



Educating NZ
Empowering Educators

Personal Financial Education Project for The Retirement Commission

Final Report
15th December 2008



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Appendices

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FINAL REPORT TO RETIREMENT COMMISSION – TRIAL OF A PERSONAL FINANCIAL EDUCATION FRAMEWORK

Introduction

The Retirement Commission contracted Educating NZ to trial a Personal Financial Education (PFE) framework with ten schools nationwide. The project aim was to:

1. Recommend changes to the draft Personal Financial Education framework and make recommendations regarding the most effective strategies for its implementation.
2. Develop and trial strategies for schools to implement the draft Personal Financial Education framework into their school's curriculum through integration into the key learning areas.
3. Develop and trial models for professional development for teachers both for their own understanding of personal financial management and for developing teaching and learning techniques to implement the school's strategy into the classroom.
4. Provide details of teaching and learning resources identified or developed as part of this contract for later use by the Retirement Commission or Ministry of Education.

This is the final Milestone Report for the project and is divided into the four sections above.

Process

The trial schools were located in Auckland (primarily Manukau City), Wellington and Nelson (Tasman District). We worked with two teachers in each of the ten schools. The schools represented a broad range of sizes, types and socio-economic profiles. There were three secondary schools, two intermediates and five primaries. Most taught the NZ Curriculum but Scots College Prep School, the only private school in the trial, taught the International Baccalaureate.

They used a range of approaches and strategies to carry out the trial. The existing levels of PFE were low - most of the schools had little or no previous experience teaching PFE.

The introduction of the new New Zealand Curriculum provided an opportunity for schools to trial the Framework in relation to the changes it contains. The introduction of Key Competencies, one such change, is likely to provide a clearer notion of what PFE is, especially within the area of Managing Self.

An action research approach was used for schools to determine their approach and strategy. Action research encourages flexibility to change the approach as the need arises, reflection and analysis.

The project team consisted of two Educating NZ facilitators, three expert advisors and an Advisory Group. The expert advisors were:

Mary Anne Mills (Core-ed) - Curriculum Expert

Liz Koh (Moneymax) – Financial Planning Expert

Karen Dobric (UNITEC) – Action Research Expert

Their role was to advise on setting up the project, attend Advisory Group meetings and present at the two National Workshops.

Other members of the Educating NZ team peer reviewed the process and the findings for quality assurance.

The Advisory Group was made up of the Educating NZ project team, the expert advisors, a principal representative, the Ministry of Education, the Bankers Association and the Retirement Commission. Their role was to make recommendations on significant project issues.

The trial was conducted during term three with schools recruited to the project in term two. The short duration of the trial meant schools were constrained to working within existing long term plans. Although there were time constraints, most schools made it a higher priority than would likely have been the case otherwise.

Leading up to implementation, facilitators met with the principal and worked in schools to undertake needs analysis. The teachers were given a baseline survey to use with staff and students. The survey aimed to gain an impression of the PFE knowledge level, but also to raise the profile of the trial in the schools.

All teachers attended two two-day National Workshops in Wellington – one in May and the other in October.

The action research approach was also used to provide professional development for the teachers and to transform their practice. Practitioner understanding of problems and problem solving is given prominence in the action research model. This approach supports the Ministry of Education's objectives in teacher professional learning (Best Evidence Synthesis) to build communities of practice within organisations that focus on improvement.

Teachers were provided with professional support and reporting templates through Action Research Expert Dr. Karen Dobric.

We have referred to the teachers in the trial as research teachers to reflect the approach that was taken.

Trial outcomes

The trial process met its objectives and produced useful information and ideas from the schools. Research teachers and schools enthusiastically integrate PFE into existing or new classroom programmes and they are now telling us that it is important, relevant and enjoyable. Findings were shared at the second national workshop and written up (contained in the appendices).

Tellingly, all schools said that the work they had done through the trial would become a permanent feature of their long-term plans.

PFE is one of a number of critical curriculum focus areas that cannot be left to chance, and this is backed up in the trial with evidence from the classroom, and the community.

A major issue is to encourage schools to include PFE into teaching programmes. Despite the opportunity presented due to schools revising their curricula, there will still be the reaction of the curriculum being overloaded. We hope that the experience of the ten schools provides realistic and effective models that can be adapted to suit individual school needs.

A summary of key findings from the trial is included at the end of the report.

Conclusion

PFE is an important area which is presently not dealt with adequately by most schools. This reflects lack of teacher confidence, lack of priority in schools compared to other topics, and an absence of a guiding document containing strategies, approaches and resources for a New Zealand context. PFE can be implemented manageably if it is given more national priority and resourcing.

1. Framework feedback

Throughout the trial and at both national workshops, research teachers used and provided feedback on the Retirement Commission's **Personal Financial Education Framework** (the Framework).

They found parts of the Framework useful in planning and implementing PFE. At the same time they suggested a number of changes to align it with the curriculum and make it more accessible and user-friendly.

Alignment with the New Zealand Curriculum

A key issue for teachers was better alignment with the New Zealand Curriculum (NZC). They highlighted a number of inconsistencies and recommended the future document be consistent with the language, structure and spirit of the NZC, particularly:

- Terminology for aims, learning outcomes, achievement objectives and indicators was used inconsistently and these also need to be brought in line with the terminology in the NZC.
- ‘Mindsets’, a significant concept in the Framework, should be reconceptualised. As it exists now, the relationship between Mindsets, strands, learning outcomes, Key Competencies and values is confusing. Mindsets as a separate section should instead be abandoned and content included in Key Competencies, values and a revised essence statement for PFE.
- The summary Framework Diagram would need to be redesigned accordingly.
- Change the reference to Personal Financial Management Competencies to Key Competencies (or show the relationship between the two).
- All Key Competencies from the NZC should be included rather than the three in the Framework.
- Stages or levels should be the same as the NZC.
- The terminology and order of the Values is subtly different and should be consistent with the NZC, noting that the NZC list is not exhaustive.

A future format

A key recommendation from the trial is that the current Framework document needs to be transformed into a Teacher Handbook – an implementation tool that is user-friendly for teachers and curriculum leaders. Teachers need guidance on getting started in the classroom, and schools need overall direction about how to implement PFE across the curriculum.

This new handbook needs to be concise, motivational and very clear about the purposes of PFE. Although research teachers found the current document useful in planning, as a whole it was seen as too wordy, especially the first few sections. It needs a balance between articulating the ‘big ideas’ in PFE, and providing a ‘quick-start’ strategy for teachers who are likely to be unconfident in this area.

This Handbook would be closely aligned to the NZC and would be the first entry point to planning and successfully implementing PFE.

It would include:

- An overview of PFE as a succinct essence statement including a description of what a financially literate student should ‘look like’ at different curriculum levels.
- A simple statement or diagram about where it fits in the curriculum with more detail in relation to Principles, Vision, Values, Key Competencies and Future Focus Issues.
- A section that helps schools strategically plan PFE across the curriculum.
- A matrix of strands, levels, achievement objectives and indicators.
- Models of approaches, school action plans, case studies including advice on ethics, cultural issues and privacy.
- A glossary and resource sections.
- A directory of organisations or people who could be approached for financial advice would also be helpful.
- Some reference to assessment models that would fit PFE.

Teachers made a number of suggestions in relation to user-friendly design:

- Greater use of bullet points and diagrams to replace lengthy passages of text.
- A simpler summary Framework diagram without the learning outcomes (they are not referred to anywhere else in the document).
- There appeared to be some repetition and some unnecessary explanation of the structure (which wouldn't be needed if more diagrams were used).
- Correcting confusing or inconsistent terminology.

Teachers also recommended a comprehensive website with links to resources, templates, case studies, pictures, video clips etc and perhaps a CD-Rom or DVD to accompany a PFE Handbook.

The title of the framework, Personal Financial Education and subsequent use of the term Personal Financial Management were seen as inconsistent. Teachers suggested the use of one consistently used term and recommended Personal Financial Education (PFE).

A more detailed list of teacher feedback is contained in the appendices.

2. Teaching and learning approaches

Personal Financial Education in the New Zealand Curriculum

The vision of the NZ Curriculum (2007) for young people is that they be confident, connected, actively involved, lifelong learners (p8).

