



Department
for Education

Multiply programme evaluation

Research report

May 2026

**Peter Matthews, Henry Faulkner-Ellis,
Fred Merttens, Priya Menon,
Imran Tahir, Christine Farquharson,
Luke Sibieta**



Government
Social Research

Contents

Contents	2
List of figures	4
List of tables	9
Glossary of terms	11
Executive summary	16
Introduction	16
Key findings	16
Assessment of Multiply against the evaluation criteria	19
Recommendations	30
Structure of this report	31
1. Methodology	34
1.1 Qualitative strands	34
1.2 Quantitative survey strands	36
1.3 Administrative data sources	39
1.4 Statistical comparisons between Multiply learners and other learners	39
1.5 Data limitations	40
1.6 Reporting conventions	42
2. Overview of the Multiply programme	43
Chapter summary	43
2.1 The Multiply programme	45
2.2 Multiply in numbers	54
2.3 The profile of Multiply learners	63
2.4 Recruitment of learners for Multiply	73
2.5 Understanding the target population for Multiply	82
3. What impact did Multiply have on learners, employers, practitioners and providers?	91
Chapter summary	91
3.1 Self-reported impact on confidence and attitudes towards learning and numeracy	94
3.2 Impacts on progression and employment	106
3.3 Impacts on confidence and progression: perceptions of local areas, learning providers and practitioners	114

3.4	Impacts on vulnerable and hard-to-reach groups	118
3.5	Impacts on employers, practitioners and providers	130
4.	How did learners and other stakeholders experience Multiply?	138
	Chapter summary	138
4.1	Satisfaction with Multiply	140
4.2	Comparing Multiply and adult education maths and numeracy courses	171
4.3	Experiences of learners who did not complete their Multiply course	173
4.4	Experience of Multiply in prisons	178
5.	How was Multiply designed and delivered?	189
	Chapter summary	189
5.1	Local-level design and focus	191
5.2	Innovation	208
5.3	Implementation of Multiply	218
5.4	Alignment with broader policy priorities	231
6.	How efficiently were resources used?	238
	Chapter Summary	238
6.1	Cost effectiveness	239
6.2	Sustainability and implications for future policy	244
	Appendices	249
	Appendix A: Qualitative workstreams	249
	Appendix B: Quantitative workstreams	261
	Appendix C: Impact analysis methods	287
	Appendix D: Data limitations	289
	Appendix E: Learning aims	299
	Appendix F: Multiply programme costs in England	315
	Appendix G: Research questions	318
	Appendix H: Theory of change	324
	Appendix I: References	331

List of figures

Figure 1: Description of the Multiply programme Theory of Change	49
Figure 2: Total number of publicly funded numeracy course enrolments, 2019/20 to 2024/25 (academic years)	56
Figure 3: Mean course length in days across 2022/23-2024/25 academic years	57
Figure 4: Total Multiply enrolments, by course number of hours and academic year	58
Figure 5: Total Multiply enrolments, by course type and academic year	59
Figure 6: Completions, completed qualifications and non-completion rates, Multiply and AEB by academic year	61
Figure 7: Difference in drop-out rates between Multiply learners and matched Community Learning learners	63
Figure 8: Multiply learners, by sex, ethnicity and age group	65
Figure 9: Multiply, Community Learning and AEB Numeracy learners by IMD quintile	67
Figure 10: Working age Multiply learners and non-learners, by employment status prior to Multiply	68
Figure 11: Sector of employment for Multiply learners currently in paid work	69
Figure 12: Activity of Multiply learners not currently in paid work	70
Figure 13: Proportion of Multiply learners that have a formal qualification, by type and level of qualification	71
Figure 14: Hard-to-reach groups among Multiply learners and non-learners	73
Figure 15: Sources of hearing about courses	75
Figure 16: Outreach events attended	77
Figure 17: Reasons for taking a course	80
Figure 18: Main reasons for taking a course	81
Figure 19: Level of interest amongst non-learners in doing further learning	83
Figure 20: Interest in taking a course like Multiply	84
Figure 21: Confidence across everyday activities that involved numbers	85

Figure 22: Perceptions of how confidence with numbers affects job opportunities	88
Figure 23: Barriers for learners and non-learners to doing further maths learning	90
Figure 24: Confidence working with numbers in everyday life prior to Multiply	95
Figure 25: Confidence with selected everyday activities prior to Multiply	96
Figure 26: How lack of confidence working with numbers at work affected a learner's job	97
Figure 27: How much Multiply helped confidence with everyday activities	98
Figure 28: Multiply influence on interest in doing more learning and getting more qualifications	99
Figure 29: Impact of Multiply on wellbeing and employment opportunities	100
Figure 30: Reasons why Multiply did not impact wellbeing and employment opportunities	102
Figure 31: Difference between Multiply and AEB (qualification) learners for self-reported impacts on confidence	104
Figure 32: Difference between Multiply and AEB (qualification) learners for self-reported impacts on wellbeing and employment outcomes	106
Figure 33: Differences between Multiply Community Learning and AEB learners AEB (qualification) learners in progressing onto another learning aim	107
Figure 34: Difference in progression rates between Multiply learners and matched Community Learning learners	109
Figure 35: Learners' actual or intended progression to further study following Multiply	110
Figure 36: Learners' progression to other courses following Multiply, by course type and ethnicity	112
Figure 37: Learners' actual or intended progression to other courses following Multiply, by course level or qualification	113
Figure 38: Extent to which Multiply influenced decision to go on to further study	114
Figure 39: Main reasons for taking a Multiply course – vulnerable and hard-to-reach groups	120
Figure 40: Learners' actual or intended progression to further study following Multiply – vulnerable and hard-to-reach groups	121

Figure 41: Extent to which Multiply influenced decision to go on to further study – vulnerable and hard-to-reach groups	122
Figure 42: Multiply helped confidence with everyday activities – vulnerable and hard-to-reach groups	123
Figure 43: Multiply influence on interest in doing more learning and getting more qualifications – vulnerable and hard-to-reach groups	126
Figure 44: Net positive impact of Multiply on wellbeing and employment opportunities – vulnerable and hard-to-reach groups	128
Figure 45: Extent to which practitioners regard Multiply as an effective way of improving learners’ numeracy skills, Year 1 and Year 2	132
Figure 46: Provider perceptions about Multiply’s effectiveness	133
Figure 47: Learning from Multiply for future courses	135
Figure 48: Provider activities and impacts made possible by Multiply funding	137
Figure 49: Experience vs. expectations regarding different aspects of Multiply delivery	141
Figure 50: Level of maths covered on the course	142
Figure 51: Learners’ access to and use of different forms of support during their Multiply course	143
Figure 52: How Multiply learners rated the amount of time spent with the teacher	145
Figure 53: Overall learner satisfaction with Multiply	146
Figure 54: Reasons given for being dissatisfied with Multiply	147
Figure 55: Learner satisfaction with different elements of Multiply delivery	148
Figure 56: Likelihood of recommending Multiply	149
Figure 57: Outreach activities participated in – vulnerable and hard-to-reach groups	150
Figure 58: Level of maths covered – vulnerable and hard-to-reach groups	151
Figure 59: Amount of time spent with the teacher – vulnerable and hard-to-reach groups	153
Figure 60: Overall satisfaction with Multiply – vulnerable and hard-to-reach groups	154
Figure 61: Practitioners’ experience vs. expectations regarding different aspects of Multiply delivery, Year 1 and Year 2	156

Figure 62: Multiply ease of delivery amongst practitioners, Year 1 and Year 2	158
Figure 63: Overall satisfaction with Multiply amongst practitioners, Year 1 and Year 2	159
Figure 64: Satisfaction with Multiply amongst practitioners across different aspects of course delivery, Year 2	160
Figure 65: Satisfaction with Multiply amongst practitioners across different aspects of course delivery, Year 1	162
Figure 66: Likelihood of recommending Multiply for practitioners, Year 1	163
Figure 67: Providers' overall experience vs. expectations of Multiply delivery, Year 1	164
Figure 68: Providers' experience vs. expectations across different aspects of Multiply delivery, Year 1	166
Figure 69: Multiply ease of delivery amongst providers, Year 2	167
Figure 70: Overall satisfaction with Multiply amongst providers	167
Figure 71: Satisfaction with Multiply amongst providers across different aspects of course delivery, Year 2	169
Figure 72: Likelihood of recommending Multiply for providers	170
Figure 73: Comparing maths and numeracy courses funded by Multiply and the AEB	172
Figure 74: Proportion of Multiply learners that did not complete their course	174
Figure 75: Reasons given by Multiply learners for not completing their course	176
Figure 76: Local area perceptions related to investment plans	192
Figure 77: Groups involved in developing local investment plans	194
Figure 78: Groups involved in identifying learner needs	197
Figure 79: Local area perceptions of importance of engaging with employers	199
Figure 80: Local area experience of engaging with employers	200
Figure 81: Local area perceptions of ease engaging with employers	201
Figure 82: Learning provider perceptions of ease engaging with employers	201
Figure 83: Types of innovation reported by local areas	209
Figure 84: Local area perceptions of innovation in delivery	210

