

The State of Functional Skills Maths in Early Years

**Developed as part of an Apprenticeship Workforce Development
Collaborative Project**

NCFE

In partnership with Greater Manchester Learning Provider Network

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BACKGROUND

Project Background

NCFE, in partnership with the Greater Manchester Learning Provider Network (GMLPN) have embarked on a groundbreaking research project to support early years apprentices in achieving their Functional Skills (FS) Maths qualification. The project is investigating the impact of using contextualised teaching 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 qualifications¹ 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 report³, which highlights the 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 framework⁴ 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 Methodology

We have undertaken desktop research to understand the current landscape of the Early Years sector

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](#)

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

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 have completed four Provider focus group meetings welcoming over 30 attendees in total. These focus groups have looked at challenges and potential solutions that would benefit their FS Maths delivery.

CHALLENGES WITH FUNCTIONAL SKILLS MATHS

AELP report that ‘the difficulty of functional skills qualifications is largely unchanged as a result of the reforms in 2019, and yet pass rates have fallen since 2019⁵, suggesting that there are a number of challenges at play outside of the assessment. AELP highlighted that L2 FS Maths pass rates had dropped from 74% in 2018-19 to 64% in 2021-22.

Challenges with FS Maths are causing apprentices to drop-out of their programme, which is damaging Training Provider’s achievement rates and fueling staffing shortages within the Early Years sector. This is supported by research by AELP in 2023 which revealed ‘many apprentices’ failure to complete programmes due to unmet English and maths requirements’⁶.

Challenges with FS Maths funding are having a negative impact on apprenticeship starts, with FE Week reporting in February 2024 that ‘the slump in starts for November 2023 is likely to have been caused by the DfE’s announcement on October 31 that new funding rates for English and maths functional skills courses would be brought forward to begin from January 2024’⁷.

Challenges for Apprentices

Thirty-two apprentices responded to our survey, representing nine different training providers and eight regions across England.

66% of apprentices reported that they thought FS Maths would be easier to understand and pass the assessment if the teaching was contextualised.

Apprentices were asked what could be done to make it easier for them to achieve FS Maths in their apprenticeship. The most common answers were:

1. Simplify the exam questions – especially problem-solving questions
2. Making maths questions and teaching relevant to their workplace
3. Remove maths requirements from the apprenticeship.

Problem solving questions were raised several times in our focus groups as being a barrier for apprentices who struggle to understand what is being asked of them. This is particularly an issue for learners with English as a second language (ESOL) or for learners with special education needs and disabilities (SEND) who may have significant problems understanding wording that is not clear.

Ofqual have found that there are issues with FS Maths problem-solving questions⁸ and have noticed that how questions were set might have made them harder to understand. Ofqual is now researching how to improve how problem-solving questions are assessed in maths.

⁵ AELP, 2024, [Spelling it out, making it count](#)

⁶ AELP, 2024, [Reevaluating Functional Skills Qualifications: Addressing Challenges and Exploring Solutions](#)

⁷ FE Week, 2024, [Apprenticeship starts dip 12% after functional skills rate announcement](#)

⁸ Ofqual, 2024, [A review of the assessment of reformed Functional Skills qualifications in English and maths](#)

Several providers have raised concerns about FS Maths requirements having a negative impact on apprentices' motivation and mental health, with some apprentices dropping out of their programme due to difficulties with maths.

Apprentices feel that extra tutoring sessions or more time off-the-job would help them to achieve their FS Maths, but we note that there are already challenges with tutoring and off-the-job requirements and therefore additional maths sessions could exacerbate existing problems unless something changes.

There is large support for contextualising maths both within teaching and the exam with over two thirds of respondents suggesting that this would have a positive impact on their ability to achieve FS Maths. A third of respondents feel that FS Maths during their apprenticeship is more difficult than the maths that they learnt at school, but the majority held the opinion that the level of difficulty is the same.

It is worth noting that there is a disparity between apprenticeship FS Maths requirements and T Levels which require the learner to be 'working towards' their qualification. If this rule were the same for apprenticeships, it would no doubt make it easier for apprentices to achieve and this is something we would encourage.

Challenges for Employers

Sixteen employers responded to the survey identifying the challenges they are facing. One of the employers represents a large national nursery chain with thousands of staff and the rest were more local, smaller organisations. Eight different regions of England are covered by the operations of the sixteen employers.