Schools develop programmes of work that draw from the Curriculum's eight learning areas in relation to the needs of their students.

Other parts of the curriculum help schools develop programmes, especially the overarching concepts contained in the Vision, Principles and Values sections.

PFE is not explicit in the curriculum but can be included in the social sciences and mathematics/statistics learning areas in the first instance. Other learning areas also contribute to teaching PFE.

Key Competencies is a new feature schools must consider when designing programmes. These describe the characteristics of good learners.

The **Managing Self** Key Competency is central in PFE, with the other four competencies contributing strongly according to the emphasis given by the school. Further discussion on Key Competencies follows in a later section.

Schools are required to consult with communities in prioritising their curriculum. They have both an increased degree of flexibility to define local curriculum, plus an obligation

to listen to what their communities are saying. We know from the trial that PFE has community support – the issue will be how effectively the parent community communicates this to school management, and how responsive the schools are.

The new curriculum also defines what effective pedagogy is, and emphasises the need for teachers to reflect on the effectiveness of their practice.

Future Focus themes

Future Focus is a part of the New Zealand Curriculum that includes sustainability, citizenship, enterprise and globalisation. It contains topics such as environmental education and awareness of Asia.

PFE can be located here through its connection with enterprise and, to some extent, other Future Focus issues. One of the schools on the trial had started using the Future Focus themes as a structure for their long-term planning, not just in PFE but across the curriculum.

PFE shares similarities with enterprise education; both deal with financial concepts, goal-setting and economic decision-making. But there are clear differences which need to be highlighted: enterprise education aims to develop enterprising attributes; PFE is directed at the management of income and spending. They could be seen as two sides of the coin – enterprising activities can generate personal wealth; PFE deals with managing wealth to attain personal goals.

The trial indicated that teaching enterprise and personal financial education can weaken PFE learning objectives (and vice versa) if teachers lack clarity at the beginning on how the two fit.

Key Competencies

The ‘real life’ and interactive nature of PFE learning activities provides a range of opportunities to develop student behaviours that demonstrate Key Competencies.

Research teachers provided feedback on the Key Competencies that were useful during the trial. PFE activities that contribute to building them are:

Managing Self

- setting goals (setting life goals and then the financial goals to achieve them)
- exploring the benefits of being resourceful and thrifty
- planning for the short and long term (budgeting, financial structures etc)
- finding and applying tools that motivate financial planning
- applying confidence, persistence and resilience to financial decision-making
- taking responsibility for long-term financial health for individuals and groups.

Relating to others

- exploring the benefits of cooperating in financial decision-making
- finding and gathering information from financial experts
- working with people in the commercial world with confidence and assertiveness, eg interacting, questioning and negotiating with others
- examining the effects of financial decisions on others
- defining what long-term financial security means in different cultural contexts
- analysing different points of view and cultural approaches to financial ideas.

Participating and contributing

- collaborating to carry out a community project
- providing feedback on others' decisions
- investigating how local, national and global finances can influence individual decisions
- appreciating the importance of social, environmental and economic sustainability in making financial decisions
- working with people that have different financial values.

Using language, symbols and texts

- using financial symbols and terminology
- computing and interpreting financial information
- gathering financial information from electronic and other sources
- pursuing personal financial planning through literacy and numeracy skills.

Thinking

- using an inquiry process to solve life problems through financial planning
- developing long-term thinking including understanding financial contexts of one's own future life stages
- identifying and deciding on different financial options
- composing and asking relevant financial questions
- evaluating financial decisions and their consequences
- making sense of financial information.

Pedagogy and assessment

It is generally accepted that multiple opportunities to learn new ideas and skills in a range of contexts represents best practice in teaching and learning.

In the trial most school approaches involved some form of the 'inquiry' teaching methodology. The inquiry pedagogical model is generally defined as the development of a 'big question', often co-constructed by teacher and students, and then investigated through a series of stages to come up with findings/learning. One school started their PFE trial off by asking students in the trial classes what they believed was important for students and parents to know.

Inquiry learning is widespread in New Zealand primary schools (and a few secondaries) in different versions and is generally supported in the NZ Curriculum although not

prescribed. It is central to teaching focus areas such as Education for Enterprise. Therefore, future guiding documents should provide PFE implementation ideas using inquiry approaches.

Research teachers in some schools used thinking skills methodologies such as Bloom's taxonomy, De Bono's Thinking Hats and Thinkers Keys in their programmes.

In relation to assessing student outcomes, trial teachers used a variety of formative and summative strategies depending on their approach. These included:

- before and after surveys to assess prior knowledge and to identify gaps in student knowledge
- peer and self assessment
- role play
- informal and formal teacher observation and reflection
- 'Agony Aunt' summative questions (Tawa Intermediate)
- student oral and written research presentations
- student written financial guide books to inform future students (Scots College Preparatory)
- student portfolios
- videoing students – questions and answer feedback on what they had learned
- the development of assessment material to support Unit Standard 24709 (Otahuhu College).

Many of the student tasks were interactive and practical making it easier to the broader range of assessment and teacher observation/reflection contained in the list above. In many cases the task design meant students were able to monitor their progress as well as the teachers.

Cross-curricular focus

Learning areas (English, mathematics, social studies and others) contain elements of PFE but none cover it completely.

The strong conclusion is that cross-curricular approaches should be advocated rather than locating PFE into one learning area. Key Competencies or other curriculum aspects could be used to organise the PFE programme to reinforce key concepts like decision-making, goal setting and planning for the future; especially if PFE is part of the school's overall vision.

Primary schools are more likely than secondaries to integrate PFE across learning areas. One trial school, for example, was able to incorporate PFE in an environmental sustainability focus by including budgeting and financial planning.

It is not realistic to expect schools to create new PFE units of work due to curriculum pressure and limited teacher time. Implementation will depend on high-quality materials

being available to be used either as stand-alone units, or by integration into existing topics.

At secondary level, learning will be more effective if different departments coordinate programmes so aspects of PFE could be taught at one time. The secondary school Commerce Department in the trial involved the school's literacy coordinator, and a learning support facilitator to develop strategies for the implementation. They reported that, if there had been more time, they would have involved the Mathematics Department. The staff in this case had the financial knowledge but sought additional strategies to widen PFE from a purely accounting or business studies course.

Two schools in the trial, one secondary, and one intermediate, developed careers-related studies using *The Real Game*. Students selected career options and this allowed them to explore the financial benefits (salaries) and expenses of different career paths as well as tax and superannuation.

There was an additional benefit for the secondary students. They reported that the work had helped them make decisions about their subject selection for the following year.

The risk with cross-curricular approaches at secondary level is that no one subject department is 'in charge' of it. Inclusion in long-term plans of a number of departments could mitigate this.

Literacy and numeracy

New Zealand's National Administrative Guidelines give priority to literacy and numeracy especially in years 1-4. Both are essential to the teaching of PFE and conversely PFE can be delivered through authentic and engaging literacy and numeracy programmes depending on student needs in the school.

Most schools found knowledge of terms and concepts had to be established first before inquiry/activity could happen. Pre testing of student prior knowledge was used in the trial. Research teachers commented that they spent more time than expected reinforcing basic skills in both areas, eg interest calculations, vocabulary etc. Some schools said this slowed them down in completing their trial so programmes need to allow for this.

Authentic contexts, real-life enquiries

PFE lends itself to teaching real world examples. Significantly, the ten schools developed authentic contexts in trialling their strategies using the PFE Framework.

All schools found that the use of authentic contexts through simulation, real-life enquiries, event-based or community projects was an engaging and effective way to teach PFE.

Many of these gave schools the opportunity to empower students in their own learning. This was seen as a positive aspect of the trial, particularly with teachers who were comparatively unfamiliar working this way.

For true authenticity, many schools said there must be a goal in the learning that involves managing income and expenditure. Many of the primaries used classroom simulation to demonstrate financial concepts through a 'classroom economy' approach (see Brooklyn (Motueka), Brightwater, Hampton Hill, Ranzau and Scots College Prep Schools case studies) which involved goal attainment and prizes/privileges.

Other primary schools used school-community events such as fundraising, school trips, Olympics activities and community meetings to infuse PFE concepts and activities.