Figure 85: Types of innovation reported by practitioners	211
Figure 86: Types of innovation reported by learning providers	212
Figure 87: Provider perceptions of the success of tailored support	213
Figure 88: Local area perceptions of ease in different aspects of delivering Multiply	219
Figure 89: Local area expectations and satisfaction with DfE	228
Figure 90: Local area perceptions of support and guidance provided by DfE	229
Figure 91: Learning provider perceptions of communication with DfE	229
Figure 92: Learning provider comparisons of Multiply and AEB	233
Figure 93: Local area comparisons of Multiply against AEB	235
Figure 94: Allocated and spent funding for Multiply in England, by financial year (cash terms)	241
Figure 95: Number of Multiply Investment Areas spending different shares of their allocation, by financial year and overall	242
Figure 96: Share of allocated funding spent, by type of authority and financial year	243
Figure 97: Data matching rate for Multiply learners	291
Figure 98: Data matching rate for Community Learning learners	291

List of tables

Table 1: Selection criteria for local area case studies	251
Table 2: Local areas included in in the wave 1 and wave 2 fieldwork.....	252
Table 3: Achieved sample for first round of stakeholder interviews (February-June 2023)	255
Table 4: Achieved sample for second round of stakeholder interviews (April-May 2025)	256
Table 5: Multiply learners survey waves	262
Table 6: Multiply learners survey weighting	264
Table 7: AEB (qualification) learners survey response rate	267
Table 8: Multiply population profile compared to the rake weighted profile.....	269
Table 9: Multiply population profile compared to the trimmed rake weighted profile	271
Table 10: Non-learners survey response rate.....	274
Table 11: Learning providers year 1 survey response rate	275
Table 12: Population count vs. unweighted profile of completes	276
Table 13: Weighted profile vs population profile	277
Table 14: Learning providers year 2 survey response rate.....	279
Table 15: Population count vs. unweighted profile of completes	280
Table 16: Weighted profile vs population profile	281
Table 17: Practitioners year 1 survey response rate.....	283
Table 18: Practitioners year 2 survey response rate.....	284
Table 19: Local areas year 1 survey response rate	285
Table 20: Local areas year 2 survey response rate	285
Table 21: Employers survey response rate.....	286
Table 22: Data matching rates for Multiply and Community learners.....	290
Table 23: Summary statistics across different samples of Multiply learners	292

Table 24: Summary statistics across different samples of Community Learning learners	293
Table 25: Balance in matching variables for Multiply and Community Learning learner groups before and after matching	295
Table 26: Learning aims for AEB courses.....	299
Table 27: Learning aims for Community Learning courses.....	304
Table 28: Local allocations (grants to local areas).....	315
Table 29: Remaining activity strands	316
Table 30: Programme evaluation theory of change	324

Glossary of terms

Accredited courses: Courses that, upon successful completion, result in a formal qualification.

Administrative data: Information collected primarily for administrative (not research) purposes by organisations such as government departments or schools. Administrative data is often used in research to analyse trends or outcomes.

Adult Education Budget (AEB) - now ASF: The AEB provided government funding for skills training for adults aged 19 and over in England. It covered basic English and maths. On 1 August 2024, the government funded Adult Skills Fund replaced the Adult Education Budget.

Adult education provider: An organisation that offers learning, training, and courses to adults aged 19 and over. These can include a wide range of institutions, such as Further Education (FE) colleges, local authority services, independent training providers (ITPs), and voluntary or community organisations.

Baseline: Data collected from participants at the start of a study, prior to any intervention. It serves as a benchmark for measuring change over time, checks that groups are balanced, and improves the precision of the final analysis.

Bias: A systematic error or distortion in data or results that can arise from the way information is collected, analysed, or interpreted, leading to outcomes that do not accurately represent the true situation.

Case study: A detailed, in-depth examination of a particular group, organisation, or event, used in research to explore and illustrate broader principles through close analysis of real-life situations.

Community Learning: Community Learning referred to a range of flexible, non-regulated provision aimed at helping adults gain new skills, build confidence, support wellbeing, and reengage with learning. It was funded through the Adult Education Budget (now called the Adult Skills Fund). This is now referred to as Tailored Learning.

Demographically matched: Refers to a group or sample selected so that its characteristics such as age, gender, ethnicity, or socio-economic status closely resemble those of another group, typically to allow for more accurate comparisons and minimise confounding factors.

Entry Level: Qualifications at entry level provide an introduction to education and can lead to certification of essential skills and knowledge for beginners.

ESOL learners: 'English for Speakers of Other Languages' learners; those taking part in a course for whom English is not their first language.

Foundation Tier Maths GCSE: Maths GCSE entry for grades 1-5.

Functional Skills Qualification (FSQ) Level 1 in Maths: A qualification that focuses on practical mathematical skills needed for everyday life and work. FSQ Level 1 Maths is usually targeted at individuals who require a more applied or vocational approach to learning maths.

Guided learning hours: The amount of time a tutor is scheduled to be present to provide specific guidance to learners as part of a course of study.

Impact evaluation: An assessment that measures the changes attributable to an intervention or programme, determining the extent to which observed outcomes can be linked directly to the activities undertaken, often using comparison or counterfactual groups to make judgements about causality.

Impacts: The broader, long-term effects of an intervention on participants and their environment, such as improved employment prospects or sustained changes in teaching practices.

Individualised Learner Record (ILR): The ILR is an on-going collection of data about learners from training providers in the Further Education (FE) and Skills sector in England. It was used in the evaluation as a source of administrative data for outcomes such as grades, course completion and progression to further learning.

Key stage: A term used in the education system in England, Wales, and Northern Ireland to describe a specific stage of compulsory schooling, defined by a child's age. Key Stage 1 covers ages 5-7. Key Stage 2 covers ages 7-11. Key Stage 3 covers ages 11-14. Key Stage 4 covers ages 14-16 and concludes with national exams (GCSEs). Key Stage 5 covers ages 16-18

Level 1: Qualifications at level 1 include or are equivalent to GCSE grades 3, 2, or 1 (previously D, E, F or G).

Level 2: Qualifications at level 2 include or are equivalent to GCSE grades 9, 8, 7, 6, 5, or 4 (previously grade A*, A, B, or C).

Local area: The collective term 'Local areas' covers the authorities that commissioned and coordinated Multiply programme delivery in their area. These are the Greater London Authority (GLA), Mayoral Strategic Authorities (MSAs) and upper tier and unitary local authorities outside of these areas. There was a transition from Mayoral Combined Authorities to MSAs as part of the 2025 Devolution Bill, reflecting a broader shift in UK devolution, moving from bespoke arrangements to a uniformed statutory framework.

Maths GCSE: An academic qualification typically taken by students in the UK around the age of 15-16, but which can also be taken by people of all ages. It is graded 1-9 with grades 1-3 a Level 1 qualification and grades 4 and above a Level 2 qualification. The

GCSE serves as an important benchmark for further academic and professional pursuits, often required for entry into further education, vocational qualifications, or employment.

Mayoral Strategic Authorities (MSAs): Regional governance bodies in England that replaces the previous Mayoral Combined Authority model. Led by a directly elected mayor, these authorities coordinate wide-scale economic growth, infrastructure, and public services across a defined geographical area without replacing local councils. There was a transition from Mayoral Combined Authorities to Mayoral Strategic Authorities (MSA) as part of the 2025's Devolution Bill. This reflects a shift in UK devolution, moving from bespoke arrangements to a uniformed statutory framework.

Mixed-mode survey: A survey method that combines multiple ways of collecting responses, such as online, telephone, and face-to-face interviews. Different modes are used to increase reach and improve response rates.

NEET: Someone who is not in education, training or employment.

Outcomes: The specific, measurable results of an intervention that are tracked to evaluate its effectiveness, such as learner pass rates, attendance, and changes in confidence.

Outputs: The immediate, tangible products or services delivered by an intervention as a direct result of its activities. They describe 'what was done' or 'what was produced' rather than the changes that resulted from it. For example, the number of learners who participated in a maths lesson.

