Developing Financial Capability in Children and Young People

A Review of the Evidence

MyPocketSkill

the Money Advice Service

Foreword

The things we see and learn about money in childhood and adolescence can have long-lasting consequences. Money habits that can last for life begin to form between the ages of 3 and 7, and are shaped by our experiences in school, at home, and in communities. There are opportunities through all these routes to make a significant, positive difference to future generations' ability to manage their money well.

The Money Advice Service wants to ensure every child gets a meaningful financial education, no matter what their needs or circumstances.

In late 2018 MAS will finalise its first ever Children and Young People's Financial Capability Commissioning Plan, which will set out how we plan to work towards achieving this goal in the years 2019-22.

We published the first step on our way to this plan, our analysis of CYP Financial Capability Needs, in April 2018. This set out topics on which CYP may need more financial education support, and which CYP may be in greater need than others. The Provision Analysis, Evidence Analysis, and Policy Landscape Analysis we are now publishing are the next steps. They are the first reports of their kind in the UK, and draw together everything we know about how financial education is currently delivered, what is effective in helping children develop financial capability, and the risks and opportunities of the policy context in each UK nation.

In Sept-Oct 2018 MAS will consult on draft recommendations for how we plan to put all this evidence into action over coming years, before finalising our commissioning plan in the months that follow. Our intention is that this will inform the financial capability strategy for the UK for future years, including funding, delivery, influencing, and research activity.

We also hope these reports will be of use to anyone seeking to understand how financial education is currently delivered in the UK, and where the gaps and opportunities for change for the better lie. We will keep them updated and welcome feedback to inform future versions.

I am delighted to introduce these documents and look forward to hearing your contributions and reflections as we work towards our Commissioning Plan over the coming months.

Sarah Porretta
Director of Financial Capability

Executive Summary

About this Report

1. The purpose of this report is to provide the Money Advice Service (MAS) with an understanding of what works in the field of providing financial capability for Children & Young People (CYP) both in the UK and more widely across the world. The report synthesises current relevant research, adds to a field which is evolving rapidly and is aimed at supporting MAS and others to commission effective support to address CYP financial capability needs, at home, in school, and in community settings.
2. This Evidence Analysis is one of the reports produced to inform MAS's CYP Commissioning Plan. Its findings will be considered with those from MAS's CYP Needs Analysis, Provision Analysis, and Policy Landscape Analysis, and will inform a gap analysis and draft commissioning recommendations, to be consulted on in Sept-Oct 2018. The CYP Commissioning Plan will be completed in Nov 2018.
3. To improve this understanding, we have established a workable taxonomy of the types of approaches that exist, gathered, analysed and interpreted evidence into a consistent framework and subsequently structured findings into digestible themes and an Evidence Map.

The Evidence Base

4. A great deal of the evidence of impact from financial capability interventions for CYP is relatively recent and much of it is lacking in substance and rigour. Our review has therefore supplemented formal academic research and stepped outside of the confines of what has been conclusively demonstrated to also highlight areas of emerging and promising practice.
5. Through the course of the review we collected around 150 separate pieces of evidence relevant to this study, including academic papers, delivery providers' own research, data analysis, policy papers and thought-leadership pieces.
6. Our review maps all the relevant pieces of evidence, categorising evidence on the basis of the characteristics of the intervention, the outcomes delivered, and the robustness of the evidence gathered.

   We then display the evidence landscape by means of an ***Evidence Map***. Evidence maps are a way of clearly and succinctly representing the scope, strength and applicability of specific interventions, showing a visual depiction of the evidence base and highlighting the areas where the evidence base is most strong/consistent vs. where there are gaps or deficiencies.

Key Themes

7. From the individual studies, reviews, policies and analysis that we have explored, a number of themes emerge. These recurrent themes begin to offer us useful pointers towards the successful ingredients of effective programmes, where there may be opportunities to scale-up examples of good practice or where further research could usefully be directed.

Key Themes

Theme 1 - Train the trainer approaches appear effective in building financial capability

Theme 2 - Workshops and face-to-face classroom formats do help to build ability and mindset

Theme 3 - Combining face-to-face with an experiential learning-by-doing approach reaches further into behaviour change.

Theme 4 - Parental involvement appears to be effective in influencing behaviour.

Theme 5 - Timing and context are important - the "just-in-time" or "teachable moment" approach appears to amplify effectiveness.

Theme 6 - The role of cognitive factors is important in downstream financial behaviours.

Theme 7 - Earlier the better – interventions can still be impactful for younger children

Theme 8 - The long-term effect size of financial education courses on financial behaviours appears weak

Theme 9 - Some mainstream interventions are not yet well evidenced

Theme 10: return-on-investment analysis is universally lacking

8. From these themes we have drawn a series of conclusions, focusing on promising areas where there may be opportunities to mainstream/scale-up and defining some of the attributes to consider for a blueprint for future programmes. We have also identified areas where more research is required.

Opportunities to Mainstream/Scale-up

9. Our research highlights programmes where evidence is positive and offers opportunities to impact a wider population if scaled-up.

10. There is potential to widen the reach of programmes such as Talk, Learn, Do, (TLD), which leverage the important role of parents/carers in shaping their children's financial capability.

11. Commissioners should consider the potential to widen the reach of experiential learning programmes, which embed taught learning through practical activities relevant to a child or young person's life and appear promising in influencing financial behaviour.

12. Train-the-trainer type programmes may offer opportunities for greater impact if expanded. There are potentially different forms of this, for example upskilling those already working with children and families to support them with financial capability as part of wider support or providing volunteers with accredited training in delivery of financial education.

13. Commissioners should consider publishing information (such as data on reach, successes/outcomes or good-practice guides) to assist in shaping future delivery of programmes for children and young people.

Blueprint for Future Programmes

14. Bringing together some of the themes from this report we have engaged with MAS' CYP evaluation, policy, and insight leads to define key characteristics that evidence suggests may be important in future programmes. These will be considered alongside MAS's analysis of needs and provision to inform future commissioning recommendations. Some of these characteristics include:

A Blueprint for Future Programmes

- Trusted and skilled messengers - Delivered by trained/accredited practitioners, supported by an up-to-date knowledge base and high-quality resources
- Experiential - Focuses on relevant just-in-time / experiential components such as handling money, opening a bank account, using a debit card, or financial planning for leaving home or a first job
- Differentiated - Adapts to different cognitive, non-cognitive (socio-emotional) and socio-demographic needs (e.g. children with lower levels of cognitive or social-emotional skills or potentially vulnerable groups such as refugees)
- Cognitive Focus - Addresses key drivers of future financial behaviours rather than purely focusing on building knowledge. For example, this might be through focusing on developing functions such as prioritising tasks, setting goals and controlling impulses
- Involves parents - Actively engages and involves parents/carers with learning and practical activities which involve both parent/carer and child/young person. Pre- and post-testing focuses on ability, mindset, connection and behaviours of both parent/carer and child
- Future-proofed - Responds to what children and young people will need now and in the future (cashless, app-based, mobile-first)
- Evaluates outcomes - Is able to follow-up impact on outcomes/behaviours to look beyond the short-term effect on knowledge and mindset
- Uses a consistent, comparable and CYP-specific methodology to track impact, and wherever possible, cost-effectiveness.

More Research Required

15. More work is required to develop a robust and consistent approach to measuring cost-effectiveness and Return on Investment, particularly in determining appropriate measures for children & young people.

16. A better understanding is required of the key influencers for young people (teachers, parents, youth worker, peers/near peers) and which of these are likely to have the most significant impact relative to the age, knowledge and circumstances of the child or young person.

17. There is a need for increased focus on collecting evidence on the impact of early interventions, focusing on the needs of younger children (pre-school, infant and junior). This may require a longitudinal approach in order to evaluate the impact on behaviours as well as purely knowledge and mindset.

18. More research is needed to understand the impact of cashless transactions on young people, and whether financial capability interventions need to adapt to accommodate changes in the way that children use money.

19. Finally, more research is required to understand the outcomes delivered by digital tools (apps, games).

Contents

1. Introduction and Background

The Financial Capability Strategy for the UK, led by the Money Advice Service (MAS), highlights the importance of building financial capability in children and young people.

One of the Strategy's core stated objectives is:

To improve the ability of children and young people to manage their money and make good financial decisions

There is an estimated £18m of annual spend in the UK on developing financial capability for children and young people[1]. However, in assessing the effectiveness of this spend and to ensure that this important segment of the population receives the high-quality financial education it needs, there is still a need to know what works. Further, there is also an advantage to MAS in being able to identify interventions that can be delivered cost-effectively at scale.

1.1 Context

The Money Advice Service (MAS) commissioned this review to develop a stratified understanding of what works in the field of providing financial capability for children & young people (CYP) both in the UK and more widely across the world.

The reasons for this research are threefold:

- MAS has been compiling an evidence base[2] on what works in the field of developing financial capability for some years; there are now 60+ reviews relevant to children, young people and their parents/families. This presents an opportunity to synthesise this resource, bringing together some of the findings relevant to children and young people.
- The research base behind what works in providing financial capability for children and young people is evolving rapidly and there is new research that supplements MAS' existing evidence base.
- MAS is producing a set of Commissioning Plans, which will set out the needs, current provision and recommendations for future commissioning based on an assessment of how resource can best be targeted to meet needs. To inform the Commissioning Plan for Children and Young People, we need to provide up-to-date evidence on what is effective in addressing the financial capability needs of children and young people at home, in school, and in community settings.

This will be analysed alongside MAS's Needs Analysis, Provision Analysis and Policy Landscape Analysis to inform a gap analysis and finally the CYP Commissioning Plan to be completed by November 2018.

1.2 Review Aims and Scope

The overarching objective of the review is to piece together a clear picture on which financial capability / education approaches are likely to deliver most value to children and young people, based on available evidence.

More specifically the review has the following aims:

- To gain a clear understanding of what we know to be effective in improving CYP financial capability and in what circumstances
- To also understand the limitations of the current evidence base, so that we can focus our efforts to build evidence and fill gaps in knowledge
- To interpret the evidence and determine the implications of it for our Commissioning Plans, regarding what approaches could be used, in what circumstances and for whom, in newly commissioned projects
- To update the position on the effectiveness of financial education in improving CYP financial capability, both in the UK and more widely.

In achieving these aims we answer the following questions:

- What does existing evidence (from the UK and other OECD countries) say is effective in helping children learn about money and develop the financial capability they will need to manage money well as adults?
- What does evaluation say about how well existing UK provision is working, including findings from MAS' What Works Fund?
- What does the balance of evidence say about the efficiency / value for money of different approaches?
- What are the limitations of our knowledge about what's effective, for whom, where, when and how?
- What does this mean are the best judgements we can make about what's likely to work to meet the outcomes we're interested in, for the groups we're interested in – what does the balance of evidence say about what sorts of approaches are likely to be most effective?

To effectively answer these questions, we have established a workable taxonomy of the types of approaches that exist, gathered, analysed and interpreted evidence into a framework and subsequently structured findings into digestible themes and an Evidence Map.

A further final aim of the work has been to deploy an approach that is updatable, that highlights current evidence gaps/uncertainties, and that can be revisited as the underlying evidence base changes, including with further evidence from the MAS What Works Fund. To achieve this, we have designed a process for the ongoing monitoring and integration of new evidence for CYP financial capability into the evidence framework and future policy position.

1.3 About this Report

This report provides an evaluation and thematic summary of the evidence in relation to building financial capacity for children and young people and mapping this evidence based on the type of intervention, outcome delivered and strength of evidence.

- Chapter 2 introduces the evidence landscape specific to developing financial capability in children and young people and highlights our sources and approach to the review.
- Chapter 3 gives an overview of the Evidence Map for the research that we have undertaken and our work to graphically represent this evidence. This uses a taxonomy against which we have categorised and evaluated our research findings.
- Chapter 4 provides a detailed description of the 10 key themes that we have drawn from our research. These themes are all important considerations for future programme commissioning or planning.
- Chapter 5 then provides conclusions, relevant to effective programme design. It highlights promising areas where more research is required, opportunities to mainstream or scale-up activities and pinpoints components for future successful programmes.

2. The Evidence Landscape

A great deal of the evidence of impact from financial capability interventions for children and young people is relatively recent and much of it is lacking in substance and rigour. Our review has therefore supplemented formal academic research and stepped outside of the confines of what has been conclusively proven so as to also highlight areas of promising practice.

2.1 The Evidence Base

The evidence base relevant to this review is limited and partial; some of the more specific limitations are highlighted in ***Section 2.4*** below. Although some of the research that we have reviewed takes the form of formal research studies, including control groups and demonstrable causality, other research is more simplistic and is sometimes based on only a Theory of Change with a few inferences about the impact. Through the course of the review we collected around 150 separate pieces of evidence relevant to this study, including academic papers, delivery providers' own research, data analysis, policy papers and thought-leadership pieces.

