Financial Education Professional Learning for Teachers in Wales Pathfinder Project

Final Evaluation Report

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Executive summary

Introduction

The Financial Education Professional Learning for Teachers in Wales Pathfinder tested two approaches to embedding and scaling effective financial education professional learning. The aim of the Pathfinder was to do this in conjunction with the four Regional Education Consortia (RECs) in Wales who are responsible for professional learning priorities for schools in their areas and work with schools and their staff to design and deliver learning opportunities for teachers. The Wales Pathfinder was part of the Children and Young People Pathfinder programme of projects funded by the Money and Pensions Service (MaPS) between 2020 and 2022 that collectively tested scalable ways to build financial wellbeing through financial education.

The two key approaches to financial education professional learning that were tested through the Pathfinder included: (1) a cascaded trainer-led professional learning approach in which teachers and staff from the Regional Education Consortia took part in a financial education training course to become volunteer trainers and then cascaded financial education professional learning to other teachers; and (2) an e-learning approach that teachers completed independently at their own pace.

The professional learning was available bilingually and aligned with the Curriculum for Wales. Educators were also able to access free resources developed as part of the project, including the new bilingual Money Mapping teaching resource.

Twenty-three teachers and staff from two of the four Regional Education Consortia (GwE and ERW) participated as volunteer trainers; 91 teachers participated in the cascaded trainer-led professional learning delivered by volunteer trainers and 62 teachers completed the e-learning.

The key evaluation questions tested were:

- 1. What is the impact of teacher professional learning on teacher's knowledge, skills and confidence in delivering financial education?
- 2. What is the relative impact and effectiveness of the two implementation approaches on teacher professional learning?
- 3. What is the impact of teacher professional learning on pupils' experiences of financial education and money knowledge, skills, attitudes and behaviours?
- 4. What are the relative costs and benefits of the implementation approaches and channels?

This report is based on the analysis of data from volunteer trainers and teachers who fully participated in the evaluation. This includes matched pre- and post-intervention survey data from 21 (91%) of the volunteer trainers, 60 (66%) of the teachers who participated in the trainer-led mode of delivery and 41 (66%) of the teachers who participated in the e-learning mode of delivery, as well as interviews with seven volunteer trainers, two teachers, seven stakeholders in the process and one focus group with young people.

Key findings

Impact on teachers' knowledge, skills and confidence

The volunteer trainers that took part in the financial education training provided by Young
Enterprise experienced a positive and significant increase in knowledge, skill and
confidence to cascade professional learning to their peers.

- On average, individuals who felt not at all knowledgeable, skilled or confident to deliver financial education professional learning before taking part in the training reported feeling very knowledgeable, skilled or confident after taking part in the training.
- Only one or two individuals still felt not at all knowledgeable, skilled or confident to cascade the professional learning after taking part in the training. Subsequent interviews with volunteer trainers suggested that this was due to a combination of feeling under pressure to deliver the professional learning to the same standard experienced from the Young Enterprise trainer, a lack of opportunity to consolidate their learning in practice prior to the survey results being collected, and nervousness about delivering to other schools in the cluster, especially where there were not established relationships. After having a practice run and receiving positive feedback from teachers, these volunteer trainers felt more confident.
- The teachers that took part in both the cascaded trainer-led and e-learning approaches experienced a positive and significant increase in knowledge, skills and confidence to teach financial education to young people.
 - The majority of teachers felt either not at all or only slightly knowledgeable, skilled or confident to teach financial education before taking part in the professional learning.
 This had increased to either moderately or very knowledgeable, skilled or confident for most, with some reporting feeling extremely knowledgeable, skilled or confident.
- At a broad level both the cascaded trainer-led and e-learning approaches to delivery of the financial education professional learning performed equally as well in effectiveness, as measured by the positive impact on teachers' knowledge, skill and confidence to teach financial education.
 - However, the trainer-led approach seemed to deliver additional benefits in terms of effective communication and explanation of the material, and the use of resources, all of which were rated more highly by teachers that participated in the trainer-led approach.
 - The trainer-led approach also seemed to be more suited to the way teachers preferred to learn. While those that took part in the e-learning approach agreed that they could complete the course at their own pace, they were also more likely to report they found it more time-consuming than teachers who participated in the trainer-led approach.
 - Specifically in relation to the trainer-led approach, unsurprisingly, the perceived knowledge, skill and confidence of the volunteer trainer had an impact on the knowledge, skill and confidence of the teachers they cascaded the professional learning to. The knowledge of the volunteer trainer had a broad impact on the effectiveness of the professional learning, but also influential was the trainer's ability to inspire others and their organisational skills.
 - Teachers were not randomly assigned to groups and had some degree of choice over which approach to take part in, although the availability of the trainer-led approach was limited by the number and location of volunteer trainers and was not available to all teachers equally. This may have resulted in a degree of selection bias that needs to be considered in the results.

- The professional learning (both the cascaded trainer-led and e-learning approaches) had the greatest impact on teachers with low or no prior experience of teaching financial education and on primary teachers generally compared with secondary teachers.
 - The knowledge, skill and confidence of primary teachers to teach financial education was much lower than that of secondary teachers prior to the professional learning. After taking part in the professional learning, there was generally no difference in the knowledge, skill and confidence of primary and secondary teachers, indicating that the professional learning had reduced the gaps that previously existed.
- The impact of the professional learning (both approaches) on teacher knowledge, skill and confidence has been equally positive in both the two main RECs that took part (GwE and ERW). Despite the difference in participation between the two RECs, this finding suggests that any variation in the way in which the two RECs conducted the professional learning or supported teachers has not had a material impact on the overall effectiveness of the professional learning.
- Teachers who took part in the professional learning were already convinced of the value of financial education, but the professional learning has further inspired teachers to want to deliver financial education across the curriculum.
 - The professional learning has also widened teachers' knowledge of the scope of financial education beyond numeracy and has contributed to a broadening of the context in which financial education takes place, beyond Maths.

Impact on young peoples' financial capability outcomes

- Based on one focus group with young people, there is some evidence to suggest that the professional learning has had a positive impact on young people's experience of financial education and financial education outcomes.
 - Young people reported enjoying the learning; an increased understanding of the important role that money plays in our lives; an increased ability to manage money effectively, specifically being able to spend money wisely and save; an increased understanding of the need to regulate their emotions associated with money, specifically to distinguish between needs and wants, and delay gratification; and an increased appreciation of the need to shop around, and to make informed and critical decisions. This is based on young people's own reports, and is not based on observations of actual change over time.
- Due to the pandemic, the timeframe was compressed significantly and the evaluation has
 only been able to assess the immediate short-term impact of the professional learning
 on both teachers and the young people they teach. Further work would be needed to
 explore any sustained impact.

Cost-effectiveness of the two approaches

• At a broad level, the e-learning approach offers a more cost-effective way of delivering the professional learning at scale compared with the trainer-led approach, whilst delivering similarly positive outcomes. Despite potentially higher up-front fixed costs (associated with the additional IT development), the ongoing costs associated with the e-learning are relatively lower than for the trainer-led approach which includes ongoing costs for volunteer trainer development and teacher (including supply teacher) time to cascade the professional learning.

Recruitment and engagement of teachers

- Whilst the Regional Education Consortia (RECs) were identified as key pillars of the national approach to professional learning, it was discovered that they do not operate in uniform ways. Participation in the professional learning was stronger where the recruitment and engagement of teachers was supported at a local level by the RECs. One of the RECs provided substantial support to volunteer trainers in cascading the professional learning which undoubtedly contributed to the strong participation from teachers in this region.
- There was also an assumption that the professional learning could be cascaded to other
 teachers not only within their own school but also within their cluster (a cluster comprises a
 secondary school and a number of feeder primary schools). Yet, it became apparent that
 teachers were not used to sharing professional learning with teachers outside their
 own school, which restricted the reach of the trainer-led professional learning.

Legacy

- Development of professional learning resources specific to Wales and in the Welsh language: Importantly, this has filled a gap in the professional learning offer for financial education in Wales and added to the resource base for teachers. There is recognition from stakeholders that the professional learning and resources fill a gap in teacher professional learning in Wales, and there is a desire for the digital resources to be available and to be maintained following the project.
- Development of new relationships in Wales: The project has provided an opportunity for both MaPS and Young Enterprise to build relationships in Wales in financial education, paving the way for further development. The development of a Strategic Professional Learning Implementation Plan by the Welsh Government, recognising a small number of priority organisations with specific subject knowledge, provides an opportunity for a specialist financial education teacher training provider to be positioned as a key professional learning partner.
- Continued opportunities to align with Curriculum for Wales: While early interviews with some REC staff questioned the alignment of the professional learning with the new Curriculum, feedback from the volunteer trainers and teachers in the surveys and interviews clearly shows that teachers do see an alignment with the new Curriculum and identified many opportunities where financial education can be more firmly embedded with the continued roll out of the Curriculum.
- Piloting of a new approach to professional learning: The project has allowed a very different approach to professional learning to be piloted (a cascaded trainer-led approach) which contrasts with previous financial education training interventions that have typically involved specialist trainers providing professional learning directly to teachers. This contributes to the existing evidence base (e.g. from the MaPs-funded "What Works Fund") that has shown the effect of teacher professional development in financial education provided by specialist trainers, and highlights the potential for alternative models of delivery including both a cascaded trainer-led approach and an e-learning approach.

Implications

 Both the cascaded trainer-led and e-learning approaches have the potential to support scaling up of financial education professional learning. Both approaches are effective at increasing teachers' knowledge, skill and confidence to teach financial education, and either approach could be used to produce similar results, albeit with different costs and reach. When choosing an approach, financial education professional learning providers and funders should consider the different merits and limitations of the approaches with regards to the context, taking into account teachers' preferences, potential reach, engagement, cost and potential to deliver bilingually.

- Training teachers to cascade professional learning in financial education to their peers can be effective where it is supported. Teachers require specialist training and resources in the initial training and ongoing support in cascading the professional learning to others. Teachers with limited or no prior experience of financial education or delivering professional learning required more support. During the project, support was provided by both the Young Enterprise trainer and via the RECs. There is the potential to embed the professional learning in the existing professional learning offer provided by the Regional Consortia in Wales. In the other UK nation contexts, further exploration would be needed to understand how this approach to professional learning could be embedded in other existing structures (e.g. Multi-Academy Trusts in England, Local Authorities in Scotland) or via Initial Teacher Education. Whatever route is used needs to have the capacity and infrastructure to provide the support on an ongoing basis.
- Engagement in the professional learning needs to be actively encouraged to ensure the benefits can be experienced. This requires effective communication, to ensure teachers are aware of the professional learning opportunities and the benefits, and enabling teachers to participate. The professional learning benefited from endorsement and communication from the Welsh Government, including communication via the Welsh Government Dysg newsletter and social media posts. Further consideration needs to be given to the measures that could be taken to encourage and enable participation at a local level, particularly the local support from the RECs. Participation was higher where the support and encouragement from the REC was stronger. Given that the many of the teachers that participated in the professional learning had limited or no prior experience of financial education or had a leadership role that included financial education, there may be merit in targeting early career teachers as well as teachers who already have, or are taking on, a leadership role that includes financial education.
- The professional learning resources need to be made available and accessible to teachers, in a place where teachers would expect to find information on professional learning and learning and teaching resources more generally, such as the Hwb in Wales, and via the RECs. In other nations, similar platforms would need to be identified. It is also important to ensure that the resources are actively promoted and not simply hosted on a platform, to increase their uptake and effectiveness.
- The resources need to be kept up-to-date and relevant. With both the trainer-led and elearning approaches, there are resource implications associated with keeping the professional learning materials up-to-date and relevant on an ongoing basis. Whilst updates may not need to occur frequently, the content would need to be refreshed on a periodic basis to ensure it remains relevant, in particular taking into account any ongoing developments to the Curriculum for Wales. There are additional resource implications associated with the technical maintenance of the e-learning resource and development costs associated with implementing updates.
- Resources need to be bilingual. Throughout the project, the provision of Welsh medium
 financial education resources aligned to the new Curriculum for Wales were much
 appreciated and filled a gap in the availability of good quality financial education resources

in Welsh. As many schools in Wales teach only through the medium of Welsh, the provision of bilingual resources is essential to ensure equality of access and impact of the learning. Any updating and development of the resources also needs to be done in both English and Welsh.

• Sustainability and scalability of the professional learning relies on a holistic and coordinated approach to financial education professional learning at a national and regional level. Learning from this evaluation suggests that, at a national level, this requires a clear focus and emphasis on financial education professional learning, clearly signposted and accessible resources and access to professional learning, with local regional support. Teachers (and schools) require support to enable teachers to engage in the professional learning and, if engaging as a volunteer trainer, resource and support to cascade the professional learning to other teachers. Teachers need to know how and where they can access high quality professional learning that has been quality assured. The strategic professional learning implementation plan, developed to support the new Curriculum for Wales, may offer a route to identify organisations with subject specific knowledge that can provide financial education professional learning at a national scale.

1 Project overview

The Financial Education Professional Learning for Teachers in Wales Pathfinder focused on testing two approaches to embed and scale effective financial education professional learning. It was part of the Children and Young People Pathfinder programme of projects funded by the Money and Pensions Service to test scalable ways to build financial wellbeing through financial education.

The project was a partnership between the Money and Pensions Service (MaPS), Young Enterprise, the Welsh Government (including the Regional Education Consortia) and University of Edinburgh Business School as the evaluation partner. The project was funded by MaPS and was delivered by Young Money (on behalf of Young Enterprise) and two of the Regional Education Consortia in Wales (GwE and ERW). Since the project began, ERW has experienced structural changes and a reduction in the number of participating councils. This report reflects the status and membership of ERW at the time of the project.

The original aim of the Pathfinder was to work in conjunction with all four Regional Education Consortia (REC) in Wales who are responsible for professional learning priorities for schools in their areas and work with schools and their staff (teaching through the mediums of Welsh and/or English) to design and deliver learning opportunities for teachers. Only two of the four RECs committed to taking part in the pathfinder.

The two approaches to professional learning that were tested were a cascaded trainer-led professional learning approach (trainer-led), and an e-learning approach (e-learning) involving teachers taking part by themselves at their own pace. In both cases, the professional learning aimed to build teachers' knowledge, skill and confidence in delivering effective financial education to young people. The project primarily focused on teachers and young people at upper KS2 and/or lower KS3 to capitalise on the key financial education teachable moment which occurs at the point of transition between primary and secondary school. It was made available for all educators.

All professional learning¹ was available bilingually and aligned with the Curriculum for Wales. Educators were also able to access free resources developed as part of the project, including the new Money Mapping teaching resource.

The original timeline of the project was established prior to the onset of the pandemic. The project was launched in January 2020 with the original aim of volunteer trainers participating in the training in April 2020, and volunteer trainers cascading the professional learning to their peers from April to November 2020. The e-learning professional learning was intended to be made available from September to November 2020. Due to the pandemic, leading to school closures and limited capacity for schools to engage and for RECs to participate in and cascade the professional learning, the delivery of training was paused for nine months and re-started in January 2021, while the content development continued throughout. The trainer-led and e-learning professional learning was rolled out to teachers from January to June 2021. The ongoing effects of the pandemic on the timeline and capacity of the RECs, schools and teachers, had consequences for participation.

1.1 Key Evaluation Questions

The project sought to evaluate the following key questions:

- 1. What is the impact of teacher professional learning on teacher's knowledge, skills and confidence in delivering financial education?
- 2. What is the relative impact and effectiveness of the two implementation approaches on teacher professional learning?
- 3. What is the impact of teacher professional learning on pupils' experiences of financial education and money knowledge, skills, attitudes and behaviours?
- 4. What are the relative costs and benefits of the implementation approaches and channels?

2 Project participation

It was originally envisaged that all four of the Regional Education Consortia (RECs) would participate in the Pathfinder with the aim of reaching 1,000 teachers, but only two of the RECs signed up to the project (ERW and GwE). GwE includes the Local Authorities in North Wales and, at the time of the project, ERW was the Mid and South West Wales Consortium. The other two RECs (CSC and EAS) were unable to participate in the Pathfinder due to insufficient staffing capacity to take the work forward, with respect to both initial grant set up and project management. The overall target numbers were subsequently adjusted to reflect that only two of the four regional consortia were participating. The participation was further affected by the Covid-19 pandemic, school closures during the project, and pressures on teachers' at this time.

Initial recruitment of teachers to the Pathfinder was undertaken by Regional Education Consortia through regional contacts, existing relationships with schools and other networks, and centrally by Young Enterprise via email campaigns, social media posts and campaigns including LinkedIn and Twitter, inclusion in the Welsh Government Dysg newsletter, inclusion in Young Enterprise's own newsletters and any further relevant communications being sent to educators in Wales. All forms of communication saw some success in terms of generating interest, however those

¹ With the exception of the initial train the trainer training provided by Young Enterprise to the 23 volunteer trainers which was provided in English only.

undertaken by GwE resulted in by far the greatest number of teachers signing up, although the conversion rate was lower.

The original intention was to assign teachers to either the trainer-led or e-learning approach, to ensure a degree of random assignment and minimise cross-contamination, and to ensure similar sized samples across the different interventions. However, due to lower numbers, teachers were given the option of which mode to participate in to increase the engagement as much as possible, although the option to participate in the trainer-led approach was limited by the availability of volunteer trainers.

Engagement in and availability of the professional learning via the trainer-led approach was determined by the number and location of the individuals who signed up to become volunteer trainers. Twenty three individuals (comprising a mix of REC staff and teachers) took part in the financial education training provided by Young Enterprise to become volunteer trainers and cascade the financial education professional learning to other teachers within their own schools and schools within their clusters (being made up of the secondary school and the partner or feeder primary schools). Twenty-one (91%) of the volunteer trainers full participated in the evaluation.

Volunteer trainers were primarily responsible for recruiting and engaging teachers in the cascaded professional learning, but this was supported to by the RECs. One of the RECs in particular provided considerable organisational and administrative support in helping teachers to cascade the professional learning, connecting teachers with cluster schools, advertising the professional learning and even drafting emails they could send to other teachers. This undoubtedly contributed to the higher participation rates overall by teachers in this REC:

So [REC staff] had done all of the email letters, she'd done the Google forms, she'd done everything ... she'd tried to work out everything that we needed to do to make it easier. She has been amazing ... I don't think it would have worked without her, she's been super-efficient and it's been phone calls and emails, yeah she's excellent, yeah. (Interviewee 1: Female, Primary, GwE)

In total, 125 teachers signed up to take part in the cascaded trainer-led professional learning; 25 from ERW and 100 from GwE. The final number of teachers that the volunteer trainers cascaded the financial education professional learning to was 91 teachers (ERW: 22; GwE: 69). Overall, two-thirds of the teachers (60) that received the cascaded professional learning fully participated in the evaluation.

The e-learning option was made available to teachers across all the RECs, in an effort to widen the participation. In total, 145 teachers signed up (CSC: 14; EAS: 8; ERW: 26; GWE: 97) to take part, but the final numbers that completed the e-learning course were 62 (CSC: 1; EAS: 2; ERW: 8; GwE: 51). The much higher sign-up to completion ratio highlights the interest in taking part in financial education professional learning, but it also indicative of the difficulties teachers faced in finding the time to engage at a challenging time. Participation in the evaluation was proportionally lower. Overall, two-thirds of the teachers (41) that took part in the e-learning professional learning fully participated in the evaluation.

3 Evaluation approach

The evaluation approach comprised testing two interventions:

- 1. A cascaded trainer-led professional learning approach (trainer-led).
- 2. An e-learning approach (e-Learning) involving teachers taking part by themselves at their own pace.