Pedagogy: The theory and practice of teaching and learning (for example, the methods, principles, and strategies used by tutors).

Percentage points (ppt): A percentage point is the unit for the absolute arithmetic difference of two percentages. For example, moving from 10% to 12% is an increase of two percentage points.

Propensity Score Matching: A methodology that allows for the creation of a counterfactual group to a group of individuals or areas that have been exposed to a programme, policy or treatment. Individuals or areas that have not been exposed to a programme are matched to individuals or areas that have been exposed to a programme based on key observable characteristics. Comparisons can then be made across these groups to assess causality.

Process evaluation: Examines the implementation of a programme or intervention, focusing on how it was delivered, what was done, and whether it reached its intended audience, often identifying factors impacting its success or failure.

Purposive sampling: A sampling technique where researchers deliberately select participants based on specific characteristics relevant to the study's goals, rather than at random.

Push-to-web: A data collection approach where participants are initially contacted through means such as post and encouraged to complete a survey online.

Qualification-bearing Maths course: This is a Maths course that, upon successful completion, results in a formal qualification.

Qualitative: Relates to research methods that collect non-numerical data, such as text or audio, that can be analysed to gain an in-depth understanding into experiences, behaviours and motivations.

Quantitative: Relates to research methods that collect numerical data, which can be measured and analysed statistically, such as through structured surveys or experiments, to quantify patterns, relationships, or outcomes.

Randomised controlled trial (RCT): A type of study design that involves randomly assigning participants to either a group that receives an intervention, policy or programme, or to a control group which does not. RCTs are often used to measure the effectiveness of the intervention.

Sample size: The total number of individuals or units included in a study or survey. The sample size affects the reliability and generalisability of the findings, the larger the sample, the more robust the results are likely to be.

Semi-structured interview: A qualitative research method in which the interviewer follows a flexible interview guide with open-ended questions, allowing for both predetermined queries and opportunities to explore new topics that emerge during the conversation. This approach balances structure with the freedom for participants to express their views in detail.

SEND learners: Those taking part in a course who have Special Educational Needs and/or Disabilities.

Statistical significance: A statistically significant difference means that it would be surprising to see such a large difference in the data collected if there was no difference at all in reality. For example, if a difference between male and female learners was statistically significant at the 95% level, that would indicate that, there is a less than 5% chance of seeing such a large difference in the analysis if, in fact, the true numbers for men and women were identical (as long as the assumptions underlying the analysis hold).

Tailored learning: A strand of the Adult Skills Fund designed to support adult learners through flexible, non-regulated provision that helps them progress into employment, further learning, or achieve wider outcomes such as improved health and wellbeing.

Theory of change: A detailed explanation or framework outlining how and why an intervention, programme, or policy is expected to lead to desired outcomes. It maps the steps, assumptions, and mechanisms that link activities to impacts, helping to guide planning and evaluation.

Value for Money assessment: An analysis that considers whether resources have been used efficiently, effectively, and economically to achieve desired outcomes, often balancing costs against benefits to determine if the intervention represents good use of public funds.

Weighting: A process of adjusting survey results so that they reflect the overall population, often by giving more influence to responses from underrepresented groups and less to overrepresented ones.

Executive summary

Introduction

To boost existing efforts to address low levels of adult numeracy, in 2022 the UK government committed funding from the UK Shared Prosperity Fund¹ to the Multiply adult numeracy programme. The aim of Multiply was to support adults with low levels of numeracy to improve their maths skills. Multiply sought to build on and complement existing provision by creating new offerings, with a focus on courses that met local needs for flexibility, intensity and method of delivery. This led to a wide range of provision including short courses to increase confidence with numbers, courses that embedded numeracy in everyday tasks, and courses designed to address specific skills gaps related to the workplace. The Multiply programme, in England, ran from April 2022 to March 2025, was delivered by the Department for Education (DfE) and is the focus of this report.² During this time, there were 288,604 enrolments recorded for Multiply courses in England across 209,150 learners, making up 45% of all adult numeracy enrolments over the period.

DfE commissioned Verian, in partnership with the Institute for Fiscal Studies (IFS), to conduct an independent process, implementation and impact evaluation of the Multiply programme. The evaluation was conducted between November 2022 and March 2026. It used a combination of quantitative and qualitative data and methods to generate evidence about the performance of the Multiply programme. The evaluation included the collection and analysis of primary data alongside the analysis of secondary data from sources such as the Individualised Learner Record (ILR) and monitoring data supplied by DfE and local areas.

As part of the evaluation, additional outputs to this evaluation report have been published. This includes a detailed case study report covering qualitative work conducted with local areas providing an in-depth view of Multiply at a local level. Additionally, whilst not a formal output of the evaluation, a bank of promising and innovative practices resulting from the Multiply Programme has been published on the Association of Colleges website.

Key findings

Participation

Multiply boosted overall participation in adult numeracy courses and was effective at attracting new learners into adult numeracy education. More than 200,000 learners took part in Multiply courses, with almost 290,000 enrolments delivered through the

¹ The UK Shared Prosperity Fund (UKSPF) was introduced in April 2022 by the UK government as a key component of the Levelling Up agenda. The UKSPF was focussed on 3 pillars – communities and place, local businesses, and people and skills – with the Multiply programme incorporated under the latter.

² In Scotland, Wales and Northern Ireland, Multiply was delivered as part of the UKSPF investment plans.

programme. This evaluation estimates that approximately 85% of those enrolments would not have happened without the programme. The total number of enrolments in numeracy courses during the 3 years of the programme was 63% higher than the 3 years prior to the start of Multiply.

There was a high level of participation in Multiply courses among groups often considered to be under-represented in adult numeracy education, for example: 48% of Multiply learners had English as an additional language, 43% were from an ethnic minority group, 29% had a long-term health condition, 7% had experience of being in care, and 5% were ex-offenders.

Learning providers and practitioners said that the flexible nature of Multiply was important in attracting new learners. Courses were designed locally and tailored to meet local needs. Many courses involved embedding numeracy in other topics relevant to learners' work or daily lives, such as budgeting or cooking. Some courses were designed to meet the needs of particular industries or employers. Many courses adopted flexible delivery models such as online options, shorter sessions, or one-to-one provision. Providers and practitioners said they thought these initiatives were effective in making numeracy learning more accessible and less intimidating.

Demand for Multiply courses

Learning providers and local areas recognised the success of outreach, peer-led and community-based learner recruitment in generating demand for Multiply courses. Many areas developed new partnerships with community groups, voluntary organisations or local employers to reach new learners.

The demand for Multiply courses can also be seen in the programme spend. By the third year, three-quarters of areas (61 out of 81) spent 95% or more of their allocated funding, with many saying they could have spent more if funding rules allowed.

Nonetheless, most people without Level 2 maths qualifications in the general population are not interested in further maths learning (66%) and generally reported being already confident in their ability to work with numbers in everyday life. There is likely some latent demand for courses like those that were offered through Multiply. However, additional work would be needed to engage those people, make them aware of learning opportunities, and persuade them of the value of additional learning.

Completion and progression

Multiply courses showed high levels of retention, with only 3% of learners recorded as dropping out of their course. Completion rates were higher for Multiply learners than for

learners who took comparable Community Learning³ numeracy courses. This finding holds even after statistically adjusting for observed differences in learner characteristics and controlling for the shorter length of Multiply courses (the mean length of a Multiply course was 37 days, compared to 60 days for Community Learning courses). This finding is likely to be related to the fact that the Multiply programme focused on engagement and support for learners, which improved completion rates.

Multiply's learner progression rate was in line with mainstream further education courses. At the time of reporting, a third of Multiply learners (33%) had gone on to take another numeracy course, 37% of which were qualification-bearing. A further 25% were recorded as taking non-numeracy courses. The vast majority (83%) of Multiply learners who said they had progressed to further study or training said that their experience of Multiply had positively influenced their decision to do so.

However, Multiply learners were around a third less likely to progress to other courses than those undertaking Community Learning numeracy courses. This is true even after statistically adjusting for differences in the observed characteristics of learners. This finding is likely to be related to the fact that many Multiply learners were new learners (they would not have taken a course without the programme) and so were likely to be less engaged with the adult education system than those completing Community Learning numeracy courses.

Impacts of Multiply on employment, confidence and wellbeing

Multiply learners were positive about their experience of their course, and generally thought it had benefitted their confidence, wellbeing and employment prospects. The evaluation does not have direct evidence of the programme's impacts on learners' numeracy skills. However, learners reported benefits of the courses on their confidence with a range of everyday numeracy tasks.