2.2 Sources of Evidence

The review utilised the following sources:

Table 1 – Sources of Evidence – Formal Papers

Source	Evidence Hub	Provision analysis/ mapping report	Academic Research Hubs
Description	Studies relating to children & young people and parents, relating to financial capability (n=65), including from the Money Advice Service's What Works Fund (n=7).	Examination of the research base underpinning the providers identified in the mapping report	Searches on research hubs (Google Scholar and ERIC).
Example	Evaluation of Life, Money, Action!, MAS, 2018	Learning Money Matters evaluation report, Young Money, 2013	A review of financial-literacy education programmes for children and adolescents, *Citizenship, Social and Economics Education*, 2018

2.3 Our Approach

We performed a literature search, using the above research hubs to source relevant evidence, interventions and approaches to improve financial capabilities of children and young people. For academic journal searches we examined key research studies as well as systematic reviews and meta analyses. We used different combinations of the following key search words for:

'children' and/or 'youth' +

'financial capabilities' or 'financial education' or 'personal finance' or 'financial literacy'.

Further, we searched the contents of the above sources, such as best-practice publications, guidelines from service commissioners, industry bodies and think tanks.

In addition, as more recent thinking develops it tends to incorporate earlier research and evidence. Hence, as well as the body of evidence that already exists on the Evidence Hub (spanning 2002 to 2018), our searches focus on the last 10 years (2008 to 2018). We only include studies that cover efficacy of programmes / interventions focused on developing financial capabilities and exclude more generic skills development or those focused on improving general cognitive and non-cognitive (socio-emotional) function.

Table 2 – Inclusion/Exclusion Criteria

	Inclusion	**Exclusion**
Target Audience	3-17 year-olds (potentially including interventions whose higher age range goes beyond 17), parents	Financial education programmes/ interventions aimed at adults
Outcomes	Financial capability (connections, mindset, ability)	Research on general development (e.g. cognitive development and habit formation in CYP and educational attainment)
Time period	2008-18 Also, all time periods for evidence on Evidence Hub.	
Language	English	
Geography	Relevant geographies	

Our review process has mapped all the relevant pieces of evidence that were found through our searches.

This is a three-stage process that involves:

- 1. Categorising the intervention against a defined taxonomy. The strands in the taxonomy relate to factors such as setting, delivery method and participant age.
- 2. Categorising the outcome delivered by the intervention against the Financial Capability Children & Young People Outcomes Framework. This framework describes the potential outcomes which can be delivered by an intervention and groups outcomes into four areas: Ability, Mindset, Connection and Behaviour.
- 3. Categorising the evidence against an evidence framework. This indicates the level of robustness associated with the evidence gathered.

More details about the taxonomy and the evidence framework are included in **Appendix 1**.

2.4 Limitations

There are some limitations with the evidence that we have sourced for this review.

The first limitation is simply around the quantity of research that exists in this field. This is not an evidence-rich landscape and the volume of studies undertaken is still relatively small. Although our research identified around 150 separate pieces of evidence, we ultimately dismissed around half of these for the purposes of our evidence mapping, either because they were not studies relating to specific interventions, or they were opinion pieces rather than studies, or they were larger reviews/meta-analyses rather than single-source studies.

A further limitation, from the perspective of UK commissioners, is that a lot of the research is drawn from outside the UK and so may not be directly applicable to our contex – for example, because of the different context for support available to families and the UK education system.

The quality of studies is another major limitation in being able to draw strong conclusions from the evidence reviewed here.

In MAS' UK provision analysis, 90% of interventions reported conducting some sort of evaluation. However, the most commonly mentioned evaluation methods were:

'Informal feedback from CYP'	(52%)
'Measurement of output'	(45%)

'Analysis of before and after outcomes using quantitative measures (like surveys) direct with CYP' (40%)

Common issues with many studies examined are:

- Small sample sizes
- Lack of control groups / comparators
- Inability to attribute causality to the outcomes achieved

A qualitative issue worth specifically highlighting is a temporal one, with many studies choosing to follow up with participants after a relatively short duration post-intervention. Given the possible drop-off in any outcomes achieved, this is likely to translate into a smaller effect over a longer duration than those reported. We do note, however, that there are examples of studies that do attempt to follow up over a longer-term duration[3] [4] and some of MAS' own ongoing research[5] is being conducted over a longer timeframe.

Another limitation is one of scope. Among the formal academic studies that look at the effectiveness of interventions to improve financial capabilities in children and young people, most focus on fairly traditional classroom formats, most focus on secondary school age children and most focus on a broad mix of students, with few interventions and studies addressing the specific circumstances of specific socio-economic groups (e.g. low income, urban, different cultural backgrounds).

Methodological differences also mean that there are limitations in comparing or compounding/aggregating studies. This means that it is particularly difficult, given the available research, to conduct any meaningful comparisons of effectiveness between intervention A and intervention B. Consequently, it is particularly difficult to answer questions around what works best.

Finally, although it is positive that a high proportion of programmes have some form of evaluation, a good deal of evaluation is purely provider-driven and hence lends itself to potential competing interests and publication bias.

3. Evidence Map

Evidence maps are a way of clearly and succinctly representing the scope, strength and applicability of specific interventions. These maps show a visual depiction of the evidence base and highlight the areas where the evidence base is most strong/consistent vs. where there are gaps or deficiencies.

3.1 Interpreting the Map

The **Evidence Map** shows the following dimensions:

Outcomes – We segment interventions according to the outcomes that have been identified in accompanying research studies. These outcomes have themselves been standardised against MAS' Children & Young People Outcomes Framework (see approach above). It is possible for an intervention to map to more than one outcome.

Interventions – We categorise interventions based on a combination of age and delivery method. In doing this, we have, in some cases, aggregated smaller age bands and have also aggregated similar types of interventions into meaningful clusters.

Evidence – The circles on the Evidence Map reflect the volume of studies (size of circle) and robustness of evidence (colour); hence, a larger circle may indicate that several studies have been undertaken but a darker colour also indicates that the research was likely to have been more rigorous (e.g. with a control group or other directly attributable causality).

The categories of evidence used in the map are shown below:

Levels of Evidence (colour shading)

Consistently Effective – The programme or practice has been rigorously evaluated and has consistently been shown to work.

Evidence of Effectiveness – The programme or practice is based on sound theory informed by a growing body of empirical research.

Promising Practices – Innovative and informed practices that have a clear logical foundation. Some positive findings but the evaluations are not consistent or rigorous enough to be sure.

Emerging - A programme or practice that has not been tested yet or where outcomes of interest are unknown.

Poor - A programme or practice that has been tested and has no effect on outcomes of interest.

See Appendix 1 for further detail.

Where there are no circles shown on the map, it is generally an indication of a gap in the evidence, where a specific intervention does not target or reach that particular outcome or where the effect on that outcome has not yet been tested.

Finally we have referenced the specific studies that are shown on the Evidence Map in **Appendix 3.**

3.2 Evidence Map – Observations

The Evidence Map tells an interesting story about the status of research for developing financial capability for children and young people.

- Most of the research reviewed here focuses on secondary school children (12–17) with considerably fewer interventions and associated research focusing on primary and junior school children (4–11). This reflects both the balance of provisions of current activity in the field of delivering financial education programmes and, consequently, of associated research. However, as we go on to discuss in ***Chapter 4***, this runs counter to evidence around the effective age to begin to intervene.

- The greatest volume of evidence relates to face-to-face skills workshops and courses. These are largely delivered in a school setting to children of secondary school age, with financial education being on the curriculum in secondary schools for many of the countries where studies took place. Such classroom-based programmes are consistently found to impact positively on ability and mindset outcomes. This is where the majority of current interventions focus and where the research base is most well established. This is echoed, to an extent, with younger children, but here there is less activity and research (see above point); hence, the evidence is not yet as compelling. Importantly, however, the evidence that these types of classroom-based interventions are able to reach into behaviour change further on in a child or young person's life is not so strong.

- Behaviour-based outcomes are more likely to be triggered by programmes that have an experiential *learning-by-doing* delivery approach. This is potentially related to other temporal factors, such as delivering interventions at a meaningful point in time (a factor we discuss further in ***Chapter 4***). More specifically, the behavioural outcomes that are impacted by these interventions are:
    - ***Managing money well day to day,*** which for children and young people relates to events such as establishing savings or budgeting behaviours.
    - ***Preparing for and managing life***

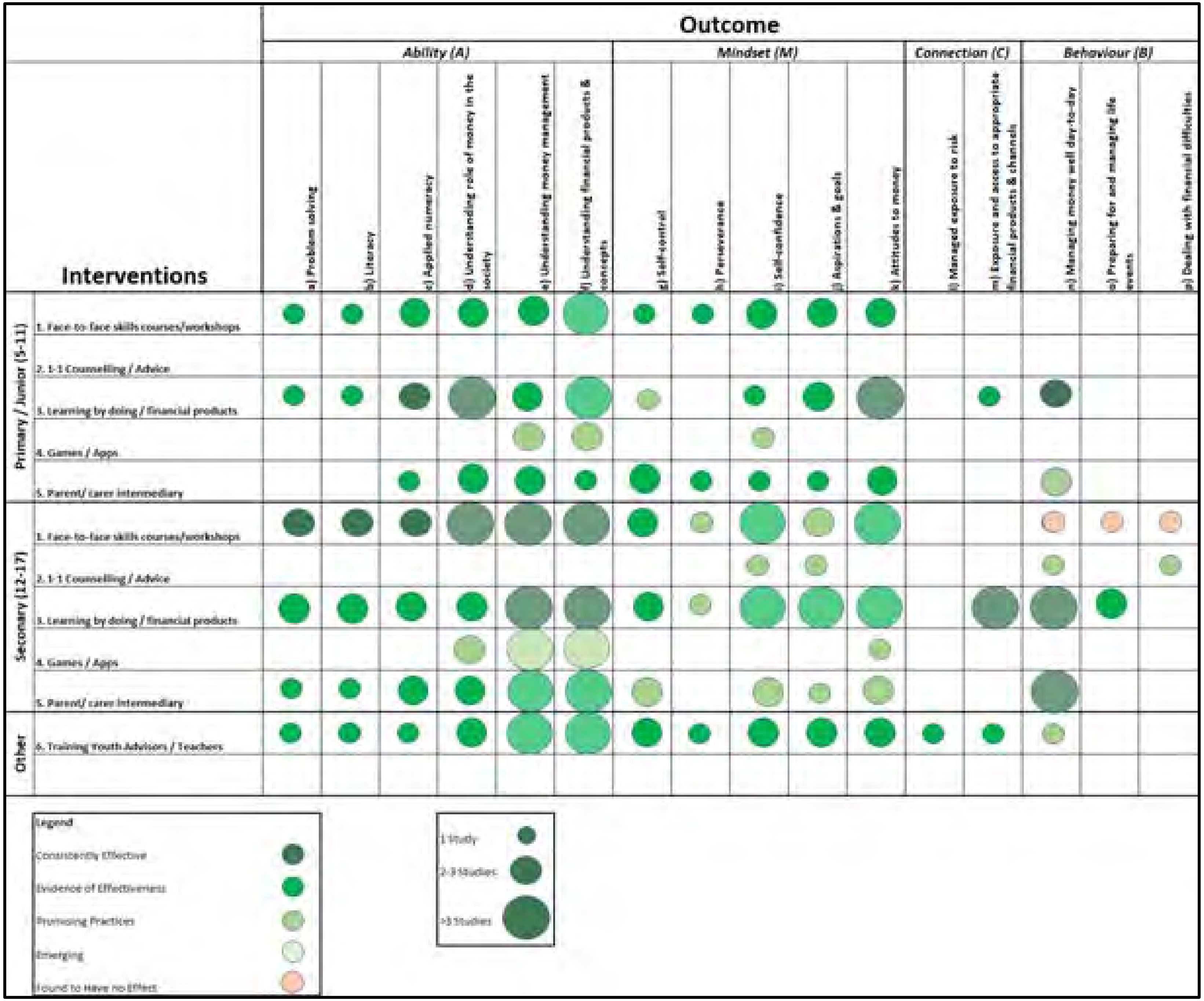
events, which for children and young people links to events such as leaving home or getting a first job.

- Another notable intervention type that reaches further into behaviour change is training programmes that seek to enhance the level of skills and knowledge of those delivering programmes.