Responses from employers were mixed when asked how important FS Maths is for early years apprentices. Half of the respondents felt that FS Maths is not important for their apprentices, and half saw the importance in the qualification. It is interesting to see how there is little consensus on the value of FS Maths.

Off-the-job training was listed as the key challenge by most employers. Employers are not always able to release apprentices for their off-the-job training requirements due to staffing issues such as sickness, holidays etc.

This reflects feedback from our Provider focus groups which frequently noted that securing off-the-job training for apprentices to study was a significant barrier to the achievement of their apprenticeship. This problem is exacerbated by the fact that FS Maths is not currently counted as part of off-the-job training hours. Because of this, apprentices are having to catch up on their maths lessons in evenings and weekends which can lead to a loss of motivation for the apprentice.

AELP agree that 'Apprentices and employers face challenges balancing Functional Skills training with other commitments due to their exclusion from off-the-job training rules'⁹, this could be resolved by allowing FS Maths training to count for off-the-job training requirements.

Focus group attendees raised the point that FS Maths not being required in the EYFS statutory framework¹⁰ but being required in an apprenticeship has caused a lot of confusion for employers who now believe that maths is not as important as it once was.

We asked the employers if they are more likely to recruit someone with an existing maths GCSE to remove the need for FS Maths to be delivered as part of the apprenticeship and the majority said they would. This is concerning as it risks removing an access route for would-be apprentices to enter the sector which Ofsted have found is already struggling with staff recruitment and retention¹¹.

⁹ AELP, 2024, [Spelling it out, making it count](#)

¹⁰ Department for Education, 2024, [Early years foundation stage \(EYFS\) statutory framework](#)

¹¹ Early Years Alliance, 2023, [Ongoing early years staffing challenge highlighted in Ofsted's annual report](#)

Many employers support moving towards a contextualised model of maths that is relevant to workplace skills and needs. The Greater Manchester Local Skills Improvement Plan research found that ‘Employers are concerned that without a focus on how (maths) skills are to be applied in the workplace relevant to job roles and career pathways, then the situation will not improve sufficiently, and the problems will persist’¹².

Challenges for Apprenticeship Providers

We surveyed ten Training Providers operating in England who are delivering apprenticeship standards across the following sectors: Health and Science, Business and Administration, Care Services, Catering and Hospitality, Construction and the Built Environment, Creative and Design, Digital, Education and Early Years, Engineering and Manufacturing, Hair and Beauty, Legal, Finance and Accounting, Protective Services, Sales, Marketing and Procurement and Transport and Logistics.

We asked the Training Providers to identify the top three challenges with delivering FS Maths and they stated:

1. The time it takes to deliver FS Maths
2. FS Maths assessment - especially problem-solving questions
3. Barriers to learning – apprentice’s motivation/previous bad experiences with maths.

All these challenges were reflected in focus group feedback and have cropped up repeatedly in discussions with wider stakeholders.

Respondents asked for there to be a review of the current FS Maths assessment – once again highlighting that the wording of problem-solving questions was causing particular problems. Additionally, the Training Providers also felt that allowing maths training time to count towards off-the-job training requirements for the apprenticeship would ease a lot of the issues and help apprentices manage their workload and motivation better.

Training Providers are keen to see what Ofsted can do to help them improve their maths and English delivery. Ofsted’s Annual Report 2022/2023¹³ found that in weaker Training Providers ‘English and mathematics training is not linked closely enough to relevant industry needs, instead tending to focus on achievement of functional skills qualifications’, which is something that increased contextualisation could help with. All survey respondents felt that contextualisation of maths would help with their delivery and achievement rates.

Several Training Providers are concerned that the situation with FS Maths will encourage apprentices to drop-out of their programme, which will further add to the growing NEET (not in education, employment or training) numbers which are already worrying¹⁴. This will also risk further exacerbating existing staff recruitment and retention difficulties in the Early Years sector.

There is widespread concern over the cost of delivering FS Maths, with several Training Providers claiming that current funding makes their delivery unsustainable. AELP analysis¹⁵ indicates that FS Maths costs £763 to deliver but is funded at £724 each – meaning Training Providers are making a loss. A resit on average adds a further £35, with no extra funding accessible.

It is worth noting that the Training Providers who responded to the survey find that there are no differences in the challenges faced across the different regions of England. Some have found that FS Maths is particularly difficult for Construction apprentices.