While most Multiply learners reported benefits for their confidence and skills, the proportion of learners reporting a positive or very positive difference was slightly lower on some outcomes related to employment opportunities than learners taking more traditional numeracy provision funded through the Adult Education Budget (AEB).⁴ These AEB courses lead to qualifications, and tended to be longer; the mean length of an AEB numeracy course was 172 days (compared to 37 days for a Multiply course). As such, it is unsurprising that these responses were on average slightly less positive for Multiply learners. Nonetheless, there is very little evidence that learners were concerned about the quality of numeracy provision delivered through Multiply courses.

³ In August 2024 Community Learning was replaced by Tailored Learning. As this was towards the end of the Multiply programme, these courses are referred to as Community Learning throughout this report.

⁴ In August 2024 the AEB was replaced by the Adult Skills Fund (ASF). As this was towards the end of the Multiply programme, these courses are referred to as AEB numeracy courses throughout this report.

Learning providers and practitioners thought that the programme had contributed to improved confidence and wellbeing among learners. They also reported that learners had improved their skills in non-numeracy areas (such as digital skills or improved English) and provided evidence of learners progressing to further employment opportunities as a result of Multiply. However, it is too early to assess the programme's longer-term economic benefits, such as impacts on employment and earnings, for the learner cohort as a whole.

Wider impacts of Multiply on the adult education sector

Many providers, practitioners and local areas said they thought the programme helped drive innovation in recruitment of learners as well as the design and delivery of numeracy courses. For example, in Year 2, 70% of local areas reported innovation in different types of outreach and course materials, 75% of practitioners reported innovation in delivering courses in a different way, and 71% of learning providers reported innovation in different types of learners reached. Examples of innovation included, trialling drop-in models, digital first approaches, or co-delivery with health and wellbeing services.

Most practitioners and providers said they wanted to continue running Multiply courses in the future, although they perceived that their ability to do so was limited by the end of Multiply funding. Many providers used Multiply funding as an opportunity to invest in developing staff, building partnerships and improving the profile of adult numeracy within their local area strategies. They expected these benefits to persist after the end of the programme.

Assessment of Multiply against the evaluation criteria

This section summarises the findings of the evaluation in relation to 6 dimensions: effectiveness, impact, relevance, coherence, efficiency, and sustainability.⁵

Impact and effectiveness

The effectiveness criterion measures the extent to which the intervention achieves its intended objectives and results. It also considers any differential results across participant groups, ensuring that the intervention is effective for all intended beneficiaries.

The impact criterion assesses the significant positive or negative, intended or unintended, higher-level effects generated by the intervention, including any broader changes that occur as a result of the intervention.

⁵ These dimensions correspond to the criteria developed by the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD). These criteria were developed to provide a framework for assessing the effectiveness and policies and programmes.

Multiply was successful in increasing the overall level of participation in adult numeracy courses in England.

Over the course of the programme, Multiply delivered 288,604 course enrolments. Over the same timeframe, 348,129 adult numeracy enrolments were provided through the AEB including Community Learning. Taken together, this represented an increase in total numeracy enrolments of around 63% compared to the 3-year period prior to Multiply.

Multiply was effective in enrolling new learners in adult numeracy provision and achieved high participation from groups often under-represented in adult education.

Multiply was generally successful in reaching people with limited qualifications. Around a third (31%) of Multiply learners said they had no formal qualifications prior to their course, and only around half (47%) said they had achieved at least one GCSE or equivalent qualification.

It is likely that a large proportion of Multiply learners would not have taken a numeracy course without the programme. The number of AEB and Community Learning numeracy enrolments was 11% lower over the 2022/23 to 2024/25 academic years than the 3 previous years. This could indicate some displacement where learners who would have taken an AEB/Community learning course took a Multiply course instead.

However, under the assumption that, without Multiply, the number of numeracy enrolments across AEB and Community Learning would have been similar in 2022/23 to 2024/25 to the 3 previous years, Multiply can be considered to account for around a quarter of a million new enrolments, equivalent to 85% of all Multiply enrolments.

This high level of additionality further indicates that Multiply was complementary to existing provision, mostly contributing new enrolments rather than displacing enrolments from other parts of the adult learning system.

Learning providers and local areas also reported that Multiply had been effective in engaging with new types of learners who would otherwise be unlikely to take part in numeracy learning. They attributed this success to tailored and targeted outreach and recruitment, as well as the informal and unintimidating nature of Multiply provision. The latter was seen as crucial for attracting learners with anxiety about maths or low levels of confidence in their numeracy skills. Peer-led approaches were considered especially effective for building trust and encouraging participation among new learners.

Many areas worked with local community organisations or employers, attempting to recruit learners through personal interactions rather than relying on learners to seek out education opportunities themselves. Targeted and personalised communication about courses appears to have been effective for reaching certain groups; for example, over a third (37%) of learners on courses aimed at parents helping their children said they had heard about Multiply through a local school, nearly a third (30%) of learners on courses to improve specific numeracy skills in the workplace had heard of the programme through

their employer, and a quarter (24%) of learners on a course aimed at improving skills to access a particular job or career had heard about the programme through a Jobcentre Plus work coach.

Multiply learners were about as likely to progress to other courses as mainstream adult numeracy learners.

Based on administrative data held by DfE (the Individualised Learner Record), more than half of Multiply learners went on to take another course up until the end of the 2024/25 academic year. At the time of reporting, a third of Multiply learners (33%) had gone on to take another numeracy course, with a further 25% taking non-numeracy courses. Of the Multiply learners who went on to further study, 55% subsequently started a qualification bearing course, representing 32% of all Multiply learners. The vast majority (83%) of Multiply learners who said they had progressed to further study or training said that their experience of Multiply had positively influenced their decision to do so. Learning providers also gave examples of learners progressing to further study as a result of their engagement with Multiply.

The fact that a sizeable minority of Multiply learners went on to non-numeracy courses suggests that Multiply had wider effects on participation beyond numeracy learning. This is supported by qualitative evidence from learning providers that Multiply courses also helped learners develop non-numeracy skills such as improving their English, digital skills, or other life skills.

The progression rates in the administrative data for Multiply learners are broadly similar to learners on AEB (qualification) numeracy courses (35% taking another numeracy course, with a further 29% taking non-numeracy courses), but lower than Community Learning courses (59% taking another numeracy course, with a further 19% taking non-numeracy courses). The fact that the majority of Multiply learners progressed to another course and that progression rates are in line with some of the established pathways suggests that the programme was broadly successful in encouraging learners to progress to further learning.

The impact evaluation used statistical matching techniques to investigate whether this difference in progression rates can be explained by differences in the types of learners taking Multiply courses and Community Learning courses. After adjusting for observed differences in learner characteristics (such as age, ethnicity and prior attainment) and course length, the progression rate for Multiply learners was still somewhat lower than for people taking Community Learning courses. This could indicate that Community Learning courses were more effective in encouraging progression. However, as many Multiply learners were likely new learners (they would not have been taking a course without the programme), another possibility is that people taking Community Learning courses were always more likely to progress to other courses.

Multiply learners were positive about their experience of their course and generally thought their course had benefitted their confidence with numbers, wellbeing and employment prospects.

Multiply had strong positive self-reported impacts on learners' confidence regarding working with numbers in everyday life. For example, nearly three quarters (71%) of learners said the programme had improved their confidence with working out the best deals when shopping, and four fifths (81%) of Multiply learners with parental responsibilities said the programme had improved their confidence in helping children with homework or talking about maths. Self-reported impacts were high across learner groups including disadvantaged groups such as care-experienced learners and ex-offenders.

On completion of their course, learners almost universally reported that Multiply had positive impacts on their attitudes towards learning and numbers, including their interest in doing more learning across a range of subjects (83% reported more interest), doing more maths learning specifically (74% reported more interest), and obtaining formal qualifications (79% reported more interest). Multiply was widely seen by learners to have had positive impacts on their mental health and wellbeing, their sense of being part of a local community, and their perceived prospects in the labour market. Only a very small proportion of Multiply learners reported negative impacts across any of these dimensions (between 1% and 3% in all cases).

The evaluation also collected similar data on self-reported impacts from learners on AEB (qualification) numeracy courses.⁶ Multiply learners gave generally similar answers to these questions as learners on AEB numeracy courses. There are many differences in the characteristics of Multiply and AEB (qualification) learners, for example, Multiply learners were more likely to be unemployed and looking for work. Adjusting for these differences as far as possible, Multiply learners were less likely than AEB (qualification) numeracy learners to report improvements in employment outcomes (such as entering or progressing in the labour market).