It was originally intended that teachers would be assigned to one of these two approaches, but given the low sign-ups, teachers were given the option to choose to participate to increase engagement. Teachers could choose to participate in one of three possible ways, the first two together formed the cascaded trainer-led approach:

- 1. Volunteer trainers. Some teachers and staff from the Regional Education Consortia took part in a two-day financial education training course to become volunteer trainers and cascade financial education professional learning to other teachers. The training was designed by Young Enterprise and provided by one of their specialist financial education teacher trainers. The first day explored the concept and context of financial capability for young people in Wales including the relevant financial education topics and outcomes for young people and Curriculum delivery opportunities. The second day provided a deep dive into the professional learning materials trainers would be delivering. The training was originally intended to be delivered in-person but, due to the pandemic, was delivered remotely (via Teams).
- Cascaded trainer-led professional development. Some teachers participated in the
 cascaded trainer-led professional learning delivered by the volunteer trainers. The group
 sessions lasted on average two-and-a-half hours. Due to the pandemic, most of the
 sessions were made available remotely, with some teachers managing to provide
 sessions in school.
- 3. **E-learning professional development.** Some teachers participated in an e-learning course designed and delivered by Young Enterprise and made available for teachers to take part in at their own pace. The e-learning course was expected to take between one-and-a-half to two-and-a-half hours to complete. The e-learning course content mirrored that of the trainer-led approach. Appendix 1 provides further detail and contains images of the registration page, module list, sample module content and a sample activity. The e-learning course can be accessed at https://e-learning.y-e.org.uk/ and is fully bilingual.

Young Enterprise developed and delivered both approaches and associated resources, including the Money Mapping teaching resource that accompanied the professional learning in consultation with teachers from the two regions that took part.

3.1 Data collection activity and data sources

To test the evaluation questions, a range of data collection activities and data sources were intended throughout the Pathfinder project, although not all of these were ultimately achieved due to shifting timelines as a result of the pandemic and school closures that left little or no time for teachers to participate. Tables 1 and 2 provide the final numbers that participated in different quantitative and qualitative parts of the evaluation.

Table 1: Quantitative data collection

Survey data collected				
Trainers	Pre surveys: 22; Post surveys 22 Matched pre and post surveys: 21 Follow on survey: 10			
Teachers trainer led	Pre surveys: 84; Post surveys 67 Matched pre and post surveys 60 Follow on survey: 0			
Teachers E learning	Pre surveys 107; Post surveys 45 Matched pre and post surveys 41 Follow on survey: 3			

Table 2: Qualitative data collection

Data collection planned	Data collection completed				
Trainer interviews	5 ERW (2 of which were REC staff) 2 GwE				
Teacher interviews	Trainer led: 2 GwE	E learning: 0 completed			
Observations of training sessions	1 YE Training session observed 1 cascaded training session observed (ERW)				
Focus groups with young people	1 Primary School; 6 pupils, Year 6, GwE				
Stakeholder interviews	1 x Welsh Government; 1 x N	MaPS, 3 x YE, 2 x REC)			

Pre- post- and follow-up survey comparisons

To assess the impact of the financial education professional learning, all individuals who took part as volunteer trainers, or in the trainer-led or e-learning delivery of the professional learning were asked to complete a baseline pre-survey (prior to taking part in the professional learning), a post-training survey (immediately following the professional learning), and a follow-up survey (roughly three months following their participation in the professional learning). Analysis of scores on repeated measures for knowledge, skill and confidence were used to assess the impact of the professional learning.

The pre- and post-surveys were designed to measure the immediate impact of the professional learning, with the follow-up survey designed to capture sustained impact. As the timeline shifted to take account of a lockdown and school closures, the opportunity to complete a follow-up survey three months after taking part in the professional learning diminished, particularly for those receiving the cascaded professional learning. A small number of follow-up surveys were completed by the volunteer trainers, but the number overall was too small to analyse quantitatively. Hence, one limitation of the evaluation is that it only captures the immediate impact of the professional learning.

Observations

It was intended originally that several observations of the professional learning sessions delivered by volunteer trainers would be carried out to help inform what was being delivered and to understand whether any variation in the way the professional learning was being cascaded may have an impact on the effectiveness of the approaches. Almost all the professional learning was delivered remotely, and only two observations were conducted: the initial training session delivered by the Young Enterprise Trainer (to understand the original training received) and one cascaded session delivered jointly by two staff from one of the RECs. Observations proved challenging to organise due to the compressed timeline. Some teachers, especially those not familiar to delivering professional learning, naturally felt nervous, and having an observer present could have been intimidating for teachers.

The rationale for the observations was to understand whether any variation in the delivery of the professional learning may have impacted the effectiveness of the approaches. Analysis of survey data (reported later in this report) was conducted to test for variation by REC and trainer factors and did not show any differences in effectiveness.

Interviews

Individual interviews with volunteer Trainers and participants in the trainer-led and e-learning approaches were conducted to understand the impact of the professional learning on individuals.

Interviews with project stakeholders, including Welsh Government, MaPS, YE and REC representatives largely informed the process evaluation and the cost/benefit analysis of the approaches.

Focus groups

To assess the impact of the professional learning on young people, post-intervention focus groups were planned to take place. As the pandemic continued, and the timeline of the project shifted, it allowed very little time for teachers to put their professional learning into practice in the classroom before the end of the school year. The evaluation timeline was extended to the October break of the next school year, to allow time for teachers to deliver financial education at the start of the year. Despite two or three teachers offering to organise a focus group, only one of them managed to deliver financial education during that time. Hence, it was only possible to organise one focus group with a small group of primary school pupils, which was carried out online via Teams, as it was not possible to visit the school at the time.

4 Findings

Findings are presented separately for:

- 1. The volunteer trainers (i.e. the teachers and REC staff who participated in the Young Enterprise training to become financial education professional learning trainers);
- 2. The teachers who took part in the professional learning (both in the cascaded trainer-led and the e-learning modes of delivery);
- 3. The young people who experienced financial education delivered from one of the teachers who participated in the professional learning;
- 4. Stakeholders in the process.

4.1 Volunteer trainers

Sample characteristics

A total of 23 individuals participated in the training delivered by Young Enterprise to become volunteer financial education trainers. The trainer findings are based on pre- and post- surveys completed and interviews. In total, 22 Trainers completed the pre-survey and 22 completed the post-survey, but only 21 individuals had completed both pre- and post-surveys. Interviews were conducted with seven individuals. Appendix 2 provides details of the volunteer trainer survey sample and interview sample.

Overall, the majority in the survey sample were from secondary schools, mainly maths/numeracy teachers or subject leads. The majority of participants were female. This broadly mirrors the wider teaching population.² In the main, participating teachers were experienced, with an average of 18 years' teaching experience. By comparison, experience of teaching financial education was considerably lower, with a mean length of experience of four and a half years; six teachers had less than one year's experience of teaching financial education and three teachers had never taught any financial education before. Only two teachers had 10 or more years' experience of teaching financial education.

Most of the teachers had some experience of delivering professional learning of some sort within the last 12 months (13 out of 19 individuals who answered the question), although the frequency of this was not particularly high (five had only delivered professional learning annually). Six of the 19 individuals had not delivered any professional learning in the last 12 months. In terms of delivering financial education professional learning, 17 out of the 19 individuals that answered the question had not delivered any financial education professional learning in the last 12 months.

Overall, while the survey sample comprised largely experienced teachers with experience of delivering professional learning, specific experience of teaching financial education and delivering financial education professional learning was much lower.

The interview sample comprised five teachers and two staff from one of the Regional Consortia (ERW). Three of the teachers were from secondary schools (one a Pupil Referral Unit) and two primary school teachers. The sample included individuals with a mix of experiences in financial education and professional learning delivery with some very experienced individuals and others with no experience.

Motivation to become a trainer

The interviews explored the motivations for taking part in the training to become a financial education professional learning trainer. Individuals were motivated by various reasons, including their own interest and passion for financial education that they felt was important and should be taught to young people:

So getting involved with anything financial for me is a major plus ... they will use finance every single day of their lives. So I'm quite passionate about that, so that's why I do it. (Interviewee 5: Female, Secondary, ERW)³

Some were motivated by the need to understand more, perhaps having just taken on responsibility for a role that included financial education:

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² Analysis of data taken from the GTCW Register of Qualified teachers indicates that 75% of teachers in both Welsh medium and English medium primary and secondary schools in Wales are female.

³ Full details of the interviewee characteristics can be seen in Appendix 2

I just thought it was a good opportunity for myself to learn more about financial education and then to help others as well. (Interviewee 1: Teacher, Female, Primary, GwE)

I've recently been appointed numeracy coordinator as well. So part of the reason that I took part in the financial education was to explore that avenue, to see whether or not we could use it to enrich the numeracy side of things in school. (Interviewee 3: Male, Secondary, ERW)

Others mentioned the new Curriculum for Wales and how there would be a greater focus on wellbeing:

I think it's just massive for wellbeing, like wellbeing is a huge thing in our school and it is in lots of schools (Interviewee 1: Female, Primary, GwE)

A newly qualified teacher noted the need to have a leadership focus as part of her development, and taking part in this project provided an opportunity for her to demonstrate leadership in the area of financial education, which seemed to be a distinct focus and a gap in terms of the type of leadership that others perhaps focused on:

A couple of the things that you have to do is leadership and innovation ... and then I saw in the GwE Bulletin about this and I thought, well, it'll tick the box for innovation and leadership because no-one else is doing it. (Interviewee 2: Female, Primary, GwE)

Perceptions of the training

All seven trainers that were interviewed talked very positively about the training. They all had high praise for the Young Enterprise trainer, both in terms of her experience and expertise in financial education and her ability to engage and motivate attendees:

[YE Trainer] had got us really enthused, really engaged ... There's not many courses to be honest I go on and think, that was really good, but this was one of them, it was. ... it has definitely been well worth my time.(Interviewee 3: Male, Secondary, ERW)

I thought she was very good, very engaging, really knowledgeable. The training was very good. (Interviewee 4: Female, Secondary, ERW)

Interviewee 7 specifically said she liked the way the Trainer made the material relevant and brought it to life with her own circumstances, and the training was useful, particularly in showing teachers that "you can't just teach financial education on one day in a year." This was reinforced by the YE Trainer herself who noted that the training had: "opened their eyes as to what financial education actually could be and how it could be used." She described it as a "mind shift" for them, as highlighted by Interviewee 3:

And I was thinking to myself, well hopefully I'll learn a thing or two, but then I realised as [YE Trainer] was going through everything, that this was far deeper than I thought it was. (Interviewee 3: Male, Secondary, ERW)

The participants felt that the topics covered in the training were very good, and they also liked the Money Mapping resource as a means of understanding progression. Several interviewees said they would have liked to have spent more time focusing on the resources introduced by the YE trainer, having them brought into the training session to understand better how to use them, and also being given a list of resources they could draw on, as well as time to go over the training they were about to deliver:

If there's one thing I think that the course needs more is it needs more almost off the shelf resources that teachers can use, because ... you're left with kind of a situation where, yes this is really worth pursuing, oh sugar I've got 15 different websites to look at and I'm not quite sure which one is the best. It's almost like I don't quite know where to go from here kind of thing. (Interviewee 3: Male, Secondary, ERW)

I think the only criticism would be ... when we were going through the training side of things, it felt like that was really quite quick. So whether there could have been a little bit more opportunity on the initial training just to go over the training of the training, whether we practised a little bit.... it might have been too much then because we'd already had the two days, we might have felt a bit overwhelmed, I don't know.(Interviewee 1: Female, Primary, GwE)

The YE Trainer subsequently organised an additional session to look over the resources and produced a spreadsheet that mapped the resources to the framework, which was appreciated:

Unlike most training courses there was then the follow up from [Trainer] which was really useful and if the resources were there pretty much straightaway it would be an almost perfect course. (Interviewee 3: Male, Secondary, ERW)

Originally, the training was planned to be in person, but due to Covid-19, was adapted for remote delivery. Interviewees felt that this worked as well as it could under the circumstances – breakout rooms were possible for discussion– but felt that it could have been more effective in-person

In general, interviewees felt the training was comprehensive and prepared them for cascading the training to others.

Knowledge, skill and confidence to teach financial education

The evaluation first tested the impact of the training on volunteer trainers' knowledge, skill and confidence to teach financial education. Tables 3, 4 and 5 provide a summary of the before and after scores for the knowledge, skill and confidence dimensions tested in the survey. Both the mean (average) and mode (most frequently occurring) scores are given, since the mean can mask interesting variation in the data. Full details of all the volunteer trainer analysis, including results for statistical significance, are provided in Appendix 3.

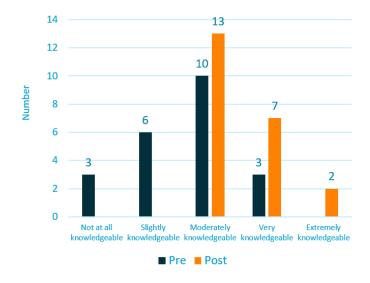
In summary, all the knowledge dimensions increased following the training, on average by around one point on the scale, and the increase is statistically significant (Table 3). Detecting statistical significance with such a small sample is very difficult because small sample sizes reduce statistical power. After the training, none of the individuals remained 'not at all knowledgeable'. As an example, Figure 1 compares how knowledgeable trainers felt to teach a range of financial concepts and topics to young people before and after taking part in the training.

Table 3: Volunteer trainer knowledge to teach financial education

	Mean (average)	Mode (most common)		
How knowledgeable do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
To teach a range of financial concepts and topics to young people	2.57	3.52	3	3	
To define what financial capability looks like for young people	2.33	3.67	1 & 3	4	
To implement (or extend) financial education within the curriculum in my setting	2.33	3.43	2 & 3	4	

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

Figure 1: Volunteer trainer knowledge to teach a range of financial concepts and topics to young people (n = 22)



The change in mean value (from 2.57 to 3.52) suggests a general shift from slightly knowledgeable to moderately knowledgeable.

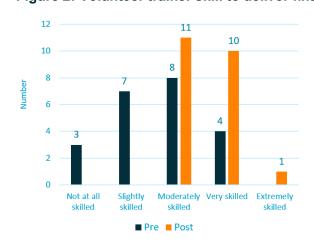
While the majority felt moderately knowledgeable both before and after the training, Figure 2 shows that individuals who felt either not at all or slightly knowledgeable before the training, felt at least moderately knowledgeable after the training. Those that felt moderately knowledgeable before were likely to have shifted to very knowledgeable after the training.

In relation to skill teaching financial education, Table 4 shows a similar improvement in skill following the training, all of which are statistically significant. A similar pattern was observed with none of the participants remaining not at all skilled following the training, with the majority feeling either moderately skilled or very skilled after the training. Appendix 3 shows the full details.

Table 4: Volunteer trainer skill to teach financial education

	Mean (average)	Mode (most common)		
How skilled do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
To deliver financial education (including teaching different concepts) to young people	2.57	3.57	3	3	
To assess young people's progression in financial education	2.39	3.33	3	3	
To use tools and resources to develop and/or deliver financial education for young people	2.48	3.52	2 & 3	3	
1 Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled					

Figure 2: Volunteer trainer skill to deliver financial education to young people (n=22)



Despite the majority feeling moderately skilled both before and after the training, Figure 2 clearly shows the shift from not at all and slightly skilled to at least moderately skilled, and the increase in those that felt very skilled following the training.

In terms of confidence to teach financial education, Table 5 shows a considerable increase in confidence, and all the increases are statistically significant (see Appendix 3 for full details). After taking part in the training, individuals largely felt very confident.

Table 5: Volunteer trainer confidence to teach financial education

	Mean (average)	Mode (most common)			
How confident do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)		
To plan quality financial education lessons for young people	2.24	3.71	3	4		
To deliver financial education lessons to young people	2.57	3.67	3	4		
To tailor financial education learning activities to young people's characteristics and identified needs	2.19	3.52	2 & 3	3		
To assess and evaluate the effectiveness of financial education for young people?	2.14	3.52	2	4		
1 Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident						

Figure 3: Volunteer trainer confidence to plan quality financial education lessons for young people (n=22)

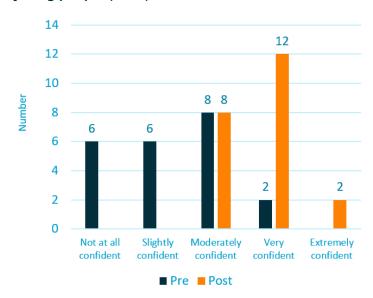


Figure 3 shows the change in confidence to plan quality financial education lessons for young people.

The pre-scores show that a good number of the individuals felt either not at all or slightly confident before the training, whereas after the training more than half (12 individuals) felt very confident and importantly nobody felt either not at all confident or slightly confident after the training: everyone felt at least moderately confident.

Knowledge, skill and confidence to deliver financial education professional learning

Whilst improvements in knowledge, skills and confidence to teach financial education are positive, the main aim of the training was to improve knowledge, skill and confidence to deliver financial education professional learning to others. Tables 6, 7 and 8 show the change in knowledge, skill and confidence in delivering financial education professional learning.

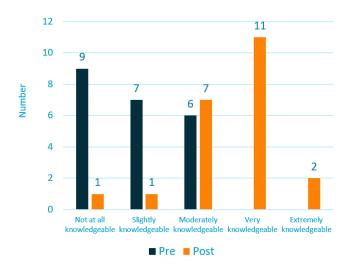
In terms of knowledge to deliver professional learning, Table 6 provides an overview of the key changes, highlighting the positive improvement in knowledge, which is statistically significant (full results are in Appendix 4).

Table 6: Trainer knowledge to deliver financial education professional learning

	Mean (average)	Mode (most common)		
How knowledgeable do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
To deliver professional learning training to teachers on a range of financial concepts and topics?	2.05	3.33	2	3	
To define for teachers what financial capability looks like for young people	1.86	3.52	1	4	
To support teachers to implement (or extend) financial education within the curriculum in their setting	2.00 3.43		2	4	

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

Figure 4: Volunteer trainer knowledge to define for teachers what financial capability looks like (n=22)



The biggest improvement has been in terms of how volunteer trainers perceived their 'knowledge to define for teachers what financial capability looks like'. Nine individuals felt not at all knowledgeable before the training, whereas half (11 individuals) felt very knowledgeable after the training. Two individuals remained either not at all knowledgeable or slightly knowledgeable. Reasons for this are discussed further below.

Table 7 shows the increase in how skilled participants felt to deliver professional learning following the training. Overall,

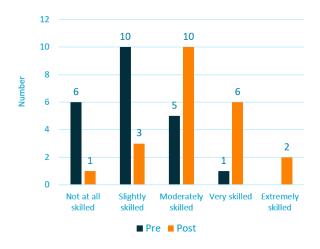
there is an improvement in skill, and the improvements are statistically significant (see Appendix 4). The majority felt at least moderately skilled after the training, with some feeling very skilled.

However, one or two individuals continued to feel not at all skilled after the training. This was most evident in relation to how skilled the volunteer trainers felt to support teachers to deliver financial education on the topics of risk and choices (two and one individuals respectively), and one individual still felt not at all skilled after the training to support teachers to use tools and resources for financial education (see Figure 5).

