

Measuring the effectiveness of financial education

Prepared for the Retirement Commission by Alison O'Connell, April 2007

Abstract

Policy makers in many countries are giving more attention to 'financial literacy' or 'financial capability', and there are many financial education programmes. The need to evaluate the effectiveness of these programmes is likely to increase. But little evaluation is currently taking place, and the evaluations made so far show mixed and inconclusive results. It is not clear whether this is a consequence of poor evaluation methods or poor programme design, or, that financial education works patchily. But it does mean that a positive impact from financial education has not been unambiguously proven; nor has a clear picture emerged of what works best and why. Evaluation of financial education is inherently difficult, and the impact of any one programme can probably never be fully isolated. Nevertheless, this paper suggests that evaluating the effectiveness of financial education can and should be improved. It begins to develop an approach to do so, including a standard framework which can be tailored for each programme.

Introduction

This paper is a review of what is being done around the world to measure the effectiveness of many different types of financial education. It takes a broad sweep through academic and policy-related literature in selected countries: New Zealand, Australia, Canada, the UK and US. It summarises the findings of some frequently cited evaluations and some newer studies. It shows the difficulties of evaluation and begins to develop a framework for doing better evaluation.

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1. Defining financial literacy, capability and education

This paper is concerned with how the effectiveness of financial education can be measured. '**Financial education**' is a term commonly used across the world to refer to various methods used to increase an individual's financial knowledge. Examples of financial education programmes include a schools curriculum, a retirement seminar at work, a budgeting workshop in the community, or a website such as www.sorted.org.nz.

The result of the education is intended to be improved **financial literacy** or **capability**: people are better able to make informed decisions on their finances throughout life.

Most countries use the term 'financial literacy'. 'Financial capability' is used in the UK. It has been suggested that financial capability is a more developed concept than financial literacy¹. But in practice, both cover decision-making, practical skills and behaviour as well as knowledge and understanding². Financial education aims at the same ultimate goal whether that is defined by improving financial literacy or capability. The OECD definition of financial education makes it clear that the expected outcome includes changed behaviour as well as better developed skills:

Financial education is the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being³.

As will be illustrated later in this paper, while behaviour change may be the ultimate goal of financial education, improvement in skills or knowledge may be a valid goal of a specific financial education programme.

Financial education programmes can be focused on one issue (for example budgeting) or can be more wide-ranging. But there is general agreement that financial literacy or capability is a broad concept - including financial goal setting, budgeting, managing household cash flow, managing debt, saving and investing - because these are all linked in any individual's personal circumstances.

Financial education could encompass forms of **generic financial advice**, defined (in the UK) as *unregulated advice which takes account of the specific financial circumstances of an individual, but which does not result in a product recommendation*⁴. **Financial advice** is a term often used to describe a personalised, regulated product recommendation from a company selling such products. Such a specific recommendation is not 'financial education', which instead tries to help an individual make his or her own decisions.

¹ Dixon (2006) p. 7

² See Table 2 later in this paper

³ OECD (2005) p. 13

⁴ HM Treasury (2007) p. 49. See also FSA (2005) p. 6. 'Generic financial advice' is a particular concern in the UK where 'financial advice' is heavily regulated and product-focused.

2. The increasing need for evaluation

Financial education programmes are getting more policy attention in many countries. It can therefore be expected that the need for evaluation of such programmes will increase.

Many drivers can explain the increase in interest in financial education⁵. In the literature, the benefits of financial education most often expected are that⁶:

- Fewer people will be 'unbanked',
- People will get into less debt, and,
- People will be better equipped to deal with the increasing complexities of financial responsibilities, especially for retirement savings and university education, which used to be carried more by government.

Some commentators suggest that governments have a moral obligation to pay more attention to financial education because of policies shifting financial decision-making onto the individual⁷. For example, the introduction in July 2007 of auto-enrolment to KiwiSaver means that New Zealanders have to engage with the financial services industry, even if it is only to make the decision to opt-out. The New Zealand government explicitly recognised that financial education would have to be stepped up as part of the package⁸.

Governments are developing national strategies for financial capability in the US, UK and Australia as well as it being an interest of the OECD. With the setting up of the Retirement Commission in 1993, and the introduction of Sorted in 2001, New Zealand has been ahead of the trend for government-sponsored provision of broad financial education. This is now being given greater impetus with the development in 2007 of a new national strategy to *lift New Zealanders' competence and knowledge of financial matters*⁹.

Financial education programmes are not only sponsored by governments. Much of the academic literature from the US and Canada covers the recent growth in programmes run by local, university, employer and other communities¹⁰.

It can only be expected that, with so much government, private sector and not-for-profit attention and funding going towards financial education, there will be increasing scrutiny of the value-for-money received. There will always be other initiatives competing for funding.

⁵ See Feslier (2006) for a summary of these drivers and of activities around the world

⁶ For examples of policymakers' reasoning, see OECD (2005), Balls (2006), US Department of the Treasury (2006), HM Treasury (2007)

⁷ Tanner (2000), Campbell (2006)

⁸ Office of the Minister of Finance (2005)

⁹ Retirement Commission Press Release 1 December 2006

¹⁰ Vitt et al (2005), Fox et al (2005), SEDI (2006)

3. The type of evaluations currently taking place; their strengths and weaknesses

Despite the apparent need to understand the value-for-money from financial education, there is little evaluation of financial education programmes currently taking place¹¹.

What there is can be categorised into 3 different types:

- First, there is **evaluation built in to specific financial education programmes**, generally to identify whether these programmes are successful and why (Table 1). For example, in the US, the National Endowment for Financial Education (NEFE) and the Jump\$tart Coalition for Personal Financial Literacy have evaluated whether students who have taken a high school curriculum in finance score higher on a financial test than those that have not. The Personal Finance Education Group (pfeg) in the UK asked for an independent qualitative assessment of the impact of their schools programme. The TIAA-CREF Institute in the US surveyed participants of a retirement seminar run by a financial institution to identify how they planned to change their retirement goals or savings behaviour as a result of the seminar, and how many participants actually did so later.
- Second, there is the **evaluation of what impact financial education has had on the financial capability levels of a national population** (Table 2). This is as yet an aspiration, with few countries having even taken a baseline measurement of current levels of financial understanding in the population, and no inference able to be drawn on how financial education might improve those levels. In 2005, the OECD identified fifteen countries that either had already or were planning surveys to identify levels of financial understanding¹², but most of these covered one segment only rather than a national population (and in this paper would be covered in Table 1). National population surveys of financial literacy or capability have been carried out only in Australia, New Zealand and the UK.
- Third, there is **evaluation of past experiments** (Table 3). This is the approach taken by most academic papers on the subject, which have been written mainly in the US. These experiments may have been set up for other purposes, but the data collected have proved convenient for researching the impact of financial education. The conclusions of analyses like those in Table 3 are necessarily in more general terms - How effective can financial education be? – than those of the type in Table 1 which look at how effective a specific financial education intervention was. In the Table 3 type of general evaluation, various associations are explored between having had some form of financial education and, for example, financial understanding measured by correctly answering financial questions or financial behaviour measured by the rate at which people are saving or their accumulated net worth.

¹¹ Braunstein and Welch (2002), Lyons et al (2005), OECD (2005), Lerman and Bell (2006)

¹² OECD (2005) p. 42

The studies detailed in Tables 1-3 were selected for being either prominent in the countries of interest, most often cited in the literature, or new. What can be deduced, or not, from the key findings of these studies is explored in the next section. The subsequent section considers the difficulties in evaluation, taking further the comments on the weaknesses of the studies in the tables.