Nonetheless, the differences between Multiply and AEB (qualification) learners for these self-reported outcomes were often fairly small. The largest difference was that Multiply learners were 9 percentage points less likely to be positive about their "chances or earning a higher wage in the future" after adjusting for differences in learner characteristics. This difference is unsurprising given that the respondents to the AEB learner survey were generally taking courses that led to a qualification while Multiply learners were almost all taking shorter unaccredited courses to engage with learning. Differences on other self-reported outcomes were smaller and often not statistically significant. It is encouraging for the programme that such self-reported outcomes were reasonably similar for Multiply

⁶ This survey did not include those taking part in Community Learning numeracy courses. This is because at that point the expectation was that Multiply would focus on accredited courses. See Chapter 1 for more information.

learners as for AEB (qualification) learners, who were generally taking part in longer and more formal courses.

These findings were corroborated by the qualitative evidence from providers and practitioners, who reported that Multiply had achieved strong outcomes in improving confidence for learners and reducing maths anxiety. This included improvements in practical skills such as budgeting and money management, as well as broader confidence among learners in handling everyday numeracy tasks.

The evaluation did not systematically test learners' numeracy skills either before or after their course. In practice, few providers were willing to conduct formal maths tests due to concerns that learners may be put off from taking part in the course, or because this would take up too much time in a short course. As such, the evaluation has no direct evidence to demonstrate the extent to which Multiply led to improved numeracy skills.

Multiply also contributed to development and innovation in the delivery of adult numeracy courses.

From the perspective of providers and practitioners, Multiply was widely seen to stimulate innovation in the provision and delivery of adult numeracy and maths courses. Multiply enabled providers to better reach learners with maths anxiety or from hard-to-reach groups. For example, by the second year of the programme, 72% of providers responded that reaching hard-to-reach learners would not have been possible without funding from Multiply. Additionally, funding enabled providers to develop effective new course formats. By the second year of the programme, 78% of providers responded that teaching in a more hands on or practical way would not have been possible without the funding.

Providers and practitioners also experimented with new types of course content such as embedding numeracy in other learning (e.g. English for Speakers of Other Languages, family learning, vocational courses). Some areas trialled drop-in models, digital-first approaches, or co-delivery with health and wellbeing services. The use of incentives (such as vouchers, refreshment, childcare), where these had been used as part of delivery, was cited as a key enabler of engagement, particularly for learners facing financial or logistical barriers.

Many providers and local areas said that the flexibility that was built into the programme's design allowed areas to pilot new commissioning models, including micro-grants to grassroots organisations and co-design with community partners. According to these stakeholders, this led to more evidence-based and responsive provision, especially in areas with limited adult learning infrastructure. Multiply was particularly seen as effective at engaging learners from deprived areas and hard-to-reach groups.

Multiply was commonly seen by practitioners to enable pedagogical innovation, for example, in the form of experimenting with new learner-centred approaches such as embedding numeracy in real-life contexts (for example, budgeting, cooking, sports, crafts),

and delivering in more informal and community-based settings. Such techniques were perceived to help reduce maths anxiety and engage learners who had previously disengaged from formal education.

While many of these activities were already happening in the adult education sector to some degree, Multiply created an opportunity for more providers to experiment with new approaches. This was in part due to the additional funding provided, as well as the fact that Multiply explicitly encouraged innovation.

Many providers and practitioners said they found working in these ways energising and motivating. Most providers and practitioners said they had plans to either run more courses similar to Multiply in the future, and/or to embed learnings from Multiply into other future courses.

In some cases, new partnerships developed through Multiply provided an opportunity for providers to have an effect beyond numeracy. For example, for Multiply courses delivered in prisons, providers gave examples of supporting the prison's employability team to update the CV writing materials, and of sharing information about neurodiversity with prison staff, which they felt helped staff to understand and support their prisoners.

Some providers and local areas thought that opportunities to further increase the impact of the programme were missed.

There were recurring frustrations expressed by local areas about missed opportunities for national promotion and guidance. Several areas highlighted the absence of a national communication campaign focused solely on Multiply (rather than being part of the 'Skills for Life' campaign) and best practice resources at the beginning of the programme. They thought this would have helped them better engage with learners from the start. Additionally, some local areas thought that the impacts of the programme were limited by not being able to carry funding across financial years and not being able to move funding between local areas to allow those that had higher demand than they could meet to reach more people.

Relevance and coherence

The relevance criterion assesses the extent to which the objectives and design of an intervention respond to the needs of beneficiaries and align with national and institutional priorities, including whether the intervention remains relevant as circumstances change.

The coherence criterion evaluates the compatibility of the intervention with other interventions and policies, as well as how it fits within the wider context in which it operates.

Multiply was designed to complement existing provision by offering new flexibly designed numeracy courses that were tailored to local needs.

The Multiply programme was designed to complement existing provision for adult numeracy courses. During the 3 years that Multiply was delivered, essential skills maths learning was also delivered through the Adult Education Budget (AEB) including via Community Learning initiatives. In contrast to AEB (qualification) courses, Multiply courses were predominantly unaccredited, meaning that they did not lead to a formal qualification (97% of Multiply courses were unaccredited compared to the vast majority of AEB numeracy courses over the 3 years of the programme). Multiply courses were also typically much shorter than AEB numeracy courses, with the median course length being 14 days for Multiply compared with 158 days for AEB numeracy courses over the same timeframe. In these respects, Multiply courses were more similar to Community Learning numeracy courses, which were all unaccredited and had a median duration of 29 days. It should be noted that teaching did not necessarily occur on every day of the course period.

The Multiply programme was designed to be highly adaptable to meet the diverse needs of adult learners with varying levels of confidence and prior attainment in numeracy, especially those who would not otherwise take part in formal learning. Delivery was tailored by adjusting the pace, content, and teaching methods to suit learners' circumstances. For example, it was common for providers to incorporate real-life contexts relevant to their learners' work or daily lives, embedding numeracy in topics such as budgeting or cooking. For some courses, learners completed diagnostic activities to identify specific skill gaps and learning goals to inform the creation of individual learning plans. Some courses were developed and tailored for specific learner groups, such as learners working in a particular industry or with a particular employer (such as the NHS), or learners in prisons. Many providers and local areas conducted special outreach activities to maximise the participation of different groups considered hard-to-reach.

During the course of the Multiply programme, learning providers and local areas made adjustments to their offer to enhance accessibility and learner engagement. For example, delivery models were adapted to include more flexible online options, shorter sessions, and one-to-one provision in response to learner feedback and attendance challenges. These changes aimed to address barriers such as childcare, work commitments, difficulties in group settings, and digital exclusion, which were identified during early implementation as key barriers to participation.

Providers and local area stakeholders generally considered Multiply favourably in comparison to qualification bearing numeracy courses funded through the AEB across a number of dimensions. This suggests that the programme filled an important gap in adult numeracy provision, and that providers and local areas perceived the quality of provision to be comparable to other courses. Local area stakeholders felt that Multiply compared favourably to AEB (qualification) numeracy provision in relation to both innovation in delivery and impact on learners. Providers reported that Multiply was generally better than AEB in relation to improving learners' numeracy skills, increasing learners' confidence with

numbers, and increasing learners' self-confidence in day-to-day life. This likely reflected the perception that the flexibility in the design of Multiply courses meant these courses were more tailored to the needs of the learners that local areas were targeting. It may also reflect the different starting point for Multiply learners, with many starting their course with low levels of numeracy and low confidence working with numbers.

Where Multiply was generally considered worse than AEB was in relation to administrative burden and guidance on funding. In these areas, the performance of Multiply improved over time, with more local area respondents favouring Multiply compared to AEB in both these regards by the end of the second year of programme delivery.

Effective partnership working was a key element for the successful delivery of Multiply courses.

Most local areas and providers developed their Multiply offer in collaboration with local community groups, employers or other organisations. Voluntary and community organisations were seen as especially important for reaching new learners.

However, in many cases local areas and providers reported finding it difficult to engage with employers effectively. Almost all local areas said they thought it was important to engage with employers for Multiply (95% in Year 1 of the programme), but the majority of local areas (59%) said they found this harder than they expected. Many employers were reluctant to release staff for training, especially for non-accredited courses, and some employers did not see the direct business benefit of engaging with the programme. Local areas reported that many employers were not aware of the Multiply programme and that the limited timescale for developing their courses created an additional barrier for working with employers.