Table 7: Trainer skill to deliver financial education professional learning

	Mean (average)	Mode (most common)		
How skilled do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
To support teachers to deliver financial on the topic of Risk'?	2.05	3.14	2	3	
To support teachers to deliver financial on the topic of Choices'?	2.14	3.29	2	3 & 4	
To support teachers to deliver financial on the topic of Attitudes towards money'	2.29	3.48	3	3	
To support teachers to deliver financial on the topic of Value	2.48	3.48	3	4	
To support teachers to assess young people s progression in financial education	1.90	3.10	2	3 & 4	
To support teachers to use tools and resources to develop and/or deliver financial education for young people	2.05	3.24	2	3	
1 Not at all skilled, 2 Slightly skilled, 3 Moderately skil	led, 4 Very s	killed, 5 Extren	nely skilled		

Figure 5: Volunteer trainer skill to support teachers to use tools and resources for financial education (n=22)



The majority of individuals (10) felt slightly skilled before the training to support teachers to use tools and resources for financial education, a large number (6) also felt not at all skilled. Following the training, the majority felt moderately skilled with a good number feeling very skilled.

Finally, Table 8 shows the results for confidence. Following the training there was a statistically significant uplift in all aspects of confidence to deliver financial education professional learning. The mean and modal pre-score indicate slightly confident before the

training and very confident after the training on the majority of confidence aspects measured. A small number of individuals remained slightly confident after the training and one person remained not at all confident on two of the confidence measures. Appendix 4 contains the full results.

Table 8: Volunteer trainer confidence to deliver financial education professional learning

	Mean (average)	Mode (most common)		
How confident do you feel :	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
To support teachers to plan quality financial education lessons	2.14	3.43	3	4	
To support teachers to deliver financial education to their students	2.19	3.43	3	4	
To support teachers to tailor financial education learning activities to their students' characteristics and identified needs	2.10	3.14	2	4	
To support teachers to assess and evaluate the effectiveness of financial education	2.05	3.19	2	4	
To promote ideas for best practice delivery and support within schools	2.38	3.43	2	3	
To deliver professional learning training in financial education to teachers	2.10	3.33	2	4	
1 Not at all confident, 2 Slightly confident, 3 Moderate	lv confident.	1 Verv confider	nt. 5 Extreme	lv confident	

¹ Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident

Figure 6: Volunteer trainer confidence to deliver financial education professional learning training to teachers (n=22)

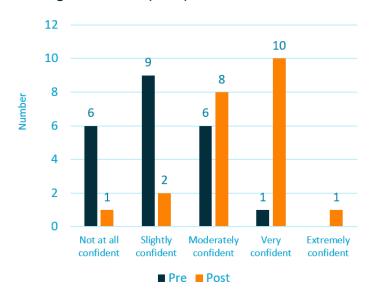


Figure 6 shows the scores for 'confidence to deliver professional learning training in financial education to teachers' and shows the general shift from not at all or slightly confident to moderately or very confident. Before the training, 15 individuals felt either not at all confident or just slightly confident, but after the training, half (10) felt very confident to deliver professional learning training in financial education to teachers. One teacher remained not at all confident and two remained slightly confident.

Overall, the Trainer survey results show that the training has had a positive and significant impact in terms of improving confidence, knowledge and skill in delivering financial education to young people and in delivering professional learning to teachers. While the vast majority have experienced an uplift in knowledge, skill and confidence, it is important to acknowledge that a small number of individuals have not. Interviews with individuals that took part in the training suggest that this may be due to:

- The difficulty of delivering the professional learning remotely (via Teams), and having to manage break-out rooms;
- the fact that the post-survey results were gathered before participants had had a chance to consolidate their learning in practice;
- the pressure felt by some to deliver the training to a particular standard, as noted by the two following quotes:

I want to do things well, so I need to know that I can do it well and I know enough about the information, which I did because the training was very good and the resources shared were very good it was just me having the confidence to do it and of course it was by Teams, it wasn't face to face, so that was a little bit trickier as well. (Interviewee 1: Female, Primary, GwE)

Once I'm 100% this is what I want to do, then I'll be able to speak with confidence as it were ... I feel like in order to do a really good job of it I'd have to have everything that I wanted to do ready to go, I'd have to be confident in myself. Part of the reason I teach Chemistry very well is because I know my Chemistry. (Interviewee 3: Male, Secondary, ERW)

 nervousness felt by some about delivering (any) professional learning to schools within their cluster (i.e. primary teachers having to deliver training to secondary school teachers and vice versa).

In relation to this final point, comments from the interviewees suggested that not all schools had close relationships with their cluster schools or worked with them on a regular basis, so delivering professional learning in this way added an additional challenge:

We don't usually do training in this way ... the relationships within the cluster are good, but I don't think it's been training before, it's been moderation and standardisation. (Interviewee 1: Female, Primary, GwE)

This is quite different. I've never done anything like this before. I've been teaching quite a long time, and I've never had this sort of way of doing it. (Interviewee 3: Male, Secondary, ERW)

I think if you were working within your cluster perhaps, particularly if you were going into primary schools ... And we did used to have cluster meetings within the authority where we all talked about what numeracy we were doing. (Interviewee 4: Female, Secondary, ERW)

The YE Trainer commented how, during the second day of the training, there was the realisation among participants that they were going to have to deliver the training in their cluster, and a growing anxiety among some that they would not be able to deliver the training to the same quality as that experienced from the YE Trainer. This may explain why some individuals still felt unconfident after the training, especially given the lack of prior experience of teaching financial education. As part of the mentoring support provided to the RECs, the YE Trainer notes that she provided a lot of post-training reassurance and additional coaching. She noted that some of this anxiety may have been allayed if time had been built in to the project to enable the trainers to consolidate their experience within their school or with a small group of peers before being asked to roll out training across their cluster. She noted that some of the volunteer trainers had planned practice sessions with a small group of colleagues to practice the materials.

Perceived value of financial education and professional learning

Table 9 provides summary results for questions relating to the perceived value and importance of financial education and motivation to deliver education and professional learning. Appendix 5 provides the full results.

At the outset, all the volunteer trainers agreed that it is important to deliver financial education to young people and all but one of the volunteer trainers agreed that it is important that professional learning in financial education is available for educators. Following the training the only change has been in the strength of agreement. Due to the already high level of agreement, the change is not statistically significant. We would hope that individuals attracted to become volunteer trainers and cascade financial education professional development to other teachers would already appreciate the value of delivering financial education to young people, so this result is not surprising.

The training has however had a statistically significant improvement on participants' motivation to teach financial education and to deliver financial education professional learning to others, and has increased participants' perceptions of the opportunities for financial education professional learning in their region.

Figure 7: I am inspired to support others to deliver financial education (n=22)

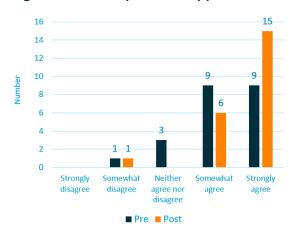


Figure 7 shows that the training has inspired individuals to want to support others to deliver financial education in their setting. Whilst there was a tendency to agree with this before the training (9 somewhat agreed; 9 strongly agreed), the feeling was stronger after the training with 15 individuals strongly agreeing. One individual continued to disagree that they felt inspired to support others to deliver financial education.

The majority (15 individuals) were either unsure or disagreed before the training that there were sufficient opportunities for financial education

professional learning in their region. After the training, the majority either somewhat agreed (6 individuals) or strongly agreed (9 individuals) that there were sufficient opportunities.

Table 9: Value of financial education and professional learning

	Mean (average)	Mode (most common)		
To what extent do you agree/disagree:	Pre (n 22)	Post (n 22)	Pre (n 22)	Post (n 22)	
It is important to deliver financial education to young people	4.95	4.95	5	5	
I am inspired to deliver financial education in my setting	4.29	4.76	5	5	
I am inspired to support others to deliver financial education	4.19	4.57	4 & 5	5	
It is important that professional learning in financial education is available for educators	4.76	4.90	5	5	
There are sufficient opportunities for financial education professional learning in my region	2.86	4.05	3	5	

¹ Strongly disagree, 2 Somewhat disagree, 3 Neither agree nor disagree, 4 Somewhat agree, 5 Strongly agree

In summary, the training seems to have attracted individuals who were already convinced of the value of financial education, but it has further inspired them to deliver financial education to young people and support teachers to deliver financial education. It has also increased awareness of the opportunities for professional learning in financial education as well.

Cascading the professional learning to other teachers

Six of the seven volunteer trainers interviewed said they had subsequently cascaded the professional learning to other teachers. The individual who hadn't cited a lack of time and opportunity. The two REC staff (Interviewees 6 and 7) cascaded the professional learning together to a group of teachers from a cluster of primary and secondary schools.

Some of the volunteer trainers said they had cascaded the professional learning more than once, often starting with a practice with a small number of teachers. Apart from the REC staff, only one of the interviewed volunteer trainers said they had cascaded the professional learning to teachers in their cluster; the rest had only cascaded the professional learning to teachers in their own school:

We managed to do two types of training, in school my first one I did online training with two colleagues. Then I did the cluster training (12-13 people) and it was online. But then I did another in school training and it was face-to-face and that was better because it was to a different audience [Foundation phase] and I think if I'd have done that online we wouldn't have got the same benefits I don't think. (Interviewee 1: Female, Primary, GwE)

I have initially done the maths department, so I did about six people in the maths department. That's it so far, and then we've got an inset in October where I'm going to do not the entire training, but parts of it, a shortened version for about an hour on an inset day for the whole staff. (Interviewee 4: Female, Secondary, ERW)

In the main, interviewees felt that cascading the professional learning has gone well, and they had received positive feedback from colleagues involved. Those that had delivered it more than once commented that it improved each time and they felt more comfortable with the material.

4.2 Teacher findings

Sample characteristics

The findings are based on a sample of 101 teachers who took part in either the cascaded trainer-led or e-learning professional learning and completed both pre- and post-surveys; and interviews with two teachers.

Of the 101 teachers that completed the pre- and post-surveys, 60 took part in the cascaded trainer-led professional learning delivered by the volunteer trainers and 41 took part in the (self-directed) e-learning course. As a result of the ongoing pandemic, the majority of the teachers taking part in the trainer-led professional learning (49) took part remotely (via Teams or similar); only 11 took part in-person. Due to small numbers, it is not possible to compare the relative impact of delivering the trainer-led professional learning either remotely or in-person, so these two sub-groups have been analysed collectively as the trainer-led group.

Appendix 6 provides an overview of the teacher survey sample characteristics. Overall, the sample comprises experienced teachers, with an average 14.7 years of teaching experience, but with limited or no financial education experience generally. The majority are primary teachers (82 out of 101). Not surprisingly, the main subjects taught are 'all subjects within a Primary school', followed by Maths, then PSE/Citizenship. Most of the teachers are female (80), reflecting the high number of primary teachers, but with a good spread of teachers in senior leadership roles and classroom teachers.

Reflecting the general participation in the pathfinder, not all the Regional Educational Consortia are represented. The majority of teachers are from GwE (80), with a smaller proportion from ERW (18). Only one teacher from CAS and one from EAS took part, both in the e-learning.

One concern with not being able to randomly assign teachers to the two different professional learning modes, is that the groups may be affected by variation in characteristics which could affect the results. To check for this, t-test analysis was conducted and confirmed that the two groups were comparable along a number of factors and there were no statistically significant

differences between the trainer-led and e-learning groups in terms of teacher gender, teachers' length of experience teaching or teaching financial education, whether they were from a primary or secondary school, the Regional Education Consortia (GwE and ERW), and the language used to complete the surveys.

Appendix 6 provides an overview of the characteristics of the two teacher interviewees. While there is variation between the teachers in terms of gender and their length of experience as teachers, both teachers are from primary schools, teaching Years 5 or 6, both are from GwE and come from Welsh medium schools and both took part in the cascaded trainer-led professional learning. Hence, the interviews do not capture the views of secondary teachers or teachers that took part in the e-learning.

Impact of the professional learning on knowledge, skills and confidence

The key evaluation questions are concerned with understanding the impact of the professional learning on teachers' knowledge, skills and confidence in delivering financial education, and the relative impact and effectiveness of the two approaches: cascaded trainer-led and e-learning.

To test the impact of the trainer-led and the e-learning professional learning respectively, paired sample t-tests were performed to assess the change in knowledge, skills and confidence before and after taking part in each mode of professional learning. This was followed by a difference-in-difference analysis (using independent t-tests) to determine the extent to which one mode may have resulted in a greater change in knowledge, skills and confidence than another and, hence, assess the relative impact and effectiveness of the two approaches.

Overall, the analysis shows that the professional learning (both trainer-led and e-learning) has had a positive and statistically significant impact on teacher knowledge, skills and confidence. Both the trainer-led and e-learning modes of delivery show statistically significant improvements in knowledge, skills and confidence. The relative difference between the modes (difference-in-difference) is not statistically significant in any of the knowledge, skills and confidence dimensions. This suggests that there was no difference between the trainer-led and e-learning modes of professional learning in terms of their impact: they both positively impacted knowledge, skills and confidence to deliver financial education equally as well. However, as noted previously there was a degree of self-selection which may influence these findings.

Tables 10, 11 and 12 provide the results for changes in knowledge, skill and confidence for teachers that took part in either the cascaded trainer-led or e-learning approaches. Appendix 7 provides the full results. Although overall the differences between the two modes are not statistically significant, the mean difference (i.e. the average change between pre- and post-) is greater for teachers in the trainer-led group than the e-learning group on all knowledge, skill and confidence dimensions, with the exception of confidence to plan and confidence to deliver financial education, where the e-learning pre- and post- difference is slightly greater, although not statistically significant. This suggests that the trainer-led mode may be slightly more effective overall. With a larger sample size, it may have been possible to detect the statistical significance of this effect. Other factors, such as the perceived quality of the two modes also suggest an enhanced effectiveness of the trainer-led mode, discussed further below.

Figure 8 shows the increase in how knowledgeable teachers in both the trainer-led and e-learning groups felt to teach a range of financial concepts and topics to young people. Prior to the professional learning the majority of teachers in both trainer-led and e-learning groups felt either not at all or slightly knowledgeable, whereas after the professional learning this had shifted to either moderately or very knowledgeable and none of the teachers felt not at all knowledgeable. A disproportionately higher number of the e-learning teachers still felt slightly

knowledgeable after the professional learning. This pattern is evident across all the knowledge dimensions.

The following comment from one of the interviewed teachers (who took part in the cascaded trainer-led professional learning) highlights the impact of the professional learning on the teacher's knowledge of what to cover. The teacher refers to the professional learning as an "eye opener", despite having a number of years of experience of teaching financial education:

It was a bit of an eye opener ... what I took away more than anything else is that we are doing some of it, but there's a huge chunk that we're missing out. And also I think the fact that we might not be doing it quite early enough as well. (Teacher 1, Male, Primary, Trainer-led, GwE)⁴

Comments from survey participants also similarly highlight how the professional learning has widened teachers' knowledge of the scope of financial education beyond numeracy:

Teaching finance isn't just about the calculations required. It's important to look at the consequences of decisions for health and wellbeing/ethics etc. (Survey respondent)

Financial literacy is not just about reading a bank statement, calculating bills etc. but about making the right choices. (Survey respondent)

I have never considered ATTITUDES to learning before and now realise how essential it is to be aware of this from a young age. (Survey respondent)

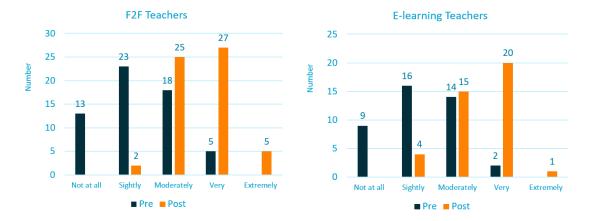


Figure 8: Knowledge to teach a range of financial concepts and topics

Base: trainer-led pre n=59; post n=59. E-learning pre n=41; post n= 40

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⁴ Full details of the interview participants' characteristics can be seen in Appendix 6.

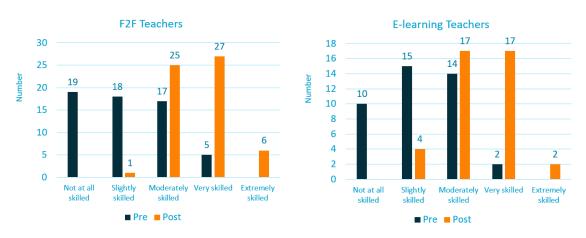
Table 10: Change in teacher knowledge in financial education

		trainer led Mean		rning ean	Significant difference in difference		
How knowledgeable do you feel	Pre (n 59)	Post (n 59)	Pre (n 40)	Post (n 40)	between groups?		
To teach a range of financial concepts and topics	2.25	3.59	2.22	3.45	No		
To define what financial capability looks like	2.03	3.59	2.02	3.33	No		
To implement (or extend) financial education in the curriculum	2.02	3.69	2.05	3.45	No		
4. Not at all be avided a able 2. Clinbib, be avided a able 2. Medanatab, be avided a able 4. Ven de avided a able 5. Evtermely							

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

Figure 9 shows the increase in how skilled teachers in both the trainer-led and e-learning groups felt to use tools and resources to develop or deliver financial education to young people. Prior to the professional learning the majority of teachers in both trainer-led and e-learning groups felt either not at all or slightly skilled, whereas after the professional learning this had shifted to either moderately or very skilled and none of the teachers felt not at all skilled, although a disproportionately higher number of teachers in the e-learning group still felt only slightly skilled compared with the trainer-led group. This patterns is evident across all the skill dimensions.

Figure 9: Skill to use tools and resources to develop or deliver financial education



Base: trainer-led pre n=59; post n=59. E-learning pre n=41; post n= 40

Table 11: Change in teacher skill in financial education

		trainer led Mean		rning ean	Significant difference in difference	
How skilled do you feel	Pre	Post	Pre	Post	between groups?	
	(n 59)	(n 59)	(n 40)	(n 40)	graper	
To deliver financial education to young people	2.14	3.58	2.15	3.40	No	
To assess young people s progression in financial education	2.03	3.39	2.10	3.28	No	
To use tools and resources to develop/deliver financial education	2.14	3.64	2.10	3.43	No	
1 Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled						

Figure 10 shows the increase in how confident teachers in both the trainer-led and e-learning groups felt to deliver financial education to young people. Prior to the professional learning the majority of teachers in both trainer-led and e-learning groups felt either not at all or slightly confident, with a good number feeling moderately confident. After the professional learning, this had shifted to either moderately or very confident and none of the teachers in the trainer-led felt not at all confident. However, one teacher in the e-learning group still remained not at all confident to tailor financial education to students' needs and to promote best practice in schools, and a disproportionately higher number of teachers in the e-learning group still felt only slightly confident compared with the trainer-led group.

F2F Teachers **E-learning Teachers** 35 20 30 18 30 16 15 16 25 13 14 12 21 19 12 20 15 15 10 15 8 6 10 4 5 2 0 0 Moderately Moderately Slightly Not at all Slightly Extremely Not at all confident confident confident confident confident confident confident confident confident ■ Pre ■ Post ■ Pre ■ Post

Figure 10: Confidence to deliver financial education to young people

Base: trainer-led pre n=59; post n=59. E-learning pre n=41; post n= 40

The following quote from one of the interviewed teachers illustrates the increased confidence she felt delivering a financial education lesson following her participation in the cascaded trainer-led professional learning. She talks about how the professional learning enabled her to expand the scope of an existing language lesson, in relation to the choice of school dinners versus sandwiches. By combining both language and numeracy aspects Year 5 pupils were able to express their opinions from a more financially-informed base:

I felt more confident doing that, because I knew a clear structure. And since then we've done a lesson, I would have done anyway ... it was in language, expressing your opinion ... So rather than just give their own opinion, we made it a numeracy lesson. So they had to work out the cost of five dinners and then we had to use that budget for online shopping then and see what they could get and to see if it's better value to have school dinners or butties. So it gives you that confidence to think actually it's an opportunity here. So yeah, I was more confident coming out.

