'.

The first 'individual' column includes the elements that have been included in existing definitions of financial literacy. The second column seeks to answer the question 'what do citizens need to know about the issues for bank behaviour in each context?' This question is not ignored in existing definitions of financial literacy. For example, Atkinson et al. (2006) emphasize 'staying informed'. However, their emphasis is on the individual, making sense of what is being offered to them. The problem with this perspective is that financial products have become increasingly complex and this makes it difficult for individual consumers to make judgements, which are in their own interest. Consumers tend to rely on their judgement of particular banks (Bennett & Gabriel, 2001) rather than their understanding of individual products. This reliance is problematic when industry norms create systemic difficulties for consumers. The problems may be compounded rather than alleviated by advice offered from within the industry. There is little evidence (given the ongoing mis-selling scandals) that regulation of financial brokerage is dealing with the asymmetric information problems inherent in the selling of financial products.

In these circumstances, it is difficult to see how citizens can do more than rely on their governments to offer them some form of protection through regulation. This raises the question of how they can voice that need. Two problems arise: (i) the structure of the electoral system which has been found to be associated whether the burden of banking risk falls largely on the financial sector or individuals (Rosenbluth & Schaap, 2003) and (ii) citizens' awareness of problems in the financial system and their ability to give expression to that problem in a way that might bear upon political judgements. That is, they must have some awareness of the asymmetric information problems (Karlan & Zinman, 2009) they have and the incentives that banks have to exploit these problems. Since we have a body of evidence (Lin & Lee, 2004) showing that education is positively correlated with search for information about financial products, it is reasonable to suggest that education may change future behaviour in relation to the context in which financial products are offered. There is potential for education to address this need for awareness, not through abstraction but through exemplification. There are abundant examples of 'bad behaviour' by banks to use. At present, the teaching resources that are available to help financial literacy are almost devoid of reference to financial misdemeanour.[2] In one sense this is hardly surprising given that so many materials have been produced by the financial sector. Circumstances where students' knowledge of the banking sector is largely dependent on the story that sector chooses to tell about itself does not look very healthy for democracy.

However, awareness of the problems in banks' financial record needs to be set against the dependence of the financial success of modern economies upon the operations of the banking sector. Ferguson (2009) provides one account of the critical role of institutions which facilitates borrowing as a source of prosperity. The disadvantage of regulation is that it can hinder the development of institutions and products, which are very much in the public interest. Exemplification of the benefits of bank behaviours to the public interest at a range of levels (individuals, communities and nations) should also feature strongly in a financial education.

The final column of table 3 addresses the role of governments. There are several questions for citizens, for example, How should they view government debt? Is it the same as household debt? When is it good for a government to borrow? Education should help young people to understand the similarities and differences between household and government debt (Krugman, 2012; Roosevelt Institute, 2014). For example, they should be aware that governments can live with more or less perpetual debt in a way which is unimaginable for households. When citizens do not understand that government debt does not work in the same way as household debt they create a poor democratic environment for government behaviour. The health of democracies depends on public understanding of the behaviour of their governments and a basic understanding of government finances—including relationship between short and long terms—is central to this. There are some ideas here which are not too complex. For example, the relationship between inflation and the real value of nominal debt and wealth is important for household and government behaviour (Gross & Souleles, 2002). It is valuable for young people to understand that when real interest rates are negative, borrowing becomes an attractive proposition to governments as well as individuals. There are plenty of examples from recent experience which can be used by teachers to help students to understand these aspects of financial systems.

One danger with presenting the framework in the format of a table is that it appears to treat each cell within the table as a distinct unit. The horizontal arrows are included to convey the idea that financial problems and decisions can be viewed in two ways. They can be viewed as a problem facing a particular actor (e.g. an individual, a bank or a government) and framed in terms of the consequences for that actor of a decision they might take. This way of looking at financial problems and decisions takes for granted an existing set of regulations, norms and wealth distribution. Alternatively, financial problems and decisions can be viewed as arising from a system which sets a particular context for interactions between individuals, financial services and government. Debates about the level of financial regulation, welfare payments, private provision for pensions all belong within this second perspective. The framework suggests that education for financial literacy should include this perspective. The vertical lines indicate relationships between short- and long-term problems and decisions facing any particular actor. Financial Literacy may be judged according to understanding of short-term problems, understanding of longer term problems or understanding of relationships between short and longer term problems.