Note that a number of the weaknesses identified are commented on by the researchers themselves. The issue here is not the quality of individual research studies but the strength of the accumulation of evidence.

Table 1: Examples of evaluations built in to specific financial education programmes

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>TIAA-CREF US Clark R.L. and d'Ambrosio M. B. <i>Ignorance is not bliss: The importance of Financial Education</i> Published 2003 by the TIAA-CREF Institute</p>	<p>Surveys of participants in retirement savings seminars run by TIAA-CREF (a mutual fund with customers mostly working in education) in 2001/2.</p> <p>Survey One asked about retirement goals before the seminar; Survey Two immediately after the seminar about changes to goals and saving planned as a result and Survey Three about actual saving changes made 3 months later.</p>	<p>The seminars had some immediate impact on most participants' ideas for retirement. From Survey Two: 91% intended to make some change to retirement saving e.g., increasing contributions or changing investment allocation. 22% of respondents altered their income goal and 6% their retirement age goal, being more likely to raise than lower both. 6% changed both goals.</p> <p>However: <i>Responses to Survey Three indicate a substantial disconnect between the stated intent to change saving behaviour immediately following the seminar and the actual actions taken in the next three months.</i> e.g., 25% of those completing Survey Three who said they would open a new savings account actually did so; of those who said they did not plan to open one, 22% indicated that they did intend to do so.</p>	<p>Strengths Evaluation built into seminar design, focused on impact of attending seminar.</p> <p>Both intention to act and actual behaviour (self-reported) investigated.</p> <p>Fairly high response rate for Surveys One and Two (34%; 633 responses)</p> <p>Weaknesses One particular type of intervention evaluated (one seminar of one hour run by one financial institution to its market segment); so application to other audiences or more in-depth financial education not able to be explored.</p> <p>Fewer respondents to Survey Three (110) so conclusions about actions more tentative.</p>
<p>NEFE US Boyce L. and Danes S.M. <i>Evaluation of the NEFE High School Financial Planning Program</i>© 1997-8 Danes S.M. <i>2003-2004 Evaluation of the NEFE HSPP</i> Both published by NEFE</p>	<p>Questionnaire sent to High School students and teachers who requested the NEFE curriculum materials.</p> <p>High School students: Self-reported answers on a '1 to 5' scale to 13 questions about financial behaviour, knowledge and confidence before and after taking the NEFE curriculum.</p>	<p>Average score increased after taking the curriculum for all questions in 1997/8, and for all but one in 2003/4.</p> <p>For each question, around 30-60% of students reported a higher score after the study than before (similar in both years).</p> <p>Around 10% of students reported a lower score for each question after the 1997/8 test; loss was not reported on in 2003/4.</p>	<p>Strengths Before and after survey seeks to identify impact of studying curriculum.</p> <p>Fairly large sample: 1997/8: 4,107 students (response rate 31%) 2003/4: 5,329 (26%).</p> <p style="text-align: right;">...continues</p>

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 1, NEFE continued...</p>	<p>Follow up survey after 3 months.</p> <p>Teachers: satisfaction with course and their assessment of students' learning.</p>	<p>Around 60% of the 3-month follow up sample reported changes in saving or spending after the study (both years). Most popular change was <i>Think more carefully about spending</i>.</p> <p>Teachers assessed improvement in students' financial abilities consistently with the above, and were satisfied with the curriculum.</p>	<p>Weaknesses</p> <p>No control group of those who took another curriculum, or none.</p> <p>Measures are self-reported; actual behaviour not checked.</p> <p>3-month follow up group self-selected, smaller sample: 1997/8: 418 (response rate 3%) 2003/4: 324 (1.6%).</p>
<p>Jump\$tart US</p> <p>The Jump\$tart coalition <i>2006 National Jump\$tart Coalition Survey</i></p> <p>Mandell L. <i>Financial Literacy: If It's So Important, Why Isn't It Improving?</i> Published in Policy Brief April 2006 by Networks Financial Institute at Indiana State University</p>	<p>A survey comprising 50 questions on financial knowledge, attitudes and behaviour given to a random, national sample of thousands of 17-18 year old High School students (usually within the year they could have taken a financial education course).</p> <p>Various associations with knowledge score explored in these surveys and in smaller one-off surveys.</p>	<p>Average score (% of questions answered correctly) is low and has declined: 57.3% in 1997 50.2% in 2002 52.3% in 2004 52.4% in 2006</p> <p><i>The turnaround in financial literacy [increase in score since 2002] continues to be led by the more affluent segments.</i></p> <p><i>We have long noted with dismay that students who take a high school course in personal finance tend to do a little worse in our exam than those who do not.</i></p> <p><i>Those at both extremes (very thrifty or very spending-oriented) did worse on both the 2004 and 2006 exams than those in the middle.</i></p>	<p>Strengths</p> <p>Long-term time trend of financial knowledge scores from a consistent survey of students of the same age.</p> <p>One-off investigations yield deeper insights.</p> <p>Proponent of financial education disclosing poor results.</p> <p>Weaknesses</p> <p>Reasons for poor trend in results not identified, although suggestion that taking an economics course with money management is more effective than taking a money management course alone.</p> <p>Does not follow one cohort of students over time.</p> <p>'Right' answers for some exam questions seem specific to a course of learning rather than necessary to good financial practice.</p> <p style="text-align: right;">...Table 1 continues</p>

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 1 continued...</p> <p>pfeg UK</p> <p>Smith L. (2004) <i>Evaluation of the pfeg Excellence and Access programme</i></p> <p>Commissioned from Brunel University and published by pfeg, 2004</p>	<p>Questionnaire sent to all 1,000 teachers and pfeg school advisers participating in the pfeg programme; a more in-depth survey sent to a random 15% sample of teachers and students aged 11-19; case studies collected by interviews.</p> <p>Teachers: Asked about their confidence in teaching personal finance and their assessment of the potential of the programme.</p> <p>Students: Asked nine questions: 'how much do you know about...' specific financial issues on a '1 to 5' scale.</p>	<p>Teacher confidence in personal finance not high, but <i>experience of project work in the classroom has had a powerful impact on participating teachers' confidence in undertaking personal finance education.</i></p> <p>Students' confidence and knowledge low.</p> <p><i>..pupils' financial experiences outside school are very powerful and the folklore is bolstered by the activities and discussions of family and friends. In contrast, the project's access to pupils is dependent on the goodwill of extremely busy schools and teachers. At this stage, therefore, we are not confident about the general effectiveness of pupils' personal finance learning.</i></p> <p>Aimed to identify most effective methods, but found this was not possible as curriculum was not settled. Suggested that teaching seemed to work best if not just content-based but made <i>relevant, realistic and practical [to] problem-solving situations ... outside school.</i></p>	<p>Strengths</p> <p>Mixture of qualitative and quantitative techniques paints a broad picture.</p> <p>Realistic assessment of the challenges of evaluating effectiveness.</p> <p>Weaknesses</p> <p>Project brief limited the quantitative assessment to self-reporting of confidence and knowledge on personal finance issues; actual knowledge or 'before and after' impact of programme not explored.</p> <p>No control group of those who took part in another programme, or none.</p>

Table 2: Examples of evaluations of the financial capability levels of a national population