A quote from one of the survey respondents, also illustrates the impact on confidence to lead colleagues in planning and developing financial education:

I feel much more confident to lead staff in the implementation of the Financial Education Framework and resources to enable teachers to plan tasks which are age-appropriate, engaging and fun

Table 12: Change in teacher confidence in financial education

How confident do you feel	trainer led Mean		E learning mean		Significant difference in difference
	Pre	Post	Pre	Post	between
	(n 59)	(n 59)	(n 40)	(n 40)	groups?
To plan quality financial education lessons for young people	2.24	3.66	1.95	3.48	No
To deliver financial education to young people	2.39	3.75	2.12	3.53	No
To tailor financial education to young people s needs	2.20	3.66	1.98	3.40	No
To assess the effectiveness of financial education	2.08	3.54	1.93	3.30	No
To promote ideas for best practice within schools	2.12	3.56	1.95	3.25	No
1 Not at all confident 2 Slightly confident 3 Moderately confident 4 Very confident 5 Extremely confident					

Effect of the perceived quality of the professional learning

Teachers in the trainer-led and e-learning groups may perceive the quality of the professional learning differently, which may have an impact on the effectiveness of the approaches. Further analysis was therefore conducted to understand the potential effect of the perceived quality of the professional learning on the delivery mode. Table 13 shows the mean scores on each of the professional learning quality dimensions for both trainer-led and e-learning groups. Each dimension was rated on a 7-point scale. Figure 11 shows the percentage of teachers within each group (trainer-led and e-learning) that gave a score of 5, 6 or 7 on the 7-point scale (indicating agreement with the item).

Table 13: Perceived quality of the professional learning

The professional learning	trainer led Mean ^a (n 59)	E learning Mean ^a (=41)	Significant difference between groups?
Was delivered well	6.43	5.73	Yes
Provided useful learning	6.43	5.75	Yes
Provided useful resources	6.22	5.53	Yes
Explained things clearly	6.42	5.58	Yes
Was an enjoyable experience	6.23	5.35	Yes
Suited the way I like to learn	5.77	4.93	Yes
Was easy to access	6.37	6.15	No
Involved more time/effort than I thought it would	3.88	3.88 3.60	

^a Means are based on a 7-point scale



Figure 11: Perception of the quality of professional learning: trainer-led vs e-learning

Base: trainer-led n=59; e-learning n=41

While both the trainer-led and e-learning groups rated the professional learning highly, teachers in the trainer-led group rated it more highly in terms of it being delivered well, providing useful learning and useful resources, explaining things clearly, and being an enjoyable experience. All these differences are statistically significant, as shown in Table 17. We can infer from this that the trainer-led mode appears to deliver additional benefits in terms of the communication and explanation of the material, and the use of resources.

Both the interviewed teachers who took part in the trainer-led approach commented how well the professional learning was delivered. They experienced different trainers. The following comment is illustrative of the quality and effectiveness of the trainer-led professional learning experienced by the interviewees:

It was delivered well, I got something from it ... it did cover what I thought it was going to cover. We went through everything in detail where we could get resources that are currently available. Plenty of time to talk ideas through and share what we're doing now. So that was quite nice ... I feel like I'd be able to do something with what I learned from there and we'll try and make it a bit more of a priority now we're back to normal-ish school. (Teacher 2, Female, Primary, GwE)

In the absence of any interviews with teachers from the e-learning group, it is not possible to draw comparisons, however, the quote above highlights the value the teacher places on being able to learn alongside other teachers and discuss and share ideas, which the e-learning route did not provide for, and perhaps explains the slightly lower scores in Figure 11.

Both interviewed teachers indicated that they would have liked to spend more time discussing and experiencing the practical delivery, which also explains their desire for follow-on support:

I would have liked a little bit more scoping to say, in this section these are the kind of things that you could do. A little bit more of that this is possible. But it's hard to deliver everything in one afternoon. (Teacher 2, Female, Primary GwE)

Both the interviewed teachers took part in the trainer-led professional learning remotely, via Teams, rather than in-person as originally intended (prior to Covid). Both teachers generally felt that it worked well remotely. Teacher 2 noted, in relation to Teams "I think people are so used to

it now so that's different". It was perhaps easier to take part and avoided the need for any travel, but both teachers indicated that it potentially could have been more effective if it had been inperson in a classroom setting:

If you have something physically in front of you to look at and to do it is much easier than doing everything on the computer. But it worked fine and [Trainer] is very good at what she does. (Teacher 1, Male, Primary, GwE)

Sometimes it's quite hard because we were trying to look at lesson materials and then you're having to switch from that presentation into actual presentation and back. Whereas if you were there you'd all be round a table, you'd have hard copies of the resources and then [Trainer] would have a PowerPoint up and it's easier to correlate the materials to the slide. But when you have to go from one to the other. It's good in some ways, but there is a place for face-to-face classroom style training as well. (Teacher 2, Female, Primary, GwE)

Teachers in the trainer-led group (compared to the e-learning group) were also more likely to say that the professional learning suited the way they like to learn (Figure 12). However, teachers in the e-learning group were more likely to agree that they could complete the course at their own pace, and this difference was statistically significant.

Both the interviewed teachers explained that the cascaded model of professional learning is becoming very common in their region (GwE) and there is the expectation that teachers cascade the learning when they take part in professional development:

It's something that we do quite a lot of. Well more or less every set of training in this sort of way we then have to then cascade down to all the other staff. Because unfortunately there's not enough time for everyone to go on every course, so it's a pity because this sort of training really would have been fantastic for the whole staff to understand. (Teacher 1, Male, Primary, GwE)

I'm doing the senior leadership course at the moment. Elements of that were cascaded down and I think more so with doing it over Teams as well. So it's becoming more common in this scenario I think. (Teacher 2, Female, Primary, GwE)

One of the interviewed teachers notes that they already work quite closely with the school that his volunteer trainer was from:

We're quite a close cluster, we quite often have cluster meetings and I think I'm involved in three if not four cluster projects at this moment now, so yes we do quite a lot together. (Teacher 1, Male, Primary, GwE)

Other clusters may not work as closely together, which may have an impact on the effectiveness of a cascaded training approach.

60

50

40

30

20

10

Suited the way 6 5 4 3 2 Did not suit the way I liked to learn (1)

■ F2F ■ E-Learning

Figure 12: The professional learning suited the way I liked to learn

Base: trainer-led n=59; e-learning n=41

Interestingly, there were no statistically significant differences found between the trainer-led and e-learning groups in terms of the extent to which teachers felt that the professional learning was easy to access or the amount of time or effort involved. This can be taken as a positive finding as it may be assumed that taking part in trainer-led professional learning was more time consuming. It could also be because the majority of the cascaded trainer-led professional learning was delivered remotely, rather than in-person, which might have made it easier for teachers to take part by reducing the time normally taken up by travelling.

Somewhat unexpectedly, Figure 13 shows that teachers in the e-learning group tended to rate the professional learning as requiring more time or effort than they thought it would compared to the trainer-led group who tended to rate against the mid-point, perhaps suggesting the amount of time or effort was about right. Interviews with the two teachers who took part in the trainer-led professional learning would seem to support this:

It was an afternoon training ... I can't remember if it was two hours or two and a half hours, but yeah it was an afternoon anyway. (Teacher 1, Male, Primary, GwE)

So it's only one afternoon. It wasn't strenuous, there was no travel involved so that helped. So I think the benefits outweigh the cost personally. I can't really think of any other way that you could deliver it at a more cost effective way than this really. (Teacher 2, Female, Primary, GwE)

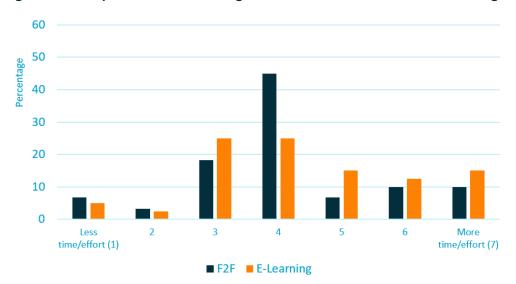


Figure 13: The professional learning involved more time/effort than I thought it would

Base: trainer-led n=59; e-learning n=41

Perceived benefit of the professional learning

Table 14 shows that teachers in both the trainer-led and e-learning groups scored the professional learning highly in terms of its perceived benefit, with no statistically significant differences between the two groups. Overall, 89% agreed that they had gained new or additional knowledge or skills; 90% agreed they would be able to apply what they had learnt; 86% agreed they felt better equipped to teach financial education; 87% felt the professional learning is worthwhile to others; 65% agreed that the course overcame barriers to professional learning; and 76% agreed that the professional learning provided everything they needed to teach financial education confidently.

In relation to this last point, responses to an open-ended question in the survey about the need for further support suggests that access to resources and the opportunity for follow-up/ongoing financial education professional development are two key aspects that some teachers feel they need.

In terms of resources, teachers asked for more examples and ideas for delivering engaging and practical lessons. Some teachers felt that more time could have been spent in the professional learning focusing on using the resources with opportunity to see the resources being used. Quite a number of comments asked for access to more free resources generally and specifically for younger primary pupils. One of the interviewed teachers (a primary teacher) commented:

I think there might be a, not a dumbed down version, that's not right, but a simplified version for the infants, or more infant-friendly resources, if you're with me. So that's my only criticism really. (Teacher 2, Female, Primary, GwE)

A number of teachers expressed the desire for follow-on or continued opportunities for financial education professional development. One of the interviewed teachers commented how they had taken the step themselves to engage in follow-on professional development, not just for himself but for other teachers in his school:

Well I have just joined the Young Money website and again we're hoping to get some training from them as well over the next, well from September onwards now. (Teacher 1, Male, Primary, GwE) The other interviewed teacher highlighted how a follow-up session "could have been beneficial to share what we've done" and would provide an opportunity to share practice with other teachers, and how this would help to keep confidence levels up.

Table 14: Perceived benefit of professional learning

Perceived benefit of professional learning	trainer led Mean ^a (n 59)	E learning Mean ^a (n 41)	Significant difference between groups?
I gained new/additional knowledge/skills	4.25	4.15	No
I will be able to apply what I have learnt	4.37	4.23	No
The professional learning provided everything I need to teach financial education confidently	3.98	3.73	No
I feel better equipped to teach financial education	4.18	4.05	No
The professional learning is worthwhile to others working with young people	4.30	4.25	No
The course overcame barriers to CPD training/professional learning	3.68	3.90	No

^a Means are based on a 5-point scale (1=strongly disagree; 5=strongly agree)

Effect of the quality of the volunteer trainer

The teachers that took part in the trainer-led professional learning were asked an additional set of questions about the 'quality' of the volunteer trainer (how confident, knowledgeable and organised they were and their ability to inspire others), to assess the extent to which the volunteer trainer had an impact on teachers' knowledge, skills and confidence, given that multiple volunteer trainers were involved in delivering the professional learning.

Correlation analysis was used to assess the strength and direction of the relationship between the perceived 'quality' of the volunteer trainer's knowledge, confidence, organisation and ability to inspire others and the change in knowledge, skill and confidence experienced by the teachers. The full analysis is provided in Appendix 8.

The volunteer trainer's (perceived) knowledge of the topics covered has a broad impact on teacher outcomes and is correlated with all but one of the dimensions of teacher knowledge, skills and confidence to teach financial education. The greater the perceived knowledge of the volunteer trainer, the greater the increase in teachers' knowledge, confidence and skills.

The volunteer trainer's (perceived) confidence in delivering the professional learning is correlated with teacher confidence to deliver financial education and to promote best practice, teacher knowledge to define financial capability and knowledge to implement or extend financial education in the curriculum. The greater the volunteer trainer's perceived confidence, the greater the impact on teachers' confidence and knowledge.

The trainer's organisation and preparation is correlated with teachers' confidence to plan financial education and to promote best practice and teachers' knowledge to define financial capability. Again, the more organised the volunteer trainer is perceived to be, the greater the increase in teachers' confidence and knowledge.

It is perhaps not surprising that the perception of volunteer trainer knowledge has an impact on the effectiveness of the professional learning, but this analysis also shows the importance of developing not only the volunteer trainers' knowledge of the material but also their confidence to deliver the professional learning, as well as their ability to inspire others and their organisational skills.

The importance of knowledge, and to some degree confidence, of the trainer is evident in the following quote from one of the interviewed teachers:

[Volunteer trainer] was informative, she knew everything that was there. She knew the resources at hand and was sharing things. We were her first group, so obviously I think she was a little bit more nervous, because we were the first. So I did feel for her, but she did fantastic on the training. (Teacher 2, Female, Primary, GwE)

The teacher also comments that she "wouldn't know if anything was missing" in the professional development and suggests that the original training (given to the trainers) could be made available as a recording for later reference:

The only one thing I could say is if you have something to refer back to. If the initial training, whoever it was provided to, was either recorded or videoed and uploaded somewhere. You could go back to it then couldn't you? And the cascaders could check against it as well for their own personal development. And it would also capture anything that may have been missed by cascaders. (Teacher 2, Female, Primary GwE)

Other factors affecting knowledge, skills and confidence

Further analysis was undertaken to explore the impact of other factors on the effectiveness of the professional learning on teachers' knowledge, confidence and skills. A number of factors were considered, including: length of teaching/financial education experience, stages taught (primary or secondary), Regional Education Consortia, language used (Welsh or English), teacher's gender, teacher's role, and the perceived quality of the professional learning. Separate regression analyses were performed for each of the knowledge, skills and confidence dimensions. The full analysis can be seen in Appendix 9.

Overall, whether the teacher was a primary or secondary teacher showed to be a consistent predictor across all the knowledge, skills and confidence dimensions. The direction of the relationship is negative, suggesting that impact on knowledge, confidence and skills is lower for secondary teachers than for primary teachers. Further analysis (reported below) seeks to understand the differential impact on primary and secondary teachers.

Additionally, length of teaching experience and length of financial education teaching experience impact different aspects of knowledge, skills and confidence. In all cases, the relationship is negative, suggesting that as teacher experience increases (in teaching generally and in financial education specifically) the impact of the professional learning on knowledge, skills and confidence diminishes. Hence, less experienced teachers and those with limited or no experience of teaching financial education have experienced the greatest impact from the professional learning, which is not surprising.

Further analysis was conducted to understand the differential impact of the professional learning on primary and secondary teachers. Tables 15, 16 and 17 show that in almost all the knowledge, skill and confidence dimensions primary teachers had lower average scores prior to the professional learning than secondary teachers.

Table 15: Change in knowledge: Primary versus secondary

	Prim	ary	Secondary	
How knowledgeable do you feel		Post mean	Pre mean	Post mean
	(n 80)	(n 80)	(n 19)	(n 19)
To teach a range of financial concepts and topics	2.15	3.56	2.63	3.42
To define what financial capability looks like		3.53	2.37	3.32
To implement (or extend) financial education in the curriculum		3.68	2.42	3.26

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

Table 16: Change in skill: Primary versus secondary

	Prim	nary	Secondary	
How skilled do you feel		Post mean	Pre mean	Post mean
		(n 80)	(n 19)	(n 19)
To deliver financial education to young people	2.04	3.51	2.58	3.47
To assess young people s progression in financial education	1.94	3.38	2.58	3.21
To use tools and resources to develop/deliver financial education		3.56	2.63	3.53
1 Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled				

Table 17: Change in confidence: Primary versus secondary

	Prin	nary	Secondary		
How confident do you feel	Pre mean	Post mean	Pre mean	Post mean	
	(n 80)	(n 80)	(n 19)	(n 19)	
To plan quality financial education lessons for young people	2.02	3.64	2.53	3.37	
To deliver financial education to young people	2.17	3.69	2.74	3.53	
To tailor financial education to young people s needs	1.98	3.59	2.68	3.42	
To assess the effectiveness of financial education	1.93	3.49	2.42	3.26	
To promote ideas for best practice within schools		3.48	2.32	3.26	
1 Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident					

It is not possible to know from this research why primary teachers felt less knowledgeable, skilled or confident in financial education. This is despite similar levels of experience in both primary and secondary teacher groups. The primary teachers were no less experienced in terms of the number of years of teaching or in delivering financial education. Primary teachers had on average 14 years of teaching experience and secondary teachers on average 17 years of teaching experience, and on average 4 and 5 years of financial education teaching respectively. These differences were not statistically significant, hence teaching experience is not explaining

the main difference in the impact of the professional learning between primary and secondary school teachers.

The difference between primary and secondary teachers' mean pre-scores for knowledge, skill and confidence is statistically significant. However, after taking part in the professional learning, there are no statistically significant differences between primary and secondary teachers in terms of their knowledge, skill and confidence. The professional learning has in effect increased knowledge, skill and confidence for both primary and secondary teachers and eliminated the gap that existed initially.

As an example of the difference between primary and secondary teachers prior to the professional learning, Figure 14 compares primary and secondary teachers in terms of their confidence to deliver financial education. Prior to the professional learning, most of the secondary teachers felt 'moderately confident', whereas most of the primary teachers felt either 'not at all confident' or 'slightly confident', but after taking part in the professional learning most of the teachers in both primary and secondary groups felt either 'very' or 'moderately' confident. Hence, the increase in confidence is greater among the primary teachers, and this pattern is evident across almost all the dimensions of knowledge, skill and confidence.

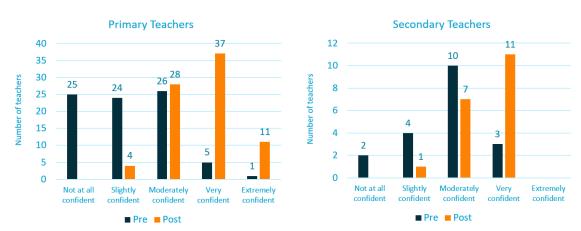


Figure 14: Confidence to deliver financial education: Primary vs Secondary

Base: Primary pre n= 80, post n=8; Secondary pre n=19, post n=19.

In the case of two dimensions there were no statistically significant differences between primary and secondary teachers prior to the professional learning (see Appendix 10): knowledge to implement (or extend) financial education in the curriculum and confidence to promote ideas for best practice in schools. In both cases, primary and secondary school teachers were similarly lacking in confidence. However, in the case of knowledge to implement (or extend) financial education in the curriculum, this was the only aspect showing a statistically significant difference-in-difference between primary and secondary teachers.

Figure 15 shows that primary teachers have increased and surpassed secondary teachers in terms of their knowledge to implement (or extend) financial education in the curriculum in their setting. Following the professional learning, the majority of primary teachers were 'very confident' compared to secondary teachers who were largely 'moderately confident'. This is the only dimension where the increase in primary teachers' knowledge, skill or confidence exceeded that of secondary teachers. One explanation could be that primary teachers operate more broadly across the curriculum in their setting compared with secondary teachers. Extending financial

education across the curriculum in a secondary school may require secondary teachers to work more collaboratively with teachers across different subjects and specialisms.

Secondary Teachers Primary Teachers 12 40 37 10 35 10 21 Number of teachers 28 Number of teachers 30 26 8 25 22 6 6 20 15 9 2 10 5 2 0

Extremely

Not at all

Sightly

Moderately

■ Pre ■ Post

Extremely

Figure 15: Knowledge to implement (or extend) financial education in the curriculum

Base: Primary pre n= 80, post n=80; Secondary pre n=19, post n=19.

■ Pre ■ Post

Moderately

0

Not at all

Sightly

Cluster analysis was performed as an alternative method to understand whether distinct groups could be detected based on demographic and other attributes. Similar factors were considered in the clustering as for the regression analysis. The analysis produced two distinct clusters, one large group comprising 89 teachers and one smaller group of 11 teachers. A larger sample size may give rise to a greater number of clusters. Three of the attributes showed the greatest discrimination between the clusters: length of teaching experience, length of financial education experience and the extent to which teachers agreed that the course overcame barriers to CPD training/professional development.