The framework in table 3 therefore offers an outline for a curriculum in financial literacy. A crucial step in moving from this outline to a programme which can be taught in school lies in the framing of expected levels of achievement. One approach to this task (e.g. Council for Economic Education, 2013) is to specify 'what should be known at each level': e.g. At level 4 'the concept of saving' and at level 12 'real versus nominal interest rates'. This approach locates the complexity of a level of achievement in the phenomenon (saving is a 'simple' concept whilst the difference between real and nominal interest rates is a complex concept). An alternative approach (e.g. Pang, 2010; Speer & Seeber, 2012) is to locate the complexity of a level of achievement in the way in which that phenomenon is understood: individuals may have simple or complex conceptions of saving or interest rates. The second of these two approaches is more obviously grounded in a theory of learning applicable to social science (Lundholm & Davies, 2013). The currently available evidence (e.g. Davies et al., 2002; Leiser & Drori, 2005; Pang, 2010; Speer & Seeber, 2012) on variation in conceptions of the phenomena included in table 3 is scattered rather thinly across the framework. So much work is needed to populate the framework in order to provide suitable guidance for teaching. Of course, from the perspective adopted here, exactly the same is true of existing curricula and resources which have been developed to meet a need in advance of finding out exactly what that need (in terms of learning) happens to be.

## Conclusion

Present definitions of financial literacy are universally too limited. The responsibility for financial probity is placed on the individual, and responsibilities of banks and governments are ignored. This is neither plausible nor acceptable for education which seeks to foster democratic behaviour. It gives rise to the suspicion that financial literacy is a smokescreen, intended to divert attention from the behaviour of banks and governments. Therefore, it would be better if financial literacy was defined to include financial behaviour by banks and governments as well as individuals. The rationale for this extension is to make it more likely that voters would have sufficient understanding of financial processes and incentives to create a climate of pressure for politicians which makes it more likely that we govern in the public interest.

Of course, this hypothesis is yet to be tested. We do not know what it takes to increase the understanding of the median voter such that they are aware of critical financial processes and incentives affecting governments and banks. We do not know what effect increased awareness of the median voter would have on politicians. However, if we are seriously interested in the role that education can play in sustaining and developing democratic processes we should want to find out the answers to these questions. Relying on financial institutions to determine the nature of financial education does not look healthy for democracies.

## Acknowledgements

I am grateful to participants in a Financial Literacy workshop at the University of Birmingham 9th/10th November for helpful suggestions particularly with regard to the proposed new framework (table 3). I am also grateful to Neil Davies and two anonymous referees for helpful comments on earlier drafts of the paper.

## Notes

1. One of our referees suggested that it would be helpful to have an additional column for enterprise. The rationale for restricting the framework to these columns is that the argument in the paper concerns expanding financial literacy for consumers to financial literacy for citizens. Enterprise education addresses preparation of young people for work (Davies & Hughes, 2013).
2. See for example the resources signposted at the US portals at http://www.mymoney.gov/ or http://www.cde.ca.gov/eo/in/fl/finlitk12.asp or sites in Singapore (http://finlit.sg/programmes/making-sense-of-your-money/); Canada (http://www.canadianteachermagazine.com/ctm_life_skills/fall08_financial_literacy_for_youth) and sites of banks (e.g. http://www.moneysense.ulsterbank.ie/schools/students/credit-worthy/understanding-debt or http://www.amalgamatedbank.com/home/personal/moneysense) which might be expected to be somewhat reticent to highlight examples of problematic behaviour within the financial sector.

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