Collaboration with employers tended to be more successful where there was an existing relationship between the employer and the learning provider. In these cases, it was easier to tailor course content to the specific needs of the employer. In some cases, the course was co-designed by the learning provider and the employer.

Employers who did engage with Multiply generally had a positive view of the programme. The number of employers participating in the research was limited. However, a majority of these employers reported positive experiences and high levels of satisfaction with Multiply. They said key benefits of the programme were its positive impacts on workforce skills and morale. Most of the employers taking part in the evaluation indicated they would recommend Multiply to others.

In response to feedback from local areas, the primary focus of Multiply shifted from enabling learners to reach Level 2 to engaging new, hard-to-reach learners in numeracy courses at any level up to Level 2.

The original objective of Multiply was to bring more adult learners up to the Level 2 numeracy standard. However, the emphasis of the programme shifted to focus more on

getting new learners enrolled in further education numeracy courses, especially if they would not otherwise engage in formal learning. This change was in response to local areas' and learning providers' assessments about who would most benefit from Multiply. A common perception was that many of these potential learners would not be willing or able to take part in long or formal courses, such as those delivered under AEB. Multiply was therefore seen as a potential stepping stone towards further learning. This followed the logic articulated by the programme theory of change, whereby getting adult learners into Multiply-funded courses would lead to increases in functional numeracy skills and confidence, thus enabling the potential for progression into further qualification-based learning and/or positive labour market outcomes for learners and employers.

Although there was evidently demand for Multiply provision, most people in the target population without Level 2 maths are not looking for support with their numeracy skills. The evaluation included a survey of people without Level 2 maths qualifications who were not taking any numeracy courses to explore their views about further numeracy learning. The majority (66%) said they would not be interested in taking a course like Multiply, although a sizeable minority (27%) said they would be either very or fairly interested. Most of these non-learners said they were already confident with using numeracy in everyday life. For example, almost 9 in 10 said they were either very or fairly confident checking change, keeping track of their balance, or working out the best deals when shopping. Additionally, the most commonly cited barrier to further numeracy learning was feeling that they did not need to improve their maths (39% of non-learners). Nonetheless, the success of the programme in recruiting learners demonstrates that there was demand for the types of courses offered through Multiply.

By the final year of the programme, 75% of local areas (61 out of 81 areas) spent the vast majority of their funding allocation (95% and above) and many said they could have spent more to meet demand if further funding had been available. As such, the programme appears to have been effective at reaching the subset of people with low levels of numeracy who would be open to taking a course. Additionally, many learning providers and local areas reported examples of proactive engagement and outreach with learners. They thought these activities had helped them to recruit learners who otherwise would not have considered adult education. This indicates that there is likely to be wider latent demand for numeracy education. However, recruiting these types of learners required significant work to demonstrate the value of this learning and to address concerns. Local areas and providers often worked with voluntary organisations, local employers and other groups to reach potential learners. This was often difficult to do where local areas or providers did not already have pre-existing relationships with these organisations.

Efficiency and sustainability

The efficiency criterion assesses how economically resources were utilised to achieve results. It examines whether the intervention delivers results in a timely manner and at a reasonable cost.

The sustainability criterion measures the extent to which the benefits of an intervention continue after its completion, including whether the net benefits are likely to persist over time.

After initial set up and delivery challenges in the first year of the programme, the majority of areas spent close to their full funding allocation in year 3.

Multiply allocated funding of £270m to local areas in England, of which £226m was spent over the 3 years of the programme. This equates to an average spend of around £785 for each of the 288,604 Multiply enrolments.

Multiply faced substantial underspend at the start of the programme. In the first year of the programme (the 2022-23 financial year), local areas spent 62% of the funding allocated to Multiply. Half of areas spent less than 70% of their allocation (42 out of 81 areas). This underspend reflects challenges many areas encountered in finalising their delivery plans and getting delivery up and running. This was compounded by the fact that funding was only made available around halfway through this year. However, by the final year (2024-25), most areas spent at least 95% of their allocation (61 out of 81 areas), and nationally 96% of allocated funding was spent.

Most practitioners and learning providers said they wanted to continue running similar courses in the future, although they perceived that their ability to do so was limited by the end of Multiply funding.

The majority of learning providers (80%) reported that they had plans to embed aspects of Multiply into their future offer to adult learners. Just under half (46%) planned to either run more courses similar to Multiply in the future, and over half (55%) planned to embed their many learnings from Multiply into other future courses. However, without continued funding, providers stated that they would not be able to deliver to the same level once Multiply ended. Providers generally expressed regret about this, given the perceived successes of the programme in bringing in new learners, raising their confidence and ability with numeracy, as well as the wider personal, social and economic benefits Multiply is associated with by stakeholders.

Providers and practitioners felt that Multiply had helped emphasise the need to support adult learners to build their maths skills, as well as perhaps extending Multiply-style forms of learning to other areas such as literacy and digital skills.

Many learning providers used Multiply as an opportunity to invest in improvements which could continue to deliver benefits after the end of the programme, for example, developing staff or building partnerships, and improving the profile of adult numeracy within their local area strategies.

Together, these innovations contributed to professional development for practitioners, with Multiply funding also sometimes used to provide training for staff to teach basic numeracy and share best practice across networks. Providers emphasised how Multiply enabled

them to both hire new staff and upskill existing staff, which improved the quality and diversity of their provision.

Close to half (47%) of all providers surveyed stated that they had been able to use Multiply funding to invest in areas that will continue after the funding has ended. These included building or deepening partnerships with community organisations, employers, and local authorities, which expanded their reach and delivery capacity. This helped facilitate providers to reach learners who would not have engaged with traditional adult education, especially those with low confidence, maths anxiety, or from marginalised harder-to-reach groups such as ESOL learners, care leavers, ex-offenders, parents and carers, and people in rural or deprived areas. Local areas and providers reported that working with local community and voluntary organisations was especially effective, and Multiply had enabled them to establish new relationships with such organisations or strengthen existing relationships.

Some providers reported that Multiply had shifted their organisational culture, making them more learner-centred and innovative. Several areas also noted that Multiply had helped to elevate the profile of adult numeracy within their broader skills strategies, creating new momentum for cross-departmental collaboration (for example, between employment, health, and education teams).

Conclusion

Multiply was successful in its aims of bringing new learners into adult numeracy education. The programme led to a substantial increase in participation in numeracy courses and appears to have been effective at recruiting people who were not previously engaged with education and people from groups often considered to be under-represented in adult learning. Multiply provision was complementary to existing provision offered through the AEB (including Community Learning), largely reaching new learners rather than displacing learners from other courses. Many Multiply learners went on to take further courses, demonstrating that the programme could act as a gateway into further learning.

Learners, providers, practitioners and local areas all expressed high levels of satisfaction with the programme and reported positive impacts for learners in numeracy confidence, wellbeing and employment prospects. Multiply learners' self-reported views on their courses were comparable to those of AEB (qualification) numeracy learners. This high level of satisfaction is also reflected in the very high completion rates for Multiply courses.

The programme's focus on unaccredited learning represented a change from the original emphasis on achieving qualifications. This change of focus was a deliberate decision in response to feedback from local areas about what they thought was necessary to engage new learners in numeracy education. Providers, practitioners and local areas said that being able to offer short, informal and unthreatening courses was an important part of its success in reaching new learners and overcoming learners' anxiety about numeracy.

However, this focus meant that the evaluation was unable to assess the extent to which Multiply improved numeracy skills. While providers and practitioners were positive about new course content (such as embedding numeracy learning in non-numeracy topics), formats and delivery models, the evidence about how effective these were in improving learners' numeracy skills is limited.

Multiply produced positive wider effects for the adult education system, including providing the opportunity to test new course content or methods of delivery, and establishing networks and partnerships between providers and local employers and community organisations. Practitioners reported being energised and motivated by Multiply, which is a welcome unanticipated benefit in the context of ongoing challenges for recruiting and training in adult education.

The high take-up of Multiply courses demonstrates that there was demand for this kind of numeracy provision. Nonetheless, most people without Level 2 maths do not see a need to undertake further numeracy learning. Generating further demand for adult numeracy education would likely require significant outreach and engagement activities to persuade potential learners of the value of courses offered.

Local areas and providers also thought that the learnings from Multiply could be applied in other areas such as literacy and digital skills. However, they were concerned they would not be able to continue to deliver the benefits of the programme at a similar scale without the support of ongoing funding.