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Australia</p> <p>Both prepared for ANZ Banking Group:</p> <p>Roy Morgan Research <i>ANZ Survey of Adult Financial Literacy in Australia</i> May 2003</p> <p>AC Nielsen Research <i>ANZ Survey of Adult Financial Literacy in Australia</i> November 2005</p>	<p>3,513 respondents for a specially-designed telephone survey (3,548 in 2003). Also 202 respondents to an in-depth interview in 2003.</p> <p>Collected proportion self-reporting 'yes/no' or on a scale to questions on financial behaviour, attitude and knowledge. Scored answers to rank respondents' financial literacy; demographic characteristics of each quintile identified.</p>	<p>No or very little change in responses between 2003 and 2005.</p> <p><i>...most Australians have a reasonable level of financial literacy...(both studies; examples 2005). 97% have a banking account. 84% feel 'well informed' when making financial decisions.</i></p> <p>Some problem areas identified, e.g.: 16% spend all their income and do not plan for the future. 24% do not read their superannuation statement.</p> <p>Lowest levels of financial literacy linked with lower education, not working, low incomes, low savings, single, aged under 25 or over 70.</p>	<p>Strengths</p> <p>Wide coverage of knowledge, attitude and behaviour.</p> <p>Straightforward analysis and presentation gives clear picture of the population, including identifying the characteristics of those most and least likely to have problems with financial literacy.</p> <p>Questions and analysis repeated to track changes in population responses over time.</p> <p>Weaknesses</p> <p>While scoring is easy to understand it is somewhat arbitrary rather than statistically rigorous.</p> <p>Literacy levels may be over-stated as confidence is self-reported.</p>
<p>New Zealand</p> <p>Colmar Brunton <i>ANZ – Retirement Commission Financial Knowledge Survey</i> Published by the Retirement Commission, March 2006</p>	<p>856 respondents for a specially-designed in-depth interview.</p> <p>Analysis on financial literacy similar to that in Australian survey, except respondents grouped into three: low, medium and high.</p>	<p><i>While the knowledge levels are reasonable overall, there are gaps that could be pivotal in deciding how the population adapts in future to the modern financial environment and how well we do in retirement.</i> For example: 83% feel confident about managing finances. 21% have a written financial plan. 30% say they could not cope in the short-term with losing income.</p> <p>Lowest levels of financial literacy linked with lower education, low incomes, low net worth, being a tenant, Maori or Pacific ethnicity, aged under 25 or over 75.</p>	<p>As for the Australian survey above, although use of more in-depth interviews allowed deeper questioning.</p>

Table 2 continues...

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 2 continued...</p> <p>UK</p> <p>FSA <i>Financial Capability in the UK: Establishing a Baseline</i></p> <p>More detail on methodology in: Atkinson A., McKay S., Kempson E. and Collard S. <i>Levels of Financial Capability in the UK: results of a baseline survey Consumer Research 47 (CR47)</i> Commissioned from the Personal Finance Research Centre, University of Bristol and published by the FSA</p> <p>Both March 2006</p>	<p>5,300+ respondents for a specially designed face-to-face interview survey with questions on financial behaviour and knowledge.</p> <p>Conducted factor analysis on responses to describe a distribution from low to high 'scores' on four imposed 'domains' of financial behaviour: <i>managing money, planning ahead, choosing products, staying informed</i> as described in CR47. Five domains were described in the FSA report, as <i>managing money</i> was split into <i>making ends meet</i> and <i>keeping track of your finances</i>.</p>	<p><i>Large numbers of people from all sections of society are not taking basic steps to plan ahead...</i></p> <p>Over-indebtedness affects small numbers but when it strikes it is often severe.</p> <p><i>Many people are taking on financial risks without realising it, because they struggle to choose products that truly meet their needs.</i></p> <p><i>The under-40s...are typically much less financially capable than their elders</i></p> <p>79% answered a question on inflation correctly. 72% say it is important to keep informed on financial matters, and 88% of those say they do so. 26% have not personally bought a product in the last 5 years. 75% of people say they have rainy day money, but nearly half of people have no savings at all. 9% of people say they always run out of money at the end of the week or month.</p>	<p>Strengths</p> <p>Broad survey with many questions on different aspects of personal finance behaviour and knowledge.</p> <p>Methodology developed over many months, including trialling the questionnaire. Research team refined emphasis towards financial behaviour as a result of input from focus groups (See Personal Finance Research Centre, 2005 for detail).</p> <p>Weaknesses</p> <p>Self-reported behaviour.</p> <p>Complexity of analysis introduces subjectivity, for example, in what the domains should be and may restrict comparative interpretation of future surveys.</p>

Table 3: Examples of studies taking advantage of past experiments

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Compulsory school mandates US</p> <p>Bernheim B.D., Garrett D. M. and Maki D.M. <i>Education and Saving: The long-term effects of High School financial curriculum mandates</i> NBER Working Paper 6085, July 1997</p>	<p>Ongoing telephone survey sponsored by Merrill Lynch extended in 1995 to ask 2,000 30 to 49 year-olds about High School financial education. 1,870 of those completed questions on savings; 911 on net worth.</p> <p>By asking respondents in which state they went to High School, researchers identified those exposed to a 'mandate' that required students to receive instruction in consumer education.</p>	<p>The introduction of compulsory mandates increased exposure to consumer education: <i>...over time, mandates appear to have significantly increased the fraction of individuals taking generic consumer education courses, as well as the fraction taking courses covering household financial topics.</i></p> <p>Mandates also appear to have had a positive, gradual impact on savings rates in adulthood and net worth accumulated: <i>Systematic differences in savings rates across states do not appear until after mandates imposed. ...one infers that (self-reported) savings rates were roughly 1.5 percentage points higher for those entering the affected high-school grade five years after the imposition of a mandate, than for those who were not exposed to a mandate.</i></p> <p><i>... one infers that net worth higher by roughly one-year's worth of earnings for the typical individual who was exposed to a mandate.</i></p>	<p>Strengths Focused test of whether the introduction of compulsory consumer education in High School influenced savings behaviour later in life.</p> <p>Control group (not exposed to mandate) available.</p> <p>Weaknesses Heterogeneity in type of education received: while all mandates included consumer education (e.g., product features, advertising) only half were specifically on personal finance. So, while 42% of the sample took a consumer education course in High School; only 29% took a course with financial topics.</p> <p>Tried to standardise definition for savings, but as self-reported and people mean different things by 'saving' then measure likely to be inconsistently applied and incomplete: <i>each household was asked to estimate the fraction of take-home pay that it saved on its own behalf (not including reinvested capital income or employer contributions to retirement accounts).</i> Household debt not explored.</p> <p>Net worth data less robust. A smaller sample (possibly self-selected) answered questions on assets, and then measure of net worth constructed by researchers.</p> <p style="text-align: right;">Table 3 continues...</p>