All three secondaries used simulation as a vehicle through role-play, group decision-making activities and classroom discussion. The secondary approaches involved discussion or simulation of life-stage decisions and careers investigation.

Secondary classes tapped into students' real experience as income-earners (although not all Year 9/10 students have part-time jobs) or financial decision-makers within the family (for example shopping, helping parents interpret bank statements and simple contracts). There are privacy issues in relation to this last point that are discussed later in the report.

Project facilitators and research teachers interviewed students during and following the trial. Universally students said that PFE was enjoyable and purposeful. This applied not only to the sense of reality that PFE emphasises, but that generally students enjoyed taking more control of their own learning – investigating, discussing and decision-making. Feedback from teachers and students in all schools indicated that authenticity increased student motivation and interest.

Here are some quotes from students:

Otahuhu College

Boy, 14 years: *"It's fun. I talk with my father at home about what we're doing. I like it"*

Girl, 14 years: *"The budgeting will help us in future. I help my mum with the food shopping"*

Onehunga High School

Boy 15 years: *"It's good. It's helping my future plans. When I start work I will start Kiwisaver"*

Girl 14 years: *"It's started me thinking about what I'm going to do in the future and learning about what to do in the future. One of the good things is that we work together in a group and talk to each other"*

Boy 14 years: *"It's positive to be controlling your money. I will be using budgeting as soon as possible. It helped a lot in choosing my (subject) options for next year"*

Scots Prep. Two boys aged 10

“Keeping a budget this time helped us to keep track of our money - it worked well. To save some money is a smarter option than to spend it all straight away. It’s good to save for a goal and to put it in a bank because if it is in my room in a piggy bank I can spend it”

Scots Prep. Boys aged 12

“It prepares us for the real world. It completely changed my thinking. Now I put my money in a savings account instead of spending it at the dairy. It’s life-like and has been a fun challenge”

Other authentic approaches

Research teachers had no difficulty in developing fun, innovative learning activities like Agony Aunt (see Tawa Intermediate School Case Study in the Appendices), Classroom Economy, and TV interviews as a form of group assessment.

The Classroom Economy experience at Brooklyn School (Motueka) (see Case Study) and others showed the increasing confidence of students, especially when given opportunities to improve, eg regular chances to earn a bonus for completing tasks successfully.

At junior primary level authenticity can be reinforced through working with real money – coins, notes and cards – to develop number skills. This is easily extendable into talking about saving and spending with younger children. Teachers recommended this as a better approach than starting from higher order concepts.

During the trial facilitators sent out a newspaper article/photo dealing with loan sharks in Porirua (included in the Appendices). This was used successfully by some of the schools to promote discussion and reinforce concepts like interest, contracts, and budgeting.

The period of the trial coincided with both the collapse of a number of New Zealand finance companies, and the early stages of the global credit crisis. There was plenty of material in print, broadcasting and news media to resource learning units or incidental activities.

Visioning the financially competent student

Two schools, one primary and one secondary, worked on developing a definition of a financially capable student (and what that might look like) with staff colleagues or their school Board of Trustees.

For schools revising their curriculum, this is an opportunity to promote personal financial competency as an important component of a school’s curriculum, vision or charter.

One school started the trial looking at their School Vision to plan their approach. They worked PFE into high order statements about what the school valued most, its Key Competencies and its community curriculum priorities to shape their strategy.

Feedback from the research teachers indicated a need for greater specificity in what a financially literate student looks like at different stages of schooling.

For example it could look something like this:

- | | |
|------------|---|
| Years 1-2 | Recognise money
Able to discuss the choices in spending money on different things |
| Years 3-4: | Identify and calculate different notes and coins
Appreciate that people have different values in relation to money
Make choices to either spend now or save for later |
| Years 5-6 | Manage financial choices
Appreciate risks in financial choices
Describe the ways people plan for the future financially
Use simple financial tools |
| Years 7-8 | Use maths knowledge for financial calculations (interest etc)
Question and negotiate financial transactions confidently
Obtain the necessary information to become informed users of money and appreciate choices in the market |
| Years 9-10 | Articulate one's own values in relation to money
Design and use a budget to manage person finances
Recognise the changing financial needs at different life stages |

Community-linked activities

The trial showed PFE to be strongly supported by parents and community. The evidence for this came from all schools that provided a community linkage in their trial.

Involving the school community is an opportunity to build authenticity into PFE. The popularity of the Mangere Central School community workshop was an example of what can be achieved. The school made this one of their main strategies. The workshop, organised by the research teachers, had a turnout of 70 parents, children and teachers, and included experts and guest speakers from budgeting services. It included a group competition with activities such as calculating interest. Parents and children worked together to come up with solutions and win prizes. The research teachers said that the high demand from the community means that further workshops would be desirable.

Feedback from participants on the value of the evening included:

“We need money knowledge because our children and families are being taken advantage of”

“It helped me know how to get help and what to stay away from!”

The Mangere Central teachers met again at the end of the trial to review the student assessment evidence and reflect on the knowledge they had gained personally. Some of their comments included reflections on which aspects of the trial content were most valuable:

“Community issues and problems. Being able to use the skills and knowledge (calculating interest rates) learnt at the community workshop in class”

“I’ve learnt that I can’t afford not knowing financial education because it helps me and I want my class to know more about it! (Year 1/2 teacher)”

PFE, therefore, has the capacity to develop positive interactions between students, parents and whanau and points to an opportunity for influencing parent and wider family behaviour.

Linkages to other financial initiatives

Two of the PFE trial schools also did PrEP - a programme designed by the New Zealand Enterprise Trust which sees students setting up a range of ventures, and making and selling a range of goods and services on market day. Students earn an income from their work and enjoy being consumers on market day.

One of the trial schools used budgeting and financial planning to strengthen their PrEP programme. The PFE focus on personal skills as distinct from the PrEP focus on business skills meant the budgeting and planning ahead skills of all students were improved.

Behaviour change

PFE aims to change student behaviours in relation to money, budgeting and saving, not just understanding.

The trial indicates short-term changes can be made through the transfer of PFE principles into practice through activities such as fundraising, school trips and planning other events.

One research school applied their learning to their three-day field trip to Wellington (from Motueka) where children successfully budgeted their pocket money over the three days. The aim of PFE, of course, is for long-term behaviour change which this trial was unable to assess.

Values and morality in PFE

Schools reported that value/morality issues emerged during the trial.

Values of fairness, charity, sacrifice, family or cultural obligations are embedded in PFE and therefore teachers should be aware of these and prepare to deal with and explore them further.

In one school, a student who was struggling to achieve in a classroom simulation activity presented a dilemma for the teachers – should offers of charity from other students be allowed, or should the students concerned be bankrupted as would have been the case in the real world? Teachers need to discuss these issues with their colleagues and make decisions which can involve the students and increase their learning, minimise the negative impact on the student/s concerned and the rest of the class. In the case above, the teachers, after discussion with colleagues, decided to bankrupt the student. They reported that this had a positive outcome for the student (refer to the Brooklyn School (Motueka) case study in the Appendices) as he was given the opportunity to recover from his bankruptcy.

The new NZ Curriculum is explicit in the values to be encouraged, modelled and explored. All of the curriculum's values are relevant to PFE:

- Excellence - by aiming high and persevering in the face of difficulties
- Innovation, inquiry and creativity – by thinking critically, creatively and reflectively
- Diversity – as found in different cultures, languages and heritages
- Equity – through fairness and social justice
- Community and participation for the common good
- Ecological sustainability - which includes care for the environment
- Integrity which involves being honest, responsible, accountable and acting ethically
- Respecting yourself, others and human rights.

Schools need to make individual decisions about how these value statements (and values from their local school charter and vision statement) are incorporated into their PFE programmes.

Research teachers recommended a bigger emphasis on values/ethical considerations in future work in PFE particularly the awareness that people's values influence their financial decisions.

Where PFE is being done by a whole department, syndicate, or whole-school, lead teachers should communicate the purpose of the learning to their colleagues and raise awareness that exploring values is an important part of the learning.

Secondary school issues

Secondary level PFE has constraints that can make planning and implementing programmes more challenging. Teachers are organised into subject departments and only

see their students in hour long blocks three or four times a week. Students in year nine and ten often have to opt to study commerce subjects to receive any PFE so coverage is a big issue. Lack of Internet access, a major source of PFE information, was a major issue in one of the schools. It was difficult to book computer suites for the classes involved owing to booking pressure.