The larger cluster (Cluster 1) is characterised by teachers with less teaching experience and less experience of financial education who are more positive about the course overcoming barriers to CPD. The average number of years of teaching experience in Cluster 1 is 17 and 4 years for financial education experience. Cluster 2 comprises a smaller number of much more experienced teachers with much more experience of financial education who are less likely to agree that the course overcame barriers to CPD.

Examining the differences between the clusters according to the knowledge, skill and confidence dimensions reveals that Cluster 1 with the less experienced teachers show a greater improvement in many of the knowledge, skill and confidence dimensions, which concurs with the regression analysis presented above. The full results can be seen in Appendix 11.

Perceived value and importance of financial education

Table 18 provides summary results for questions relating to the perceived value and importance of financial education and financial education professional learning. Overall, the difference-in-difference (i.e. the difference in change between the trainer-led and e-learning groups) is not statistically significant for any of the aspects measured. This is largely because of high proportions of teachers in both groups agreed at the outset that financial education is important.

Overall, across both the trainer-led and e-learning groups:

- 99% of teachers agreed that it is important to deliver financial education to young people;
- 85% agreed that they were inspired to deliver financial education to young people (and this increased to 93% after the professional learning);
- 98% agreed that it is important that professional learning in financial education is available for educators.
- However, only 31% of teachers agreed at the outset that there were sufficient opportunities for financial education professional learning in their region, and 48% neither agreed nor disagreed, suggesting they were perhaps not sure of the opportunities.
- After the professional learning, 64% agreed that there were sufficient opportunities and 25% were still unsure.

Although the overall difference-in-difference analysis was not statistically significant, comparing the pre- and post-results for the trainer-led and e-learning groups separately shows a greater increase in the trainer-led teachers agreeing that they are inspired to deliver financial education to young people and agreeing that there are sufficient opportunities for financial education professional development in their region. These changes in the trainer-led group are not statistically significant at the 5% level, but are statistically significant at the 10%).

Figure 16 shows that the number of trainer-led teachers that strongly agreed they felt inspired to deliver financial education after the professional learning had increased noticeably, compared with no noticeable change in the e-learning teachers.

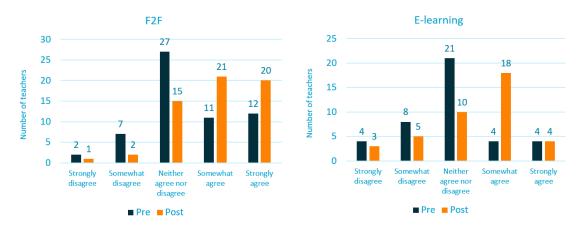
F2F 50 E-learning 45 41 40 25 Number of teachers 35 19 ²⁰ 29 30 20 15 ¹⁶ 22 **Number of teachers** 25 15 20 15 15 10 10 5 1 1 5 0 2 1 1 Somewhat Neither Somewhat Strongly 0 disagree disagree agree noi agree disagree Somewhat Somewhat Strongly Neither gree nor disagree ■ Pre ■ Post disagree ■ Pre ■ Post

Figure 16: I am inspired to deliver financial education

Base: trainer-led pre n=59; post n=59. E-learning pre n=41; post n=40.

Figure 17 shows that almost two-thirds of the trainer-led teachers agreed there were sufficient opportunities in their region for financial education professional learning after taking part in the professional learning, compared with less than half of the e-learning teachers.

Figure 17: There are sufficient opportunities for financial education professional development in my region



Base: trainer-led pre n= 59; post n=59. E-learning pre n=41; post n=40.

Table 18: Value and importance of financial education and professional learning

	train	er led	E learning		
To what extent do you agree/disagree:	Pre (n 59)	Post (n 59)	Pre (n 41)	Post (n 40)	
It is important to deliver financial education to young people	4.90	4.81	4.78	4.78	
I am inspired to deliver financial education in my setting	4.34	4.63	4.10	4.28	
It is important that professional learning in financial education is available for educators	4.83	4.80	4.63	4.63	
There are sufficient opportunities for financial education professional learning in my region	3.41	3.97	2.90	3.38	

¹ Strongly disagree, 2 Somewhat disagree, 3 Neither agree nor disagree, 4 Somewhat agree, 5 Strongly agree

In summary, the training seems to have attracted individuals who were already convinced of the value of financial education and it has further inspired them to deliver financial education to young people and support teachers to deliver financial education. It has also increased awareness of the opportunities for professional learning in financial education as well.

Impact on financial education opportunities

In addition to assessing the impact of the professional learning on teachers' knowledge, skills and confidence to teach financial education, the study also assessed the potential impact on the provision of financial education opportunities. The professional learning has had a marked impact on the intended frequency of financial education delivery.

Figure 18 shows that more than one-third of teachers (37) delivered financial education very infrequently (yearly) in the 12 months before taking part in the professional learning, with a smaller number (19) delivering it on a termly basis and a similar number (17) that did not deliver any financial education at all over that time.

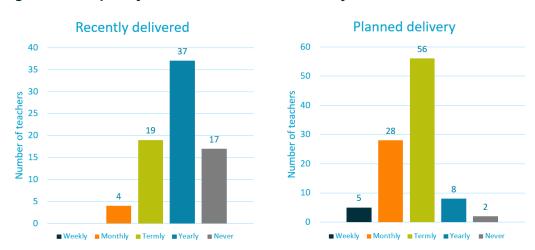


Figure 18: Frequency of financial education delivery

Base: Recently delivered in the last 12 months n=77 (teachers filtered out who had not taught financial education before); planned for the rest of the school year n=99

When compared with plans to deliver financial education for the rest of the school year, we can see a marked difference in the frequency, with over half the teachers (56) planning to deliver financial education termly, and a small number (28) planning to deliver it weekly. Only two teachers said they did not plan to deliver any financial education over the rest of the year.

One of the interviewed teachers sees more opportunities to deliver financial education coming up, and talks about her plans, following the professional learning, to map out financial education across the curriculum and to give it a distinct focus each term:

I'm going to sit down in the next few weeks and map out different things, the topics, the new Curriculum to make them more 'new Curriculum' friendly. So I think going forward it's going to have a definite string to each term with its own termly focus then like a wild term, if you're with me. (Teacher 2, Female, Primary, GwE)

The professional learning also has had a marked impact on the intended delivery of financial education across the curriculum. Figure 19 shows the context in which financial education was delivered over the 12 months prior to taking part in the professional learning and compares that to intended future delivery. The chart shows a substantial increase in planned delivery in all contexts except Maths, which accounted for the main context of delivery prior to the professional learning.

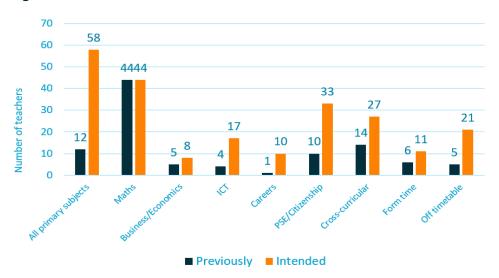


Figure 19: Context in which financial education is delivered

Base: 'Previously' n=81 out of 101 teachers who had previously taught financial education. 'Intended' n=101 teachers

The following comments from survey respondents provide an indication of the impact of the professional learning across a wide range of ages and curriculum contexts:

The broad scope of opportunities to instil sound financial education for all ages

Wider curriculum links of financial education and the impact of teaching this upon wellbeing

I've been inspired to promote financial maths in every year group of the school

How important it is that children receive teaching on financial education and that it is important that we start in Primary schools

The importance of teaching about money during different times of the year, not just a short course in the maths lessons

That it's possible to deliver financial education to nursery children

Taken together, these findings reveal that the professional learning has had a marked impact on both the planned frequency of financial education opportunities and the planned context in which financial education is likely to be delivered, showing an expansion of reach and scope beyond the context of Maths and into a range of other contexts.

The two interviewed teachers were asked whether they felt the financial education learning aligned with the new Curriculum for Wales:

Definitely, because it says that they've got to be good citizens, be able to make decisions. It's definitely going to fit in with the new Curriculum. (Teacher 2, Female, Primary, GwE)

I think this will slot in quite well in making people understand ... this is a necessary part of what we should be teaching as well'. (Teacher 1, Male, Primary, GwE)

In the survey, a number of teachers provided unprompted statements about the relevance of financial education to the new Curriculum:

I have a better understanding of what financial education is and how it can be covered with the new Curriculum. (Survey respondent)

Financial education is central to the four purposes and it could be done as a cross-curricular unit of work that would be extremely useful to children throughout their lives. (Survey respondent)

Financial education is so much wider than I first thought it was and has so many links to the four purposes. (Survey respondent)

Financial education links to so many areas of the upcoming Curriculum for Wales and its four core purposes. (Survey respondent)

When designing our whole school curriculum, we should ensure that financial education is woven into it across the school. (Survey respondent)

4.3 Young people

The insight from young people comes from one focus group conducted with a group of six Year 6 pupils, two girls and four boys. Several themes were evident from the discussion:

Young people enjoyed learning about money. All the young people spoke very enthusiastically about their experience of learning about money at school and were able to recall in quite a lot of detail what they had learnt. They identified several activities in particular that had made quite an impact on them. One of the activities involved discussing what you would do if you found £50 on the floor. As Gareth⁵ explains "When we were doing what would you do if you saw £50 on the floor, it was quite interesting to hear everyone's answers."

Another activity was set around a fictional trip to Azerbaijan to watch the national football team play in the Euros. It provided a number of learning points for young people, including finding out where Azerbaijan is and working out the most cost-effective way to travel there and where to stay. As Alan recalls:

... and then we were seeing what plane flight, what hotel and how to use the money well and how long we were staying there and stuff ... it was fun to see all of the plane flights and how much they cost and all of the hotel rooms and how much they cost. (Alan)

All the children agreed that they enjoyed learning about money, as Carys commented: "because it's really fun." They were also in agreement that they would like to learn more, because as Gareth explains: "we have learnt a lot, but it'd be nice to learn a bit more."

Increased appreciation of the important role that money plays in our lives. The young people spoke about how important it was to learn about money and recognised that it was helping to teach them useful skills for the future. They spoke about the important role that money plays in helping us to pay for living expenses and bills, and being able to save for the future and acquire goods and services:

Yeah, very important because you can learn how to save and how to spend ... because if you didn't know, you would just be like spend, spend, spend, over and over and... because otherwise you would have no money to save for your future. (Alan)

⁵ Real names have not been used

Yeah, to buy a house and buy a car and then pay all the stuff that you need to have in your house like sofas. (Owen)

Because in the future you've got to pay your bills and stuff so you've got to try and save your money when you're little to like remember that you've got to save when you're older.(Gareth)

Increased understanding of how to manage money better, especially spend money wisely and save. The young people generally mentioned that they were more aware of how to look after their money better, and that they had learnt not to waste their money, but to look after it more carefully, including budgeting and spending their money wisely:

Yeah, because instead of wasting all your money, we're learning to save it and budget. (Lewis)

A few of the children said they were now developing more savings habits as a result of their learning, or at least knew how and why they should save. Gareth talked about how he was saving up to get his computer fixed:

Because my computer's broke I've saved probably £100 at my dad's and £100 at my mum's... I want to spend it, but I know I've got a goal to reach to try and fix my laptop. (Gareth)

Now we know how to save our money and we now just save it up for things we really want, maybe, or maybe just save it up for things we may want in the future, you never know what you're saving up for. (Alan)

Yeah and instead of wasting all your money on little things, you can save up for the things that you really need. (Carys)

Owen commented that when he was little he "didn't save at all" he "just bought stuff with my money when I got it." But, since learning about money at school he has been more careful with his money. When asked how it made him feel to save up his own money, Owen replied: "It makes me feel quite proud of myself."

Increased appreciation of the need to regulate their emotions associated with money. A number of the young people mentioned that they had learnt about the difference between needs and wants, and better understood that they (and their parents) couldn't always afford what they wanted.

I've learnt not to just go on the internet and just look at things that are good but I might not use, like I only use them for a month and then they'll be sat in my bedroom and they're like £100, so I learned not to buy those. (Gareth)

Increased appreciation of the need to shop around and make informed, critical decisions.

The exercise involving the fictional trip to Azerbaijan had been very effective in teaching the young people about the need to shop around and compare prices to make wise spending decisions. It had also opened their eyes to the cost and value of things, giving them a better appreciation of how much their parents have to pay for such things as flights for a foreign holiday. As Alan recalls:

I used to think that the aeroplane flights, I used to think that they were really cheap, but now I realise how much our parents have to save up for it ... I remember telling my mum about, you know when the plane thing, I was telling her that you always don't need the best plane if we're ever going on holiday (Alan)

Yes and that's why you don't go a holiday abroad quite as much as you think you can because the flights are so dear and you have to get a hotel suitable for, because my mum and dad look after me and my brother, so they've got quite a lot to put in the hotel, so it has to be quite a good one but not perfect. (Carys)

In summary, the focus group highlighted that the young people had enjoyed learning about money and had taken a lot from the activities. In particular, there was evidence that the young people had an increased understanding of the important role that money plays in our lives and an increased understanding of how to manage money effectively, to regulate their emotions associated with money and distinguish between needs and wants, and to make informed, critical decisions.

These findings are based on young people's own reports and are not based on any actual change over time. The extent to which any real change in behaviour could be expected at this early stage is very limited.

4.4 Process evaluation

Evaluation of the process has been based on interviews with seven stakeholders (see Appendix 11 for details) as well as insight from the trainer and teacher interviews.

Table 19 highlights the key themes emerging. There were several positive themes, including the impact of the training, the appreciation of the resources specific to Wales, the development of new relationships in Wales (for both MaPS and Young Enterprise) and the piloting of a new approach to professional development not previously tested.

Additionally, several challenges were noted as well, including the ongoing impact of Covid-19, issues of clarity of communication and expectations of those involved, questions of alignment with the new Curriculum for Wales, the role of the Regional Consortia, the complicated / burdensome project and evaluation processes and the low and uneven numbers participating.

Table 19: Key themes

Positives	 Impactful financial education professional learning Development of financial education professional learning resources specific to Wales and in the Welsh Medium Development of new financial education relationships in Wales Piloted a new approach
Challenges	 Covid 19 Complicated/burdensome project process Role of the regions Communication and expectations Alignment with the Curriculum for Wales Low participation numbers, and uneven participation

Positive themes

Impactful financial education professional learning. The trainer and teacher survey results and interviews (reported above) reveal the positive impact of the training, and this was emphasised in the interviews by the two REC participants (P2 and P3) and the YE Trainer (P4).

Both the trainer-led and the e-learning approaches have resulted in improved knowledge, skill and confidence to deliver financial education

Development of new financial education professional learning resources for Wales. One of the key benefits of the project, from the viewpoint of P1, P2, and P3 has been the development of key professional learning resources that are specific to the context in Wales. The importance of this was outlined by P1. The resources comprise the professional learning, the Money Mapping resource and the e-learning course. P1 noted the importance of the resources in relation to embedding financial education and the sustainability of the project (see sustainability section).

Development of new financial education relationships in Wales. The YE participants (P4, P5 and P6) all spoke positively about the opportunity afforded by the pathfinder to build new relationships and connections in Wales, that YE also wishes to continue to support. There is also a strong sense from REC interviewees that these new relationships are valued and there is a desire to continue to develop them.

Piloting of a new approach to financial education professional learning. Although the project was set up as a Pathfinder, P5 acknowledges that in many respects it resembles a pilot in that the project is not simply replicating what happened in "What Works", which focused on a single model of delivering training to teachers, but instead is testing two different models of cascaded trainer-led professional learning and e-learning, which has not been attempted previously. Hence, viewing the project as a pilot is helpful, allowing the opportunity for further testing at scale to confirm the benefits of the two approaches. In that sense, the fact that only two RECs have engaged with the project is less of an issue, and still produces useful insight from a pilot perspective. P1 believes that there is useful insight that can inform the other RECs if they choose to engage at a later stage. From the point of view of a pilot, the project is providing valuable insight and learning that can be developed further to better understand how to embed financial education professional learning.

Challenges and limitations

The impact of Covid-19: Despite interest from teachers, the pandemic has understandably affected their capacity to engage with the professional learning and the project team's opportunity to interact with teachers. As a result of lockdowns and school closures, the effective timeline available to train volunteer trainers and for teachers to participate in the cascaded trainer-led and e-learning professional learning was compressed from one year to approximately a five-month window before the end of the school year. This significantly reduced the opportunity for teachers to put their learning into practice in the classroom, reducing the likelihood of testing the impact on young people. It also reduced the opportunity to gather meaningful data from the follow-up surveys to assess the sustained impact of the professional learning. The YE Trainer reflected that it would have been beneficial to have additional time built into the project to allow teachers space to put the professional learning into practice before cascading it to other teachers. This could be considered in future projects.

Project and evaluation processes: The additional processes around the Pathfinder project and the evaluation created additional workload, which was to be expected. In the early stage of the project, the grant-making process, between MaPS and the RECs caused additional work because it was very different to the funding arrangement that the RECs were used to. The Pathfinder Project Manager at YE took on additional work on behalf of one of the RECs around recording and tracking participation. Setting the project management and evaluation processes aside, teachers suggested that professional learning on its own was not onerous, which is positive for encouraging ongoing engagement, but pressure on teachers' time is a key factor.

The pace at which particularly the volunteer trainers were required to cascade the professional learning to teachers, and also to deliver financial education in the classroom was much more compressed than desired and not achievable by many of the participants, thus contributing to the lower numbers.

Role of the Regional Education Consortia: The Regional Education Consortia (RECs) were identified at an early point as being key to the success of the Wales Pathfinder and embedding professional learning in financial education. The RECs were described as the key pillars of the national approach to professional learning in Wales, developed in 2018, which was supported with significant investment in schools to participate in professional learning linked to the roll out of the new Curriculum. The approach to professional learning was believed to align with the existing ways in which the RECs worked, in terms of cascading the professional learning within clusters. But, it became apparent throughout the project, that the RECs did not operate in a uniform way and teachers themselves confirmed that they did not all have existing relationships with schools in their cluster, so new connections had to be formed. This created additional work for the RECs.

The involvement of the RECs was, however, significant in terms of encouraging participation in the professional learning. The RECs provided support to the volunteer trainers, one of the RECs in particular provided considerable organisational and administrative support in helping teachers to cascade the professional learning, connecting teachers with cluster schools, advertising the professional learning and even drafting emails they could send to other teachers, as one of the teachers explained:

So [REC staff] had done all of the email letters, she'd done the Google forms, she'd tried to work out everything that we needed to do to make it easier. She has been amazing, yes she's been very good. I don't think it would have worked without her, she's been super-efficient and it's been phone calls and emails, yeah she's excellent, yeah. (Interviewee 1: Female, Primary, GwE)

Communication and expectations: In the early stages of the Pathfinder there was some confusion around communication and/or expectations of the project. It is difficult to know where the issues with communication developed, but it was perhaps not surprising given the complexity of the project. It was noted in the initial training of the volunteer trainers that several of the participants had not fully understood that they were required to cascade the training afterwards. The YE Trainer spent time during the training reiterating the expectations. As a result, one person withdrew from the training, because they felt they couldn't deliver the professional learning within their cluster. The following quotes illustrate the potential variation in what teachers understood was expected of them as volunteer trainers:

Yes, no I think I was but then when I did the training I was like, "ooh I can't believe I really said I would do this." Because doing things in-house is very different and doing things for children is very different, so then doing it across to other adults in other schools. I think it's proved really it's not as bad as I thought, so I think the thoughts before were, yeah. (Interviewee 1: Female, Primary, GwE)

Yeah, when I did the training in March I did understand that I had to train other people. It's just been very difficult this year. (Interviewee 3: Male, Secondary, ERW)

Subsequently, and after clarifying the expectations, participants engaged with the project very well, as much as other commitments allowed.