Challenges for Apprenticeship Providers - Early Years Sector Specific

¹² Greater Manchester Chamber of Commerce, 2023, [Local Skills Improvement Plan](#)

¹³ Ofsted, 2023, [The Annual Report of His Majesty’s Chief Inspector of Education, Children’s Services and Skills 2022/23](#)

¹⁴ ONS (as cited in FE News), 2024, [Young people not in education, employment or training \(NEET\) – Sector Reaction](#)

¹⁵ AELP, 2024, [Spelling it out, making it count](#)

We surveyed ten different Early Years Training Providers operating across all regions in England to understand their experiences with FS Maths. The survey findings are also supplemented by the discussions we had with focus group attendees to gain more insight.

We asked the respondents to list the top three challenges they face when it comes to delivering FS Maths:

1. Attitude/Negativity/Confidence/Lack of engagement
2. Time
3. Low starting points.

The vast majority found that apprentices have had previously negative experiences of maths at school and have a resistance to engaging with their FS Maths because of their low confidence and negativity. Some apprentices do not see the value in FS Maths and convincing them to take it seriously and commit to the learning hours needed can be a challenge. This is exacerbated by the fact that maths learning does not count for off-the-job training and is seen as an additional burden by some apprentices.

There are issues with off-the-job training in the Early Years sector, as getting apprentices released for their time can be especially difficult. Training Providers cite staffing issues, sickness and child ratios as the factors fueling this problem. The nature of the Early Years sector can mean that Training Providers are training apprentices across multiple small childcare employers across a large geographical area, and this can make it more difficult to get apprentices into the centre for face-to-face maths lessons at a convenient time.

Respondents claim that early years employers might not always value or understand the FS Maths requirements for apprentices, and that recent changes to the EYFS have left employers confused about what apprentices need to do. Focus group attendees stressed how important it is to convey this information to employers and apprentices during the onboarding process to ensure effective buy-in.

The Early Years Training Providers that also deliver apprenticeship standards in other sectors reported that motivation is lower for Early Years apprentices, perhaps because of the pressures of their workplace and difficulties getting the off-the-job training time consistently.

Several Providers also reported that there are a higher proportion of ESOL in the Early Years sector, which causes issues with the wording of questions in assessments which are already perceived to be unclear.

There are also concerns that some SEND learners struggle with overly complicated multi-part questions. Providers are unsure on how the new funding rules will impact on SEND learners, but they note that the removal of the eight-week period in which evidence of need had to be gathered and provided has been very beneficial for getting SEND learners appropriate support and exclusions.

We asked whether contextualising learning and assessment to an apprentice's job would increase chances of passing FS Maths and there was moderate support for the measure. Focus group attendees especially felt that contextualisation in teaching would help make maths more relatable and accessible for apprentices, which could help increase motivation.

Some concerns were raised about contextualisation including the time it would take to change teaching and learning resources and whether it would equip apprentices with relevant skills for life e.g., budgeting. A few Training Providers stressed that contextualising teaching is only valuable if the assessment is also contextualised, as apprentices would not be well prepared for their assessments otherwise.

Several individuals questioned whether relevant maths and English skills could be embedded into each apprenticeship standard to simplify the process.

There was a small proportion of Early Years Providers who wished to see the FS Maths requirements removed all together to help increase achievement rates and support employers with staffing issues.

FUNCTIONAL SKILLS ENGLISH (FSE)

Some of the top awarding organisations for Functional Skills; City & Guilds¹⁶, Pearson¹⁷ and NCFE¹⁸, report higher pass rates for FSE than FS Maths across both Level 1 and Level 2.

Awarding Organisation	L2 Maths Pass Rate 2022/23	L2 Reading Pass Rate 2022/23	L2 Writing Pass Rate 2022/23
City & Guilds	45%	73%	84%
Pearson	37%	63%	56%
NCFE	44%	58%	72%

The majority of Training Providers that we have spoken to have stated that FS English is not as challenging as maths is for their Early Years apprentices. Some Training Providers have found that apprentices do not have the same aversion to FSE as they do with FS Maths, partly because they understand and value how English skills are directly relevant to their job roles.

Some focus group attendees considered that the level of English that apprentices already have when they come to their Training Provider is usually higher than their maths ability due to better teaching at school level.

CONTEXTUALISATION

Potential Benefits of Contextualisation of Maths

Many stakeholders and participants in this research project have claimed that the issue with Functional Skills is that it 'isn't functional' and is not closely related enough to skills that apprentices need to succeed in their job roles.

Empowering apprentices by giving them teaching and assessments contextualised on what they are succeeding at in their day-to-day job roles may help to increase apprenticeship achievements and starts. Given the declining pass rates and lack of engagement by employers and apprentices in FS Maths, it is imperative that something needs to change.