The three secondary schools in the trial represented a range of approaches. One had a more flexible timetable that allowed teachers to work with a range of age groups together over consecutive days. All secondary research teachers either worked with teachers from other subject areas, or could see the benefits of doing so.

Year ten is a good level in secondary to do PFE. Students are old enough to understand many personal financial concepts, and they have had real-life experience with money management, eg cell-phone plans, saving for a car etc. Many, not all, have part-time jobs. They are not yet in the senior qualifications system and so teachers have flexibility in course development.

Unit Standards are becoming available for PFE although senior secondary was excluded from the terms of reference of this report. One of the schools trialled the use of Unit Standard 24709 for their year ten students and this is an option for other schools.

Classroom issues

Research teachers commented on issues relating to privacy, and with reference to ethnicity.

Privacy issues arose when students discussed real financial issues to do with themselves or their families in the classroom. One school that set homework tasks in relation to household expenses spent part of the lesson discussing with students the purpose of the exercise and the need to respect privacy, ie anonymity, and the right for students not to take part if there were privacy issues. The school's principal suggested the use of Survey Monkey – an online surveying tool to anonymously collect data and overcome this issue.

Other teachers commented on the willingness of students to discuss real life financial issues, including household income and spending. Teachers could opt to allow students to disclose information where they felt comfortable, avoid public disclosure by using an anonymous survey, or avoid this area completely and use non-authentic information. Most felt it was a manageable issue as long as teachers were aware of the need to let students 'pass' on questions that involved private issues.

There were ethnic differences noted on the issue of privacy. Two of the schools in the project with multi-ethnic student population reported that students of Pacific Island and Maori heritage generally spoke relatively freely about family financial issues whereas Asian and Fijian Indian students were less likely to.

Research teachers in Manukau City schools explicitly dealt with cultural and value positions in relation to money and household expenditure during the trial. Their feedback

emphasised the different financial pressures and commitments that families from different backgrounds have. For example Pasifika families are more likely to have significant obligations to church, community and remitting money to extended family in the home nations. One school listed the understanding of this as a learning focus for their PFE unit of work.

Best evidence practice (Ministry of Education's Teacher Professional Learning and Development Best Evidence Synthesis Iteration) emphasises the need for teachers to be inclusive in general, and in subjects where there are cultural differences in particular. For example, the use of "us" and "we" in teachers' delivery can portray PFE as being a mono-cultural set of ideas. In reality all ethnic groups have their own set of cultural goals and financial priorities. PFE principles, however, have the potential to support all of these.

3. Professional development

Teacher capability

The primary PFE implementation issue is changing teacher awareness and practice toward this important area.

Trial feedback revealed that most teachers lacked confidence in teaching PFE and require more content knowledge and strategies to teach it well. The survey carried out in the 10 schools highlighted a surprising lack of personal financial knowledge amongst students and teachers. Additional resources and professional development initiatives are needed to support teachers. The exceptions to this are teachers with commerce degrees, or teachers with work experience in the financial sector. These teachers will have an excellent knowledge base but still may require support in developing effective approaches in the classroom.

The research teachers were successful in planning and implementing their approach after receiving professional support to do so.

Educating NZ used a range of ways to raise their knowledge and confidence. Financial Expert Liz Koh provided content knowledge through three sessions at the first National Workshop which dealt with most of the basic concepts in personal finances.

Teachers were given copies of her book *Your Money Personality*. Liz was available to teachers through the on-line community. Other materials were provided to teachers via the on-line community and they welcomed the opportunity to receive personal financial advice from Liz at the workshop.

School PD approaches

Research teachers were not required to formally plan their approaches to school-based professional development, except where it was a focus (Mangere Central School), but

they were asked to reflect on the professional learning process as they went. Most schools recorded useful insights during the trial and these are summarised in following sections.

In primary schools where trial teachers led whole school PD before embarking on their approaches, all teachers developed shared understandings about PFE. Consequently they were able to jointly plan learning activities.

Ranzau Primary School started the trial with whole staff sessions. Using a school devised survey of students and families to find areas of need, the first staff session focused on money personalities and introduced the framework. The second looked at the framework in detail and explored the strand objectives, learning outcomes, analysed their survey results, and suggested possible contexts. Each class designed their own programme based on a school-wide inquiry method. This ensured whole staff buy-in.

Mangere Central School chose a specifically teacher PD-centred approach. The school's research teachers facilitated a staff development day learning about personal finances and carrying out whole-school planning. During that day all teachers planned curriculum-related PFE in their classes, planned assessment for student outcomes and surveyed their own knowledge. The main source of content and pedagogical support came from the research teachers. They used Ministry of Education *Figure it Out* resources, external experts, and websites as other sources of professional support.

Towards a national PD action strategy

Trial feedback indicated the need for PFE professional development (PD) to equip teachers/schools to introduce it appropriately and effectively.

A national strategy would get PFE on school radars at a time when they are realigning their local curriculum in response to the introduction of the NZ Curriculum. Such a rollout would have to include the Teacher Handbook and any other new resources.

We asked the research teachers at the second national workshop to make recommendations on what an effective PD strategy in PFE would look like. Their feedback included:

- Organising a high profile launch through educational media (eg Education Gazette, NZ Principal and Starters and Strategies) to create excitement and buy-in, perhaps with a high-profile person featured
- Ensuring the key guiding document and accompanying resources are ready and accessible for implementation
- Experience indicates that when a resource arrives at a school without accompanying support it will not be successfully implemented
- Providing a personal financial survey tool to enable teachers to self-assess their prior knowledge
- Using a 'train the trainers model' through a series of regional cluster workshops with schools invited to send representatives. This would build school-based capability

- Getting principal buy-in at the start
- Making the workshops and the PD materials interactive and fun
- Sustaining the initiative through using the regional cluster structures, events, and visits from a regional or national facilitator. Teachers felt having two school-based lead teachers was more sustainable than one
- Making the PD model flexible and adaptable, not a one size fits all programme
- Schools that saw PFE becoming an integral part of their school curriculum in the future recommended that whole school PD was essential
- Experiences and resources could be shared through a national clearing house (website)
- Pre-service teacher education could be used.

BES thinking and feedback from the trial schools

If we were to cross reference the experience of the trial to the Ministry of Education's Best Evidence Synthesis (BES) on Teacher Professional Learning and Development (ibid page xxvii) the observations would be:

1. Extended time for opportunities to learn

Project funding allowed trial teachers to be released to attend the two national workshops, meet with facilitators, meet with the school-based project team and attend regional cluster meetings. This meant they had frequent contact with project facilitators and colleagues from other schools. Much of this time (over 80%) was interactive engagement (collaborative planning, sharing feedback and team report writing).

2. Use of external expertise

External expertise is acknowledged in BES as being important for PD interventions. The project used a range of experts at national level (action research, curriculum and personal financial education). Most research teachers sought external expert help at a school-level through budgeting services, banks and other experts from the school/parent community. The research teachers themselves provided some 'externally-sourced' PD through their involvement in the national project.

3. Teacher engagement more important than initial volunteering

Most trial school principals 'shoulder-tapped' the research teachers for the role. This did not appear to affect the enthusiasm for the project for most of the teachers, particularly during the classroom implementation phase.

4. Prevailing discourses challenged

The basis for this aspect of BES is possible teacher assumptions that some groups of students could not learn well as others in the focus area (PFE). Our observation was that all schools planned approaches that were capable of reaching all students through use of real life contexts, interactive pedagogy, and a continual reflection on outcomes throughout the trial. Case study material contains commentary on

students who struggled and what action was taken to take remedial action, particularly in core areas such as numeracy and literacy.

5. Professional community of practice

Educating NZ emphasised the sense of community among the group of teachers we worked with through the design of the national workshop programmes, the social events, the on-line community design, and the regional cluster meetings. Research teachers in the three areas met with regional colleagues five times during the trial. This was rated as a positive feature of the project with most discussion revolving around strategies, approaches and overcoming school-based obstacles rather than PFE knowledge.