> **"… little is known about the effects of financial education on children's and adolescents' actual financial behavior. Evidence is relatively limited because it is methodologically difficult to assess the actual behavior of children and adolescents."**
>
> A review of financial-literacy education programmes for children and adolescents

In terms of key evidence gaps that are revealed by the Evidence Map, these include:

- Behaviour changes are the ultimate goal of most capability-building programmes and there remain important gaps around programmes' ability to deliver such changes. We found a few examples of interventions that impacted on ***managing money day to day*** but very little evidence of interventions that equipped participants to ***deal with future financial difficulties,*** i.e. future preparedness to deal with financial problems if and when they arise.
- The mindset outcomes of ***self-control*** and ***perseverance*** appear to be less well served than other mindset outcomes. This potentially reflects the course components of many of the typical classroom-based programmes that have been formally evaluated, which focus more on imparting knowledge than shaping attitudes.
- ***Managed exposure to risk*** is another outcome that has not been reliably delivered by any of the programmes that we have reviewed. This is probably because the focus of many of the interventions reviewed is around encouraging and reinforcing positive behaviours (for example, the importance and benefits of saving, opening a bank account or setting up a household budget). However, it is more difficult to deliver programmes for children and young people that deal with exposure to risk. There are some interesting examples of this (e.g. interventions delivered through activities, games/simulations) but there is not yet compelling evidence to support the effectiveness of these approaches.
- Despite there being many games and apps aimed at children that claim to improve financial capabilities, the research on these is currently very limited. There are instances of marketing-based research, for example, but there is very little evidence to track the impact of, say, becoming good at an app or game simulation and those activities subsequently having any transferable bearing on related real-world behaviours. The small amount of useful evidence that we could find does appear to create an argument that these kinds of tools do positively impact on ability as well as certain mindset characteristics such as ***self-confidence*** and ***attitudes to money.***
- Although there are emerging studies that highlight the important role of parents/carers as a key influence on developing financial capacity, the research here is still relatively limited in quantity, particularly for younger age groups. There is also an issue of separability; many interventions include parental involvement as one of many components of an intervention rather than a separate intervention in its own right. It is therefore difficult to attribute the relevant impact of the parent/carer subcomponent of such interventions.
- Counselling/advice services. Although there is not much research in the area (and none for infant/junior school age children), the few studies that we reviewed did show promise in terms of being able to impact on mindset and behaviour.


Outcome
Ability (A)
Mindset (M)
Connection (C)
Behaviour (B)
a) Problem solving
b) Literacy
c) Applied numeracy
d) Understanding role of money in the society
e) Understanding money management
f) Understanding financial products & concepts
g) Self-control
h) Perseverance
i) Self-confidence
j) Aspirations & goals
k) Attitudes to money
l) Managed exposure to risk
m) Exposure and access to appropriate financial products & channels
n) Managing money well day-to-day
o) Preparing for and managing life events
p) Dealing with financial difficulties
Interventions
Primary / Junior (5-11)
1. Face-to-face skills courses/workshops
2. 1-1 Counselling / Advice
3. Learning by doing / financial products
4. Games / Apps
5. Parent/ carer intermediary
Secondary (12-17)
1. Face-to-face skills courses/workshops
2. 1-1 Counselling / Advice
3. Learning by doing / financial products
4. Games / Apps
5. Parent/ carer intermediary
Other
6. Training Youth Advisors / Teachers
Legend
Consistently Effective
Evidence of Effectiveness
Promising Practices
Emerging
Found to Have no Effect
1 Study
2-3 Studies
>3 Studies

4. Key Themes

From the individual studies, reviews, policies and analyses that we have explored, several themes have emerged.

These recurrent themes begin to offer us some useful pointers about the successful ingredients of effective programmes, where there may be opportunities to scale-up examples of good practice or where further research could usefully be directed.

For each of these themes, we have:

- Defined the theme and its relevance.
- Outlined what the evidence currently says.
- Described some useful components relating to the theme (e.g. what makes it successful).
- Drawn-out case studies, promising examples or relevant quotes.

The further pages in this chapter detail these findings.

Theme 1 – Train-the-trainer approaches appear effective in building financial capability

Theme 2 – Workshops and face-to-face classroom formats do help to build ability and mindset

Theme 3 – Combining face-to-face with an experiential learning-by-doing approach reaches further in terms of behaviour change

Theme 4 – Parental involvement appears to be effective in influencing behaviour

Theme 5 – Timing and context are important – the "just-in-time" or "teachable moment" approach appears to amplify effectiveness

Theme 6 – The role of cognitive factors is important in downstream financial behaviours

Theme 7 – The earlier the better – interventions can still be impactful for younger children

Theme 8 – The long-term effect size of financial education courses on financial behaviours appears weak

Theme 9 – Some mainstream interventions are not yet well evidenced

Theme 10 – Return-on-investment analysis is universally lacking

Theme 1

Train-the-trainer approaches appear effective in building children and young people's financial capability

There is strong and consistent evidence that points to the effectiveness of training for practitioners working in building financial capability.

Our review highlighted the importance of training to those involved in delivering interventions in financial capability. These interventions appeared to make a difference in two respects. Firstly, structured training improved the confidence of those delivering the intervention[6] and, perhaps more importantly, those trained practitioners were then able to deliver content that effectively helped young people to manage their finances and change behaviour, through better financial decision-making[7], although the evidence for the former is stronger than that for the latter.

It is difficult to examine the independent effects of different components of practitioner training; however, some of the good-practice components highlighted in reviews of such programmes include:

- Co-creation. Where training programmes are co-created involving children and young people, as well as the practitioners delivering the courses.
- Accreditation. For example, where a programme is accredited against a set of predefined standards or criteria. An example of this is the OCN London's Award in Providing Financial Capability Support, which is aimed at those working in the community to help others to develop their financial capability; it has been developed in partnership with the National Skills Academy for Financial Services (NSAFS)[8] and includes units on Improving Young People's Financial Capability.
- The provision of instructor handbooks and accompanying tools and resources[9] [10]. This is particularly relevant given a common methodological concern with the research base around the consistency of interventions.
- Lead teachers. For example, where a train-the-trainer approach is adopted within schools to assist in staying current on aspects of financial capability development as well as providing guidance on financial products and regulatory issues.
- Online support, through which resources on subjects which are likely to change frequently can be made available to practitioners, thus helping them to stay current.
- Self-directed training, focusing on understanding where practitioners' knowledge gaps might be and hence focusing learning resources on closing these gaps rather than delivering general training.

> **"It helped you feel more confident that you do know your stuff. You do have that underpinning knowledge."**
>
> Practitioner Feedback, Life, Money Action Programme

The evidence of improved confidence among practitioners is mirrored by evidence that highlights lack of subject-matter knowledge as a potential barrier for those delivering training and support for children and young people. For example, OFSTED highlighted teachers' lack of subject knowledge and expertise in this area, as well as a lack of awareness of resources, as potential barriers to effective financial education[11].

Emerging Practice – Case Study
Peer Helper Program (USA, 2017)

Fidelity Investments issued a financial education grant challenge, inviting organisations to submit innovative ideas for improving the financial literacy of teens. Utah 4-H's winning idea was a peer helper programme that trains teenage volunteers to conduct educational programmes through the Money Mentors programme. The Money Mentors curriculum consists of six one-hour lessons that incorporate the do, reflect, apply method of experiential learning.

Table source: The Money Mentors Programme[12]

Although there is evidence that well-trained educators do make a positive impact, there is less clarity around which form of training and associated delivery is more effective (i.e. specialist practitioner, teacher, youth worker, peer/near-peer) and more research is required around comparative evaluations of different types of practitioner-led programmes.

Theme 2

Workshops and face-to-face classroom formats do help to build ability and mindset

These types of interventions do play a part particularly in positively impacting on:

- **Ability** (understanding the role of money, money management and understanding financial products and concepts)
- **Mindset**, particularly confidence and attitudes to money.

A good deal of the formal research in the field of developing financial capability for children and young people has focused on school/workshop face-to-face interventions[13]. From the research that we have reviewed, there is now consistent, replicated evidence for the impact that this type of intervention has in building ability and mindset[14 15 16 17].

In designing effective classroom-style interventions there is a challenge in ensuring a high-quality and consistent approach. Some of the features of high-quality programmes include:

- Content mapped to curricula or standards/benchmarks. Where content is clearly mapped to curricula, such as with the Financial Fitness for Life programme in the USA (see below), there is the potential to ensure that programmes are comprehensive and mapped to other school-based learning[18].

Financial Curriculum – Example *(USA, Accessed August 2018)*

Financial Fitness for Life® (FFFL)	Personal finance curriculum for K-12 students (i.e. covering all ages pre-college) that teaches students how to make thoughtful, well-informed decisions about important aspects of personal finance, such as earning income, spending, saving, borrowing, investing, and managing money. Economic concepts form the foundation of all lessons, providing students with a decision-making framework for the real world. Content is based on national standards, and correlates to standards in economics, personal finance, mathematics, and language arts (literature and language). With engaging, hands-on instructional activities, FFFL materials engage students of all ages in active learning.

Table source: Council for Economic Education, USA.

- Supplemented by online/offline resources. Useful in ensuring that messaging is consistent and that teachers, for whom financial education may not be a core area of knowledge, are supported by the resources they need.
- Lesson content and guidance. Content covers such topics as: budgeting, debt and credit, investment, money management and savings.
- Utilising real-life examples rather than abstract problems. See also ***Theme 3***, below.

In considering the appropriateness of a curricula-based approach, we note that having a curriculum to cover all bases may be at odds with the objective to effectively motivate young people (see case study below) and, importantly, there is research that highlights a diminution of impact among diverse backgrounds and needs (e.g. low-income populations, urban populations, multicultural contexts)[19].

Also, in reviewing interventions we observe that often the underlying design and delivery principles of programmes do not receive sufficient attention. Other commentators have raised this concern – for example, they highlight that some studies do not explicitly describe the teaching methods employed[20].

Several interventions are now taking a more user-centred design approach in constructing the curricula content (see case study below).

Evidence of Effectiveness – Case Study *Money Charity's Workshops in Schools and Colleges (UK, 2018)*

Money Workshops cover aspects of money and finance and aim to increase students' confidence, knowledge and skills relating to money matters. They are delivered in hour-long sessions to classroom-sized groups (aged 14-19) by trained consultants. This project aimed to explore the causal impact of the Money Workshops on participants' behaviour, attitudes, confidence and knowledge relating to managing money. Research findings indicated that the workshops had a significant positive effect on students' self-reported confidence in managing money (an outcome within Mindset), how much students feel they know about savings and credit and how much students feel they know about planning and budgeting (outcomes within Ability/Mindset).

Table source: Randomised Controlled Trial Evaluation of The Money Charity's Workshops in Schools [21]

Theme 3

Combining face-to-face with an experiential learning-by-doing approach reaches further in terms of behaviour change

As well as impacting positively on financial knowledge, those interventions that involve a practical element of learning by doing additionally impact on Connection and Behaviour.

Specifically, these interventions positively impact on: managing money day-to-day, saving, and being able to ask for timely decision support advice.

Some of the more effective interventions that we have reviewed appear to have greater impact because they take the learning beyond the classroom. Those interventions embed the learning through a hands-on approach, which when evaluated, demonstrated a greater likelihood of delivering downstream changes in Behaviour rather than purely changes in Mindset or Ability[22].

There are different ways in which interventions achieve the learning-by-doing, but some of the ones that have evidenced behaviour change include:

- Combining an in-school education programme with access to a school bank or credit union[23 24].
- Work-ready education programmes that include setting up bank accounts/debit cards with linked savings accounts[25 26].
- Role-playing assignments, such as visiting local markets and organising class graduation parties[27] or using a theme park format for roleplay activities[28].
- Receiving money and advice on saving, together with parental control on how to spend the money, then increases the probability that a child saves[29]. There is also evidence that earning pocket money from part-time work is particularly beneficial[30].

Promising Practice – Case Study *LifeSavers (UK, 2017)*

LifeSavers is a financial education programme for primary schools, which aims to help children manage money wisely now and in the future. It provides training and resources for teachers, offers support to set up and manage school savings clubs, and encourages parental and wider community engagement. There are three key elements to LifeSavers' 'whole school approach' to financial education:

1) Continuing professional development (CPD) training on financial education for teachers, along with classroom and collective worship resources to help schools embed financial education into the school curriculum.

2) Support to set up and manage school savings clubs to give children practical experience of handling money, delivered in partnership with local credit unions.

3) A whole-community approach that involves parents, credit unions and churches/community organisations in helping children learn about money.

Table source: *LifeSavers Interim Evaluation Report*[31]

In a recent review of financial literacy education programmes (Amagir A, Groot W, Maassen van den Brink H, and Wilschut A, 2017)[32], the authors conclude that *Experiential Learning* is particularly appropriate since it has the potential to engage students in topics of interest to them, and it provides opportunities to explore how financial concepts can be applied to real-world situations.

"*Experiential learning* with a variety of teaching methods yields the largest effects in the increase of students' financial knowledge."

A review of financial-literacy education programmes for children and adolescents

Theme 4

Parental involvement appears to be effective in influencing behaviour

There is consistent and replicated evidence that parental involvement has a downstream impact on behaviour (managing money day to day).

Those that received more parental teaching of money management were less likely to experience debt.

Further, parental financial expectations have an influence on their child's subsequent financial behaviours.