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 3 continued... Retirement seminars US</p> <p>Lusardi. A. <i>Preparing for retirement: The importance of planning costs</i> published in <i>National Tax Association Proceedings</i> 2002</p> <p><i>Saving and the effectiveness of financial education</i> 2004</p>	<p>3,265 pre-retirees aged 50-61 in 1992 responding to questions about their finances in ongoing Health and Retirement Study (HRS). Self-employed and non-working respondents excluded.</p> <p>Around 400 answered 'yes' to <i>Have you attended a meeting on retirement and retirement planning organised by your or your spouse's employer?</i> (12.6% of sample).</p> <p>Measure of financial asset accumulation based on self-reported data and either excluded pensions and Social Security or estimated for those items.</p>	<p>Financial assets accumulated for retirement were higher for those who had attended a retirement seminar. Greater effect at low incomes suggests seminars were 'remedial' rather than appealing to those with a 'taste for saving': <i>Overall, attending seminars appears to increase financial wealth by approximately 18%. This effect derives mainly from the bottom of the distribution, where wealth increased by more than 70%. The effect of seminars decreases steadily as one moves to higher quartiles of wealth.</i></p> <p>Accumulation was associated positively with having a bequest motive; a pension; or, a tendency to give financial help to family, and negatively with: smoking; drinking; or, believing house prices will go up.</p> <p>Attending seminars had as large an effect on asset accumulation as having had higher education or not smoking.</p>	<p>Strengths HRS is a rich longitudinal data source.</p> <p>Study explores useful associations: the impact of retirement seminars on financial asset accumulation sized against that of different characteristics, and, the differing impact of retirement seminars at different points of the income distribution.</p> <p>Weaknesses Seminars attended voluntarily (so sample may be biased to retirement planning), by a small proportion of respondents.</p> <p>Seminars heterogeneous, varying by type, quality, content and when respondents attended.</p> <p>Measure of accumulated assets used may not be robust.</p>
<p>Links between financial knowledge & behaviour US</p> <p>Hilgert M. A., Hogarth J. M. and Beverly S. G.</p> <p><i>Household Financial Management: The Connection between Knowledge and Behaviour</i> Federal Reserve Bulletin July 2003</p>	<p>1,004 respondents nationwide to additional module in ongoing telephone University of Michigan Survey of Consumers in 2001.</p> <p>Respondents 'scored' by their answers to 28 True/False financial knowledge questions; and their self-reported practices in: cash-flow, credit, saving and investment.</p>	<p>Significant correlation between knowledge and behaviour: people who knew more were more likely to engage with financial products and engage in good practice in these areas.</p> <p>Specific knowledge was linked with specific products e.g., if knew about credit more likely to engage in credit management.</p> <p>Households that reported learning a lot from personal experience and from friends and family were more likely to have higher scores.</p>	<p>Strengths Focused study with simple data.</p> <p>Weaknesses Self-reported behaviour.</p> <p>Causality not proven: whether product use leads to better knowledge or the other way around, or whether there could be a third unexplained factor.</p> <p style="text-align: right;">...Table 3 continues</p>

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 3 Links between financial knowledge & behaviour continued... US</p> <p>Lusardi A. and Mitchell O. S. <i>Financial Literacy and Planning: Implications for Retirement Wellbeing</i> Working Paper published by Retirement Research Consortium and the Pension Research Council at the Wharton School, March 2006</p> <p><i>Baby Boomer Retirement Security: The roles of planning, financial literacy, and housing wealth</i> NBER Working Paper 12585, October 2006</p>	<p>Both studies based on Health and Retirement Survey (HRS)</p> <p>March study: 1,269 respondents of HRS 2004 aged 50+ additionally asked three very simple questions to test financial knowledge (on compound interest, inflation and risk) as well as questions about experience with making a plan for retirement.</p> <p>October study: Compares HRS 1992 and 2004 ('Early Baby Boomers') cohorts aged 51-56 at the time. Sample size 2,653 in 2004 and 4,580 in 1992. Asked two very simple questions to test financial knowledge (a percentage calculation and lottery division) and, if they got one of those right, a compound interest question.</p> <p>'Planners' for retirement identified by asking <i>How much have you thought about retirement? A lot, some, a little or hardly at all?</i></p>	<p>'Widespread' financial illiteracy among older Americans: March study: half of respondents correct on compound interest and inflation questions; one-third correctly answered those and a question on risk diversification. October study: 83.5% correct on percentage calculation; 56% on lottery division; 18% on compound interest.</p> <p>A minority plan for retirement (March): <i>31% had ever tried to figure out how much to save for retirement; 21% more or less developed a plan; 18.5% were mostly able to stick to the plan.</i></p> <p>Those who plan more likely to give correct answers to financial literacy questions. Those unable to answer a question on compound interest (both studies) and divide lottery winnings (October) correctly less likely to plan.</p> <p><i>Financial literacy is positively correlated with wealth but only in the first two quartiles of the wealth distribution (...a remarkable result as other factors controlled for) (March).</i></p> <p><i>Planners accumulate larger amounts of wealth than non-planners... even " a little" or "some" planning generates large wealth differences (October).</i></p> <p>Association between planning and wealth appears to hold for both cohorts (October).</p>	<p>Strengths HRS is a rich longitudinal data source, supplemented here by considering a time-trend and by a purpose-built module on planning and financial literacy.</p> <p>Associations between financial knowledge (referred to as 'literacy' in studies), planning behaviour and financial accumulation examined in detail.</p> <p>Considers causality – does better financial knowledge lead to planning which leads to higher wealth?</p> <p>Weaknesses Robustness of measure of wealth questioned as excludes Social Security and pensions, and imputes for those that did not report.</p> <p>Low levels of knowledge and small numbers of (self-reported) planners. Cannot distinguish between types and intensities of 'planning' actually carried out.</p> <p>Cannot prove causality from financial knowledge to planning behaviour to wealth.</p> <p style="text-align: right;">...Table 3 continues</p>

Selected study	Data, methods	Key findings (quotes in <i>italics</i>)	Strengths and weaknesses of evaluation(s)
<p>Table 3 continued...</p> <p>Credit counselling US</p> <p>Hirad A. and Zorn P.M <i>A Little Knowledge Is a Good Thing: Empirical Evidence of the Effectiveness of Pre-Purchase Homeownership Counseling</i> Paper presented at Federal Reserve Bank of Chicago conference March 2003</p>	<p>Delinquency of 38,080 Freddie Mac loans granted between 1993 and 1998 where the applicant received pre-purchase counselling compared to that of 1,238 loans exempt from counselling requirement.</p>	<p>On average, the loans taken out by borrowers who received counselling were 19% less likely to have ever been '90 days delinquent' than those where counselling was not required.</p> <p><i>...borrowers receiving individual counselling have the lowest delinquency rates. Classroom and home study are also associated with lower borrower delinquency rates, but telephone counselling is found to have no statistically significant impact.</i></p> <p>No evidence that counselling providers varied in their effectiveness.</p>	<p>Strengths</p> <p>Large sample of counselled loans, with attempt to identify a control group receiving no counselling.</p> <p>Comparative investigation into the different types of counselling useful as, in the absence of proof of effectiveness, policy tends to favour less costly methods such as telephone and home study.</p> <p>Weaknesses</p> <p>Loans which did not require counselling were defined by being of lower credit risk, therefore a biased group, reducing the strength of conclusions.</p> <p>Smaller samples for individual counselling (10% of total) and classroom (9%) compared to home study (43%) and telephone (34%).</p>

4. Summary of the key findings from these evaluations

This section explores further what can be deduced, or not, from the key findings of the evaluations of financial education summarised in the above tables. The overall picture, confirmed by other commentators¹³, is that the evaluations so far have shown mixed and inconclusive results.

The studies and commentaries on them seem to agree that, in most populations studied:

- There is a low level of financial understanding, with the implication that it can be improved.
- Financial knowledge or capability is associated with higher age (although is lower in the oldest age group), education, income and wealth.
- People scoring highly on financial knowledge are probably more likely to be those doing the 'right' things to manage their finances.