Cluster meetings provided an opportunity for teachers to formally network, share challenges and successes and discuss resources as they were identified by teachers and facilitators. These meetings allowed teachers to clarify and confirm aspects of the action research process with facilitators to ensure they were comfortable with the process and able to meet the requirements within the given timeframe.

6. Consistency with wider trends in policy and research

The main issue for the PFE trial was the importance of aligning the approaches with the NZ Curriculum. This was recognised by the project team and we would acknowledge the strong input from Mary Anne Mills, the project Curriculum Expert.

By using an advisory committee it was possible to include major stakeholders and provide assurance that the project reflected current political, educational and financial contexts. For example, the Ministry of Education input emphasised policy priorities which would enhance the eventual implementation of a national PFE strategy. The project team researched and distributed current resources and best practice in PFE from Britain and Australia.

7. Active school leadership

An active leadership model included working with two research teachers from each school who provided leadership during the project. We also ensured the school principal was proactive in supporting the research teachers throughout. This was a condition of the school joining the trial. It was noteworthy that the project provided an opportunity for the research teachers and their close colleagues to develop leadership, curriculum, and action research skills as well as increased content knowledge. The principal representative on the Advisory Group alerted the project team to school leadership issues.

Personal benefits for teachers

PFE is an area of personal interest to teachers and this can give it leverage when disseminating it in schools. Topics like superannuation, debt, and budgeting led to discussion among many of the teachers with their colleagues and family. Some of the research teachers commented to us that they were personally actioning some of the their

learning from the project. Mangere Central School's trial focusing on staff professional development involved a follow-up meeting about Kiwisaver for staff.

On-line professional development

Research teachers made use of the on-line community provided by Educating NZ to find appropriate resources for their school trial. Most (though not all) teachers have access to the Internet through the laptops for teachers' scheme and home use. Many of the resources we recommended were already available via the Internet, and a website would be an essential addition to any general resource bank. Similar websites are available in other non-core curriculum areas such as Asia Awareness (<http://asia-knowledge.tki.org.nz/>), sustainability education (<http://www.e4s.org.nz/efs/>), and education for enterprise (<http://education-for-enterprise.tki.org.nz/>).

If or when a website for PFE is developed, it should equip teachers with resources in the two distinct areas - content knowledge, and strategies/approaches.

4. Resources

At the beginning of the trial, teachers were provided with a list of suggested resources by the Educating NZ project team to support their approaches. As more resources were located they were shared on the online community and during school and cluster visits. They included people experts, print materials, web and 'hands on' resources. These are included in the appendices.

While there was a good supply of resources from other countries, all teachers identified a lack of resources with a New Zealand context and content (currency for example) and recommended this as an area for development, particularly in the junior primary area. Teachers designed their own supporting materials to create meaningful experiences for their students but reported that the availability of relevant resources would further support the successful implementation of PFE.

Research teachers recommended the creation of a resource bank to support them in both content knowledge (for example fact sheets), teaching strategies, and cross-curricular resources.

Time and flexibility

Having the necessary time and flexibility in the trial was seen as very important. Teachers found sourcing relevant resources and designing innovative activities time consuming. But the response of their students was rewarding.

“The highlight for us was seeing all our hard work pay off – the learning the students made. It was also something that we both enjoyed teaching and had

personal growth in our knowledge in this area – from the initial national workshops, colleague help/advice and our own research.”

- Tawa Intermediate teachers

People Experts

People experts were seen by all teachers as crucial resources. Financial advisors, credit unions, building societies, finance companies, government departments, local banking institutions, Citizens Advice Bureaux and budgeting services were valuable resources. All schools used one or more.

Experts were used to support teachers' own knowledge as well as student learning outcomes. Teachers briefed experts on the specific knowledge areas relevant to student need and helped them design interactive activities. The most successful experiences were created when experts provided personal contexts for students to explore aspects of PFE, for example, applying for a loan and analysing the breakdown of car repayments.

The Mangere Central School community workshop involved students, parents and teachers in a number of well designed activities. Invited experts from within the community held the confidence of the participants and were critical to the success.

“Our guest speaker, Daryl, from Mangere Budgeting Services was extremely successful in highlighting relevant key issues for our Mangere community ... and engaged parents and staff by raising awareness about community issues.”

- Mangere Central teachers

Banks proved to be a significant resource in the school community. A number of schools already had school banking. While research teachers reported no significant issues regarding product promotion, it was considered important to provide a range of expert resources to students so schools were not seen to be promoting branded financial products. Students should be made aware that there are a variety of choices available to them in the future.

Experts also included those from within the school structure. One of the secondary schools used literacy experts to support students who, because of their literacy skills had difficulty engaging with the content. Teachers designed glossary flash card keyword activities to support these students.

“If a literacy support person is available, we recommend they be used to assist in developing literacy strategies,”

- Otahuhu College teachers

Other trial teachers were supported by colleagues with personal financial knowledge. Secondary schools usually had commerce teachers with either industry experience or appropriate qualifications.

'Hands on' resources

All primary teachers stressed the importance of hands on experience with money in real life contexts to practice coin and note recognition, counting and giving change. Hampton Hill and Ranzau Schools sourced learning aids such as New Zealand play money, cash registers and money fans from commercial educational companies to provide practice for the real life contexts their students were to experience.

A number of junior classes set up shops to provide this experience and reinforce money skills. The Money Snap card game reinforced learning.

While the Numeracy Project uses note denominations as a resource, these are used predominantly for place value rather than to explicitly teach financial skills. Some schools found the denominations used for the numeracy project could be confusing for younger students (\$1,000 and \$10,000 notes).

Teachers found commercial games like Monopoly, The Game of Life and The Real Game (see below in online resources) were very useful either as a basis for simulation scenarios or for reinforcement activities.

The Cash Flow board game from the author of Rich Dad Poor Dad, Robert T. Kiyosaki, was used by Alfriston College.

“Although this is a difficult game to begin with because learners have to learn some new terms which are mostly foreign to them, it is useful for teaching risk and investment. It could be simplified and adapted to a NZ context.”

- Alfriston College teachers

Online/Web

The Internet is a rich source of resources for both teacher capability and for finding teaching and learning materials, lessons, units and ideas. As discussed earlier, teachers found a lack of NZ content or contexts and recommended some of the international models could be adapted for a NZ audience.

Teachers recommended that PFE has its own TKI kete as a ‘one stop shop’ to support teachers with pedagogy and resources with templates, case studies, pictures, video clips etc. They suggested this could include ‘Ask an expert’ for answers to specific enquiries.

“We thought it would be good to have some kind of ‘survivor’ type online challenge game that students could engage with that explored PFE concepts.”

- Alfriston College teachers

5. Key findings

- These key findings are based on the ten-school trial conducted from May to October 2008. The ten had little or no previous experience teaching PFE, reflecting its low priority in New Zealand schools.
- Personal Financial Education (PFE) is a critical area that cannot be left to chance. While not explicit in the NZ Curriculum, it can be included through social sciences and mathematics/statistics and other learning areas. A cross-curriculum approach is best.
- The trial showed that PFE lends itself to ‘real-life’ education which has the potential to empower students in learning knowledge, skills and attitudes to build their financial capability – and the reaction from the students was overwhelmingly positive. They saw their learning as both meaningful and fun.
- Despite curriculum demands, trial teachers and schools integrated PFE into existing or new classroom programmes and are now telling us that it is important, relevant and enjoyable.
- Most teachers lack confidence in teaching PFE and would require support through more content knowledge and strategies to ensure it is taught well.
- What teachers need is an implementation guide. They found the Retirement Commission’s Framework useful but suggested changes to align it with the curriculum, make it more accessible by including additional features, and more user-friendly.
- A strategy is needed to get PFE on schools’ radars especially as they are currently redeveloping their local curriculum in response to the introduction of the new NZ Curriculum.
- PFE gained considerable community support in the trial – it was rated highly as a priority by parents and community. The issue is: how can the parent community communicate this to schools, and how responsive are schools to this?
- The values of fairness, charity, sacrifice, family or cultural obligations are embedded in PFE and teachers will have to be aware of these and prepare to deal with and explore them further.
- There are good PFE resources from other countries, but need to be contextualised for New Zealand. This is an area for development, particularly in the junior primary area. Teachers recommended the creation of a resource bank – probably web-based.
- At secondary level, learning would be more effective if different subject departments coordinated their programmes so aspects of PFE could be taught as an integrated unit.
- There is potential linkage to careers education in secondary schools. Secondary classes can tap into students’ real experience through part-time jobs.
- Privacy issues arise when students discuss real financial issues to do with themselves or their families. There were cultural differences as to which information was regarded as private.
- PFE is an area of personal interest to teachers and this can be leveraged in order to gain school commitment.