Alignment with the Curriculum for Wales: The introduction of the new Curriculum for Wales provided an opportunity for MaPS to consider the role and place of financial education within the new curriculum, and offer practical support to do so. The new Curriculum for Wales and the national approach to professional learning (introduced in 2018), were also key motivations for the Welsh Government in taking part in the project, as well as the prospect of the development of resources, in partnership with the RECs, aligned to the new Curriculum.

Early during the project, there was some concern expressed from one of the RECs that the training prioritised financial education over the new Curriculum for Wales and the four purposes. There was also some concern that the timing of the Pathfinder was too early to allow the professional development to be fully embedded, since teachers still had to develop their curricula and the REC staff were primarily focused on professional learning to support the implementation of the new Curriculum. Yet, insight from the interviewed volunteer trainers and teachers and surveys revealed many comments suggesting how financial education could align with the new Curriculum and the timing of the professional learning was helpful in feeding into Curriculum development that was still to happen.

Low numbers participating: The overall numbers of teachers taking part in both the professional learning and in the evaluation were much lower than originally anticipated as a result of only two out of four RECs taking part and further impact due to the pandemic that limited ability to engage. The original target was to achieve 1,000 teachers taking part. The much lower numbers meant that a control group was not feasible, as originally intended.

A number of marketing and promotion avenues were pursued to encourage participation, including email campaigns, inclusion in the Welsh Government Dysg newsletter, social media posts etc. Recruitment was higher where there was more engaged REC involvement in promoting the professional learning. Despite this, there was still drop out between registering interest and completion of training/participation in the evaluation, which is likely to have been due to additional pressures on teachers' time.

Larger samples would have allowed for greater scope in quantitative analysis and increased the validity of the findings. However, with small sample sizes it can be very difficult to detect statistically significant differences, with a much greater chance of reporting a false negative (i.e. not detecting any difference when it may exist). The fact that statistically significant results have been detected with the small samples is very positive. However, a larger sample size would be helpful in confirming the magnitude of the effect we have observed, and may have been able to detect more nuanced differences between the trainer-led and e-learning approaches than we have been able to detect with a smaller sample.

Uneven participation: Uneven participation occurred in both the professional learning and the evaluation.

- Only two of the four Regional Education Consortia (REC) in Wales took part in both
 professional learning approaches and participation was significantly greater from one of
 these two RECs: three-quarters of the participants in the trainer-led approach and 82%
 of the participants in the e-learning approach were from the same REC. Uneven
 participation was also mirrored in the evaluation.
- While a good number of people signed up to take part in both the trainer-led and elearning approaches, the conversion rate for the e-learning was lower, resulting in more than half the teachers taking part in the trainer-led approach. In the absence of any interviews with e-learning teachers, further work would be needed to understand more about the motivations for taking part in e-learning.

- Participation was skewed towards primary teachers: less than 20% of the teachers that
 took part in the evaluation were from secondary schools. The timing of the professional
 learning coincided with the main assessment period which made it very challenging for
 secondary teachers to participate in both the professional learning and the evaluation
 (especially given the increased emphasis on teacher assessments as a result of
 cancelled exams due to the pandemic).
- Despite uneven participation generally, quantitative analysis confirmed that there were no significant differences between the two groups of teachers that took part in the trainer-led and e-learning approaches in terms of key characteristics such as length of experience, primary or secondary, or the region that teachers belonged to, meaning that the unevenness occurred similarly in both the trainer-led and e-learning groups. A more even participation from across the RECs, between primary and secondary teachers, and the inclusion of e-learning teacher interviews would have increased the robustness and validity of the results. Similarly, a greater number of focus groups with young people, including both secondary and primary pupils, would have provided more reliable findings of the impact of the professional learning on young people.

4.5 The relative costs and benefits of the trainerled and e-learning approaches

The assessment of the relative costs and benefits is based on an assessment of the various elements that make up the costs associated with the development and delivery of both approaches, which is informed by inputs from key stakeholders, as well as an assessment of the amount of teachers' time and effort required to participate, either as volunteer trainers or participants in the trainer-led or e-learning approaches. The latter has been informed by interviews with the volunteer trainers and teachers who participated in the trainer-led approach (there were no interviews with teachers who took part in the e-learning approach) and informed by survey responses from both the trainer-led and e-learning participants.

Table 20 provides an overview of the key elements of costs associated with each approach.

The table highlights that there are some common set-up costs associated with both approaches relating to the development of the professional learning, specifically the content underpinning both approaches and the Money Mapping resource. These are fixed costs that exist irrespective of the number of teachers that take part in the professional learning and, in this case, were able to be shared between both approaches. In the event that only one approach is taken forward, these set up costs would be attributed wholly to that approach.

The other fixed development costs relate to the specific professional learning approaches. The set-up costs for the e-learning course are higher due to the additional IT development costs associated with the e-learning delivery platform. The only variable cost associated with the e-learning course is the hosting and maintenance cost, which has been costed based on a 12 month period, but would be a recurring cost that would vary according to the degree of ongoing maintenance required.

The trainer-led approach includes a greater range of variable costs associated with the trainer time to deliver the training to volunteer trainers, the teachers' time involved in taking part in the volunteer training, and the teachers' time in cascading the training to other teachers. The real financial cost associated with teachers' time is where supply teaching cover is required to release teachers from the classroom. The training of volunteer trainers and cascaded training can only be delivered in relatively small groups to be effective, which limits the cost-effectiveness of the

trainer-led approach. The 23 volunteer trainers were trained in two separate groups within the two regions that participated, suggesting a cost of £2,000 to train a group of approximately 10-11 individuals.

Taking part as a volunteer trainer clearly involved a more substantial time commitment, both in the training and in the subsequent cascading of the professional learning. There are also opportunity costs to consider, meaning that the time spent taking part in the training cannot be spent on other activities, the benefits of which are lost. Hence, teachers must weigh up the relative benefit to themselves (and their school) of taking part in the training or participating in some other activity (professional learning, teaching etc.)

The time commitment for taking part as a volunteer trainer was estimated to be two days taking part in the initial training, plus another day or two to prepare the materials for cascading the professional learning. Most of the volunteer trainers seemed to deliver at most a half-day session to teachers, or around two-and-a-half hours. The amount of time teachers put into the preparation did vary, perhaps according to how confident they were, and some were also spending their own time outside of the normal working day:

The training isn't essentially that time consuming, because you've got the pack, you've got the script. Just reading through the script and just making sure you know what's coming up on the slides wasn't so onerous. But I think the next bit is going to be the actual delivery, setting out and delivering it is the time consuming bit isn't it? (Interviewee 5: Female, Secondary, ERW).

For me, I think it's taken more time that I thought it would take, but I have had supply to do that, but I don't like to come out of class a lot, so lots of time that I might have been organising it, it might have been after school or in the evenings. I think now I've done it once I think it would be easier next time. So no, I think it's OK, I think in total I've done my two days for the training, it's probably taken about two days, two afternoons to prepare, so maybe a day to prepare and do all of the planning and things, so not too much, but it's spread over a time that you just have to be a good manager of your time really. (Interviewee 1: Female, Primary, GwE).

The main concern for the volunteer trainers was the time away from the classroom. While most teachers did not like to come out of class too much, this seemed to be more difficult for secondary teachers, and Welsh medium teachers, posing greater challenges for supply teacher cover. Teachers also noted the additional work of preparing the lessons for the supply teacher, which is an additional time cost:

If supply teachers were to come in then the teachers still have to plan for the supply teachers, so they'll be expected to plan a lesson plus do two and a half hours at least of the training session, so it's quite a lot to ask. (Interviewee 4: Female, Secondary, ERW)

Despite the recognition of the additional burden involved as a volunteer trainer, all the volunteer trainers interviewed agreed that taking part in the training and becoming a volunteer trainer had been beneficial and the benefits had outweighed the costs.

Table 20: Costs associated with the trainer-led and e-learning approaches

Costs	Trainer led approach	E learning approach	Cost incurred by whom?	Notes/assumptions		
Development of professional learning content (Fixed Cost)	 Total cost £25,000 comprising: Content Development Content Design Translation 		 Total cost £25,000 comprising: Content Development Content Design 		Professional learning delivery organisation	Content development and translation costs totalling £25,000 were shared between the two approaches. If only one approach is taken forward, the total costs would be attributed to a single approach.
Development of Train the Trainer package (Fixed Cost)	 Total cost £16,000 comprising: Content Development Content Design 	Professional		Translation costs were not included as the train the trainer training was delivered in English only. This could be a future cost to deliver the training bilingually.		
Development of e learning course (Fixed Cost)	Not applicable	 Total cost £62,250 comprising: Development of e learning course wireframes Technical implementation UX/UI Testing Translation 	Professional learning delivery organisation			
Development of associated teaching resource (Money Mapping) (Fixed Cost)	 Total costs £22,500 co Resource development Resource Design Quality Mark Translation 	omprising:	 Professional learning delivery organisation 	Resource development, design and translation costs totalling £22,500 were shared between the two approaches. If only one approach is taken forward, the total costs would be attributed to a single approach.		
Promotion, engagement and recruitment (Variable Cost)	 Total cost £1,300 Email campaigns Social media posts/campaigns Newsletters Recruitment of volunteer trainers Translation 	 Total cost £1,640 Email Campaigns Social media posts/campaigns Newsletters Translation 	 Professional learning delivery organisation Welsh Government Regional Education Consortia 	 These costs comprise communication/campaign costs and staff time based on approximately 5 days' staff time (trainer led) and 4 days' time (e learning) in developing communications, at a day rate of £190 per day for REC staff time. 24 volunteer trainers signed up (23 participated); 125 teachers signed up to the trainer led approach (91 participated); 145 teachers signed up to the e learning approach (62 participated); 		

Delivery of initial Train the Trainer training (Variable Cost)	 Total cost £4,000 comprising: Trainer s time to prepare and deliver training sessions and provide ongoing support to volunteer trainers 	Not applicable	Professional learning delivery organisation	 Train the trainer delivery costs vary according to the number of training sessions/volunteers to be trained. This cost is based on training 23 trainers over 2 x 2 day training sessions.
Ongoing costs associated with e learning (Semi fixed cost)	Not applicable	Total cost £8,000 comprising: Hosting and maintenance costs for 12 months	Professional learning delivery organisation	 Ongoing costs are based on a 12 month period. Cost is semi fixed, containing fixed hosting costs and variable maintenance costs.
Volunteer trainer participation costs (Variable Cost)	Total cost per trainer £320 comprising: Supply teacher costs for two days £320 to allow teachers to participate in two days' training Opportunity costs (from missed opportunities).	Not applicable	 Schools (for teacher participation) Regional Education Consortia (for staff participation) 	 The day rate is calculated at £160 per day and based on an annual salary of £31,987 (the mid point (M4) of the main pay scale for qualified teachers in Wales)⁶ divided by 195 working days per year. Day rates could range from £140 to £195 per day for qualified teachers, and higher for teachers in leadership roles. Opportunity costs are not costed since the cost is not always financial.
Cascading costs (to teachers by volunteer trainers) (Variable Cost)	 Total cost per cascaded session £320 comprising: One day preparation, recruitment and set up £160; half a day supply teacher cost £80; half a day providing ongoing support to teachers £80. 	Not applicable	Schools (for teacher participation) Regional Education Consortia (for staff participation)	 Day rates as above. Based on an average 5 teachers participating per session,⁷ so £320 per 5 teachers. Periodic updating of knowledge and resources has not been costed as it is unlikely to imply supply teacher cover and would be done in the teacher s usual development time.

⁶ https://gov.wales/sites/default/files/publications/2021-09/school-teachers-pay-and-conditions-wales-2021.pdf

⁷ A total of 23 volunteer trainers and a total of 91 teachers cascaded to suggests an average of 3.9 teachers per volunteer trainer cascaded session. However, not all trainers did cascade the training within the timeframe, so we suggest an average of 5 teachers per session.

Participation costs (for teachers) (Variable Cost)	 Total participation cost per teacher £80 comprising: Participation in 2.5 hours professional learning and associated supply teacher cost for half a day per teacher. Total participation cost per teacher £80 comprising: Participation in 2.5 hours professional learning and associated supply teacher cost for half a day per teacher, although teachers are likely to participate in their usual development time. 	• Schools	 Day rates as above. Participation costs have been included for e learning, but in practice teachers are likely to participate in their usual development time without the need to take time out of the classroom.
Costs associated	 Incremental development costs (content and resources) £4,750 Major development costs (content and resources) £14,250 	Professional learning delivery organisation	 Both incremental and major development costs are based on a fraction of the original costs incurred in rows 1 3. Incremental costs are assumed to occur on an ongoing basis and are based on 10% of the original development costs.
with ongoing updating of professional learning resources (Variable Cost)	 Incremental development costs of train the trainer package £1,160 Major development costs of train the trainer package £4,800 Incremental development costs for e learning are already included in the hosting and maintenance costs of £8,000 for 12 months and not costed again separately. Major development costs of e learning £18,675 	Professional learning delivery organisation	 Professional learning content and resources development costs, totalling £47,500, were shared across both approaches, but would apply individually in the case of only one approach being taken forward. Major development costs are based on 30% of the original development costs (as above). Significant development costs, not included, could be as high as the total original development costs (e.g. in the case of a change in the provider or a major re write of the professional learning package)

With regards to the participation by teachers in either the trainer-led or e-learning approaches, there are similar costs associated with the teacher time involved. The cascaded trainer-led professional learning sessions typically lasted around two-and-a-half hours or no more than half a day. The e-learning was expected to take between one-and-a-half and two-and-a-half hours to complete. Interestingly, the survey results suggest that teachers who took part in the e-learning approach rated this as more time-consuming than those who took part in the trainer-led approach. Without any interviews with e-learning teachers it is not possible to really understand why. One explanation may be that engaging in the professional learning individually rather than in a group session may add to the perceived cognitive effort. Also, teachers may have engaged in the e-learning in their normal development time or even their own time (rather than being released from the classroom as in the case of the trainer-led), which may add to the perception of additional workload. Alternatively, teachers may have rated the time and effort involved with the trainer-led approach more favourably because there was generally no additional travel time included as most of the sessions were delivered remotely. Overall, though, in both approaches teachers generally did not consider that the professional learning was onerous and the time commitment seemed to be on a par with other types of professional learning.

The final row of the table sets out potential ongoing development costs associated with both professional learning approaches. We identify ongoing development costs according to the scale of potential changes. Incremental development costs relate to minor modifications and updating and likely to occur within a short timeframe. Incremental costs are calculated on the basis of 10% of the original development/set-up costs. In the case of the e-learning course, these incremental developments are assumed to be included in the hosting and maintenance costs already costed for 12 months. Major development costs comprise more substantial changes, such as those responding to Curriculum for Wales developments and revisions to resources and have been costed at 30% of the original development costs. Major developments are likely to occur on a less frequent basis as part of a periodic review of the professional learning, say every three – five years. Significant development costs comprise a significant re-write of the professional learning package and would occur in the event of a change in the professional learning provider or e-learning provider. These costs are likely to be very close to the original development costs.

With regards to the relative benefits of the two approaches, the previous analysis has confirmed that both approaches achieved similarly positive improvements in teachers' knowledge, skill and confidence to teach financial education, concluding that both approaches achieve similar benefits. Interviews with the trainer-led participants and the survey data suggest that teachers in the trainer-led group rated it more highly in terms of explaining and communicating the material and using the resources. Hence, the key question concerns the most cost-effective way of delivering the professional learning, given the outcomes from both approaches are broadly similar.

The likely reach and speed at which the two approaches could be scalable to larger numbers should also be considered. The e-learning option attracted a higher number of initial registrations (145) compared with the trainer-led option (125), but the conversion rate was much higher for the trainer-led approach (73% of the teachers that registered completed the professional learning and 43% that registered with the e-learning option participated through to completion). The trainer-led approach benefits from teachers making use of existing contacts and established networks via school clusters, but also requires additional time to factor in the recruitment and training of suitable volunteer trainers and allow time for them to cascade the professional learning. There is also likely to be a limit to the number of teachers that volunteer trainers cascade the professional learning to, being limited mainly to the teachers in their school or cluster (i.e. secondary and feeder primary schools). A total of 23 volunteer trainers were trained and a total of 91 teachers were cascaded to which suggests an average of 3.9 teachers per

volunteer trainer cascaded session. However, not all trainers did cascade the training within the timeframe, so we estimate an average of five teachers cascaded to per session. Teachers are unlikely to cascade the professional learning much more widely than this because of the constraints on their time. The e-learning approach has the potential to reach a larger number of teachers, but requires effective communication to encourage engagement and conversion rates could be a concern.

In summary, weighing up the relative costs and benefits of the trainer-led and e-learning approaches it would seem that the e-learning approach may be more cost-effective in the long-run than the trainer-led approach, but only where participation at scale can be achieved. The e-learning approach becomes more cost-effective as participation increases, due to the higher proportion of up-front fixed costs. The unit cost per teacher is higher for low participation numbers. On the other hand, the higher proportion of variable costs associated with the trainer-led approach make this a more costly form of delivery for larger numbers of teachers. It is also potentially more challenging to scale up because of the need to identify and train volunteer trainers.

5 Conclusions and Implications

Both the cascaded trainer-led and e-learning approaches have the potential to support scaling up of financial education professional learning. Both approaches are effective at increasing teachers' knowledge, skill and confidence to teach financial education, and either approach could be used to produce similar results, albeit with different costs and reach. When choosing an approach, financial education professional learning providers and funders should consider the different merits and limitations of the approaches with regards to the context, taking into account teachers' preferences, potential reach, engagement, cost and potential to deliver bilingually.

Training teachers to cascade professional learning in financial education to their peers can be effective where it is supported. Teachers require specialist training and resources in the initial training and ongoing support in cascading the professional learning to others. Teachers with limited or no prior experience of financial education or delivering professional learning required more support. During the project, support was provided by both the Young Enterprise trainer and via the RECs. There is the potential to embed the professional learning in the existing professional learning offer provided by the Regional Consortia in Wales. In the other UK nation contexts, further exploration would be needed to understand how this approach to professional learning could be embedded in other existing structures (e.g. Multi-Academy Trusts in England, Local Authorities in Scotland) or via Initial Teacher Education. Whatever route is used needs to have the capacity and infrastructure to provide the support on an ongoing basis.

Compared with the trainer-led approach, the e-learning approach offers a more cost-effective approach, if delivered at scale. The higher proportion of variable costs associated with the trainer-led approach make it potentially more costly to operate and more difficult to scale up to large numbers. The trainer-led approach, however, may be preferable at a local level where the relationships between schools within a cluster are strong and the cascaded trainer-led approach aligns with existing ways of working. Where cluster relationships are not strong, other networks and relationships could potentially be exploited, such as numeracy leads networks, PSE leads networks etc.

There is the potential to embed the professional learning in the existing professional learning offer provided by the Regional Education Consortia in Wales. In the other UK nation contexts, further exploration would be needed to understand how this approach to

professional learning could be embedded in other existing structures (e.g. Multi-Academy Trusts in England, Local Authorities in Scotland) or via Initial Teacher Education. Whatever route is used needs to have the capacity and infrastructure to provide the support on an ongoing basis.