There are good reasons why parental involvement has a particular role in effectively building financial capability. The majority of children and young people cite their parents and carers as their primary source of financial education[33] and MAS' Financial Capability Survey shows that 91% of children and young people aged 7–17 would turn to their parents if they needed advice about money[34].

Like other interventions in this review, parental involvement is often seen as an adjunct rather than a sole intervention, hence it is difficult to independently assess the impact of this involvement alone. However, there are plenty of examples of programmes that include parental involvement as a key component[35]:

- The use of parental workshops and supporting resources (online/DVDs)[36].
- Parental resources/learning aids (online/offline).
- Take-home exercises for children to undertake with their parents at home (for example setting-up a household budget).
- Encouraging discussion of financial matters and financial products at home.

"The vital importance of parental influence on young people's financial knowledge, understanding and attitudes to money is highly significant."

Young Persons' Money Index 2017

Emerging Practice – Case Study *Talk, Learn, Do (UK, 2018)*

Talk, Learn, Do (TLD) is a parenting intervention, co-designed with parenting practitioners and integrated into existing parenting programmes (Family Links Nurturing Programme and Incredible Years) with the objective of helping parents of 3-11 year olds to improve their children's financial capability. Ongoing research (to be published in Autumn 2018) is evaluating the impact on: - **Children's** ability to: handle and manage money; manage their own day-to-day money; recognise the difference between 'want' and 'need'; save up for a short period of time for something they want, and understanding why their parents are saying 'no' to buying something, as reported by their parents. - **Parents'** knowledge on giving their child pocket money and on how to talk to their children about money; parents' belief that they should have conversations about money with children at younger ages, talk about the importance of saving and involve them in discussions around family spending and advertising. Also, parents' own over-indebtedness.

Table source: Talk, Learn, Do, Evaluation Report[37]

There is also evidence of the impact of parental involvement in behaviour change, for example with a link between parental financial education and a lower likelihood of falling behind on mortgage payments when children are older. Parental influence is also shown to be positively associated with responsible financial behaviour in CYP.

Conversely, other research has found no link between parents' saving behaviours and their children's.
Finally, some commentators have argued that since children's later behaviour appears to be more responsive to their parents' influence than to what they are taught in school (for example, with a correlation between parental engagement in financial matters, parental behaviours and saving rates in later adulthood), the focus on financial education ought perhaps to be on parents as much as children.

Theme 5

Timing and context are important – the "just in time" or "teachable moment" approach appears to amplify effectiveness

This theme is connected to ***Theme 3*** (experiential learning).

There is evidence that links the effectiveness of programmes to their timing and relevance to their utilisation/ context[38], [39], [40], [41], [42], [43], [44], [45], [46].

The term *teachable moment* equates to a point at which a child becomes developmentally capable and ready to absorb a new skill or attitude. It could be at a time when a financial decision or an action is required, such as leaving home, getting a job or starting a family, as well as purchasing/initiating a financial product (bank account, mortgage, pension). The findings of the reviewed evidence are particularly interesting as they hold true for vulnerable groups.

Overall, studies suggest that individuals are particularly receptive to financial education when it is relevant and delivered immediately before they face the financial decision (i.e. at a 'teachable moment' or 'just in time'). As a result, the increasing financial independence associated with adolescence and young adulthood presents many valuable opportunities for learning.

Many 'teachable moment' situations are age-specific, and are related to experiential learning (see ***Theme 3***). The research papers we reviewed often included an experiential aspect (e.g. the act of opening a bank account) at the point at which it is relevant (wanting to start thinking about saving). Interventions here are often aimed at making students aware of basic financial concepts and how these concepts relate to everyday life.

Overall, it is interesting to note that there seems to be some consensus about pedagogical characteristics of effective financial programmes delivered on a 'just-in-time' basis, with strong experiential characteristics viewed as a promising method of financial education in primary and secondary schools.

Another interesting observation is that the added benefit of hands-on experiences promotes a feeling of self-efficacy/ confidence in one's ability. It also influences unconscious decision making, on which individuals often rely.

> **"There is an intimate and necessary relation between the process of actual experience and education"**
>
> Dewey (1997 [1938])

A Teachable Moment: The *EAST* Approach

If you want to encourage a behaviour, make it Easy, Attractive, Social and Timely (EAST). · Ensure actions are simple, follow a default path and are hassle-free (easy). · Attract our attention with effective rewards and sanctions (attractive) - Socially reinforcing through networks and commitments to others (social). · Prompt people when they are likely to be most receptive (timely).

Table source: EAST, Four Simple Ways to Apply Behavioural Insights, Behavioural Insights Team, 2014

Promising Practice – Case Study "Teachable Moment"

My Money Now (UK, 2018)

The My Money Now project, delivered by the National Youth Agency, was initiated to help young people, aged 16–21 years, to improve their knowledge about financial matters and to help them make good decisions about finances in the future. To ensure that participants could benefit significantly from additional support, the project was designed to cater to young people who had started apprenticeships, had joined or been placed on employability programmes and/or were still in full-time vocational education in school or college. The evaluation reports that the programme has been successful in meeting its objectives: successfully raising awareness of money matters and helping participants to be able to plan for the future in a more positive way and with a better practical understanding of financial products and concepts, such as standing orders and direct debits.

Table source: Evaluation of My Money Now, delivered by the National Youth Agency, 2018 (as summarised in the MAS Evidence Hub, 2018)

Theme 6

The role of cognitive factors is important in downstream financial behaviours

Research positively correlates various cognitive factors with financial behaviour. A key building block here is executive function – the mental processes by which we manage the information in our lives (including everyday functions such as prioritising tasks, setting goals and controlling impulses)[47], [48], [49], [50], [51], [52], [53].

There are also many cognitive biases that impact on financial decision making, such as procrastination, regret, loss aversion, as well as mental accounting, status quo bias and information overload.

Solely focusing on building-up financial knowledge is not sufficient for making a significant impact on downstream responsible financial behaviour. One of the reasons for this is the important role played by cognitive factors.

Cognition development relates to how a person perceives, thinks, and gains understanding of his or her world through information processing, intelligence, reasoning, language development, and memory. A key building block relevant to financial capability is executive function, which starts to develop early in childhood (3–5 years old) and continues through middle childhood into adolescent and young adulthood.

Many external factors, such as socioeconomic environment and early experience with adversity, affect an individual's executive function. On the positive side, there is evidence that interventions, such as computer-based training or martial arts, have the strongest impact on children and young people with the poorest executive function[54].

Incorporating understanding of the interplay of behaviour and cognitive factors into financial education seems promising and requires further research. In particular:

- Given the development stage, learning by doing to target very young children to instil good habits.
- Given parental influence in a child's early life, interventions that target parents to introduce good habits also has supporting evidence.
- Overall, better understanding of timing of interventions and how they relate to developmental stage. For example, habit forming interventions focusing on young children, while knowledge acquisition for slightly older/ secondary school age children and bringing in practical/experience-based learning for adolescents.

Understanding that cognitive factors play a role in financial behaviour also means that regulatory/ policy environment can reflect that. E.g. FCA now utilises financial behaviour models to regulate financial institutions not to use human nature to their advantage (and consumer disadvantage).

"Among pre-elementary students, executive function […] develops rapidly. Its growth is strongly influenced by the external environment, especially parenting. Research suggests that executive function can be improved through frequent practice, although the long-term persistence of such improvements has not been rigorously studied. Given the importance of executive function in adult financial well-being, and its enabling of financial skill development at later stages of childhood, further research that explores the potential for interventions in this age group should be prioritized."

Drever et al. (2015)

Theme 7

The earlier the better – interventions can still be impactful for younger children

There is some evidence (particularly in the body of research that focuses on the role of cognitive factors) that intervening earlier in a child's life is likely to be more impactful, in particular when looking at longer-term behaviour[55], [56], [57], [58], [59], [60], [61].

It is, therefore, notable that this is not reflected in the distribution of interventions and associated evaluations.

The evidence in relation to how to tailor interventions to ages for the maximum impact is still emerging and the whole subject area is not sufficiently researched. This is partially because it is challenging to measure the true impact of interventions, which call for longitudinal studies to track the effect of capability-building activities onto later behaviours.

Moreover, in relation to starting early, there is already useful research around the capabilities that can be acquired by different age groups[62]. However, the research lacks clarity in terms of at what age most impact can be made.

In the reviewed literature, the following benefits of starting financial education earlier in life are highlighted:

- Existing research in developmental psychology shows that even young children can understand simple financial concepts.
- It is potentially easier to instil good financial habits than correct poor habits or attitudes later in life.
- Learning by doing/ experiential learning is most beneficial for younger age groups.
- In terms of the format for younger ages, there is some debate and overall lack of evidence on whether integrating learning across the curriculum is more beneficial than standalone programmes.
- There is also some research outlining positive impact of parental interventions targeting parents, in particular, when addressing a younger age group.

Promising Practice – Case Study

I Can Save (ICS), (USA, 2011)

I Can Save (ICS) explored the effects of matched savings and financial education on elementary school students. The programme started when children were 5–6 years old and ran for four years. Children received financial education and incentives for saving, including a $500 seed deposit and a one-to-one savings match for all deposits into the account up to a total of $1,500. Financial education for ICS children included classroom-based curricula and a once-a-week voluntary after-school club during the academic year. Club activities included games, refreshments and, beginning in Year 2, monthly field trips to deposit savings in the bank. Children received one dollar for attending each weekly ICS Club session. Study results show that students for this intervention scored significantly higher on tests of financial knowledge and showed significant differences in financial capability in terms of savings behaviour.

Table source: Financial Capability in Children: Effects of Participation in a School-Based Financial Education and Savings Program[63]

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Theme 8

The long-term effect size of financial education on financial behaviour appears weak

The findings here are inconsistent, with several studies indicating a lack of findings of impact of financial education on downstream financial behaviour, particulalry among low-income or immigrant participants, and others demonstrating a weak link.

Despite the mixed evidence, there are several important findings that are identified in the studies we reviewed. Most studies agree that financial education does impact financial knowledge[64]. However, financial knowledge appears to be an essential but not sufficient component to ensure responsible financial behaviour [65].

Many studies point out that financial knowledge in itself is not sufficient, as there is emerging but consistent evidence of the role of social (e.g. parental influence) and cognitive factors (such as self-discipline and thoroughness) on behaviour[66].

When financial behaviour is affected, the overall impact is small[67]. This could be because financial education decays over time. Another hypothesis[68] suggests that it could be that knowledge is logged and used at an appropriate time and that existing measuring approaches have not accounted for that. This is due to the lack of longitudinal studies looking at behavioural change in the years following the intervention.

Where there is some positive evidence of interventions, there are several relevant factors that play a role here:

- Format of the intervention matters – interactive and relevant being important factors[69].
- Duration of the intervention and, more importantly, its intensity (i.e. number of hours taught and the timeframe) are significant predictors. Importantly here, a higher intensity of inputs (hours, combined formats and resources) yields significant results for low-income target groups.
- Offering education at a 'teachable moment' (i.e. when teaching is linked to decisions of immediate relevance)[70] also yields positive results[71].
- Experiential design may be a helpful format when targeting children, as ordinarily they have limited opportunity to engage in financial decision-making.[72]
- Targeting education at younger children rather than older children may be more fruitful where behaviour is concerned. This is because habits are formed early, and even young children can understand financial concepts, such as trade and exchange. There are also potential benefits starting with a 'blank slate'. There are few rigorous evaluations, though, supporting the above and further research is required. [73]

> **"…Paradox exists between the efficacy of education in improving financial literacy and the impact of education on short and long-term financial behaviour."**
>
> Research by Lewis Mandell and Linda Schmid Klein

Since most financial education takes the form of workshops delivered in school settings with some additional reinforcement, either online or through supplementary material, it is interesting to note that many innovative financial education approaches, including financial apps have not been studied empirically[74].

The financial behaviour that interventions and financial literacy do appear to have an impact on is saving/spending behaviour, but borrowing behaviour may be more difficult to affect[75], [76]. This may be expected, as young people are unlikely to borrow formally before they reach the age of 16, so, in the majority of cases, they will not have reached a 'teachable moment' for this behaviour (see ***Theme 5***).

How much financial education is enough?

To quantify this, an increase of one hour of financial education per week has been shown to result in a 0.004 standard deviation unit increase in the impact on financial behaviour studied[77]. So, as the study assumes, doubling weekly hours to 8 hours per week, while keeping the length of the intervention the same, would lead to an average of 14% higher effect with all else being kept equal[78].

Table source: The World Bank Development Research Group, 2014

Theme 9

Some mainstream interventions are not well evidenced

There is a lack of rigorously researched evidence of long-term impact around some interventions that have entered popular adoption. The notable examples are short-duration enterprise competition type schemes, as well as new forms, such as online games and financial product apps, that, for example, support moderated spending for children[79], [80], [81], [82], [83], [84], [85].