- For schools revising their curriculum, this is an opportunity to promote personal financial competency as an important component of a school's curriculum, vision or charter.

6. Appendices

i. A summary of school trial approaches

A summary of school trial approaches			
School	Approach	Context	Strategy
Mangere Central School	Staff professional development, community workshops and topic implementation.	Whole school implementation, staff Professional Development and community consultation.	Whole school development began with staff planning day held during the term break. This consisted of staff PD on financial literacy plus whole school planning on implementing PFE in each syndicate. Part of the whole school development was the planning of a community workshop. Syndicate initiatives planned were: Junior: (Yr 1/3) Olympics. Making sweatbands and marketing them. Middle: (Yr 3/4) Focus on maths implementation. Seniors: (Yr 5/6) Focus on maths implementation. Intermediate: (Yr 7/8) Maths, social studies (investigating the cost of becoming an athlete). Staff held a staff evaluation meeting at the end of term to assess student outcomes.
Alfriston College	Cross-curricular, competency focus; Board of Trustees and community input.	'3-Day episode' student elective; cross-level financial module. Focus was to determine what a financially capable student looks like.	Lead teachers developed and implemented a '3-Day episode' entitled 'Lift your Money Game.' This saw learners opt into special programmed electives while normal classes were suspended. Programmes were made up of learners from all year levels. 'The 3-Day episode was loosely based on the Cashflow game and included input from speakers, and student-centred activities. In addition, College principal Susan Impey ran a module 'Money Matters' with Yr 9-12 students weekly for term three focusing on budgeting. The research teachers worked with the Board of Trustees to gain input into defining a financially capable student. Parent feedback on financial education competencies was sought through the curriculum community consultation process.
Onehunga High School	Subject based, key competency development.	'Show me the Money', a six week unit across four social studies classes.	Social studies department planned and implemented a unit based on 'The Real Game (Bill Barry) with role playing and simulation on real financial events which also has a careers focus. Four Yr 10 social studies classes. The unit

			<p>taught through the use of role-play and real life scenarios to model a life's journey. Students allocated a job and income, encountering and working through different life experiences and solving problems using the knowledge gained during the unit. Students individually investigated different aspects of the financial sector, accessing information to help them through the scenarios. Students worked in communities (cooperative group work) to examine different aspects – income, saving, taxes, obtaining credit, budgeting and career/retirement planning. One of the research teachers (the Deputy Principal responsible for curriculum) trialled the use of Key Competencies in relation to the school curriculum redevelopment process.</p>
Otahuhu College	<i>Unit standard (US24709).</i>	Budgeting skills.	<p>Teachers held a departmental PD session to plan unit of work on budgeting skills relevant to their everyday lives. The unit led students to complete a unit standard on budgeting skills applicable to their day to day lives. Four Year 10 Business Studies classes. They have adapted material according to student needs. Teachers used the Figure It Out Financial Literacy resources. They started at Level 2 and worked through booklets to ensure that students who had no exposure to Financial Literacy previously worked through each level before moving to the next level to avoid gaps in their knowledge. Outside speakers have also been used. The school's Literacy Co-ordinator assisted with development of literacy strategies.</p>
Tawa Intermediate School	Cross curricular/Inquiry.	'The Game of Life'.	<p>Two classes of Year 7/8 students researched specific personal financial areas (needs/wants relating to themselves and their family) as an inquiry. In groups, they selected an employment and family setup (drawn out of a hat) and were then required to plan to meet their financial commitments given their income. Their investigative scenario involved locating and furnishing flats, arranging rental payments, utilities, food, clothing and entertainment while taking into account tax, student loan etc. All students were presented with a 'twist of fate' experience once a week which created a risk element that had to be managed within their financial plan. The budget included a 'holiday' fund towards a class trip at the end of the term, and if students couldn't reach the target they would be unable to join the class on the trip. All were successful.</p>

<p>Hampton Hill School</p>	<p>Cross curriculum/Inquiry.</p>	<p>Fundraising: The students chose to hold events to raise money for a school goal: purchasing speakers for data projector.</p>	<p>Two Year 3/4 classes kept a simple financial record for a series of school-wide fundraising events. Students decided to raise money to purchase speakers for their classes data projectors. They set up a bank account to keep this money safe. Events held:</p> <p>Soup Day: The classes prepared a budget, marketed, prepared soup, priced, served and sold and kept a financial record of their event. Students experienced keeping a float, buying within budget and calculating expenses.</p> <p>Olympic Dress up Day: The students advertised the event, arranged for prizes, collected and counted money and worked out profit after expenses. Both classes developed a class economy system (modelled by Brooklyn School (Motueka)) to explore budgeting and financial record keeping.</p>
<p>Scots College Preparatory</p>	<p>Inquiry/cross curriculum.</p>	<p>Yr 7: 'Does money matter to me?'</p> <p>Yr 4-6: Trialling linkage with NZ Enterprise Trust PrEP programme.</p>	<p>Yr 7: approach was based on the class economy system. Using the existing House points programme, a parallel strategy was adopted where time and effort was rewarded through a monetary system and therefore creating an income. Students set personal financial goals. The points each student earned carried a monetary value and this income was taxed, saved and/or invested. This resulted in learning across a variety of financial objectives. At the conclusion of the project students were able to use whatever income they had generated in an auction. As part of their assessment, the students were required to write a financial guide book explaining the process for future students.</p> <p>Yr 4/6: This project looked at budgeting and trialled linkages with PrEP (Primary Enterprise Programme). Students investigated the importance of planning ahead and keeping financial records, savings schemes, earning interest, tracking expenses and forecasting profit. Outside agencies were used for advice and input. In previous years the businesses created for Market Day did not always achieve a profit but with the Personal Financial Education budgeting lessons included, they were more successful.</p>
<p>Brooklyn School (Motueka)</p>	<p>Cross Curriculum.</p>	<p>Classroom Economic System.</p>	<p>In two senior classes at Brooklyn School, lead teachers implemented a classroom economic system where class members applied for a variety of jobs within the school environment. Once employed, they earned a monthly salary paid in Brooklyn dollars. Opportunities were included to generate extra income in the form of bonuses for excellence in work, perfect</p>

			<p>attendance, perfect work completion record, community service jobs etc.</p> <p>Using PFE strategies, students set financial goals and used balance books to learn about budgets. They were introduced to different forms of credit and investment, and the associated risks involved. The teachers refined and modified their strategy as the project developed.</p> <p>PFE concepts were also successfully transferred when students planned and managed a budget for the use of their spending money for school camp (a week in Wellington) at the end of Term 3.</p>
Ranzau School	Inquiry (whole school).	How to ensure students are informed users of money in order for them to value and respect money and to make good future financial choices.	<p>Planned school PD on PFE to ensure whole understanding of the project and the framework. After analysing the results of a simple student and community survey they had designed to assess student need, they finalised their approach. Each class developed the inquiry</p> <p>In the NE/Year 2 syndicate, one class set up a shop while another held a number of small fundraising activities to raise money for an outing. The third planned and held an ice cream stall and investigated the best way of keeping this money safe until they used it. To do this a group of students wrote to the local banks with relevant questions before bringing their research back to the class for the final vote. This approach was developed as part of a school wide inquiry process.</p> <p>In the Yr 3/6 syndicate, a model of 'The Game of Life' was trialed. This led to the scenario of a 'dream career', investigating this career and income options and exploring money personalities. The seniors set up a class bank with investment, banking, loan and credit options. They also successful trialed and developed a classroom economy.</p>
Brightwater School	Inquiry – Sustainability.	Classes will be responsible for a sustainable project in the community.	<p>Two classes set PFE within the context of a whole school inquiry. This inquiry involved students enhancing the present school environment and making this sustainable by, for example, creating a school garden. Each class chose an area of the school to develop and then created a business plan detailing how this could be achieved. The PFE element investigated how to meet the financial requirements of the inquiry. Students planned a budget as part of the business plan they submitted. The best plan was selected and then the class planned an event to raise the required capital. This is ongoing project and will be completed by the end of the 2008 fourth term.</p>

ii. Framework feedback in detail

Essence statement (including PFM competency descriptors)

- The first two paragraphs of the Essence statement are the most useful and gave an indication of what a financially capable student looks like;
- The aims are very important but may appear lost in the body of the text which is too wordy for an entry point to the document;
- The competency descriptors are helpful to show where PFE fits in the curriculum;
- There is uneasiness about the notion of Mindsets. This is a major concept underpinning PFE and not found in the NZC.