Engagement in the professional learning needs to be actively encouraged to ensure the benefits can be experienced. This requires effective communication, to ensure teachers are aware of the professional learning opportunities and the benefits, and enabling teachers to participate. The professional learning benefited from endorsement and communication from the Welsh Government, including communication via the Welsh Government Dysg newsletter and social media posts. Further consideration needs to be given to the measures that could be taken to encourage and enable participation at a local level, particularly the local support from the RECs. Participation was higher where the support and encouragement from the REC was stronger. Given that the many of the teachers that participated in the professional learning had limited or no prior experience of financial education or had a leadership role that included financial education, there may be merit in targeting early career teachers as well as teachers who already have, or are taking on, a leadership role that includes financial education.

The professional learning resources need to be made available and accessible to teachers, in a place where teachers would expect to find information on professional learning and learning and teaching resources more generally, such as the Hwb in Wales, and via the RECs. In other nations, similar platforms would need to be identified. It is also important to ensure that the resources are actively promoted and not simply hosted on a platform, to increase their uptake and effectiveness.

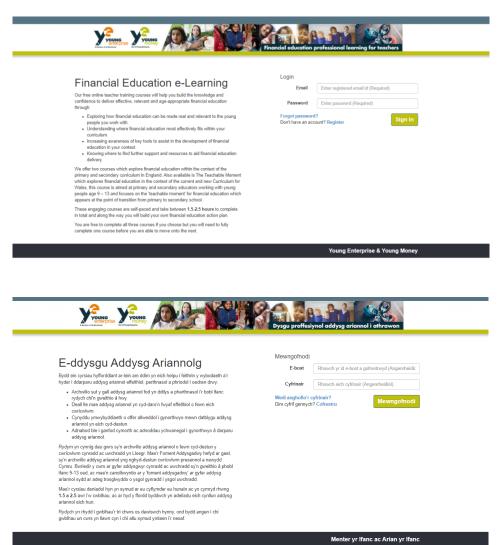
The resources need to be kept up-to-date and relevant. With both the trainer-led and elearning approaches, there are resource implications associated with keeping the professional learning materials up-to-date and relevant on an ongoing basis. Whilst updates may not need to occur frequently, the content would need to be refreshed on a periodic basis to ensure it remains relevant, in particular taking into account any ongoing developments to the Curriculum for Wales. There are additional resource implications associated with the technical maintenance of the elearning resource and development costs associated with implementing updates.

Resources need to be bilingual. Throughout the project, the provision of Welsh medium financial education resources aligned to the new Curriculum for Wales were much appreciated and filled a gap in the availability of good quality financial education resources in Welsh. As many schools in Wales teach only through the medium of Welsh, the provision of bilingual resources is essential to ensure equality of access and impact of the learning. Any updating and development of the resources also needs to be done in both English and Welsh.

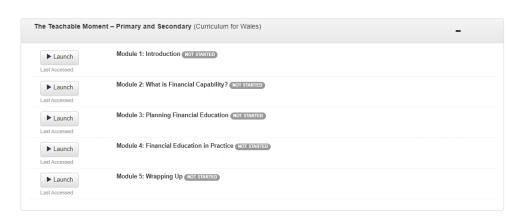
Sustainability and scalability of the professional learning relies on a holistic and coordinated approach to financial education professional learning at a national and regional level. Learning from this evaluation suggests that, at a national level, this requires a clear focus and emphasis on financial education professional learning, clearly signposted and accessible resources and access to professional learning, with local regional support. Teachers (and schools) require support to enable teachers to engage in the professional learning and, if engaging as a volunteer trainer, resource and support to cascade the professional learning to other teachers. Teachers need to know how and where they can access high quality professional learning that has been quality assured. The strategic professional learning implementation plan, developed to support the new Curriculum for Wales, may offer a route to identify organisations with subject specific knowledge that can provide financial education professional learning at a national scale.

Appendix 1 - E-learning content and images

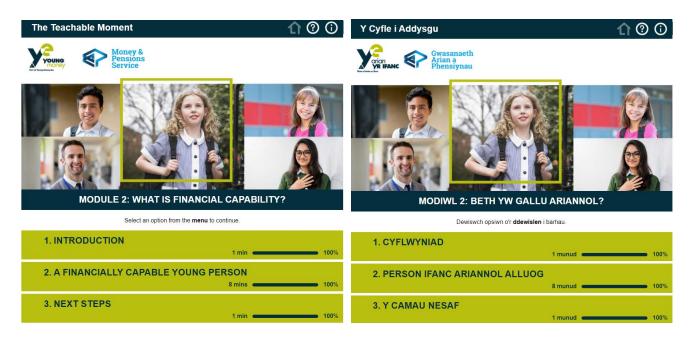
Registration / Login Page



Module List



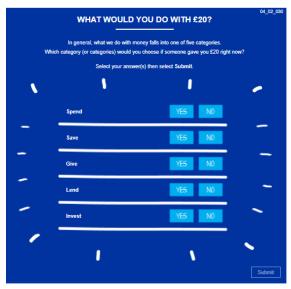
Sample Module Overview



Sample Activity



This is where we start to talk about how to deliver, embed and assess financial education. Let's explore a simple activity you could do with your learners to get them thinking about financial attitudes and values, and making choices around money ...





Dyma ble rydyn n'n dechrau siarad am suf i gyflwyno, ymgorffori ac asesu addysg ariannol. Gadewch i ni archwilio gweithgaredd syml y gallech chi ei wneud gyda'ch dysgwyr i'w cael nhw i feddwl am agweddau a gwerthoedd ariannol, ac i wneud dewisiadau mewn cysylliad ag arian ...



Appendix 2 – Volunteer trainer sample characteristics

Volunteer trainer survey sample characteristics

Characteristic	Description
Length of teaching experience	The mean length of teaching experience is 18 years; minimum is 3 years and maximum is 32 years.
Length of financial education teaching experience	The mean length of financial education teaching experience is 4.5 years, the mode is less than one year (6 individuals). 3 individuals had never taught financial education before. Only 2 individuals had 10 or more years' experience teaching financial education.
Key Stages taught/supported	18 of the individuals who took part in the training were from schools (13 from secondary schools and 5 from primary schools).
Key subjects taught/supported	All subjects in a Primary 6; Maths 13; PSE/Citizenship 4; ICT 1; Careers 1; Business Studies/Economics 1. (Numbers exceed 21 because teachers teach more than one subject).
Gender	Male 7; Female 14
Role	18 school staff (4 senior leadership; 6 subject leads; 7 class/subject teachers; 1 supply teacher); 3 REC staff (1 GwE; 2 ERW)
Language	Welsh 6; English 17

Volunteer trainer interview sample characteristics

Interviewee	Teaching experience	Professional learning experience	Key stages/ subjects taught	Gender	REC
1	Very experienced teacher, but limited experience of financial education	No prior experience of delivering professional learning to other teachers outside her own school	Primary Maths Years 5 and 6	Female	GwE
2	Limited teaching experience and no prior experience of teaching financial education	No prior experience of delivering professional learning to other teachers	Primary Currently teaching Foundation and Upper KS2	Female	GwE
3	9 years of teaching, no experience of teaching financial education	Limited experience of delivering professional learning to other teachers, but not to cluster schools	Secondary Chemistry teacher and numeracy coordinator	Male	ERW
4	Very experienced teacher, 26 years, limited experience of financial education	Has quite a bit of experience of delivering professional learning to other teachers	Secondary Maths teacher, responsible for numeracy across the curriculum	Female	ERW
5	Very experienced teacher, 27 years, and very experienced in delivering financial education	Some experience of delivering professional learning to other teachers	Secondary Maths teacher, KS 3 and 4, Pupil Referral Unit	Female	ERW
6	Very experienced teacher, 31 years and very experienced in delivering financial education	Very experienced in delivering professional learning to teachers	Supports teachers across primary and secondary	Female	ERW
7	Very experienced, 32 years. With 2 years of financial education experience	Very experienced in delivering professional learning to teachers	Supports secondary schools	Female	ERW

Appendix 3 – Volunteer trainer survey results (delivering financial education)

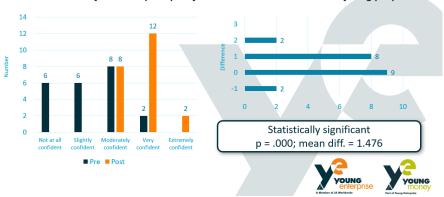
a) Confidence to deliver financial education

How confident do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To plan quality financial education lessons for young people	0.000	1.476	1.106 1.847	2.24	3.71
To deliver financial education lessons to young people	0.000	1.095	0.745 1.445	2.57	3.67
To tailor financial education learning activities to young people's characteristics and identified needs	0.000	1.333	1.001 1.666	2.19	3.52
To assess and evaluate the effectiveness of financial education for young people?	0.000	1.381	1.015 1.747	2.14	3.52

¹ Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident

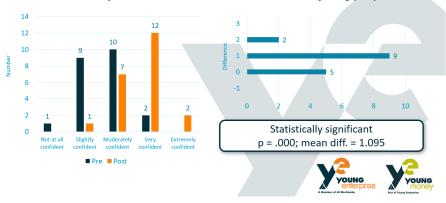
Confidence (Teaching)

How confident do you feel to plan quality financial education lessons for young people?

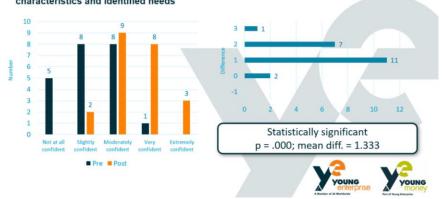


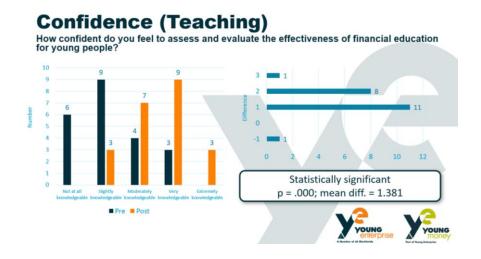
Confidence (Teaching)

How confident do you feel to deliver financial education to young people?



Confidence (Teaching)
How confident do you feel to tailor financial education learning activities to young people's characteristics and identified needs

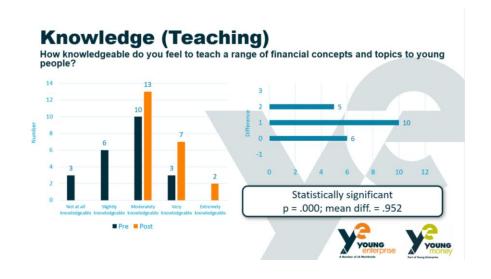


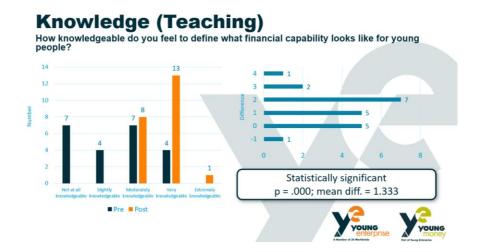


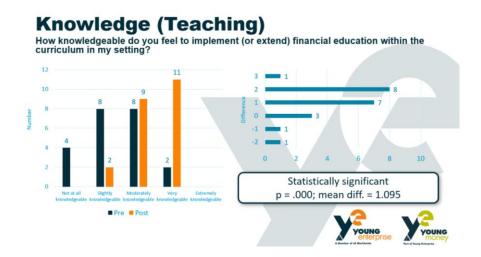
b) Knowledge to deliver financial education

How knowledgeable do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To teach a range of financial concepts and topics to young people	0.000	0.952	0.616 1.289	2.57	3.52
To define what financial capability looks like for young people	0.000	1.333	0.770 1.897	2.33	3.67
To implement (or extend) financial education within the curriculum in my setting	0.000	1.095	0.558 1.632	2.33	3.43

1 Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable







c) Skill to deliver financial education

How skilled do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To deliver financial education (including teaching different concepts) to young people	0.000	1.000	0.545 1.455	2.57	3.57
To assess young people s progression in financial education	0.000	1.048	0.560 1.535	2.39	3.33
To use tools and resources to develop and/or deliver financial education for young people	0.000	1.048	0.629 1.467	2.48	3.52

¹ Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled

Skill (Teaching)

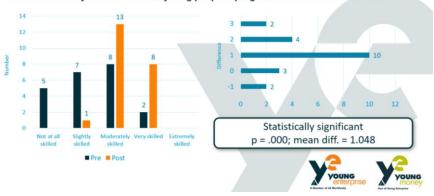


Statistically significant p = .000; mean diff. = 1.000



Skill (Teaching)

How skilled do you feel to assess young people's progression in financial education?



Skill (Teaching)How skilled do you feel to use tools and resources to develop and/or deliver financial education for young people?



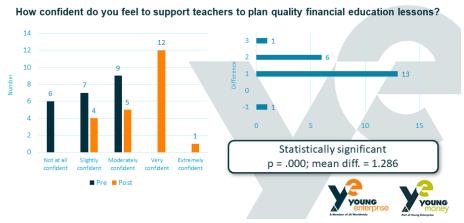
Appendix 4 – Volunteer trainer survey results (delivering financial education professional learning)

a) Confidence delivering professional learning

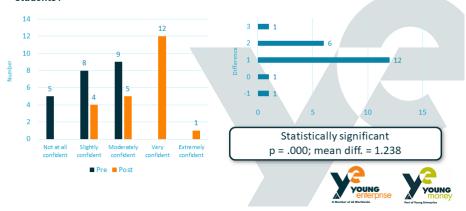
How confident do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To support teachers to plan quality financial education lessons	0.000	1.286	0.929 1.642	2.14	3.43
To support teachers to deliver financial education to their students	0.000	1.238	0.860 1.616	2.19	3.43
To support teachers to tailor financial education learning activities to their students' characteristics and identified needs	0.000	1.048	0.654 1.441	2.10	3.14
To support teachers to assess and evaluate the effectiveness of financial education	0.000	1.143	0.782 1.504	2.05	3.19
To promote ideas for best practice delivery and support within schools	0.000	1.048	0.605 1.491	2.38	3.43
To deliver professional learning training in financial education to teachers	0.000	1.238	0.809 1.668	2.10	3.33

¹ Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident

Confidence (Training)

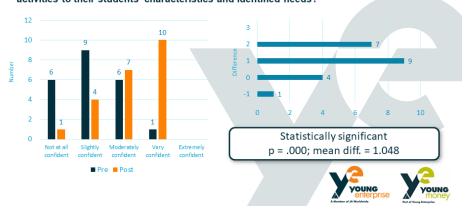


Confidence (Training)
How confident do you feel to support teachers to deliver financial education to their students?



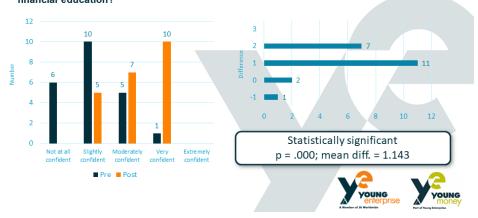
Confidence (Training)

How confident do you feel to support teachers to tailor financial education learning activities to their students' characteristics and identified needs?



Confidence (Training)

How confident do you feel to support teachers to assess and evaluate the effectiveness of financial education?

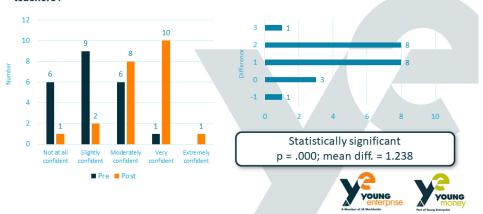


Confidence (Training)
How confident do you feel to promote ideas for best practice delivery and support within schools?



Confidence (Training)

How confident do you feel to deliver professional learning training in financial education to teachers?



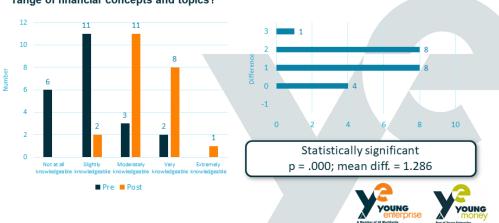
b) Knowledge delivering professional learning

How knowledgeable do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To deliver professional learning training to teachers on a range of financial concepts and topics?	0.000	1.286	0.901 1.670	2.05	3.33
To define for teachers what financial capability looks like for young people	0.000	1.667	1.204 2.129	1.86	3.52
To support teachers to implement (or extend) financial education within the curriculum in their setting	0.000	1.429	1.060 1.798	2.00	3.43

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

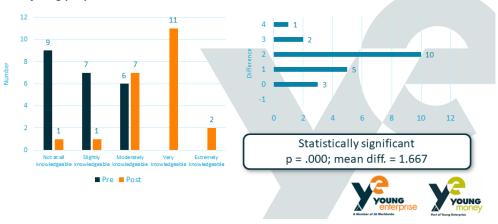
Knowledge (Training)

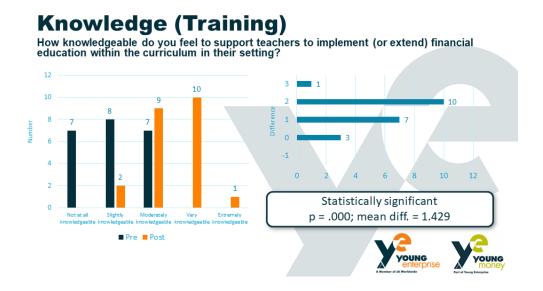
How knowledgeable do you feel to deliver professional learning training to teachers on a range of financial concepts and topics?



Knowledge (Training)

How knowledgeable do you feel to define for teachers what financial capability looks like for young people?





c) Skill delivering professional learning

How skilled do you feel :	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
To support teachers to deliver financial on the topic of Risk'?	0.000	1.095	0.691 1.500	2.05	3.14
To support teachers to deliver financial on the topic of Choices'?	0.000	1.143	0.754 1.531	2.14	3.29
To support teachers to deliver financial on the topic of Attitudes towards money'	0.000	1.190	0.679 1.702	2.29	3.48
To support teachers to deliver financial on the topic of Value	0.000	1.000	0.545 1.455	2.48	3.48
To support teachers to assess young people s progression in financial education	0.000	1.190	0.721 1.660	1.90	3.10
To support teachers to use tools and resources to develop and/or deliver financial education for young people	0.000	1.190	0.768 1.613	2.05	3.24

¹ Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled

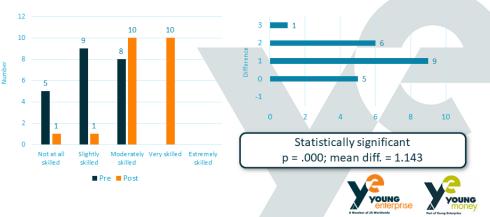
Skill (Training)

How skilled do you feel to support teachers to deliver financial on the topic of 'Risk'?



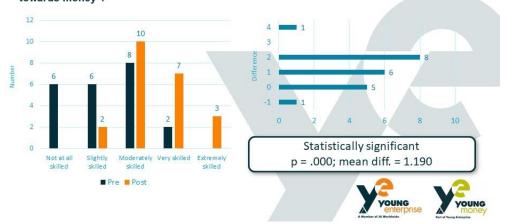
Skill (Training)

How skilled do you feel to support teachers to deliver financial on the topic of 'Choices'?



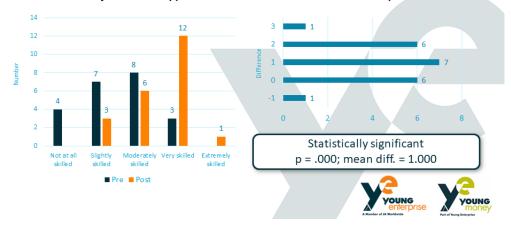
Skill (Training)

How skilled do you feel to support teachers to deliver financial on the topic of 'Attitudes towards money'?



Skill (Training)

How skilled do you feel to support teachers to deliver financial on the topic of 'Value'?