However, looking at the body of evidence, contradictions and unresolved questions appear. For example:

- **It is not always the case that financial education is associated with the 'right' financial behaviour or good financial literacy.** For example, both the Jump\$start and Bernheim studies evaluate the result of financial education in US High Schools at different times and in different ways. The Bernheim study suggests personal financial education in schools results in higher savings later in life. Mandell, from the Jump\$start studies, could not find evidence that thrift is systematically related to financial literacy, or that financial education improves thrift or decision-making around personal finances¹⁴.
- **No study has proved education causes better financial literacy or better financial behaviour¹⁵.** For example, while the NEFE studies found two cohorts of students scored better on a short test after studying the personal finance curriculum, it is not known whether similar cohorts would also have scored better without studying the curriculum, or if they studied a different one. Hilgert et al (2003) find correlations between having financial knowledge and financial practices, but point out that the causality could flow either way, or in both directions (or there could be a third unexplained factor at work). For example, it is not necessarily the case that having learned about equities through a financial education initiative you are then more likely to invest in them. It could be that having invested in some, you are then more likely to answer in a survey that you think you know about them.
- **It is not clear how the benefits of improved financial literacy vary across the income distribution.** For example, Lusardi found that the positive effect of retirement seminars on financial wealth decreased steadily moving to higher quartiles of wealth¹⁶. But the most affluent students have led the recent improvement in financial literacy in the Jump\$start initiative¹⁷.

¹³ Fox et al (2005), Lyons et al (2005), OECD (2005), Lusardi (2006)

¹⁴ Mandell (2006)

¹⁵ See also Braunstein and Welch (2002), Hilgert et al (2003)

¹⁶ Lusardi (2004)

¹⁷ The Jump\$start Coalition (2006)

- **The interplay of factors other than financial education that may also affect financial behaviour is not well understood.** For example, attending retirement seminars appears to increase financial wealth but then other things are just as much, associated with higher wealth for example, going to college or not smoking¹⁸ (which perhaps is an indicator of planning for longevity). Policy initiatives to improve education or longevity awareness could compete with financial education for increased government funding.
- **Financial education may sometimes act in undesirable ways**, or, at least, in ways that conventional financial wisdom would suggest is undesirable. For example, Mandell reports that students seem to get more from financial education if they have participated in a stock market game¹⁹. But then they say they would not be thrifty, perhaps because they think they can rely on stock investments. People who have learned enough to try to avoid possible mistakes may still make others, for example, they may under-invest in equities because they over-worry about the risk²⁰. After the TIAA-CREF seminars, almost 7% of people with a goal of retiring at age 65 said they would increase that age target, but over 7% said they would lower it²¹.

Further, as the tables show, all the studies have weaknesses in their methodology. This means that care has to be taken in applying the results more widely: an intervention which worked in one situation may not elsewhere. For example, neither the inputs nor the outputs of the Bernheim study are precisely defined. Therefore it is speculative to suggest that the result of the statistical analysis in that study - that those having undergone financial education in US High School were better off later in life by a year's earnings on average - means financial education in the UK would increase the net worth of a couple by £22,000²². The context of such a 'what if?' calculation needs to be appreciated so that it is not confused with a robust policy impact assessment.

In summary, the results of studies attempting to evaluate the effectiveness of financial education vary. It is not clear whether the inconclusive results are a consequence of poor evaluation methods or poor programme design, or that financial education works patchily in ways that we do not yet understand. Champions of financial education around the world have quoted the apparent positive results enthusiastically. While the positive results give much cause for optimism that financial education is a good thing, the state of evaluation of financial education programmes is such that exactly what works, and how, is not yet fully understood. There is therefore a case for improving the evaluation of financial education programmes. The next section considers the difficulties in doing so.

¹⁸ Lusardi (2004)

¹⁹ Mandell (2006)

²⁰ Campbell (2006)

²¹ Clark and d'Ambrosio (2003) p. 5

²² As in Dixon (2006) p. 71

5. The inherent difficulties with evaluating financial education

It is not surprising that there has been little conclusive evaluation of the effectiveness of financial education. It is not easy to do well. This section considers four inherent difficulties with evaluating financial education programmes, covering:

- The integrity of the data collected to evaluate financial education programmes.
- The practical difficulties of collecting the data and organising evaluation.
- Isolating the impact of a specific financial education programme.
- Putting the impact of the programme in context.

Data integrity

Inevitably, most data is collected through telephone surveys or face-to-face interviews with people about their personal finances. Such data has well-known difficulties:

- **The data may be limited and biased.** Some people will not divulge personal financial information, so people taking part in any survey form a self-selected group. Many studies using personal financial data (including the effectiveness of auto-enrolment) look only at individual's holdings in one product or with one institution, so are unable to identify whether, for instance, even if 401(k) saving went up, did other household saving go down?²³ And because individuals' retirement holdings are often complicated, some of the studies construct artificial measures, often excluding such vital items as state pension entitlement and some employer pensions.
- **Most of the data is collected from people self-reporting their own financial understanding, capability or behaviour,** without actual observations to prove that they do what they say they do. People are not always accurate about financial matters. For example, in the Australian baseline survey of financial literacy, 67% said they have an understanding of compound interest but only 28% actually answered a question on it correctly²⁴. Baseline surveys all over the world are interpreted as showing low levels of financial literacy, so we have to be cautious about what people say about their finances.
- **Data from different surveys is not comparable.** Different data is collected in different surveys, although it may sound as though they are investigating the same issue. For example, when investigating how many people have sufficient financial literacy to understand compound interest, Lusardi and Mitchell in the US asked how much would be in a savings account after two years given an interest rate²⁵. In another study by the same authors published in the same year, an easier two-sentence multiple-choice question was used²⁶. A different approach again was taken in the Australian financial literacy survey where the compound interest question asked about the difference between simple and compound interest²⁷. The 'right' answers to some financial literacy tests can seem trivial or misleading²⁸.

²³ Campbell (2006)

²⁴ As reported in OECD (2005)

²⁵ Lusardi & Mitchell (2006a) p. 4

²⁶ Lusardi & Mitchell (2006b) p. 14

²⁷ OECD (2005) Annex A, p. 108

²⁸ Lerman and Bell (2006) p. 8

Practical difficulties

Collecting financial education evaluation data is often time consuming, costly and difficult. For example, over 5,300 interviews for the baseline capability study for the Financial Service Authority (FSA) in the UK took on average 42 minutes each, and some took just over an hour²⁹. The interview questionnaire was developed using the results of initial detailed work one year earlier based on focus groups and in-depth interviews³⁰.

Because it is a significant exercise, evaluation is a specialist skill. Lyons et al (2005) found that evaluation was considered difficult by the US community-based financial education practitioners interviewed and many of the educators felt they lacked the knowledge or time to do it well. Evaluation was often an afterthought, without sufficient management attention or strategic thinking being applied. The authors concluded that *the basic problem is that the development of the evaluation component often falls to financial educators unfamiliar with evaluation methods*³¹.

Isolating the impact of a specific programme

Even with a well-conducted survey, interpreting the results is not easy. The challenge lies in isolating the long-term impact of any specific financial education intervention³², a task made difficult by the inherent nature of personal finances.

- **Financial education programmes vary.** A study looking at people who said they had attended a retirement seminar at some point in their career puts under the one heading of 'retirement seminar' many different types of teaching methods, subject matter and quality of material. Communities initiating financial education programmes have naturally tailored them to their particular priorities, so the studies investigating such programmes group together different content. This can be useful to compare which variations work better than others³³, but it also means it is harder to evaluate the impact of a single intervention.
- **No financial education programme actually works in isolation.** For example, the evaluators of the pfeg schools programmes concluded that they could not be confident about the general effectiveness of pupils' personal finance learning because *pupils' financial experiences outside school are very powerful and the folklore is bolstered by the activities and discussions of family and friends...*³⁴. Seemingly small encouragements from within a social network can make a relatively significant impact³⁵. Financial education may not work immediately, but take time, during which people are exposed to the powerful influences of family, friends, changes in life situation and legislative or tax changes. We do not know how all these other possible influences complement or compete with financial education initiatives.