It is surprising to see that some initiatives/ programmes that are widely adopted, including in a school setting, lack rigorous supporting evidence. This is particularly true of some enterprise programmes.

Online games have some theoretical advantages, in that they provide a familiar and engaging environment for children, teens and young adults. The virtual environment lends itself well to interactive forms of education, such as role-play and experiential learning (see ***Theme 3***). There is also some positive evidence that it can cultivate financial self-efficacy and literacy.

However, such games also require further research. Also worth noting is that, while the environment feels like it can simulate life events, the notion of risk is absent in the artificial setting.

Finally, we have also failed to find any available evidence of the impact of financial apps that monitor or moderate spending. Some of the products on the market are simply too new to have been rigorously researched. However, given the proliferation of apps and their scalability and reach, good quality research to understand their impact would be beneficial.

Examples of financial apps targeting children and young people

nimbl nimbl is a smartphone app and debit card for children and young people [aged 8–18], which allows parents/carers to put controls and restrictions in place to help their child make better choices. For example, it is not possible to run up debt or go overdrawn. The product was developed and validated through market research of more than 6,000 parents and the company places emphasis on the learning aspects of the app.
RoosterMoney RoosterMoney is a digital product that allows children to keep track of their money, save towards goals and earn rewards while parents oversee what money goes in and out of their accounts. The company aims to foster the development of positive money habits early on by offering a safe environment through which to help develop positive attitudes to money, empower children to have aspirations and goals and develop self-confidence, perseverance and self-control.
goHenry goHenry is a pre-paid, pocket money card and app with parental controls, for young people (aged 6–18). The product adopts a learning-by-doing approach through giving children the independence to manage their own money. Through its product, the company aims for children to grow in confidence and develop good money habits for life.

Table source: Providers' websites

Theme 10

Robust return-on-investment analyses are currently lacking

There is an almost complete absence of cost effectiveness evaluations of financial literacy programmes and no consistent approach has been used to measure return-on-investment (ROI) or social-return-on-investment (SROI).

One recent study, commissioned by the Money Advice Service, begins to address this.

In our initial approach to evidence evaluation, we set out criteria to examine whether studies had measured return-on-investment or other forms of cost effectiveness. It was notable that we did not find any studies that had systematically examined these factors, with relevance to CYP, when reporting on the effectiveness of these interventions.

Attempting to examine ROI/SROI in this field is complicated. True financial returns from these types of interventions are long term, for example, impacting on the propensity to save, manage money effectively and deal with financial difficulties. However, programmes are typically shorter in duration and it is difficult and costly to build in long-term follow-up of participants.

Instead, if there is any form of financial analysis, it tends to focus on input measures (cost per person trained) or attempts to join the dots between financial education programmes and downstream financial behaviours without being able to attach a financial value to the impact.

> **"Social Return on Investment (SROI) is a framework for measuring and accounting for a much broader concept of value; it seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits."**
>
> A Guide to Social Return on Investment, Cabinet Office, 2009

Our review did identify a couple of programmes that had used a form of SROI to evaluate the economic impact of the programme. One of these is the Made of Money programme[86], another, highlighted below, is the Money Works programme, delivered by MyBnk.

Promising Practice – Case Study

MyBnk – Money Works Evaluation (UK, 2018)

MyBnk's Money Works programme was evaluated in 2018 using a social value analysis with the HACT Social Value model. The model's process uses industry-verified questions from several major sources and a methodology drawn from HM Treasury's Green Book to represent social impact (the uplift in individuals' wellbeing as a result of the programme) in monetary values. Examples include:

Financial comfort:	£8,917
Able to save regularly	£2,155
Debt-free:	£1,593
Relief from being heavily burdened with debt:	£10,836

Overall, the programme has been assessed to have a substantial and positive social impact, where it is estimated that every £1 spent in delivering Money Works in 2017-18 contributed to £5.57 in social value.

Table source: MyBnk, *Evaluation of MyBnk Money Works*, (2018)[87]

Although these are welcome additions to approaches for evaluating SROI, as the authors of the evaluation note, there are still some methodological issues to be resolved with this approach. For example, there are potential issues associated with the applicability of this particular SROI approach to children and young people, given that the areas above largely relate to adults. Also, there are issues with relatively small sample sizes for follow-up surveys.

5. Implications for Effective Programme Design

In this section, we draw some of the previous themes together. Our review and analysis of evidence focuses on three areas:

- Opportunities to mainstream/scale-up.
- Promising areas where more research is required.
- A blueprint for future programmes.

5.1 Opportunities to Mainstream/Scale-Up

As well as identifying areas where more research is required, we also highlight programmes where evidence has been positive and hence there appear to be opportunities to scale-up the delivery to reach a wider population.

5.1.1 Parent-Focused Programmes

We found some good examples of financial capability programmes that specifically targeted parental involvement and were found to be effective in shaping future behaviours, with examples referenced in ***Theme 4*** above. There appear to be opportunities to widen the reach of such programmes – for example, integrating them into other types of parenting programmes and extending the reach beyond the pilot locations.

Conclusion 1: There is potential to widen the reach of programmes such as Talk, Learn, Do (TLD), which leverage the important role of parents/carers in shaping their children's financial capability.

5.1.2 Extending Experiential Learning Programmes

There is evidence that face-to-face can deliver an impact on mindset and ability aspects of financial capability, and good evidence that combining face-to-face learning with a more hands-on, experiential learning approach is helpful in embedding learning and influencing future financial behaviours, such as managing money day to day and preparing for life events. Placing a combination of these forms of learning interventions into the heart of capability-building programmes would therefore seem to offer an opportunity to make financial capability development more impactful, delivering improvements across a range of financial capability skill, mindset and behaviour outcomes. Some of the examples that we identified (see ***Theme 2 and 3***) include:

- The role of school banks.
- Current accounts and linked savings.
- Supporting advice and guidance at the time of key events (leaving home, first job).

Conclusion 2: Commissioners should consider the potential to explore ways to amplify and broaden the impact of face-to-face delivery, including considering ways to work beyond mindset and ability impacts to deliver an impact on behaviour. As part of this commissioners should consider widening the reach of experiential learning programmes that embed taught learning through practical activities relevant to a child or young person's life and appear promising in influencing financial behaviour.

5.1.3 Train-the-Trainer Programmes

There appears to be good evidence for the positive impact of providing those who are delivering capability training with good training and resources.

Conclusion 3: There may be opportunities to scale-up train-the-trainer type programmes with either funding more direct train-the-trainer type programmes or by attaching training to broader-based programmes. There are potentially different forms of this – for example, upskilling those already working with children and families to support them with financial capability as part of wider support, or providing volunteers with accredited training in the delivery of financial education.

5.1.4 Commissioners as Influencers

Since the majority of programmes are either delivered in or in partnership with schools, there may be opportunities to provide guidance and information to help to shape these programmes. These activities could be in the form of best-practice guidance, publishing information about coverage/successes or data on outcomes achieved.

Conclusion 4: Publishing information (data, good-practice guides) to assist in shaping future delivery of CYP programmes.

5.2 Promising Areas Where More Research is Required

The Evidence Map is helpful in charting the existing evidence base, highlighting where current research has been undertaken and indicating some potentially promising areas where less evidence is currently available.

5.2.1 Underpinning Components

The lack of robust or consistent ROI/SROI measures is a significant issue in attempting to evaluate the effectiveness of any programme. Currently, it is difficult to conclude whether many of the programs evaluated deliver a reasonable return on investment. Similarly, it is even more difficult to conclude whether some interventions are more cost-effective than others.

Conclusion 5: More work is required to arrive at a robust and consistent approach to measuring the return on investment/value for money of interventions, particularly in determining appropriate measures for children and young people.

There appears to be good evidence that providing practitioners with the right training and tools makes a helpful contribution to building financial capability. However, it is difficult to make any reasonable assessment about who is best to engage in this training and whether this key influencer role is different with various age groups.

Conclusion 6: More research is required to understand the key influencers for young people (teachers, parents, youth workers, peers/near-peers) and which of these are likely to have the most significant impact relative to the age, knowledge and circumstances of the child or young person.

5.2.2 Specific Programmes

Much of the research that we have looked at highlights the importance of starting young and designing effective interventions for young children (pre-school, infant and junior). Indications from the evidence available to date are that such interventions may be more effective on impacting downstream behaviours, but more evidence is needed here. A further area of research could be evaluating what is the best medium to reach the younger age group, particularly whether targeting standalone parental financial capability programmes or adding on to non-financial programmes is more effective.

Conclusion 7: More research needs to focus on collecting evidence on the impact of early interventions, focusing on the needs of younger children (pre-school, infant and junior). This may require a longitudinal approach in order to evaluate the impact on behaviours as well as purely knowledge and mindset.

Some commentators have raised the issue of children now growing up in a cashless society and have hypothesised issues around financial capability development associated with this – for example, the lack of obvious touch-points to start talking about money and the short-cutting of the physical processes involved in routine transactions. However, there is currently little evidence around the impact of these factors on children.

Conclusion 8: More research is needed to understand the impact of cashless transactions on young people – for example, whether financial capability interventions need to adapt to accommodate changes in the way that children use money.

Similarly, in MAS' provision analysis, there are some interesting examples of innovative games and apps aimed at young people and their parents/carers that claim to build financial capabilities. The evidence base around most of these emerging digital products is currently very slender. There is some evidence – for example, that games do improve knowledge, but we don't know whether it is possible to influence downstream behaviours through the adoption of any of these apps. It may be a fruitful area to research, given how scalable some of those products are. Another positive is that the virtual world is a very natural and engaging environment for young people.

Conclusion 9: More research is required to understand the outcomes delivered by digital tools (apps, games).

5.3 A Blueprint for Future Programmes

In bringing together some of the themes from this report, we have engaged with MAS' CYP research and evaluation, policy, and insight leads to define some of the key characteristics of future programmes. These will be considered alongside MAS' analysis of needs and provision to inform future commissioning recommendations.

The highlights of these characteristics are shown in the table below.

Developing Financial Capability – A Blueprint for Success

Attribute	Comments
Trusted and skilled messengers	Delivered by trained/accredited practitioners, supported by an up-to-date knowledge base and high-quality resources.
Experiential	Focuses on relevant just-in-time/experiential components such as handling money, opening a bank account, using a debit card, or financial planning for leaving home or starting a first job.
Differentiated	Adapts to different cognitive, non-cognitive (socio-emotional) and socio-demographic needs (e.g. children with lower levels of cognitive or social-emotional skills or potentially vulnerable groups such as refugees).
Cognitive focus	Addresses key drivers of future financial behaviours rather than purely focusing on building knowledge. For example, this might be through focusing on developing functions such as prioritising tasks, setting goals and controlling impulses.
Involving parents/carers	Actively engages and involves parents with learning and practical activities that involve both parent/carer and child/young person. Pre- and post-testing focusing on Ability, Mindset, Connection and Behaviours of both parent/carer and child.
Future-proofed	Responds to what children and young people will need now and in the future (cashless, app-based, mobile-first).
Evaluated	Is able to follow up impact on outcomes/behaviours to look beyond the short-term effect on knowledge and mindset.

Appendix 1 – Evidence Review Approach

A1.1 Levels of Evidence

Although many evidence frameworks exist[88], a specific requirement for this review is to be able to include interventions where there is 'potential' rather than solely where there are different degrees of established evidence. Hence, our preferred approach is to use a modified scale, which has been adapted from the Washington State Institute for Public Policy (WSIPP), 2013 (updated 2018).

The variations to the WSIPP approach that we have included are:

- We have expanded the WSIPP requirement for Theory of Change to include other theoretical/ logical frameworks to reflect the 'promising' requirement from MAS.
- We have included qualitative assessments (e.g. surveys, interviews, feedback, internal evaluation) within Promising Practice and defined the top two tiers based on causality rather than a specific type of research.
- We have added 'causality' to the criteria for the Research-based level - for clarity of meaning.
- We have changed the name of null to 'Emerging', as this creates a more positive description to some of the initiatives/ interventions that have not been tested.
- We have retitled 'Evidenced-based' and 'Research-based' as 'Consistently Effective' and 'Evidence of Effectiveness' respectively, so as to clarify these terms.
- We have created a different level titled 'Poor' to highlight practices that have been shown to have no effect on outcomes.

We also include a cost dimension in the adopted framework. This is to be able to highlight cost-effective initiatives that show promise and may potentially warrant pilot funding to test them further.

In our Evidence Map, we reflect the Levels of Evidence using colour shading, with darker circles reflecting increasingly consistent evidence. This is combined with the size of the circles, which is related to the volume of research studes undertaken (which is unrelated in itself to the quality of these studies).