The Framework of the PFM Curriculum, Diagram, Framework in Detail

- The Framework summary diagram is important but confusing. With the recommendation to eliminate Mindsets as a separate category this needs to be redesigned. A brief 'big picture' statement is needed at the top of the diagram. The Learning Outcomes section could be replaced by the strand achievement objectives.

Strands with AO's pp. 11-14, and Indicators (last section) 21-30

- This was found to be the most useful and accessible part of the document and influenced most of the planning. Teachers found these pages very helpful when planning their strategies with the indicators providing a clear idea of what to teach.
- More consideration be given to amalgamating the two strands. Having two strands may give the impression that PFE is unmanageable.
- For manageability purposes it was strongly recommended that the achievement objectives and indicators be included on the same rubric. The less 'page flicking' the better was a common observation.
- Teachers recommend consistent use of correct and current terminology would avoid confusion.
- Both strand pages listed a number of achievement objectives above the matrix, but teachers believe the objectives were found within the matrix.
- Achievement objectives within the NZC are grouped by level rather than stage found in the framework and teachers recommend the document be consistent with the NZC.
- They suggested the matrix be redesigned to demonstrate how the levels can 'overlap' rather than be discrete.
- It was suggested an extra column with new PFE 'themes' could be added to the matrix rows which would run through the stages.

- The short time frame of the trial did not allow teachers to comment on the levelling or progression of all achievement objectives, only the ones they trialled. While they were found to be generally appropriate, at the junior level teachers found students had little understanding of the ‘value’ of money and some schools felt this could be more of a focus.
- Teachers suggested some separate achievement objectives could be taught together or amalgamated entirely. For example ‘What credit is’ and ‘How and why people use credit’ should be taught together as they are so intertwined.
- Some achievement objectives and indicators didn’t match. For example, Money and Income Management AO’s achievement objectives from stage 1 indicators were in a different order and used different language eg ‘Why money is needed’ became ‘Why income is needed.’

Terms in PFM and including PFM in the Curriculum

- Having the key vocabulary split into the two strands helped teachers with little prior knowledge of PFE clarify the difference between the two. It was recommended this become a glossary with definitions. More key terms could be added eg opportunity cost.
- Teachers found ‘Including PFE in the Curriculum’ overly complicated and jargon heavy. This section could probably be incorporated into the ‘Planning’ section.

Planning a programme of work

- Teachers felt these steps are currently well recognised. If they are to be included they suggest they should be presented as a diagram or with bullet points with the addition of possible teaching approaches.

Template Planners pg 19-20

- There were mixed responses regarding the templates provided. It was suggested that some teachers liked to have a model to help guide their planning. In this trial most teachers used planning templates designed by their schools. It was recommended that some models developed during the course of this trial be included in a final document.

iii. Print resources

The Financial Literacy Figure It Out series (published by the Ministry of Education) was highly recommended by both primary and secondary teachers as an excellent resource for subject based and integrated units. Each level has individual student booklets and a teachers' guide that can be downloaded. The student books have interesting activities, an attractive layout and are accessible to students with teacher guidance. The teachers' guide provides explanations of financial understandings and suggested sequences, copy masters of useful templates and a glossary.

http://www.tki.org.nz/r/maths/curriculum/figure/index_e.php

Titles:

The Real cost of Pets Levels 2-3

Saving For a Holiday Level 3

Granny's Gift Level 3-4

Young Entrepreneurs Level 4-4+

Teachers indicated they were pitched at levels higher than expected, especially The Real cost of Pets, Level 2, which was used with Level 3 and even Level 4 students. These were adapted by teachers to fit their students and secondary schools used these primary resources with success.

"Their games and black line masters were particularly useful." Brooklyn School (Motueka)

"They provide excellent exercises and games for students, encouraging collaborative learning opportunities." Otahuhu College

School Journals published by Learning Media for the Ministry of Education were recommended. This list was provided by Tawa Intermediate who used them in their reading programme as part of their integrated (cross-curricular) approach.

Baked Beans on Toast	Story 8-9	Pt 3, No. 3, 2005
Blue Suede Shoes	Story 8.5 – 9.5	Pt 4, No. 1, 1998
Car Wash Cash	Story 9.5 – 10.5	Pt 4, No. 2, 2006
Declined	Story	Young Persons No.1
Finding Your Own Tucker	Story 9 – 10	Pt 4, No.1, 1992
Joy Goes Busking	Article 8.5 – 9.5	Pt 2, No.1, 1992
Kynan's +ve and -ve Adventures	Story	Connected No. 3, 2006
Lovelorn Schoolboy	Story 9.5 – 10.5	Pt 4, No. 2, 1988
My Stolen Pay Packet	Story 9 – 10	Pt 4, No. 2, 1992
My First Pay Packet	Story 9 – 10	Pt 4, No. 3, 1990
Harambee Fundraising	Story 11 – 13	Pt 4, No. 1, 1993
Nice Chap	Story 8.5 – 9.5	Pt 2, No. 4, 1993
Tauhara Street	Story 9 – 10	Pt 4, No. 1, 1998
When Mum Won Lotto	Story 8 – 9	Pt 1, No. 1, 1998

A number of schools developed a class economic system (already in operation at Brooklyn school but modified for PFE) based on the book Teach Like Your Hair's on Fire: The Methods and Madness inside Room 56 by Rafe Esquith. (Viking Penguin 2007). While it is not recommended all schools developed class economies, this proved very popular for many of the trial primaries.

Some schools accessed a small number of print resources from commercial firms and used these to build their students early understanding of PFE concepts before they developed their independent investigations. While successful, they found very few examples to support their programmes and recommend this as an area of resource development, particularly those with a New Zealand focus.

Books teachers used were Money Management by Jocelyn Hadley-Buxton, Essential Resources Education Publishers Ltd (2004) at the primary level and Consumer Economics: A Textbook, secondary. Junior and middle primary teachers suggested graded printed texts would be useful especially when students make the progression from using materials to imaging.

“PrEP CD and manual, (from Enterprise New Zealand Trust, see online reference below) provided a range of useful resources, particularly the Money side of life game.”

Some schools (Tawa Intermediate, Ranzau) found the use of problem solving and complex thinking skills a tool for teaching Personal Financial Education and used them in their integrated programmes. Resources used were:

Tony Ryan's 'Thinkers Keys' can be found on the following website

<http://www.tonyryan.com.au>

Teaching Complex Thinking by Michael Pohl, Hawker Brownlow Education (2000)

Open-ended Problem Solving by Harry O'Brien, Teaching Solutions

Each school was provided with the text Your Money Personality by Liz Koh, who was also this trial's financial expert. Some teachers used it for their own content knowledge and to support school professional development sessions.

Towards the end of the project teachers received the Retirement Commission's free booklets: Goals, Investment, Retirement, Saving, Budgeting, Kiwisaver, Managing debt, Sorted guide and Your money in Retirement, which they were not able to report on due to the timing, but indicated would be helpful to support their own capability or as teaching resources.

Some examples of existing resources schools used were:

The Retirement Commission website ‘Sorted’

<http://www.sorted.co.nz>.

Sorted is New Zealand’s free independent money guide, run by the [Retirement Commission](#). It’s full of [calculators](#) and [information](#) to help manage personal finances [throughout life](#). This site is easy to navigate with separate links for students and teachers. <http://www.sorted.org.nz/movies> a series of short movie clips about managing debt, saving, setting goals and budgeting, investments, mortgages, and retirement (suitable for upper primary above).

All teachers recommended this website. The online calculation tools were used with students in the game simulation eg the money personality surveys and the student loan calculator. Excellent links are provided to government agencies like the Inland Revenue Department and Work and Income.