Recommendations

The evaluation has identified a number of recommendations for government and the sector regarding the ongoing delivery of adult numeracy education like Multiply, and to support the design and implementation of any similar programmes in the future.

Local areas and learning providers should continue to invest in strengthening their partnerships with community organisations and employers. Strong networks were considered an extremely important factor for successful outreach and co-design of courses. Local areas and learning providers reported the greatest success where they had existing relationships to draw on. Local areas and providers should continue to develop these relationships and seek opportunities to establish new relationships. There is also a role for government to encourage and support these networks.

Local areas should continue to look for opportunities to engage with local services, both to identify potential learners and to address barriers to learning. Multiply learners faced various barriers to taking part in numeracy education including ill health, concerns related to cost, and difficulty juggling care responsibilities or other commitments. Improved support to tackle the barriers to learning could enable more people to take part in courses. For example, the use of incentives (such as vouchers, refreshment, or

childcare) was considered by providers to be effective in enabling engagement with Multiply. Strengthening links between numeracy education provision and relevant support services (such as debt support, financial management support, and mental and physical health support) could help further mitigate the barriers experienced by potential learners.

The sector should maintain and build on existing knowledge sharing to encourage lesson-learning and dissemination of best practice. For example, the promising practices databank can be a valuable resource for learning providers to understand what worked well in Multiply. There is also a role for government to encourage and support dissemination.

For any future programmes, increased national visibility could help get the programme up and running quickly. Local areas and learning providers thought that a bigger national information campaign focused specifically on Multiply (rather than as part of the Skills for Life campaign) would have been beneficial to early set up and recruitment. Such a campaign could also be used to demonstrate the value of engaging in learning to persuade more people who might otherwise not be interested. Similarly, further engagement with potential referral organisations (such as Jobcentre Plus) or partnership organisations (such as large employers) could help make the recruitment of new learners more effective and efficient.

Strengthen local information and guidance to learners on progression pathways and provide further support for learners to progress onto more formal courses. The programme has demonstrated its potential to address initial barriers to learning. To make the most of these achievements, it is important that ongoing follow up support is available for learners to continue engaging with numeracy or other learning.

Ensure the design of any future programmes takes full account of existing provision and funding streams. Community Learning already offered short unaccredited numeracy courses, so any future programmes need to consider the most effective way to both complement existing provision and ensure a focus on the programme aims, including through considering whether to mainstream or ringfence funding, and the advantages and disadvantages of this.

Consider whether similar programmes could be extended to other non-numeracy areas such as literacy and digital skills. Many learning providers said they thought there would be demand for similar programmes in those areas and were looking at ways of applying the lessons they had learnt through the delivery of Multiply.

Structure of this report

Chapter 1 describes the types of data used in the evaluation, how this data was collected and analysed, and the limitations in the evidence generated.

The evaluation involved collecting qualitative and quantitative data from learners (both learners taking Multiply courses and learners taking other numeracy courses), learning providers, practitioners, local areas, and employers. Each of these strands of data collection is outlined in Chapter 1, with further technical information provided in Appendices A and B.

Alongside this primary data, the evaluation included analysis of secondary data from sources such as the Individualised Learner Record (ILR) and monitoring data supplied by DfE and by local areas. Chapter 1 includes a description of these data sources, how the analysis was undertaken, and the limitations in using these data sources. Further technical information is provided in Appendices C and D.

Chapter 2 provides an overview of the Multiply programme, including a brief description of the programme and the context in which it was implemented. The chapter gives key information about the number of enrolments and the proportion of learners completing their course, the types of courses offered through Multiply, the profile of Multiply learners, and how learners were recruited onto their course.

Chapter 3 discusses the evidence for the impacts Multiply had on learners, employers, practitioners, and learning providers. This evidence draws on a combination of surveys, qualitative interviews and analysis of administrative data from the ILR. The chapter explores:

- learners' self-reported impacts on confidence and attitudes towards numeracy learning
- impacts on learners' employment prospects and progression to further study
- impacts on learners, as perceived by providers, practitioners and local areas
- impacts on vulnerable and hard-to-reach learner groups
- impacts on employers, practitioners and providers.

Chapter 4 examines how Multiply was experienced by learners and other stakeholders, such as employers, practitioners and learning providers. There is a particular focus on learners in vulnerable or hard-to-reach groups, as well as Multiply learners who did not complete their course. This chapter also includes a more detailed investigation of one particular strand Multiply: the provision of Multiply courses in prisons.

Chapter 5 describes how Multiply courses were designed and delivered. Drawing primarily on qualitative and quantitative data collected from providers, practitioners, local areas and employers, this chapter explores the different ways in which Multiply provision was tailored to meet local needs. This chapter provides examples of innovative practice, perceived successes or unintended consequences in delivery, and a discussion of how the design of Multiply was aligned with broader policy priorities and initiatives.

Chapter 6 summarises the evidence about how Multiply funding was spent, and considers how the achievements of the programme may be sustained beyond the funding period. This chapter includes a description of the funding allocation and spend across local areas for each year of the programme using administrative data provided by DfE. The chapter ends with a discussion of the implications of the evaluation findings for future policy.

1. Methodology

This chapter provides a description of each of the strands conducted within the evaluation, including qualitative and quantitative data collection, and analysis of secondary data. Further technical information can be found in the appendices to this report.

1.1 Qualitative strands

1.1.1 Case studies

Verian conducted 2 waves of case study research involving in-depth interviews and document review across 20 local areas. Local areas were engaged with up to 10 hours of interviews each. As delivery progressed, a further 14 case study areas were purposively selected for wave 2. This selection process aimed to ensure that the selected case study areas had a range of administrative models, funding, geography, and target audiences.

As part of the fieldwork process, semi-structured interviews were conducted online, both individually or in groups, with strategic and operational stakeholders. Key programme documents were also collected and reviewed to contextualise these findings. Participant recruitment was flexible, engaging a broad range of stakeholders from strategic leads to frontline practitioners, ensuring the case studies reflected the varied experiences and lessons from Multiply delivery across England. A separate case study report has been published alongside this evaluation report.

1.1.2 Stakeholder interviews

The stakeholder strand comprised of online semi-structured interviews across 2 waves, engaging a diverse mix of central government officials, FE sector representatives, and contractors involved in delivering Randomised Controlled Trials (RCTs). The interviews sought to gather perspectives on Multiply's effectiveness, strengths and weaknesses, and experiences throughout the programme's design, set-up, and delivery phases, with an emphasis on lessons for future government initiatives.

Wave 1 included 14 stakeholders from various government departments, while wave 2 expanded to include additional FE sector bodies and service suppliers, totalling 20 contributors. Recruitment was managed via DfE, with no incentives offered, and the interviews ranged from individual to paired sessions.

1.1.3 Promising practices

The Promising Practices workstream set out to identify and showcase innovative approaches to adult numeracy provision across the UK, beginning with a scoping phase in November 2024. An open qualitative questionnaire on Microsoft Forms was in field from November 2024 to April 2025, gathering 93 examples of promising practice from local

authorities, providers, and other stakeholders across Scotland, Wales and Northern Ireland as well as from England. Following this, Verian and the Department for Education collaboratively shortlisted 10 practices, from which 5 were selected for in-depth qualitative exploration.

In March 2025, 5 30-minute interviews were conducted with 12 stakeholders from the chosen areas, providing rich insights into the context, implementation, and impact of each practice. Examples of promising practices submitted are stored in an online searchable database managed by the Association of Colleges.

1.1.4 Prisons

Fieldwork for this workstream focused on understanding the set-up, management, and delivery of numeracy courses for prisoners and, where relevant, ex-offenders, aiming to enhance their skills and employability. Through 19 flexible interviews conducted in March 2025, ranging from individual to small group formats and lasting up to 60 minutes each, Verian engaged 26 stakeholders. These stakeholders included delivery partners, local authority strategic representatives, and independent practitioners.

The research explored the types and delivery of provision, successes and challenges, approaches to programme tracking and monitoring, outcomes and impacts, and future sustainability, with particular attention to both in-prison and community-based support for ex-offenders. This research was undertaken to capture learning from delivery in prisons to complement separate work on DfE's randomised controlled trials on adult numeracy. The experience of prison learners was also not captured in the learner survey.

1.1.5 Learners who did not complete their course

This workstream had a specific focus on learners who started but did not finish their courses, aiming to understand the reasons behind non-completion and suggest possible solutions. Verian conducted 28 interviews between November 2023 and August 2024, each lasting up to 30 minutes, with a diverse range of participants from across England. These included retired, unemployed, and employed individuals, native and non-native English speakers, and those who attended courses in various formats. Most interviewees stopped attending before or midway through the course, and the recruitment approach prioritised diversity over quotas.