Table A1.1 - Levels of Evidence Matrix and Criteria

	Well Established Theory of Change or other logical theoretical models	Shows Potential Based on Some Statistical or Qualitative analysis	Single evaluation demonstrating sustained desirable outcomes, with causality demonstrated through randomised / statistically controlled trials or other means	Tested in heterogeneous or intended populations with multiple evaluation(s) that indicate causality	Weight of the evidence from a systematic review demonstrates sustained improvements	When possible, has been determined to be cost-beneficial
(3) Consistently Effective – the programme or practice has been rigorously evaluated and has consistently been shown to work.	✓	✓	✓	✓	✓	£
(2) Evidence of Effectiveness– the programme or practice is based on sound theory informed by a growing body of empirical research	✓	✓	✓			£
(1) Promising Practices – innovative and informed practices which have a clear logical foundation. Some positive findings but the evaluations are not consistent or rigorous enough to be sure;	✓	✓				£
(0) Emerging - A program or practice that has not been tested yet / outcomes of interest are unknown.	✓					£
(-1) Poor - A program or practice that has been tested and has no effects on outcomes of interest.						

A1.2 Taxonomy

To categorise the types of interventions that currently exist, we use the following four categories:

- Setting
- Delivery method
- Age
- Outcomes

I	II	III	IV
Setting	**Delivery Method**	**Age**	**Outcomes**
A School	1. Face-to-face skills courses/workshops	i) 0–5 years old	***Ability (A)***
B Home/ Community	2. Online training/resources	ii) 5–7 years old	a) Problem solving
	3. Learning by doing	iii) 7–9 years old	b) Literacy
	4. Parent/carer intermediary	iv) 9–11 years old	c) Applied numeracy
	5. Competitions	v) 11–14 years old	d) Understanding the role of money in society
	6. Apps	vi) 14–16 years old	e) Understanding money management
	7. Books	vii) 16–18 years old	f) Understanding financial products & concepts
	8. Training youth advisors/teachers	viii) Parents	***Mindset (M)***
	9. Curriculum		g) Self-control
			h) Perseverance
			i) Self-confidence
			j) Aspirations & goals
			k) Attitudes to money
			Connection (C)
			l) Managed exposure to risk
			m) Exposure and access to appropriate financial products & channels
			Financially Capable Behaviour (B)
			n) Managing money well day-to-day
			o) Preparing for and managing life events
			p) Dealing with financial difficulties

To determine the appropriate outcomes, we have drawn on the Children & Young People Outcomes Framework[89]. This framework reflects the elements of financial capability that young people need to develop (subcategorised into ability, mindset and connection) in order to manage their money between the ages of 3 and 18 and to achieve financially capable behaviour and wellbeing in adulthood.

Appendix 2 – Selection of Evidence Summaries

In this Appendix, we have included a summary of a selection of the research referenced in this paper. We have included papers that are yet to be added to MAS' Evidence Hub.

A Review of Financial-literacy Education Programs for Children and Adolescents (2018)

Description of the Programme	The study "A review of financial-literacy education programs for children and adolescents" published in Citizenship, Social and Economics Education evaluates the effectiveness of financial-literacy education programmes and interventions for children and adolescents. Furthermore, the key characteristics of the design of a successful financial-education curriculum are described.
The Study	The evidence on the impact of financial education on knowledge, attitudes, confidence and behaviour among children and adolescents is relatively limited and recent. The majority of the studies were published less than 10 years ago. In this review, the authors cover the research published between 2004 and 2015, with a special focus on studies that evaluate programmes at schools, from infant through to undergraduate.
Key Findings	a. Process findings The authors note that there seems to be some consensus about the pedagogical characteristics of effective financial education programmes (Collins and Odders-White, 2015; Johnson and Sherraden, 2007; Totenhagen et al., 2015). This study provides a number of key characteristics that should be considered when designing an effective school-based financial education programme. A promising method to teach financial literacy in primary school and secondary school seems to be "experiential learning" with a variety of teaching methods. In elementary school, the focus should be on "hands-on pedagogy," whereby a key characteristic is "learning by doing". In secondary school, a key characteristic is "relevance of the topic" by adding real-world experiences to the lessons and consider the students' perceptions of future goals. In both primary school and secondary school, a key characteristic of effective financial education programmes seems to be that students experience the impact of their decisions by actively participating in the learning process. In college, an essential key characteristic of the financial education programme appears to be that the content of the lessons aligns with students' specific "life events". Overall, financial-literacy education should not only be concerned with acquiring new skills, but also with knowing how to apply these skills, and, based on this, help students to gain experiences that makes them stronger. b. Outcome findings This study has provided a systematic literature review on the extent to which financial education in schools can improve the financial literacy of children and adolescents and enhance their capabilities as economic citizens. There are indications that school-based financial education programmes may improve children's and adolescents' financial knowledge and attitudes. The retention results prove to be small, and the studies measure mainly short-term effects. Studies that assess the intention to practice good behaviour and studies based on self-reported behaviour also report positive effects. Little is known about the effects of financial education on children's and adolescents' actual financial behaviour. Evidence is relatively limited because it is methodologically difficult to assess the actual behaviour of children and adolescents and they often (but not always) have relatively few financial responsibilities. Also, longitudinal experimental research is needed to investigate the long-term effects of specific financial education programmes on financial knowledge, behaviour and attitudes. The available evidence also suggests that financial education programmes in secondary schools and colleges may be effective in reducing the gender gap in financial capability. These findings support the notion that financial-literacy education must start early (primary school), and ought to be repeated in secondary school and college. To ensure continuous learning, financial literacy education should be a compulsory part of the school curriculum. Furthermore, the few financial education programmes that involve parents in the education of their children seem to be effective in increasing the financial literacy of children and adolescents.
Points to Consider	A limitation in the design of financial-literacy education programmes is that little or no attention is paid to transferable knowledge. In order to make well-considered financial decisions, children and adolescents must have the ability to make the transfer to new contexts. One way to achieve this is by embedding behavioural economics in the design of financial-literacy education programmes (Yoong, 2013). Future research must investigate the effectiveness of this approach. Another limitation is that the design principles of programs do not receive sufficient attention. Specifically, several studies do not explicitly describe the teaching methods. Furthermore, they give little or no information about what in the programme was effective, or how large the effects were. Moreover, they do not provide information about what can be improved or changed. Other issues concern how the effectiveness of financial education programmes is measured. A self-reported increase in financial knowledge may be measuring self-confidence more than actual knowledge.

Building Financial Capability in Youth Employment Programs: Insights from a Roundtable with Practitioners (2014)

Description of the Programme	The study "Building Financial Capability in Youth Employment Programs: Insights from a Roundtable with Practitioners" by the Corporation for Enterprise Development (CFED) examines a number of successful interventions in the US: 1) The Economic Awareness Council (EAC) and Young America Saves (a campaign to help young people make savings a habit by pledging to save as little as $5 a month and by receiving special Saver Benefits as a reward for consistent saving) partnered to launch Young Illinois Saves. Through the Young Illinois Saves initiative, EAC is working with ten youth employment sites to provide financial education, enrol children and young people (ages not stated) in direct deposit (direct debit payments), and encourage young workers to make a goal-based savings pledge. Result: 308 children and young people (74 percent of programme participants) opened new bank accounts or signed up for direct deposit and 255 children and young people (62 percent) took a savings pledge and pledged to save an average of $54 per month. 2) The Philadelphia Youth Network (PYN) provides payroll cards with linked savings accounts and financial education to children and young people in the WorkReady programme in Philadelphia. 4,807 children and young people received a payroll debit card from PYN. Of these youth, 10 percent (506) opted to have a portion of their earnings automatically deposited into a savings account. 3) The D.C. Department of Employment Services (DC DOES) and Bank on DC offered financial education and access to a checking and savings account to participants in the Summer Youth Employment Program (SYEP). Nearly 49 percent of eligible children and young people (more than 5,200) opened accounts through the programme. SYEP also provides instructor-led and web-based financial education; more than 3,600 children and young people participated in these workshops in 2013. Participants completed pre- and post-tests and increased their scores by 19 percent. 4) The MyPath: Savings programme provided young people with peer-to-peer financial education, a savings account tied to an ATM card, enrolment in direct deposit, and incentives to set and meet personal financial goals. The evaluators found that the 197 programme participants saved an average of $1,210 in their accounts.
The Study	The study conducted by CFED looks at a number of case studies. While the research claims to find a correlation between the interventions and certain outcomes, the underlying data is not available for review, making the assessment of the quality of the study difficult.
Key Findings	a. Process and outcome findings The study identifies a number of key lessons: Lesson 1: Partnerships with the private sector, non-profit organisations, government agencies, financial institutions, and children and young people are necessary for successful programme implementation. The key to creating successful partnerships is to identify overlapping priorities or goals of each participating organisation, and to align the role of each partner with the resources (time, money, etc.) that they can dedicate to the effort. The extent to which partners directly provide financial capability services in a youth employment programme will vary depending on how they are participating and their motivation for doing so. Lesson 2: Financial education should be tailored to the needs of youth, employers, and financial education providers. Financial education is more efficient when seamlessly integrated into a programme's structure to account for the time and resource constraints of youth, employers, and financial education providers. In addition to structure and delivery, financial information should be tailored to address a young person's specific needs and priorities. Children and young people are a diverse population, and financial information delivered in a youth employment programme should be 'just in time' or relevant at the time someone is facing a particular life choice or for a decision they will face in the near future. Financial education should also be actionable and provide opportunities to apply knowledge in real time so that it is appropriate to a young person's current life priorities. Lesson 3: Financial products offered to children and young people should be carefully selected by weighing the costs and risks of various options. All of the communities highlighted here seek to capitalise on the 'teachable moment' of employment to provide safe and affordable financial products for children and young people to use, with the goals of helping children and young people avoid high fees, encouraging savings, and connecting young people to mainstream financial services. However, financial institutions' understanding of, and compliance with, identification, residency and 'know your customer' regulatory requirements may pose barriers to entry into the financial system for youth. Ongoing dialogue with the financial services industry and regulators will help determine what risk and cost factors are most important in creating and offering products for young consumers. Lesson 4: Organisations should develop explicit strategies for engaging children and young people in the short and long term. Efforts to engage children and young people are important both during and after the employment programme. During employment programmes, organizations have used social media, peer training facilitators, and incentives to encourage more children and young people to adopt positive financial habits. Organszations have a captive audience while the young people are employed. However, organizations struggle to make the financial components persistent, or 'sticky'" after children and young people exit the programme. Long-term engagement strategies include involving family members and friends, and providing access to financial education and products outside the employment programme.
Points to Consider	Despite the promising practices and lessons learned highlighted in the study, there are still gaps in the knowledge base for this work that require additional research and evaluation. Stakeholders such as federal programme managers, municipal leaders, financial institutions, national intermediaries, philanthropic partners, private sector employers, and community-based organisations will be key to moving this work forward and building on lessons learned.

Early Influences on Saving Behaviour: Analysis of British Panel Data (2016)

Description of the Programme	The study "Early influences on saving behaviour: Analysis of British panel data" by Brown and Taylor examines the saving behaviour of individuals over time, looking at the impact of parental behaviour on the future financial behaviour of their children.
The Study	The paper uses data from the British Household Panel Survey and Understanding Society and explores the determinants of the saving behaviour of children aged 11–15.
Key Findings	a. Process findings (not applicable) b. Outcome findings The findings suggest that parental allowances/pocket money lower the probability that a child saves. However, earning money from part-time work might encourage children and young people to increase their savings. There is also evidence that the financial expectations of the head of household have an influence on their offspring's saving behaviour, where children of optimistic parents have a lower probability of saving by approximately 2 percentage points. However, there is no evidence of an intergenerational correlation in savings behaviour; the saving behaviour of parents appears to have no bearing on the saving decisions of their offspring. The study also finds that having saved as a child has a large positive influence both on the probability of saving on a monthly basis and on the amount saved as an adult.
Points to Consider	The findings suggest that how children acquire money has an important influence on their saving behaviour. Specifically, income associated with work is positively related to the likelihood that the child saves, while income received in the form of an allowance from parents has the opposite effect, with the likelihood of saving being sensitive to how the money was received (i.e. given vs earned). Such findings suggest that if parents wish to encourage their children to save, they may want to consider the form in which they give allowances to children.

Examining the Effects of Game-Based Learning on Developing Youth Financial Literacy (2017)

Description of the Programme	The study "Examining the Effects of Game-Based Learning on Developing Youth Financial Literacy" by Ko, Julie and Chang examines the effects of the game 'Save the Camp' on financial knowledge and behaviour. Since its launch in 2017, Save The Camp has been played over 6,000 times. In playing the game, players learn about financial decision-making techniques relevant to savings and credit and then apply these in the game. From mistaken or unwise applications of available funds, the player develops increasing astuteness about the relationships between income, savings, expenses, borrowing and interest.
The Study	The study looks at the evolution of players' decision-making processes in the game over time. The study heavily relies on meta data of the players' digital footprint (i.e. detailed information of in-game decision data) to gauge the evolution of financial decision-making within the game.
Key Findings	a. Process findings To measure players' learning behaviour in digital games, it is necessary that the game design is such that the learning behaviours are captured in ways that can be tracked effectively. b. Outcome findings Overall, Save the Camp has met its objective of engaging students in applying concepts of income and expenses, savings, budgeting and future consequences of spending across successive gameplay sessions. Students demonstrated increased game-based learning and application of financial literacy as observed in how their gameplay is altered or refined with respect to strategies, spending and saving.
Points to Consider	In the development of digital games that are for game-based learning, game mechanics should consider iterative improvements to features that engage specific learning behaviours – for example, increasing savings interest rates in order to incentivise players to save, or discontinuing the automatic paying off of debt in order to draw players' attention to debt re-payment. More broadly, there is more research required to understand the downstream impact of gaming on real-world financial behaviours.