Younger students used the games eg Money Island, Dollar Reef and Cash Cloud as independent activities during numeracy lessons. While the games covered some simple concepts they were found to be quite repetitive and lacking in the sophisticated problem solving element today’s students enjoy.

TKI: Te Kete Ipurangi

<http://www.tki.org.nz/> the Online Learning Centre for a number of resources including digital learning objects, Digistore.

This consists of a number of interactive activities students can use independently or as part of a group as stand alone activities or as part of a teaching strategy. The following link involves students comparing mobile phone plans.

<http://www.tki.org.nz/r/digistore/protected/objects/?id=762&vers=2.0>

Some teachers used these as independent student activities but they were not widely used.

Education for Enterprise

<http://education-for-enterprise.tki.org.nz/>

The Education for Enterprise (E4E) website explores how schools can develop an enterprising approach to teaching and learning.

<http://education-for-enterprise.tki.org.nz/Resources,-tools,-templates> . While teachers did not report on the use of this link, it has recently been redeveloped and provides resources that could be used by teachers planning fundraising events as a context for PFE.

Enterprise New Zealand Trust

<http://www.enzt.co.nz>

Enterprise New Zealand Trust’s principal objective is to promote an enterprise culture amongst New Zealand School students.

Programmes include the Lion Foundation *Young Enterprise Scheme* (YES), *Finding your financial feet* (FED), *“The Apprentice”* (ESP) and *Primary Enterprise Programme* (PrEP). SmartStart, in association with the ASB is a new initiative for primary schools.

Some of the games and activities from existing programmes were found by teachers to support students develop their personal financial skills. Scots College Preparatory (Yr 4-6) used PFE to strengthen their existing PrEP programme.

The Ministry of Education Maths Curriculum website

www.nzmaths.co.nz

Teachers are familiar with this site and some indicated it was a useful resource when teaching PFE particularly in the Number, Algebra and Measurement strands.

Reserve Bank

<http://www.rbnz.govt.nz/education/>

For general information

http://www.rbnz.govt.nz/currency/Money/explaining_currency.pdf

This section of the Reserve Bank of New Zealand's website describes what money is, what cash or currency is, how New Zealand's bank notes are designed and made, and the life cycle of a typical bank note. It also looks at the design and security features of our bank notes and coins, and the history of currency in New Zealand.

Some primary teachers indicated this link could be a useful resource for classes creating their own school or class currency for their simulation games.

KiwiSaver

<http://www.kiwisaver.govt.nz>

Some teachers used this for their own personal financial understanding or with upper primary and secondary when looking at the Financial Planning and Wealth strand.

The New Zealand Association of Citizens Advice Bureaux

<http://www.cab.org.nz/>

We provide information, advice, advocacy and support to individuals. Services are free, impartial and confidential.

Mangere Central School and Otahuhu College both used this service; Mangere for their community consultation workshop and Otahuhu as part of their teaching strategy.

Income Revenue Department

<http://www.ird.govt.nz/how-to/taxrates-codes/itaxsalaryandwage-incometaxrates.html>

Provides links to income tax rates for individuals. This was used by teachers and senior primary and secondary students when seeking tax information to support their strategies.

Career Services

<http://www.careers.govt.nz/>

http://www2.careers.govt.nz/who_earns_what.html

This section from Careers website shows the impact of qualifications on earnings. It provides information about occupations that are the highest and lowest earners, and compares employee earnings by occupation.

Students from some trial schools used this in their inquiry when researching a career and salary. The information was used when creating a financial plan as part of their simulation.

<http://www.interest.co.nz/>

This provides listings of all retail interest rates on offer in New Zealand and includes call and savings accounts, term deposits, credit cards, and home mortgages. Some schools used this site when students were deciding on the best interest rate for a mortgage in their 'Game of Life' or 'The Real Game' simulation.

The Real Game http://www2.careers.govt.nz/the_real_game.html

The Real Game is a career education resource designed for students in Years 9 and 10. It introduces students to the world of work and helps them to develop an understanding of the options and opportunities available to them and the implications and importance of their choices. It uses elements of role-play, group work and individual investigation to help students develop the knowledge, skills and attitudes they will need to assess and make decisions about further education and training and career options.

Onehunga High School already used 'The Real Game' in their Social Studies department but added more complex budgeting as well as PFE knowledge strands with their trial. "This gave our unit an authentic context while still teaching the core ideas from PFE."

Australian Websites:

<http://www.financefirst.net.au/teachers.html>

Making Cents is a series of financial education units for primary children covering Years K-6. Practical activities are used to stimulate and engage students enabling them to develop an understanding of financial concepts by using situations that relate to their everyday lives.

These are downloadable units matched to Social Studies and Maths curricula for each Australian state and territory. Each state has adapted the same resource to fit its curriculum.

Year 1-2: Lower Primary 'Using Money' (scenario linked to a pocket money scenario)

Year 3-4: Middle Primary 'Budgeting and spending' (scenario linked to planning a birthday party)

Year 5-6: Upper Primary 'Calculating the cost' (scenario linked to a mobile phone contract)

The three units were given to trial primary schools to adapt and use in their programmes. While teachers didn't use the modules as designed, they found some ideas and templates useful.

<http://www.understandingmoney.gov.au/>

The Australian Government's 'Understanding Money' website aims to build the capacity of people to better understand and manage their money. There is information about building financial skills and knowledge related to budgeting, saving, credit and its use,

debt control, investing, superannuation, getting financial advice and looking out for scams and insurance.

This was used mainly for information and links and was recommended by some teachers.

<http://www.financialliteracy.edu.au/resources/resources.html>

The Consumer and Financial Literacy Professional Learning Program aims to build the capacity of teachers in primary and secondary schools to engage students in consumer and financial literacy.

Some of the learning activities were linked to the TKI digistore learning objects. While these were recommended to teachers there was little feedback on them.

Financial Securities and Investments Commission consumer education

<http://www.fido.gov.au/fido/fido.nsf>

As the consumer protection regulator for financial services, ASIC's aim is to improve the financial literacy of Australian consumers so that they can make informed decisions about financial products and services, and identify and avoid financial scams and rip-offs. The teacher resources section under publications includes materials about becoming confident consumers and managing money for middle school, levels 7-10, NSW Business Studies syllabus resources for Years 11 and 12 and contacts for speakers.

<http://www.fido.asic.gov.au/fido/fido.nsf/byHeadline/Your+money+starter+quiz>

FIDO's new financial literacy resource for secondary schools has quizzes, games, movies and fact sheets on superannuation and insurance.

UK websites

Personal Financial Education Group

<http://pfeg.org>

This UK website supports the teaching of financial literacy from the age of 4 through to 19. It offers resources and support to help teachers plan and teach personal finance in fun and exciting ways that fit into existing activities and curriculum plans. It consists of interactive website, print and material for pupils, teachers and parents.

While the activities were excellent and could be adapted their use was limited. Lessons relied heavily on the supporting resources which matched the UK currency and banking systems.

Biz/ed

<http://biz/ed.co.uk>

A website for students and educators in business studies, economics, accounting, leisure, sport & recreation and travel & tourism.

This was recommended by some secondaries as a useful model to adapt.

Natwest

<http://www.natwest2f.com/natwest/schools.asp>

The Natwest's MoneySense programme teaches children money management life skills. Material and ideas are age grouped: 11-14, 14-16 and 16-18. There are four modules (lesson plans, activities and resources) which cover how to open a bank account, how to manage money on a day to day basis, budgeting and how to run a business.

Again, useful but limited due to the currency and banking systems.

Uniaid Foundation

<http://www.uniaidinteractive.org.uk/mash-test.asp>

A fun and easy-to-use game for groups of undergraduates and year 11-13 students focusing on student finance. This is a personality MASH test card game and worksheet version.

This can be purchased online and was recommended by Alfriston College.

Others

Mad Money

http://pbskids.org/itsmylife/games/mad_money_flash.html

This game teaches primary students about budgeting, earning and spending money and was recommended by students and teachers.

My Savings Quest

www.mysavingsquest.com

An interactive game where students set a long term financial goal. They then design and manage a budget to achieve this goal. This was recommended by a number of schools.