²⁹ BRMB (2006) pp. 13-14

³⁰ Personal Finance Research Centre (2005)

³¹ Lyons et al (2005) p. 9

³² Fox et al (2005)

³³ Such as in the investigation into the effectiveness of different types of credit counselling by Hirad and Zorn (2001)

³⁴ Smith (2004) p. 13

³⁵ Duflo and Saez (2002) report an experiment which suggested that individuals' decisions to enrol into an employer-sponsored savings plan were affected more by 'small' changes (perhaps from the influence of colleagues) than by obtaining new information about the plan at a financial education event

- **There is inherent, and unexplained, variation in individuals' financial behaviour.** People appear more likely to say that they will make a change after financial education than they are actually to make a change³⁶. People make seemingly irrational financial decisions, even when presented with advice on what would be the best thing to do³⁷. In research carried out for the FSA in the UK³⁸, the team found interviewees themselves commented that what mattered was using financial knowledge, not just having it. Interviewees referred to 'X-factors' or personality characteristics that affected what people did around money, for example, whether they were organised or prepared to assert their rights. The interviewees had different views about what determined these personality traits. Traditional economic theory does not explain the reasons for variation in financial behaviours, and newer behavioural economics does not yet complete the puzzle³⁹. So different people will act in different ways after financial education, and separating out how the education itself makes an impact will always be difficult.

Putting the impact in context

Even if the effect of a specific programme could be isolated, there is then the difficulty of comparing it to what it should be. There are many different desirable outcomes that financial education could have, and the evaluation studies made so far consider a variety of measures. However, it seems to be difficult to put the results in a critical context of what can be expected from financial education.

- **The goal of financial education is not yet clearly defined.** So far, champions of financial education have tended to assume it is a good thing and done as much as possible within limited budgets. Precisely what the financial education is trying to achieve and how this should be measured have received less attention. There is a long list of what the impact of financial education programmes might be expected or desired to be, for example:
 - More people have financial education.
 - The level of financial knowledge, or capability, or confidence, increases.
 - People change their attitudes towards finances for the better, e.g., become thriftier.
 - People take the specific action that the programme is designed around e.g., make more retirement savings or pay down debt.
 - People take action to improve their personal financial situation overall, e.g., appropriately balance saving with paying down debt.
 - Macro-economic indicators improve e.g., economic growth is stimulated as more people save more.
 - The financial market becomes more efficient as more financially literate consumers demand a better deal from product providers.

³⁶ For example, Clark and d'Ambrosio (2003)

³⁷ Campbell (2006), Braunstein and Welch (2002)

³⁸ Personal Finance Research Centre (2005)

³⁹ Campbell (2006)

The aims at the top of this list - improving participation in financial education programmes, financial knowledge and attitudes - tend to get measured more often than those in the middle and bottom of the list, to do with individual behaviour and macro-economic impact⁴⁰. Intentions to measure the impact of financial education on behaviour can in practice fall back on measuring changes in attitude⁴¹.

- **The better measures are those hardest to measure.** In the evaluation of any type of programme, participation and satisfaction are important measures. But there is a strong case for increasing the emphasis on evaluating how people actually change their financial behaviour as a result of financial education and whether that leads to a better financial position.
 - As discussed in section 1, there is a general consensus around the OECD view that the aims of financial education should include taking more effective actions as well as better financial understanding.
 - As discussed in section 4, causality from better financial understanding to making the right financial decisions is not proven, so it may not be enough to assume that improving financial understanding will lead to a better financial position.
 - As the experience from the FSA research team in the UK suggests, people understand that better capabilities and knowledge are not necessarily enough to improve personal finances – it is action that makes the difference.

However, measuring improvements in financial behaviour is more difficult than measuring improvements in financial knowledge or attitudes:

- A survey which asks 'How much do you feel you know about interest rates?' is easier to carry out than one which asks for data on how much an individual has on credit cards or in loans.
- Identifying the 'right' financial action is debatable. If a financial education programme has a single aim (say, to increase savings in an employer-sponsored vehicle) can it be said to be a success for an individual employee if he or she does increase contributions but affords that greater saving by getting more into debt? If the increasing debt is not measured, the apparent effectiveness of the education may hide that the household is in a worse position overall.
- As discussed earlier, economic models of consumer behaviour cannot fully explain how individuals actually behave as regards money, so it is hard to identify that people are taking the 'right' or 'wrong' financial action for them. Personal financial decisions involve so many variables, many subjective. One family could decide on the right balance between debt repayment/spending/short-or long-term saving differently from another, but both could be valid for each set of personal circumstances and attitudes.

⁴⁰ Lyons (2005) shows this for US community-based programmes, see page 37

⁴¹ For example, the FSA plans to track over time how consumer behaviour is influenced by its promotional campaigns, but illustrates evaluation done so far by 73% of respondents felt more capable to handle these issues having accessed our resources. FSA (2006b) p. 12.

- **There are no benchmarks for what should be expected on any measure for any population.** In any of the evaluations of financial education, or commentary of them, there has been no debate on what the appropriate level or amount on each measure should be. For example, what balance between debt and savings would constitute success for a financial education programme, or is it sufficient just to see an increase in saving and a reduction in debt? In a survey of a population with a particular income distribution and cost of living, what proportion of people can be expected to have spent all their income at the end of the month? How many people should be able to answer a question on compound interest, or understand a superannuation statement, given the general levels of numeracy and literacy in the population? Assuming the goal of financial education is to improve these figures, what improvements are feasible? To get some idea of likely improvements it would be useful to compare data between populations, but the available data is piecemeal and far from being standardised.

Because of the practical, theoretical and conceptual difficulties of evaluating financial education programmes, it is unlikely that evaluation will ever be able to quantify absolutely the impact of financial education. But still, given the increasing attention and funding being given to financial education, it can only be expected that the need to know whether financial education programmes are successful will increase. It will therefore be worth trying to improve how much evaluation takes place, and its quality. The next section considers how to develop better evaluation of financial education.

6. Developing a framework for evaluating financial education

This paper has suggested that good measurement of the effectiveness of financial education initiatives is necessary but difficult and happening piecemeal. Fox et al (2005) suggest that:

An overarching framework for the evaluation of financial education programs would provide a guide or road map for collecting information about program development, delivery, effectiveness, and accountability. Widespread adoption of key elements in a common framework will not only make program evaluation less daunting for financial educators, by providing a guide and frame of reference, but also contribute to consistency in data collection and clarity and program comparison⁴².

They suggest that a number of similar program evaluation frameworks exist and offer one from which to develop a comprehensive, standard framework for evaluating financial education programmes. Box 1 contains a slight adaptation of the Fox et al suggestion, highlighting some of the important issues for financial education as discussed in this paper.