Experimental Evidence on the Effects of Financial Education on Elementary School Students' Knowledge, Behavior, and Attitudes (2015)

Description of the Programme	The study "Experimental Evidence on the Effects of Financial Education on Elementary School Students' Knowledge, Behavior, and Attitudes" published in the *Journal of Consumer Affairs* uses an experimental design to evaluate a set of standardised financial education lessons delivered to fourth and fifth graders (ages 9–10) in two different school districts, in the USA. The authors find that even a relatively brief programme results in knowledge gains that persist one year later. While measuring financial behaviours in this age group is challenging, students exposed to financial education have more positive attitudes about personal finance and appear more likely to save. These results show that younger students can learn financial topics and that learning is associated with improved attitudes and behaviours that, if sustained, may result in increased financial capability later in life.
The Study	This study examines the effects of a classroom financial education programme adapted from the Council for Economic Education's Financial Fitness for Life (FFFL) curriculum for grades 3 to 5 (typically aged 8–10). The programme, which was delivered in five weekly lessons of approximately 45 minutes each, focused on savings, financial decision making, and money management. These lessons are not intended to be taught as special classes, but can be integrated into math, social studies, or English-language arts (i.e. literacy and language) curricula. To ensure the fidelity of treatment, teachers and volunteers were asked to complete a questionnaire after teaching each lesson. A majority (58 per cent) reported that the students in the class were "very interested" in the lesson, and 94 per cent reported that this course was material the class had not experienced before. There were approximately 1,500 fourth and fifth graders in total in the study's School District in the 2011–2012 school year. Half of the district's 71 classrooms were randomly assigned to participate in the programme during the study period (in experimental language the educational 'treatment' group). The remaining classrooms did not deliver the education until after the study's follow-up assessment had been completed (this then becomes the noneducation 'control' group). Thus, all students received the financial education before the end of the year – the difference being in the timing of the lessons relative to the follow-up assessment. The assessment includes a 13-point financial literacy quiz. The financial quiz questions are drawn from the FFFL curriculum materials.
Key Findings	a. Process findings (not applicable) b. Outcome findings The authors found that a well-supported intervention consisting of five classroom financial instruction lessons increases fourth and fifth graders' financial knowledge relative to a control group. The effect sizes are relatively large, at three-quarters of a standard deviation. This is larger than found in prior studies of financial education and larger in magnitude than effects in education more generally (see Fernandes, Lynch, and Netemeyer (2014) for a discussion of effect sizes). Importantly, these gains are found to persist. a year after receiving the financial education and therefore do not simply reflect students being "taught to the test." Moreover, financial education is linked to improved student attitudes and, at least in the panel model, positive financial behaviours. The findings provide encouraging evidence of the potential for financial education offered to elementary students. This study also offers one of the first attempts to track student financial knowledge and behaviour across grade levels, showing persistence beyond the immediate post-education time period.
Points to Consider	The idea that schools ought to teach financial management to children remains a topic worthy of debate. On one hand, integrating topics into curricula is one of the primary avenues for reaching the largest segments of future consumers. However, financial management is one topic among many that might be mandated in state curricular standards. Even if financial content is expanded, schools certainly cannot replace parental instruction and guidance on personal finance habits. However, as many parents themselves feel unqualified to manage their own finances, school curricula could become a venue for dual-generational learning as students discuss lessons with their parents.

Financial Education and Timely Decision Support: Lessons from Junior Achievement (2012)

Description of the Programme	The paper “Financial education and timely decision support: Lessons from junior achievement” by Carlin and Robinson examines the training programme developed by Junior Achievement. The subjects are 2,357 Los Angeles students aged 13–19 years old who participated in a simulated consumer finance experience at the Junior Achievement Finance Park of Southern California, USA. In the theme park, participants are randomly assigned fictitious characters they have to play during their stay in the park.
The Study	The study particularly focuses on analysing the ability of students with prior financial literacy education to (a) recognise difficult financial situations and to (b) seek timely support in making the financial decision. The study refers to earlier work (Lynch 2009) showing that access to timely decision support can improve financial behaviours and financial outcomes.
Key Findings	a. Process findings During the Finance Park simulation, students are randomly assigned a fictitious identity – for example, an eighth-grader (aged 13–14) might be asked to play the role of a single mother of two children. Their role-play identities include their age, employment, marital status, number of dependants, personal income, and taxes. The demographic characteristics of the fictional characters resembled those of the lower-income neighbourhoods where most of these students reside. For example, the characters’ gross annual income ranged from $20,000 to $65,000; median household income in Los Angeles in 2008 was $55,000, but in the Compton neighbourhood, where most of the students resided, the number was around $29,000. Participants begin by calculating their Net Monthly Income—their monthly take-home income net of taxes, Medicare, and Social Security contributions. Following this, students are asked to create a personal budget, which includes housing choices, health insurance, credit management, recreation, investment in continuing education, charity, mobile phone contract, and home improvement. Volunteers at the park provide limited guidance to assist students in the task. After their budget is created, they go from kiosk to kiosk in the park to carry out the transactions they have budgeted. Details regarding the 17 kiosks in the park may be found in Carlin and Robinson (2009). During the simulation, each student’s goal is to create a balanced budget that reflects their preferences but also meets the needs of their fictional household situation. b. Outcome findings Financial literacy training affected the students’ choices in the park. For example, when comparing the choices of students who went through the park twice, before and after the education, their savings rates were four times higher after the education, they paid off their debt faster, and they spent considerably less on entertainment and dining out. All of these differences were statistically significant at the 5 per cent level and were economically significant. In general, students who received classroom financial literacy training made a range of choices that were consistent with delaying immediate gratification to increase overall wealth. Moreover, there was a significant interaction between prior exposure to financial literacy training and the presentation of timely advice about financial management. Attendants in the park frequently reminded students to consider paying off their debt earlier. However, even though the students who did not receive financial literacy training prior to the park experience heard the same advice, many did not take it.
Points to Consider	The study compares the financial behaviour in a theme park of students that received financial literacy education with students that didn’t receive any prior financial education. While the findings support the claim that financial knowledge can translate to financial behaviour and particularly emphasises the ability of students with prior financial literacy education to seek out timely financial advice and assistance, it does not examine the effect of the theme park intervention itself. Other research seems to indicate that ‘learning-by-doing’ approaches, such as the theme park intervention might be promising in changing financial behaviours and attitudes.

Financial Education of Children and Youth (2016)

Description of the Programme	The policy proposal "Financial Education of Children and Youth" by Fabris and Luburić emphasises the importance of financial literacy education and develops a five-step programme for a potential national financial literacy programme.
The Study	Not applicable
Key Findings	a. Process findings The paper proposes the following key steps to establish a national financial literacy education programme. Step 1: The first issue is selecting the principal body for the programme design (e.g. Central Bank, Ministry of Education, etc.). The body has to lead the project, coordinate all stakeholders, foster the consensus, define priorities and promote the programme. The authors argue that the central bank is the best option. First, central banks have a high degree of independence that is important for drafting the programme. Second, as institutions responsible for the supervision of some financial sector segments, central banks have access to financial institutions and insight into the situation in the financial system, and thus an overview of the situation when it comes to financial literacy. Step 2: Defining the national programme. The key element of the national programme is the drafting of the financial education strategy. The strategy needs to elaborate on the issues that are to be achieved, their schedule, and what instruments are to be used. Working groups should involve all key stakeholders. Step 3: Definition of targets, targeted groups, selection of instruments, communication channels. The objectives should be clearly defined, attainable, relevant for financial education, and measurable. The ultimate objective is to increase the financial literacy of youth and children, i.e. ensuring that the target groups: • Learn when and how to use financial products. • Learn the benefits of using financial products and the risks related to their use. • Learn to manage private finances. • Have confidence to do all of the above. Step 4: After preparing the first version of the strategy, the next step should be public promotion. This includes programme presentations, workshops and visibility events (to enable other relevant stakeholders that have not been included in its creation to give their opinions). Step 5: Monitoring, evaluation, and fine-tuning. After the implementation of the programme, the objective of its monitoring is to follow up on the progress. The evaluation should determine whether and to what extent the programme objectives are being achieved.
Points to Consider	Not applicable

Improving Confidence and Supporting Independence – LifeSkills: Second Year Impact Report (2015)

Description of the Programme	The study "Improving Confidence and Supporting Independence – LifeSkills: Second Year Impact Report July 2015" by the Work Foundation examines the LifeSkills programme – an intervention that is running hundreds of volunteer-led lessons in schools and colleges including new enterprise and digital citizenship activities, giving educators over 50 hours of free, curriculum-led content to run in-class and improving and designing new materials for young people to access on the online platform to complement and continue classroom learning. Moreover, LifeSkills is supporting hundreds of young people on quality work experience placements in Barclays and other organisations. The programme is connecting hundreds of businesses with free information advice and guidance on traineeships and apprenticeships leading to full-time, paid jobs for young people. It is also launching new content for parents and guardians, enabling them to support the young people in their lives to gain skills and experience.
The Study	The study is based on interviews and surveys with participants, teachers and other stakeholders, such as volunteers and school administrators.
Key Findings	a. Process findings There are a number of themes that have emerged from the Work Foundation's evaluation that identify how positive learning outcomes for students can be maximised. The use of small groups was essential to the learning and reinforcement of information. This was particularly important for more reserved and reticent students, as well as for learning and practising work-related skills, such as how to perform well in an interview. Moreover, students felt the learning was more effective through visual and practical applications such as illustrative videos, games, role-playing, the interactive white board and team-working. Furthermore, one of the primary drivers of impact was the novelty of the information being given. In most cases this was a great success, with students commenting that the content was not something they were getting from elsewhere. Finally, content that was applicable to the immediate future (e.g. managing money at university or getting a job) also appeared to lead to greater recall. b. Outcome findings The largest observable impact the programme is having is in raising the confidence across the core subject areas and aspirations of the young people who take part. This was clearly documented in both qualitative fieldwork in schools and from the survey responses: Two-thirds of online learners who responded to the survey strongly agreed or agreed that taking part in LifeSkills has helped them feel more confident about their future.
Points to Consider	Some of the report's findings, particularly in regard to process findings, could be valuable in structuring future interventions, hence its inclusion in this Appendix. However, the study solely relies on surveys and lacks an in-depth analysis of the intervention's effect on financial knowledge and behaviour.

Investigating the Disconnect Between Financial Knowledge and Behavior: The Role of Parental Influence and Psychological Characteristics in Responsible Financial Behaviors Among Young Adults (2015)

Description of the Programme	The study “Investigating the Disconnect Between Financial Knowledge and Behavior: The Role of Parental Influence and Psychological Characteristics in Responsible Financial Behaviors Among Young Adults” by Tang and Baker investigates the association between financial knowledge and behaviour by simultaneously testing the roles played by financial knowledge, parental influence, and individual psychological characteristics (self-discipline and thoroughness) in young adults’ financial behaviours.
The Study	This article uses data from the 1997 National Longitudinal Survey of Youth (NLSY97). The NLSY97 surveys were designed and carried out by the Bureau of Labor Statistics to be a nationally representative sample of youth who were 12–16 years old as of December 31, 1996. To reach a total sample of 8,984 respondents, NLSY97 interviewers screened 75,291 households in 147 primary sampling units that did not overlap (a primary sampling unit is a metropolitan area or, in nonmetropolitan areas, a single county, or group of counties). The data contains extensive information on respondents’ demographic and socioeconomic characteristics and their family backgrounds. It also asked questions about respondents’ financial knowledge, financial behaviour, and their psychological attributes.
Key Findings	a. Process findings (not applicable) b. Outcome findings Using data on 2,712 young adults from the NLSY97, the authors first confirmed the weak association between financial knowledge and behaviour; a high level of financial knowledge does not necessarily indicate a high level of responsible financial behaviour. Moreover, the study found evidence that social and psychological factors are both influential in developing self-benefiting financial behaviour among young adults. Specifically, parental influence and the psychological factors of being self-disciplined positively relate to a young adult’s responsible financial behaviour. Even more importantly, the paper showed that there are important differences between men and women in terms of how knowledge, parental influence, and individual psychological characteristics are linked with financial decision making. While women benefit more from financial knowledge and parental influence, thoroughness (the detail-oriented and being organised attributes required to be good at planning) has a larger impact on men than on women.
Points to Consider	The paper reiterates the weak link between financial knowledge and financial behaviour and links future financial performance to parental influences and psychological factors such as self-discipline.

