EDUCATION & TRAINING FOUNDATION

APPRENTICESHIP WORKFORCE DEVELOPMENT: FINAL PROJECT OVERVIEW

The Impact of Contextualising Functional Skills Maths in Early Years Collaborative Project

Created by:
NCFE In partnership with Greater Manchester Learning Provider Network

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The impact of Contextualising Functional Skills Maths in Early Years

Please note your project overview should highlight the benefits of your Apprenticeship Workforce Development (AWD) project to others, who are working to improve the quality of their apprenticeship delivery. It should include the impact on others which may include your organisation/s, employer partners, stakeholders, and apprentices.

Project Overview: The problem and why this project is important

Briefly describe what your project is all about. Please include why you felt it was important to do an AWD Collaborative Project. What key issues or challenges were you aiming to address that would support quality improvement in your apprenticeship delivery? Tell the reader about the specific objectives and why they mattered. Use simple, relatable terms.

NCFE in partnership with the Greater Manchester Learning Provider Network (GMLPN) have embarked on a groundbreaking research project to understand how to support early years apprentices in achieving their Functional Skills (FS) Maths qualification. The project is investigating the impact of using contextualised resources and assessment papers as part of the FS Maths Level 2 delivery within the early years apprenticeship sector.

The pilot project, commissioned as part of the Apprenticeship Workforce Development Project, funded by the Department for Education, is a response to Ofqual's review of the reformed Functional Skills qualifications[1] that raised concerns around the declining pass rates linked to the perceived difficulty of the qualification. It further aligns with the Association of Employment and Learning Providers (AELP) 'Spelling it out, making it count'[2], which advocates for the integration of real-world contextualised scenarios to enhance learner motivation and skill acquisition.

The initiative gains further significance against the backdrop of the Greater Manchester Combined Authority's (GMCA) Education Skills Intelligence report[3], which highlights the

[1] Ofqual, 2024, A review of the assessment of reformed Functional Skills qualifications in English and maths
[2] AELP, 2024, Spelling it out, making it count
[3] Greater Manchester Combined Authority, 2022, Industry Labour Market and Skills Intelligence Report

difficulty early years settings face in recruiting staff, exacerbated by skills gaps within their teams.

Moreover, recent changes to the Early Years Foundation Stage (EYFS) statutory framework[4] have underscored the importance of FS Maths Level 2 qualifications for apprenticeship completion, further emphasising the necessity of this project in addressing industry needs.

The project has been supported by four apprenticeship training providers delivering early years apprenticeship and Level 2 FS Maths in the northwest including DH Associates, Kids Planet Day Nurseries, Rochdale Training Associate and Salford City College. We have worked with other providers across England to gain a further understanding of the challenges they face. Through a combined effort, it is hoped this project can bridge skills gaps, empower apprentices, and foster workforce development in the early years sector and beyond.

Project Activities: Making it Happen

Walk the reader through the steps taken in your project. What were the key activities? How did the partner organisations work together to deliver the project?

Stage One of the project involved undertaking desktop research to understand the current landscape of the Early Years sector and the challenges with FS Maths for learners, employers, and Training Providers.

To further scope out and understand the landscape, we have surveyed:

- Early Years Apprentices
- Early Years Employers
- Early Years Training Providers
- Apprenticeship Training Providers – who do not deliver Early Years.

Additionally, we facilitated four Provider focus group webinar welcoming over 30 attendees in total. These focus groups have looked at challenges and potential solutions that would benefit their FS Maths delivery. The findings of this research are detailed in a report that was developed as part of the project.

Stage Two of the project used AI to design contextualised maths questions for apprentices to complete. This utilised NCFE's internally developed AI tool 'The Assistant" which has been trained using past papers. An Early Years Subject Specialist was consulted to determine what contexts would be relevant for apprentices. The contextualisation questions were also checked and validated by a maths subject matter expert. The contextualised questions were then merged with non-contextualised maths questions, covering the same Level 2 subject content statements, to determine the impact of contextualisation.

GMLPN have provided the Early Years Training Providers involved in the programme with licenses to use TeacherMatic – an AI tool which supports the development of teaching resources. This has helped teachers and tutors to develop resources that are contextualised for their learners.

[4] Department for Education, 2024, Early years foundation stage (EYFS) statutory framework

Project Timeline:

April 2024	Project inception and scoping
April – June 2024	Desktop research
May 2024	Surveys
May – June 2024	Focus groups
June – August 2024	AI (“The Assistant”) used to develop contextualised assessments
June – August 2024	Analysis
July – August 2024	AI (“TeacherMatic”) used to develop contextualised teaching resources
August 2024	Participants undertake baseline assessment
August – September 2024	Participants experience contextualised learning
August – September 2024	Participants undertake final assessment
September 2024	Publication of research report

Overcoming challenges

Share challenges faced along the way. What unexpected hurdles arose? How did the team adapt?