⁴² Fox et al (2005) p. 204

Box 1: Suggested framework for the evaluation of the effectiveness of financial education

Adapted from Jacobs' (1988) *Five-Tiered Approach to Program Evaluation* as presented in Fox et al (2005)

1. **Need:** What objectives does the programme try to meet? Is it to improve financial knowledge (generally or in specific ways), and/or to encourage a specific behaviour such as saving more in a retirement scheme or paying down debt? Is it focused on a well-defined small group (e.g., employees of an organisation) or at a national population? Are there groups within the population that have different needs?
2. **Accountability:** How much is the programme used and how much does it cost? This answers the money side of the value-for-money question. The numbers attending a seminar or using a website would be measured, and cost per unit could be tracked and compared to other initiatives.
3. **Fine-tuning:** How could the programme be improved? This focuses particularly on delivery and can help to identify which elements work better than others and why. It can use satisfaction surveys to help determine how well the participants and administrators rate delivery. It can also be linked to impact measures to see, for example, what the best performing schools are doing that the others are not.
4. **Micro Impact:** How effective is the programme against its objectives? This goes back to what the programme specifically set out to do (in 'Needs', the first tier) and sees how successful it is on those points. A clear list of programme objectives should directly suggest a list of measures, and a timeframe for achievement of these targets will need to be decided. However, some measures may be difficult or too costly to use, requiring the programme administrators to make some hard decisions. This is where there may be a risk of substituting the easy-to-measure knowledge improvements for the harder-to-measure actual behaviour change. Measurement in this tier should help to answer the benefit side of the value-for-money question.
5. **Macro Impact:** What impact is the programme having relative to the big policy picture, and compared to other possible initiatives? This is where measurement of the impact on the bigger macro issues is attempted, again, depending on the original programme objectives. While national capability strategies may have such macro-impacts as their goal, community-based projects may not need to have any measurements in this tier. A government could use measurements in this tier to compare the impact and value for money from a financial education programme to that of other initiatives.

This framework could be applied to the evaluation of a specific programme or series of initiatives; the type of evaluations seen in Tables 1 and 2. It could also be used as a 'checklist' by which to critically assess, or help develop, the historic analyses covered in Table 3.

Each of the five 'tiers' of measurement in this proposed framework tries to answer a different question. The important point is that each tier should at least be considered for each programme to be evaluated, preferably while the programme is being designed. Not every financial education initiative would necessarily need to answer every question, and could emphasise the areas critical to the particular goal of that programme. The framework provides a discipline to think through what is relevant and important for any particular programme.

For many programmes, the cost of collecting the ideal evaluation data will have to be balanced against its relevance and likely use. For example:

- An employer running a seminar programme for employees may only be interested in boosting participation in the workplace retirement savings scheme. The programme managers could choose to measure only the change in contributions made to the scheme. They would not identify possible disbenefits of other changes in the household to afford increased contributions, or the possible wider benefits of financial education, for example, better understanding of investment choices. Wider use of the evaluation results may be restricted.
- Similarly, an organisation sponsoring a programme of debt counselling workshops may itself have a role limited to that one dimension of personal finance. It would then be valid and practical to limit evaluation of the workshops to their impact on debt reduction, with similar caveats on the use of the results as the previous example.
- Academics researching the impact of financial education more generally would be expected to choose the most rigorous measurement techniques in order to identify important policy implications.
- Governments funding a large scale public financial education initiative would similarly be expected to use comprehensive and robust measures in the later tiers of the framework.

Different programmes would therefore have different sets of measures and use different methods to collect the data relevant and useful to them. Table 4 suggests some measures and methods in each tier for two example programmes: a series of budgeting workshops held in local communities and a national education programme designed to improve the levels of financial understanding in the population.

The table should not be read as a template for either of these programmes or any other. This paper assumes that the managers of any programme would think through the framework to determine what evaluation is appropriate for their specific situation, and the table shows some concrete examples to help spark some ideas for that process. Further ideas can be obtained by reading some of the studies discussed in earlier tables and other papers reviewed for this report.

Table 4: Examples of how the framework could be applied

Example 1: Workshops held in local communities to improve budgeting skills			
	Possible measures	Example methods	Actions, comments
Need	<ul style="list-style-type: none"> • Level of debts outstanding, credit card usage, compared to other communities of similar financial profile • How much any current budgeting programmes are used, by whom, and with what perceived success or problems 	<ul style="list-style-type: none"> • Collect statistics from survey of individuals and/or total statistics e.g., from financial providers, national statistics • Interview local people, community leaders, financial providers • Review local press for issues 	<ul style="list-style-type: none"> • Use information to identify priorities and decide on the objective(s) of the proposed workshop programme e.g., X% more households develop budget plans? Y% of households carry out better day-to-day budgeting? Average household debt in the community reduces by Z%? Make definitions precise so that these items can be measured. • Estimate unprompted demand for the programme and potential demand for all 'in need' to put a feasible range on X, Y, Z (benchmark from studies in other locations if available). • Detail target participant demographic profile as much as possible e.g., by income group or other indicator of being 'in need' of budgeting skills
Accountability	<ul style="list-style-type: none"> • Actual participant numbers and profile • Response rate to invitations to attend course for each type of invitation, for each workshop • Starting numbers and level of drop outs, for each workshop • Total cost per participant and per location 	<ul style="list-style-type: none"> • Programme managers collect statistics on invitation response, attendance and drop-out • Workshop costs itemised where spent on a standard form so total costs are consistent 	<ul style="list-style-type: none"> • Measurement of usage can be tracked against expected demand and profile from 'Need' as workshops continue • Profile most successful invitation method • Profile most successful workshop attendance rate • Method of costing and allocation per participant to be agreed with funding agent before programme starts (e.g. Are development costs treated separately from delivery costs? How should volunteer time be counted?). Costing approach may need to be standardised with other initiatives if a comparison between them is sought.
Fine-tuning	<ul style="list-style-type: none"> • Participant, workshop leader and programme manager ratings of satisfaction with programme operation 	<ul style="list-style-type: none"> • Use feedback surveys on satisfaction; ideas for improvement 	<ul style="list-style-type: none"> • Compare actual usage and satisfaction against expectations in 'Need' (e.g. Are the target group participating as hoped?). Adjust invitation and delivery methods as patterns of most successful approaches emerges (a 'formative' evaluation⁴³). Document adjustments so that evaluation can be linked back to different delivery methods.

⁴³ See Fox et al (2005) p. 204 for use of the framework in 'formative' and 'summative' approaches

Example 1 continued			
	Possible measures	Example methods	Actions, comments
Micro Impact	<ul style="list-style-type: none"> • Aim to measure items as decided in 'Need' – Number of households with a budget plan? Number of households reporting they are budgeting better? Level of household debt? - baseline before programme and afterwards • Aim to identify any specific <u>behaviour</u> change made as a result of the programme 	<ul style="list-style-type: none"> • Carry out surveys and/or interview participants before and immediately after the programme, and, say, 3 months later • Confirm self-reported data with direct observation where possible e.g., review (anonymised) bank statements of a sub-sample, read budgeting plans 	<ul style="list-style-type: none"> • Total data for a 'summative' evaluation of the programme's achievements over a specified time period(s) (or sections of programme by e.g., locality or delivery method) • If a control group can be readily identified - e.g., those not responding to an invitation to join workshops - collect same financial data for comparison with that of workshop participants • Analyse results by demographic profile to identify those groups who benefited most, compare with target group
Macro Impact	<ul style="list-style-type: none"> • Benefits to participants beyond financial • Wider impact of attending workshops e.g., greater financial awareness/interest, passing on of knowledge to family and friends 	<ul style="list-style-type: none"> • Carry out surveys and interviews as above 	<ul style="list-style-type: none"> • Use anecdotes to complement the data analysis in the evaluation report