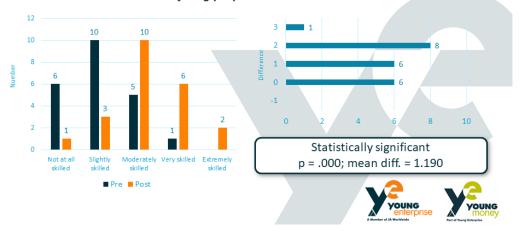
Skill (Training)

How skilled do you feel to support teachers to assess young people's progression in financial education?



Skill (Training)

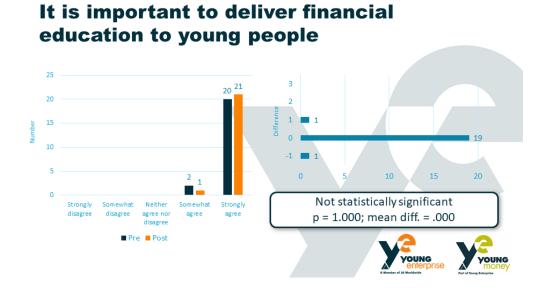
How skilled do you feel to support teachers to use tools and resources to develop and/or deliver financial education for young people?



Appendix 5 – Volunteer trainers' perceptions of the value and importance of financial education

To what extent do you agree/disagree:	Sig. p value	Mean difference	95% confidence interval of the diff.	Mean pre score	Mean post score
It is important to deliver financial education to young people	1.000	0.000	0.144 0.144	4.95	4.95
I am inspired to deliver financial education in my setting	0.004	0.476	0.167 0.786	4.29	4.76
I am inspired to support others to deliver financial education	0.042	0.381	0.015 0.747	4.19	4.57
It is important that professional learning in financial education is available for educators	0.186	0.143	0.075 0.360	4.76	4.90
There are sufficient opportunities for financial education professional learning in my region	0.000	1.190	0.700 1.681	2.86	4.05

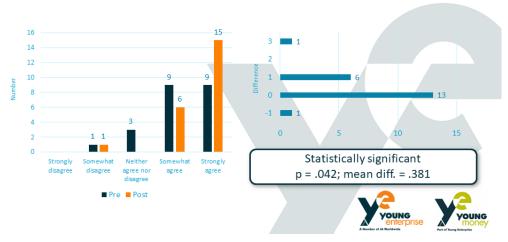
¹ Strongly disagree, 2 Somewhat disagree, 3 Neither agree nor disagree, 4 Somewhat agree, 5 Strongly agree



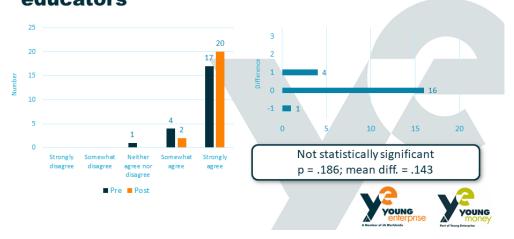
I am inspired to deliver financial education to young people



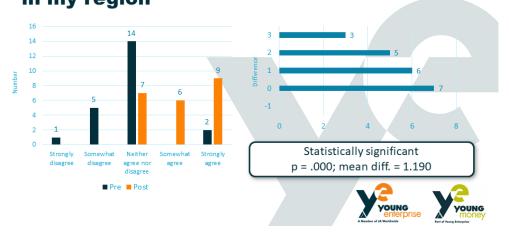
I am inspired to support others to deliver financial education



It is important that professional learning in financial education is available for educators



There are sufficient opportunities for financial education professional learning in my region



Appendix 6 – Teacher sample characteristics (both trainer-led and e-learning)

a) Teacher survey sample characteristics

Characteristic	Description
Length of teaching experience	The mean length of teaching experience is 14.7 years; mode is 15 years. The minimum is less than one year (new to teaching this year); the maximum is 32 years.
Length of financial	The mean length of financial education teaching experience is 4.2 years. The mode is less than 1 year.
education teaching experience	1 in 5 individuals had never taught financial education before; 2 in 5 had less than one year s experience (new to teaching financial education this year). 80% had 6 or fewer years of teaching financial education.
Key Stages taught	Primary 82; Secondary 19
Key subjects taught	All subjects in a Primary 70; Maths 29; PSE 11; ICT 10; Citizenship 9; Careers 4; Business Studies/Economics 4. (Numbers exceed 101 because teachers teach more than one subject).
Gender	Male 21; Female 80
Role in school	Senior leadership 26; Subject lead 9; Teacher 64; Teaching assistant 2
Regional Education Consortia	GwE 80; ERW 18; CAS 1; EAS 1.
Medium	Welsh 30; English 71

b) Teacher interview sample characteristics

Characteristic	Teacher 1	Teacher 2
Gender	Male	Female
Length of teaching experience	26 years	8 years
Length of financial education teaching experience	26 years	7 years
Key Stages taught	Year 5	Years 5 & 6
Role in school	Maths and numeracy coordinator and Year 5 teacher	Responsible for Maths and Numeracy and PSE across Years 5 and 6.
Frequency of financial education delivery in last 12 months	Yearly	Yearly
Frequency of participation in financial education professional learning in the last 12 months	Yearly	Not at all
Regional Education Consortia	GwE	GwE
Language	Welsh	Welsh
Mode of delivery	Trainer led (trainer led)	Trainer led (trainer led)

Appendix 7 – Teacher survey results

a) Knowledge to teach financial education

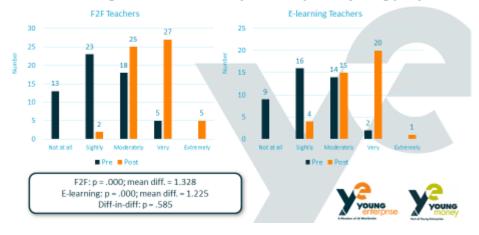
How knowledgeable do you feel	trainer led Mean diff. (n 21)	E learning Mean diff. (n 21)	Sig. (p value)* (difference between groups) (n 21)
To teach a range of financial concepts and topics	1.328	1.225	.585
To define what financial capability looks like	1.552	1.300	.235
To implement (or extend) financial education in the curriculum	1.672	1.400	.200

¹ Not at all knowledgeable, 2 Slightly knowledgeable, 3 Moderately knowledgeable, 4 Very knowledgeable, 5 Extremely knowledgeable

*p-values < .05 indicate statistical significance at the 95% confidence level

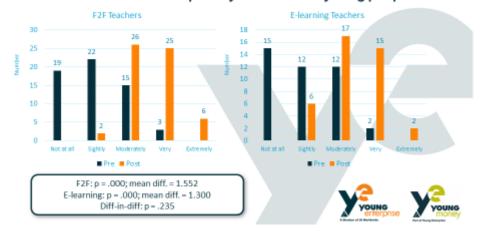
How knowledgeable do you feel ...

to teach a range of financial concepts and topics to young people?



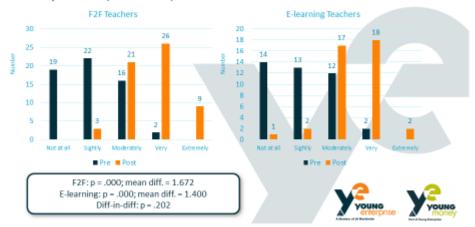
How knowledgeable do you feel ...

to define what financial capability looks like for young people?



How knowledgeable do you feel ...

to implement (or extend) financial education in the curriculum?



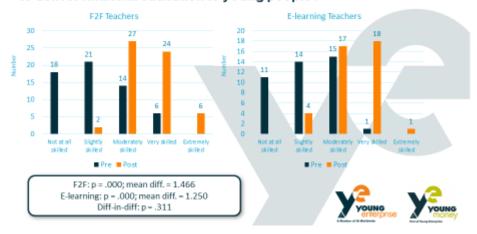
b) Skill to teach financial education

How skilled do you feel	trainer led Mean diff. (n 21)	E learning Mean diff. (n 21)	Sig. (p value)* (difference between groups) (n 21)				
To deliver financial education to young people	1.466	1.250	.311				
To assess young people s progression in financial education	1.379	1.175	.350				
To use tools and resources to develop/deliver financial education	1.534	1.225	.169				
1 Not at all skilled, 2 Slightly skilled, 3 Moderately skilled, 4 Very skilled, 5 Extremely skilled							

^{*}p-values < .05 indicate statistical significance at the 95% confidence level

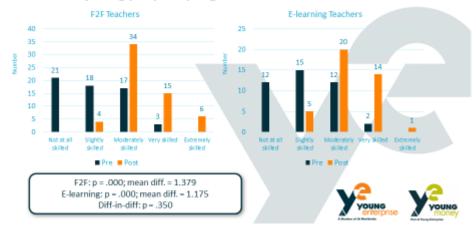
How skilled do you feel ...

to deliver financial education to young people?



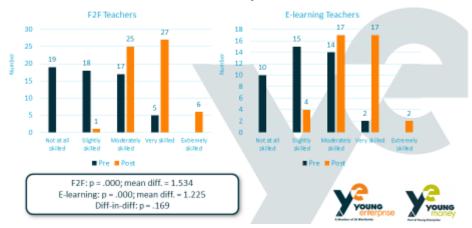
How skilled do you feel ...

to assess young people's progression in financial education?



How skilled do you feel ...

to use tools and resources to develop/deliver financial education?



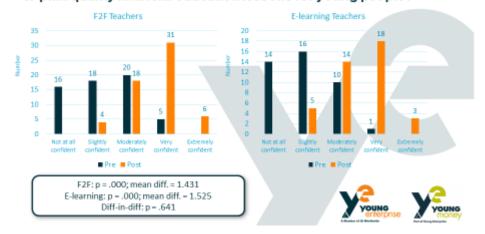
c) Confidence to teach financial education

How confident do you feel	trainer led Mean diff (n 21)	E learning Mean diff (n 21)	Sig. (p value)* (difference between groups) (n 21)				
To plan quality financial education lessons for young people	1.431	1.525	.641				
To deliver financial education to young people	1.345	1.400	.814				
To tailor financial education to young people s needs	1.448	1.425	.920				
To assess the effectiveness of financial education	1.466	1.375	.697				
To promote ideas for best practice within schools	1.431	1.300	.574				
1 Not at all confident, 2 Slightly confident, 3 Moderately confident, 4 Very confident, 5 Extremely confident							

^{*}p-values < .05 indicate statistical significance at the 95% confidence level

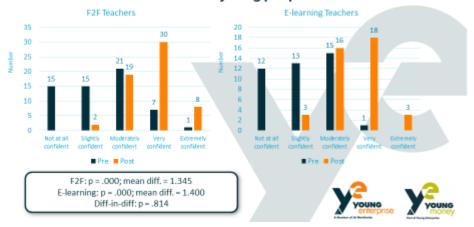
How confident do you feel ...

to plan quality financial education lessons for young people?



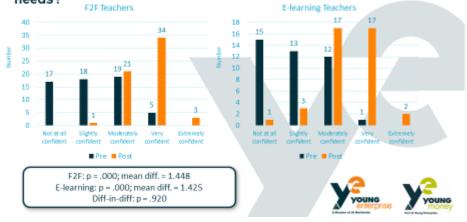
How confident do you feel ...

to deliver financial education to young people?



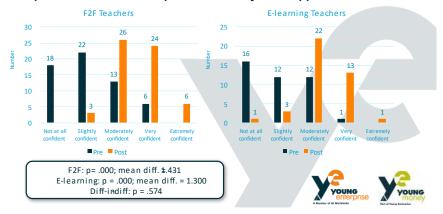
How confident do you feel ...

to tailor financial education to young people's characteristics and needs?



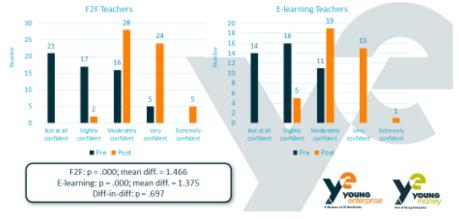
How confident do you feel ...

to promote ideas for est practice delivery and support within schools



How confident do you feel ...

to assess the effectiveness of financial education for young people?



Appendix 8 – Effect of Trainer quality

The following table shows correlations between dimensions of perceived Trainer quality and teacher knowledge, skill and confidence outcomes

				Teache	er knowl	edge, s	kill and	confide	nce out	comes		
Perceived Ti Quality	rainer	Confiden- ce to plan quality financial education lessons	Confidence to deliver financial education	Confidence to tailor financial education to young people's needs	Confidence to evaluate the effectiveness of financial education	Confidence to promote best practice within schools	Know- ledge to teach a range of financial concepts and topics	Know- ledge to define what financial capability looks like	Know- ledge to imple- ment (or extend) financial education in the curricu- lum	Skilled to deliver financial education to young people	Skilled to assess young people's progressi on in financial education	Skilled to use tools/ resources to develop/ deliver financial education
Confidence of the trainer in delivering	Pearson Correlation	.244	.264 [*]	.196	.196	.365**	.208	.274 [*]	.263 [*]	.198	.118	.182
professional learning	Sig. (2-tailed)	.065	.046	.140	.140	.005	.117	.037	.047	.137	.379	.172
	N	58	58	58	58	58	58	58	58	58	58	58
Trainer's knowledge of the topics covered	Pearson Correlation	.345**	.353**	.272*	.364**	.440**	.301*	.382**	.387**	.288*	.205	.285 [*]
	Sig. (2-tailed)	.008	.006	.039	.005	.001	.021	.003	.003	.028	.123	.030
	N	58	58	58	58	58	58	58	58	58	58	58
Trainer's organisation and preparation	Pearson Correlation	.298*	.252	.234	.217	.348**	.243	.335*	.306*	.243	.161	.221
	Sig. (2-tailed)	.023	.056	.078	.102	.007	.066	.010	.019	.066	.228	.096
	N	58	58	58	58	58	58	58	58	58	58	58
Trainer's ability to motivate and inspire others	Pearson Correlation	.301*	.317 [*]	.283 [*]	.292*	.390**	.239	.386**	.392**	.261 [*]	.201	.290 [*]
	Sig. (2-tailed)	.021	.015	.032	.026	.002	.070	.003	.002	.048	.129	.027
	N	58	58	58	58	58	58	58	58	58	58	58

^{**.} Correlation is significant at the 0.01 level (2-tailed).

 $^{^{\}star}.$ Correlation is significant at the 0.05 level (2-tailed).

Appendix 9 – Regression analysis

	Primary vs secondary	Years of teaching experience	Years of financial education teaching experience	Gender (Male vs female)	Professional learning delivered well	Found professional learning useful	Found resources useful	Feel more equipped	Easy to access	Gained new knowledge/ skill	Adjusted R ²	Model Sig.
Confidence to plan	-ve	-ve				+ve					.261	.000
Confidence to deliver	-ve	-ve							+ve		.199	.000
Confidence to tailor	-ve	-ve	-ve	+ve			+ve				.366	.000
Confidence to evaluate	-ve		-ve		+ve			+ve			.225	.000
Confidence to promote	-ve		-ve			+ve					.178	.000
Knowledge to teach	-ve		-ve				+ve				.221	.000
Knowledge to define	-ve					+ve					.179	.000
Knowledge to implement	-ve		-ve				+ve				.295	.000
Skill to deliver	-ve	-ve				+ve					.210	.000
Skill to assess	-ve	-ve					+ve	+ve		+ve	.292	.000
Skill to use resources	-ve	-ve				+ve					.204	.000

There is an inverse (negative) relationship between the key stage that teacher teachers (eg. Primary versus secondary) and the increase in knowledge, skill and confidence from the professional learning. This means that secondary teachers have experienced a lower increase than primary teachers. The relationship is negative because of the dummy coding applied (Primary = 1 and Secondary = 2)

There is an inverse (negative) relationship between both years of teaching experience / years of financial education teaching experience and gains in knowledge, skill and confidence: the greater the experience, the lower the increase in knowledge, skill and confidence. The means that newer or less experienced teachers experience a greater increase in knowledge, skill and confidence.

Females have experienced a greater increase in confidence tailing financial education to students' needs and characteristic. The relationship is positive because of the dummy coding applied (Males=1 and Females =2).

Finding the learning useful, finding the resources useful, feeling more equipped, finding the professional learning easy to access and gaining new knowledge are positively related to increases in some aspects of knowledge, skill or confidence.

Appendix 10 – Difference between primary and secondary school teachers

a) Change in knowledge: Primary versus secondary

	Sig. (p value)*	Sig. (p value)*	Sig. (p value)*
How knowledgeable do you feel	Difference between primary and secondary at pre	Difference between primary and secondary at post	Difference in difference between primary and secondary
To teach a range of financial concepts and topics	.030	.434	.007
To define what financial capability looks like	.031	.284	.017
To implement (or extend) financial education in the curriculum	.070	.042	.001

b) Change in skill: Primary versus secondary

	Sig. (p value)*	Sig. (p value)*	Sig. (p value)*
How skilled do you feel	Difference between primary and secondary at pre	Difference between primary and secondary at post	Difference in difference between primary and secondary
To deliver financial education to young people	.020	.834	.022
To assess young people s progression in financial education	.005	.389	.002
To use tools and resources to develop/deliver financial education	.013	.845	.022

c) Change in confidence: Primary versus secondary

How confident do you feel	Sig. (p value)* Difference between primary and secondary at pre	Sig. (p value)* Difference between primary and secondary at post	Sig. (p value)* Difference in difference between primary and secondary
To plan quality financial education lessons for young people	.030	.179	.003
To deliver financial education to young people	.024	.399	.013
To tailor financial education to young people s needs	.002	.356	.002
To assess the effectiveness of financial education	.032	.222	.010
To promote ideas for best practice within schools	.170	.276	.063

^{*}p-values < .05 indicate statistical significance at the 95% confidence level

Appendix 11 – Cluster analysis

Key differences in cluster attributes

Attribute	Clusters (means)		
	Cluster 1 (n 89)	Cluster 2 (n 11	
For how many years have you been teaching/supporting teaching? Length of teaching experience	17 years	28 years	
For how many years have you been teaching/supporting the delivery of financial education?	4 years	26 years	
The course overcame barriers to CPD training/professional learning	4 (agree)	3 (neither agree nor disagree)	

Cluster differences in knowledge, skill and confidence

Difference in Difference Result	Cluster Differences	Sig.
	(Cluster 1 Cluster 2)	
To plan quality financial education lessons for young people	0.94	0.004
To use tools and resources to develop and/or deliver financial education for young people	1.13	0.108
To deliver financial education to young people	0.9	0.002
To tailor financial education to young people s characteristics and needs	0.79	0.010
To assess and evaluate the effectiveness of financial education for young people	0.83	0.027
To promote ideas for best practice delivery and support within school	0.73	0.020
To teach a range of financial concepts and topics to young people	0.61	0.011
To define what financial capability looks like for young people	0.84	0.064
To implement (or extend) financial education in the curriculum within my setting	0.53	0.011
To deliver financial education to young people	0.64	0.110
To assess young people s progression in financial education	0.56	0.058
It is important to teach financial education	0.34	0.105
I am inspired to teach financial education	0.03	0.911
It is important that professional learning in financial education is available	0.27	0.232
There are sufficient opportunities for professional learning	0.09	0.847

Appendix 12 – Stakeholder sample

The table shows the stakeholders who were included in the interviews.

Participant	Role/Position
P1	Head of Professional Learning and Leadership, Welsh Government
P2	REC Stakeholder
P3	REC Stakeholder
P4	Young Enterprise Trainer
P5	Money and Pensions Service
P6	Head of Programmes and Services, Young Enterprise
P7	Wales Pathfinder Project Manager, Young Enterprise