The timing of the project has presented the biggest challenge. Delivery of a project over summer has meant that learners have been away from role and staff have been on holiday, which has made it much more difficult to get timely results.

Additionally, the delay in the project being announced has exacerbated this problem as we would have been able to make progress quicker.

One of the timing challenges was relate to summer holidays and associated leave. Participants were on annual leave or were covering other colleagues at their early years setting who were on leave during his period which limited their availability to participate in maths lessons. Therefore, we extended deadlines for providers in order to give them the time required to teach and assess the participants, but this has impacted on our reporting timescales at the end of the project. Furthermore, we lost six learners who participated in the baseline assessment but were unable to complete the final assessment.

We recommend future tenders consider the impact of project delivery over the summer months and whether projects could be extended to eight to nine months or whether the tender process takes place in the autumn and delivery between January and June.

Project Outputs/Resources

Please list your project outputs/resources and the purpose of each one, i.e. how they can be used by other providers.

We have developed a report on the state of Functional Skills Maths in the Early Years sector, which has been informed by focus groups with Early Years Training Providers and surveys to Providers, Employers and Apprentices. This report details ongoing challenges and makes a series of recommendations on how FS Maths can be improved to ensure the sustainability of Apprenticeships.

NCFE have developed two different maths assessments and marking schemes to support the

project, but these cannot be shared outside of the project due to intellectual property restrictions. A baseline and final assessment were created to analyse comparison of performance and distance travelled. The assessments were developed utilising NCFE's AI tool 'The Assistant' that has been trained using past papers to ensure the questions produced align to subject content statements and appropriate levelling for a Level 2 FS Maths paper. Both assessments were structured the same with 40 marks available consisting of two sections (Section A – non-calculator section and Section B – calculator section). The assessments were contextualised through the input of appropriate scenarios and consisted of both contextualised and non-contextualised questions and a marking scheme was produced to enable the four partners providers to score each apprentice.

Several resources have been developed by the Training Providers involved in the project to support the delivery of contextualised maths in Early Years including teaching resources by Rochdale Training, Kids Planet Day Nurseries, Salford City College and DH Associates.

We have developed a 'Tips on contextualising resources using AI' resource to support teachers and tutors who are new to using AI. This includes generic information but also provides examples of contextualised maths for ten common apprenticeships.

The Results: Impact on Real Lives

Tell the story of the project's success. Who was impacted, and how? Include reference to positive impact on your organisation/s, employer partners, stakeholders, and apprentices.

Include measurable outcomes (e.g., quantitative data), testimonials and quotes from people who were positively impacted by the work. Use this as an opportunity to highlight area/s of the project which have gone really well, something that wouldn't have happened without this funding.

66% apprentices who responded to our survey indicated that contextualised maths delivery would really help them to engage with maths and achieve their qualifications. One learner who participated in the contextualised learning and assessments stated, *"I did find it easier to answer questions relevant to my job as it created less anxiety and confusion. Often the scenarios that are given can be hard to grasp. When you are able to relate something to your own life it enables you to have a better understanding of the question, as you can visualise it. Using questions that are relevant also allows that skill to stay embedded as it is applicable to you."*

Training Provider delivery staff have told us that using TeacherMatic to develop resources has saved them a lot of time and has been a brilliant and effective tool.

> *"Using AI helps to save time as there can be some good ideas suggested which can then be tweaked to support the sessions. Teachermatic in particular allows for differentiation to support learners with differing needs."*
>
> *"While the AI occasionally provided incorrect answers, it consistently offered valuable examples and ideas, helping tutors introduce new perspectives and increase the complexity of tasks to challenge apprentices effectively."*

The project has also fostered greater collaboration amongst the participating providers who have shared their best practice and helped each other with challenges.

Looking Forward: What's Next?

How will you sustain any positive impact, or what will you do differently and in the future because of your learning and insights from the project. How will you continue to collaborate as a group following the end of this project?

Stage Two of the project offers a research concept that with a few tweaks could be applied across a wider geographical area, additional sectors and involving more providers and apprentices. This would provide a greater sample size.

NCFE and GMLPN have a long-established relationship and will continue to work in partnership to support providers and learners in their delivery and assessment of FS Maths.

GMLPN are delivering the Multiply Provider Support Programme, funded by Greater Manchester Combined Authority, to Training Providers delivering Maths in Greater Manchester. We will build upon the feedback and learning from this project within that project and run support events based on contextualisation and using AI.

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