Example 2: A national education programme to improve financial understanding of the population			
	Possible measures	Example methods	Actions, comments
Need	<ul style="list-style-type: none"> • List of 'problem' areas from financial household and macro-economic data e.g., levels of debt, household saving • Ways in which people currently gain financial understanding • What financial education programmes are in place, with what results 	<ul style="list-style-type: none"> • Review national statistics, academic and research literature • Gather benchmarks from other countries • Hold focus groups or interviews with individuals, community groups, financial providers, financial education providers • Understand levels of general numeracy and literacy in the population 	<ul style="list-style-type: none"> • Use information to identify priorities and decide on the objective(s) of the proposed education programme e.g., Average levels of financial knowledge, capability and/or confidence increase by A%? Average levels of saving increased by B%, and/or debt reduced by C%? Overall financial situation of D% of households better off overall? Positive action on finances taken by E% of individuals? Make definitions precise so that these items can be measured. • Review benchmarks from other countries in context of local general education levels and demand for the programme to put a feasible range on A-E. • Detail target participant demographic profile as much as possible

Example 2: A national education programme to improve financial understanding of the population			
	Possible measures	Example methods	Actions, comments
Accountability	<ul style="list-style-type: none"> Actual participant numbers and profile for each module within programme* Participants as a percentage of appropriate section of population e.g., employed adults or students Total cost per participant for each module <p>* Modules in a national programme could be, for example, a website, a school curriculum, employment-based seminars, or national advertising</p>	<ul style="list-style-type: none"> How usage statistics are collected will depend on module e.g., number of classes or seminars and participant numbers counted by managers; number of unique visitors to a website counted by software; surveys for recall of advertising or usage of brochures Costs itemised where spent on a standard form so total costs are as consistent as possible 	<ul style="list-style-type: none"> Measurement of usage can be tracked against expected demand and profile from 'Need' Method of costing and allocation per participant to be agreed with funding agent before programme starts (e.g. Are development costs treated separately from delivery costs? How should shared costs be allocated between modules?). Costing approach will need to be standardised between the modules and with other initiatives if costs are to be compared.
Fine-tuning	<ul style="list-style-type: none"> Participant and manager ratings of satisfaction with each module 	<ul style="list-style-type: none"> Use feedback surveys on satisfaction; ideas for improvement 	<ul style="list-style-type: none"> Compare actual usage and satisfaction against expectations in 'Need' (e.g. Are the target group participating as hoped?). Adjust delivery methods if undertaking formative evaluation. Document adjustments so that evaluation can be linked back to the right delivery method.
Micro Impact	<ul style="list-style-type: none"> For each item decided in 'Need' – e.g., Average level of financial knowledge in the population - decide whether to track change over time, inferring the impact of the programme; and/or, whether to aim to identify specific impact of each module Where possible, aim to identify any specific <u>behaviour</u> change made as a result of the programme 	<ul style="list-style-type: none"> Undertake national surveys where feasible, regularly if tracking items Use smaller surveys and/or interview a sample of participants immediately before and after each module, and, say, 3 months later to identify specific impacts Confirm self-reported data with direct observation where possible 	<ul style="list-style-type: none"> Total data for a 'summative' evaluation of a module's achievements over a specified time period(s) If evaluation is being carried out regularly, use objective measures that can be repeated If a control group can be readily identified - e.g., those not using the website or attending seminars - collect same financial data for comparison with that of participants Analyse results by demographic profile to identify those groups who benefited most, compare with target group Identify exposure to more than one module to investigate whether the benefit is more than the modules would give separately
Macro Impact	<ul style="list-style-type: none"> Wider benefit to economy e.g., impact on national savings or on efficiency of financial markets Efficacy of financial education compared to other policy initiatives 	<ul style="list-style-type: none"> Use econometric modelling 	<ul style="list-style-type: none"> Specially designed experiments involving control groups may be required to isolate impact of financial education alone as a starting point for more advanced analysis Care should be taken on consistency in measurement between initiatives being compared

7. The case for improving evaluation of financial education

As with any evaluation, using a framework like this one has some important benefits⁴⁴. Many of the difficulties with evaluating the impact of financial education should become easier by following the framework:

- It provides an external discipline where practitioners may not be experts in evaluation. It should save 'reinventing the wheel'. By the discipline of thinking through each tier of the framework, those designing the programme have to be clear on what it aims to teach people or how it aims to change behaviour. This should temper any tendency to think that any financial education must be a 'good thing'.
- The framework allows tailoring within a standard. Individual programmes or sites such as schools can tailor their evaluation as they tailor their financial education programme. But working within a consistent standard should mean that comparisons across programmes are still valid. The most and least effective practices - within a programme or between different national or international programmes - would then be identified on consistent measures. The comparison would suggest ideas for how to improve those initiatives performing less well, and to what benchmark level it is realistic to expect improvements.
- The same framework can be applied to evaluate other financial well-being initiatives. Ideally, this could help to compare the effectiveness of different initiatives or policies. For example, it could help to develop a better picture of the relative value-for-money of financial education, tax incentives and auto-enrolment.
- Consistently applying the framework across initiatives and over time would mean that robust evidence is available when the value-for-money questions are asked. The evidence base should help keep the attention of policy makers and funding agents⁴⁵.

There may be some suspected benefits of financial education that cannot be absolutely proven. This should not be used as an argument not to evaluate. Doing better evaluation of financial education programmes will improve the current understanding of what helps people make good financial decisions. Neither should the difficulties of evaluation be an excuse. As discussed in the last section, the key is deciding on the right balance between what can be usefully and practically evaluated and what is relevant in each case.

8. Conclusions and suggested next steps

This paper suggests that evaluation of the effectiveness of financial education programmes can only be expected to increase as policy makers in many countries give more attention to improving 'financial literacy' or 'financial capability'.

⁴⁴ Lyons et al (2005) and Fox et al (2005) discuss further benefits

⁴⁵ Fox et al (2005) p. 209

However, little evaluation is currently taking place and the evaluations made so far show mixed and inconclusive results. It is not clear whether this is a consequence of poor evaluation methods or poor programme design, or, that financial education works patchily. But it does mean that a positive impact from financial education has not been unambiguously proven; nor has a clear picture emerged of what works best and why.

Evaluation of financial education is inherently difficult, and the effect of any one programme can probably never be fully isolated. Nevertheless, this paper suggests that evaluating the effectiveness of financial education can and should be improved; and begins to develop a framework to do so.

Using such a framework will help to improve the rigour of evaluation and its interpretation and should therefore help to share best practices for effective financial education. Given the difficulties in evaluating the effectiveness of financial education, a suggested approach for any one programme is to:

1. Follow a standard framework such as the one suggested in this paper, preferably at the design stage of the programme, to identify all the goals of the exercise, all the questions of effectiveness that it might be desirable to ask, and ideal methods and measures for each.
2. Consider the potential value of the ideal evaluation: given the practical and other challenges that will put caveats on the interpretation of the results, what lessons for improving the effectiveness of future programmes will actually be able to be learned and how widely will the results be able to be used?
3. Balance the cost, relevance and value of the possible evaluation methods and measures to decide on the approach to be taken.

Specific next steps for New Zealand to improve the evaluation of financial education initiatives might include:

- a) Seek further ideas to develop the framework from techniques used to evaluate general education, and/or other public education campaigns such as anti-smoking or drink-driving.
- b) Map the financial education programmes underway in New Zealand, their objectives and evaluation results so far, against the framework suggested in this paper.
- c) Identify other current personal finance studies in New Zealand that could be used as convenient data sources.
- d) Involve a wide range of practitioners and others to develop the evaluation framework in further detail for ongoing evaluation of one or more selected education programme(s) in New Zealand, with an eye to consistency with other approaches used in other relevant policy evaluations such as KiwiSaver.
- e) Continue to swap lessons on the evaluation of financial education projects in other countries where the national strategies face similar challenges to that in New Zealand.

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