LifeSavers Interim Evaluation Report (2017)

Description of the Programme	The study "LifeSavers Interim Evaluation Report" by Public Perspectives refers to the LifeSavers financial education programme for primary schools, which aims to help children manage money wisely now and in the future. The intervention provides training and resources for teachers, offers support to set up and manage school savings clubs, and encourages parental and wider community engagement. There are three key elements to LifeSavers' 'whole school approach' to financial education: 1) Continuing professional development (CPD) training on financial education for teachers, along with classroom and assembly resources to help schools embed financial education into the school curriculum. 2) Support to set up and manage school savings clubs to give children practical experience of handling money, delivered in partnership with local credit unions. 3) A whole-community approach that involves parents, credit unions and churches/community organisations in helping children learn about money. Underpinning LifeSavers is a values-based approach to financial education, which seeks to explore what it means to be wise, generous, just and thankful with money, recognising that attitudes are as important as knowledge and skills in shaping people's financial behaviour. Following a pilot with six schools in 2015/16, the first year of the programme sought to roll out LifeSavers with 30 schools across four regions (the North East, Nottinghamshire, South East London, and West Yorkshire) in 2016/17. The second year, in 2017/18, will extend the programme to two more regions and work with a further 40 schools. The final year of the programme, 2018/19 will work with an additional 50 schools.
The Study	The study is conducted by Public Perspectives, an independent research and evaluation organisation. The evaluation has been embedded in the programme from the outset and is both a 'learning' and 'impact' evaluation. It is designed to help inform the development and implementation of the programme, alongside measuring the impact of LifeSavers on pupils in order to build a stronger evidence base on the benefits of early financial education and justify future investment and roll-out. The report is an interim evaluation of the delivery and impact of LifeSavers to 30 schools in 2016/17. The final evaluation report will cover the delivery and impact of LifeSavers across two years between 2016 and 2018, covering 70 schools. The evaluation, in partnership with the LifeSavers programme, developed a Theory of Change model and evaluation framework to capture learning and measure the success of the programme. This has developed indicators to measure the impact of LifeSavers on the knowledge, skills, attitudes, and behaviours of pupils, as well as the impact on schools/teachers, parents, credit unions and the wider community. The evaluation has used a combination of quantitative and qualitative approaches, including surveying pupils, schools and teachers, and conducting in-depth case studies and stakeholder interviews (evaluation materials are available on request).
Key Findings	a. Process findings In 2016/17, the programme was scaled up from a pilot with six schools to a full programme of 29 schools (target 30), of which 28 schools delivered financial education to their pupils (target 30). 21 schools set up savings clubs (target 30) and 20 schools are 'fully participating' in LifeSavers (target 30). In total, 461 teachers received CPD training, while 6043 pupils received financial education and 529 pupils are saving through savings clubs. The programme is well-received and valued by stakeholders, schools and pupils: Universally, all stakeholders, schools and pupils engaged spoke positively and enthusiastically about LifeSavers, highlighting its importance and rating its delivery highly. b. Outcome findings Significant numbers of schools, teachers and pupils have benefited from LifeSavers financial education and the savings clubs. It appears to be enriching the curriculum and allowing meaningful conversations about money to take place. There is emerging evidence that the 'LifeSavers approach' works: Emerging evidence suggests that this approach has resonance and works. Schools, teachers and pupils spoke positively about the values-based approach, while savings clubs are helping make financial education tangible and starting to create savings habits. The support provided by Young Enterprise and the area coordinators is also effectively supporting schools and credit unions to implement LifeSavers. Parental and community engagement is still developing, but where it takes place, it appears to have a positive impact and reinforces learning and behaviour. There is qualitative evidence of impact and emerging quantitative evidence of improvement: There is evidence of impact on pupils, schools and teachers. There is also some evidence of impact on parents and credit unions. At the early stages, while the programme is refined and gaining momentum, this evidence is mainly qualitative. This qualitative evidence highlights that pupils are increasing their knowledge and understanding about financial issues, embracing the LifeSavers values and developing savings habits. There is also some evidence from pupils and teachers that LifeSavers is supporting education outcomes. It is possible that positive outcomes will become stronger, as the programme matures and as pupils are exposed to more financial education during their school life.
Points to Consider	There have been some natural challenges associated with rolling out the original pilot programme on a larger scale, which has meant some schools were slow coming onto the programme. This has had the knock-on effect of delaying the implementation of some savings clubs. There was no comparison group to determine causality, and caution must therefore be exercised when interpreting the results. While there is certainly emerging evidence linking the programme to an increase in financial knowledge (based on surveys and tests), there were no long-term randomised control-trials to link the programme to a change in financial behaviours.

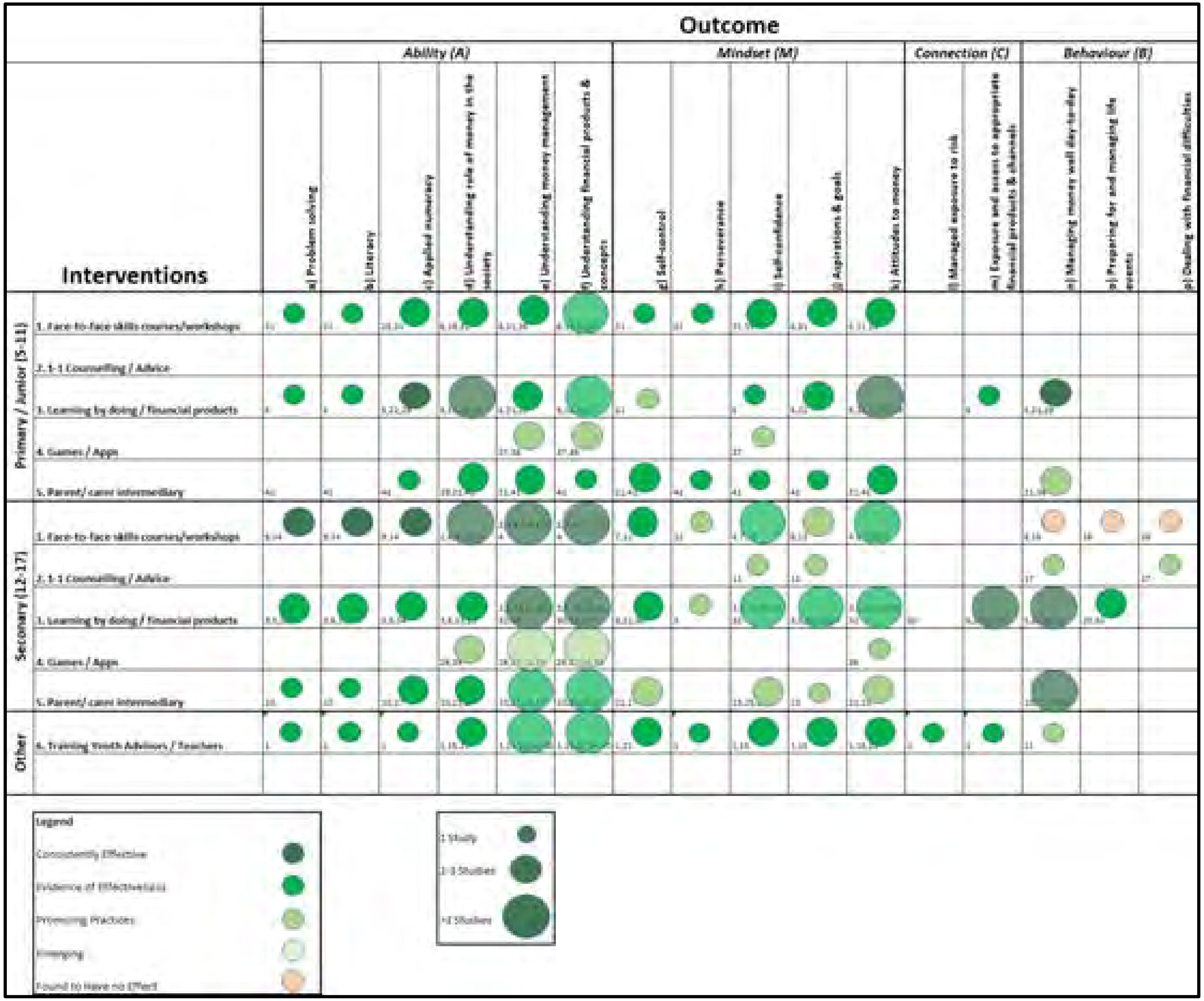
The Effects of K-12 Financial Education (2015)

Description of the Programme	The study “The Effects of K-12 Financial Education” by the Rand Corporation is a meta-analysis of the existing research on financial literacy education, investigating the effect of financial literacy education on financial knowledge, financial behaviour and financial attitudes.
The Study	In addition to examining the existing research on financial literacy education, the study analyses national and selected state content criteria to identify skills and knowledge that a financial education curriculum might be expected to address. The paper examines tools used to evaluate and select curricula (including tools specifically focused on financial education curricula and tools focused on evaluating mathematics and English-language arts (i.e. literacy & language) curricula) to identify utility and quality criteria. The study also looks at research on financial education curricula to identify criteria associated with implementation and impact. Finally, the paper draws on critical reviews of research on curricula to shape the efficacy criteria.
Key Findings	a. Process findings (not applicable) b. Outcome findings The meta-analysis finds that while financial literacy education correlates with an increase in financial knowledge, the effect can not necessarily be characterised as causal. "While [many studies are] highly suggestive, the (...) studies all make use of selected (non-random) samples, limiting the ability to make causal inference." While there is sound evidence for a correlation between financial literacy programmes and an increase in financial knowledge, the study does not find any consistent effect on financial behaviours or financial attitudes.
Points to Consider	The meta-analysis is rigorous and proves a correlation between financial literacy interventions and an increase in financial knowledge that does not necessarily translate to a change in financial behaviours and attitudes (the evidence is inconclusive). One reason for the lack of evidence for a change in financial behaviour is the limited data on the long-term effects of financial literacy education exhibited in many of the analysed studies in this paper. Existing research often lacks a long-term measure of the intervention’s success. In regard to curricular recommendations made in this study, it is unclear if the paper bases the recommendation on sound evidence or on anecdotal evidence. While the suggested curriculum gives a good first indication of potentially important intervention, it’s main use might be to assess and compare existing and potential curricula with a guidebook of best-practice. The study acknowledges positive results from randomised control trials but also considers potential spillover effects among groups/control-groups – for example transfers of knowledge from a treatment group to a control group, which would make positive results in an RCT less likely.

Youth Financial Literacy: A Review of Key Considerations and Promising Delivery Methods (2015)

Description of the Programme	The study "Youth Financial Literacy: A Review of Key Considerations and Promising Delivery Methods" was published in *Citizenship, Social and Economics Education*. The paper discusses the current state of research findings regarding youth financial literacy education to identify characteristics of financial education programmes that may influence positive changes and/or behaviour for youth.
The Study	The authors conduct a meta-analysis of existing financial literacy education research. Initially, approximately 445 documents were identified. Among these documents, 91 were critically reviewed having satisfied the following criteria: (a) focused on some aspect of financial literacy (e.g., general money knowledge, financial planning); (b) focused on youth (ages 3–21 years),; (c) was specific to programmes and youth in the US; (d) contained information that was evidence-based (e.g., presentation of empirical data, citation of relevant studies, reliance on established standards); and (e) was published within the 10 years leading up to this project (2002–2012).
Key Findings	a. Process findings In their literature review, the authors acknowledge that when programmes are implemented, rigorous evaluation of the effectiveness of these programmes remains a challenge. For example, although over 200 programmes and curricula were reviewed as part of a larger project, evaluation information was available for only 22 of these programmes and there was great variability in the quality of their evaluations. Some ''best practices'' in evaluation include the use of matched comparison groups, reliable and valid measures of financial literacy and/or behaviours provided pre- and postintervention, and longitudinal follow-ups to determine the long-term effectiveness of the programmes including which components of the programming were most effective. b. Outcome findings There were eight themes that emerged that were described as key considerations in promising youth financial readiness programmes. These included: (a) establishment and alignment with standards and benchmarks; (b) parent involvement; (c) evaluation; (d) instructor knowledge and training; (e) starting early and continuing; (f) addressing diverse backgrounds and needs; (g) alignment with student motivation and interest (e.g. interactive and engaging interventions), and (h) essential knowledge, consisting of the following nine sub-categories: (1) Budgeting and saving; (2) Investing; (3) Credit and Financing; (4) Taxes; (5) Insurances; (6) Banking and Financial Services; (7) Fraud and Identity Theft, and (8) Special Topics for Young Children.
Points to Consider	N/A

Appendix 3 – Evidence Map References



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