One of the biggest barriers for FS Maths achievement that has been consistently raised during this research is the attitude of apprentices who are not passionate about maths and have had previous negative experiences – such as when in school, or any assessments they have not passed. If contextualising maths to a workplace situation they are passionate and engaged in can help these apprentices to see the value of maths then this could help tackle a major boundary to their achievement.

Making maths contextual to the workplace will help employers to see the value of maths and show them how they can directly benefit from upskilling their staff by improving their maths capabilities. Encouraging buy-in of FS Maths at all levels is crucial in helping ease all the challenges this report has detailed. There has been some industry support for contextualising maths in the apprenticeships sector, in particular Sharon Blyfield, Head of Early Careers at Coca-Cola Europacific Partners has argued that 'there could be great benefit in... contextualising Maths in particular to align it to the apprenticeship sector that the candidate is undertaking' and highlighting how this could help widen participation in apprenticeship programmes.¹⁹

Potential Risks of Contextualisation of Maths

Several Training Providers raised concerns that maths tutors would need additional training if maths delivery and assessment were contextualised, to be able to deliver the new approach. Time would also be needed to develop new resources for learners that were contextual to their job roles.

¹⁶ City & Guilds, 2023, [Functional Skills Level 1 and Level 2 Mathematics and English Pass rates 2022-23](#)

¹⁷ Pearson, 2023, [Functional Skills Pass Rates 2022/23](#)

¹⁸ NCFE, 2023, [Functional Skills pass rates 2022-23](#)

¹⁹ FE News, 2024, [Breaking down barriers in the Early Careers space](#)

This could be a big challenge for providers operating across many different sectors and standards who would need to develop different resources for each potential job-role and subsequent context. Changes would also need to be explained to employers who would need support to understand and implement. There may be specific issues created for SEND learners who may struggle to picture different scenarios, for example it can be a challenge for autistic individuals²⁰ to imagine different scenarios than they have experienced directly. Ex-justice minister Sir Robert Buckland has called for autistic individuals without difficult Education, Health and Care Plans (EHCP) to be exempted from functional skills requirements, which would help mitigate this risk²¹.

Several respondents have raised the point that maths skills are needed for life and not just passing an exam, and they worry that contextualisation of maths into a job role might make maths skills that are developed be too myopic to be of use in wider life situations.

RECOMMENDATIONS

Whilst the recent changes to Functional Skills maths requirements are welcomed, 16-18 learners are still impacted by the need to achieve Functional Skills in order to compete their apprenticeship. Therefore, still not a level playing field with T levels. Based on the findings from our research, we believe that the following changes to FS Maths should be considered to benefit learners, employers and Training Providers:

- DfE should consider whether learners on T Levels should be required to pass L2 maths, at either GCSE or Functional Skills qualifications, in order to create parity with apprenticeships or, remove the requirement to pass Functional Skills qualifications L2 for all apprentices at level 3 and above irrespective of their age in order to create parity between the T level and apprenticeship routes at post-16.
- DfE and ETF should consider expanding the testing across other sectors and involve more learners and providers in order to assess the results across a larger sample size and identify nuances between sectors and geographical areas.
- DfE should consider a reduction in the level of maths required for example, currently needing FS Maths Level 2 to pass a Level 3 apprenticeship – is it viable for apprentices to only need FS Maths Level 1 instead to achieve their Level 3 Early Years apprenticeship?
- DfE should consider the contextualisation of learning and assessment with FSQ maths, and in partnership with IfATE consider alignment of maths to apprenticeship standards.
- DfE should consider capturing data that identifies whether a learner's non-completion of FS maths is a single cause or one of multiple causes for non-completion of the apprenticeship.
- Ofqual should consider greater contextualisation in assessment questions.
- We encourage Ofqual to review the use of problem-solving questions within assessment and consider the relevance of subject content to apprentices within different sectors.
- We encourage Ofsted to work alongside Training Providers to help support their achievements in Functional Skills.
- We would recommend a longer timeline, perhaps over several years, in order to properly establish impact.

We acknowledge that our sample size is small however our project has provided the base for the research that we hope will be taken forwards and conducted on a larger scale in the future.

²⁰ Cambian, 2024, [Social Imagination Difficulties](#)

²¹ FE Week, 2024, [Relax functional skills rules for autistic apprentices, says ex-minister](#)

Thank You

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