1.1.6 Employer interviews

The employer strand involved 7 semi-structured online interviews with companies that had engaged with the programme, focusing on employers' perceptions, motivations for involvement, participation methods, challenges in employee engagement, strategies to encourage participation, satisfaction levels, and suggestions for improvement. This strand was originally planned as a quantitative survey, however due to limited sample size in year

1 this was repurposed to qualitative fieldwork. Although 20 interviews were initially planned, only 7 were completed due to this limited sample. Participants were recruited via local authority referrals validated by DfE.

1.2 Quantitative survey strands

This section gives an overview of the different quantitative survey strands. Further technical detail can be found in Appendix B.

1.2.1 Survey of Multiply learners

Verian conducted a mixed-mode survey among learners identified as on a Multiply funded numeracy course. Fieldwork was continuous from August 2023 to July 2025 with new waves of invitations being issued at regular intervals. Across the survey, 120,475 adults who participated in Multiply-funded numeracy courses were contacted, with 6,439 responding.

Eligible learners were invited to take part in the survey in batches via a “push-to-web” approach, with the invitation to take part sent either by post or by both post and email. A telephone fieldwork stage was also included, conducted after each wave amongst those who did not complete online, to contact harder to reach populations.

The questionnaire was designed collaboratively between DfE and Verian and covered topics such as confidence with numbers, how learners found out about the course, and their experience of the Multiply course. It was designed for learners who had completed their course as well as those who had left their course part way through.

The survey data has been weighted to reflect the population of Multiply learners recorded in the Individualised Learning Record (ILR) in order to reduce the effect of bias on the findings as a result of non-response. Estimates from the survey data are thus representative of all Multiply learners.

1.2.2 Survey of Adult Education Budget (AEB) learners

The AEB survey was conducted to provide a comparison point to Multiply learners, of adults who were on AEB funded numeracy courses. Verian contacted 10,590 adults who enrolled in numeracy courses funded through the Adult Education Budget (AEB) without at least a Level 2 maths qualification with 1,700 responding.

The questionnaire included the same questions as asked to the Multiply learners. The sample was selected to include AEB (qualification) learners that were on courses most similar to Multiply learners. There were key differences in the types of courses funded through Multiply and the AEB, most notably the fact that Multiply courses were much shorter. The data was weighted to account for participant non-response, and to attempt to

make the AEB profile as similar as possible to the Multiply population profile, across demographic characteristics and type of course.

1.2.3 Survey of non-learners without Level 2 maths

Verian's random probability panel, Public Voice, was used to survey individuals that were a target group for Multiply – but had not taken a Multiply course. This survey provides a comparison to Multiply learners of individuals who are not engaged in basic skills courses.

14,968 adults were contacted, and respondents would only qualify for the survey if they had a Level 1 or lower maths qualification.⁷ Initially the sample drawn were non-degree holders, but this was expanded to degree holders due to lower sample size. In total, 1,856 respondents successfully completed the survey.

Questions were asked to non-learners about their confidence with numbers, their thoughts and experience of doing further adult learning, and their awareness and views of Multiply.

The sample of adults was drawn to be demographically matched to Multiply learners, and the data was weighted based on individuals' representativeness based on the general population, and the probability of being included in the non-learner sample.

1.2.4 Survey of learning providers

The Providers survey was targeted towards senior decision makers at providers of Multiply courses. Two waves of the survey were conducted, the first survey covered the 2022/23 financial year, and the second survey covered the 2023/24 financial year. The first survey wave achieved 149 responses, and the second wave achieved 156 responses.

Providers were asked a range of questions including their perceived impact of Multiply, about the delivery and implementation of Multiply, engagement and outreach activities, and satisfaction with Multiply.

The data was weighted to account for non-response, to reflect the population of Multiply providers based on key provider-level characteristics.

1.2.5 Survey of practitioners

The Practitioners survey was targeted towards practitioners (e.g. teachers) at providers of Multiply courses. Two waves of the survey were conducted, the first survey covered the 2022/23 financial year, and the second survey covered the 2023/24 financial year. The first survey wave achieved 73 responses, and the second wave achieved 98 responses.

⁷ The eligibility criteria for Multiply was relaxed later in the programme to include learners who did have Level 2 qualifications in maths, but lacked confidence in numeracy.

Practitioners were asked a range of questions including their perceived impact of Multiply, about their experience of designing and delivering Multiply courses, engagement and outreach activities, and their expectations and satisfaction with the programme.

No weighting was applied to the data outputs due to small number of completes and the limited population data available for practitioners.

1.2.6 Survey of local areas

The local area survey was sent to all 81 local areas involved with Multiply. The collective term 'ocal areas' covers the authorities that commission and coordinate Multiply programme delivery in their area. These are the Greater London Authority (GLA), Mayoral Strategic Authorities (MSAs) and upper tier and unitary local authorities outside of these areas. Two waves of the survey were conducted, the first survey covered year 1 of Multiply (financial year 2022/23), and the second survey covered year 2 of Multiply (financial year 2023/24). The first survey wave achieved 37 responses, and the second wave achieved 46 responses.

Local areas were asked about their experiences of being involved in the Multiply programme. This included their perceived impact of Multiply, about developing and designing courses, funding and spend across the programme, and areas of potential improvement.

1.2.7 Survey of employers

The Employer survey was targeted towards businesses who had been involved in Multiply funded training. Only 1 survey was conducted and covered the 2023/24 financial year, which achieved 29 responses. A year 1 survey was not conducted due to insufficient sample size. For year 1, qualitative fieldwork with employers replaced a quantitative survey.

Employers were asked about their perceived impact of Multiply, how they engaged with the programme and with other stakeholder groups, and questions surrounding the participation and barriers for their employees.

No weighting was applied to the data outputs due to the number of completes being too small to reliably weight.

1.3 Administrative data sources

1.3.1 Learner data from the Individualised Learner Record (ILR) and National Pupil Database (NPD)

The Individualised Learner Record (ILR) is an administrative dataset collected by education providers on adults (age 19+) undertaking further and vocational education in England. Education providers submitted data about their learners to the Education and Skills Funding Agency (ESFA)⁸ who used those data in calculating their funding allocations. The ILR, in its entirety, includes information on topics such as attainment, funding, and learner characteristics such as special educational needs and ethnicity. The data are collected by DfE, which uses the information to help it run the further education system in England.

Where possible, the ILR data was linked to data from the National Pupil Database (NPD). The NPD holds information about students attending state funded schools and colleges in England. By combining the 2 data sources, the evaluation analysis could incorporate information that is not recorded in the ILR, such as detailed prior attainment.

1.3.2 Programme cost monitoring data provided by local areas

DfE provided information about the costs of delivering Multiply. This included the amount of funding allocated and the amount spent for each local area in each year of the programme.

1.4 Statistical comparisons between Multiply learners and other learners

Some of the analysis in this report compares outcomes for Multiply learners against outcomes for learners on AEB (qualification) numeracy courses or Community Learning numeracy courses. Please see Appendix E for the full list of learning aims for different types of numeracy courses included in the analysis. However, there are various differences between the types of learners taking Multiply courses and taking other numeracy courses. For example, Multiply learners tended to be older than AEB (qualification) numeracy learners, and were more likely to be male than learners on Community Learning numeracy courses. Therefore, differences in outcomes could be explained by differences in the types of learners taking different types of courses.

When analysing administrative data from the ILR and NPD, the evaluation used a statistical technique called Propensity Score Matching to attempt to account for these differences in learner types. This analysis involved finding a subset of individuals on non-

⁸ The ESFA was disbanded on 31 March 2025, and its functions were transferred to DfE. This occurred after Multiply delivery had completed.

Multiply courses who are similar to Multiply learners across a range of characteristics. Specifically, the analysis used data from the ILR linked to data from the National Pupil Database to match on characteristics such as prior attainment, demographic factors, and support for Special Educational Needs and Disabilities, as well as course length in certain specifications. See Appendix C for more details on the approach.

When analysing survey data, the analysis uses regression models to control for differences between AEB (qualification) and Multiply learners observed in the ILR and survey data. The survey dataset is more limited in size than the administrative datasets. It also incorporates survey weights to ensure representativeness. In this setting, regression can provide a more suitable way to control for observed differences than matching, which could further reduce the effective sample size. In the regression analyses, we include a range of variables, such as demographic factors, course-related information and reasons for taking the course, to attempt to account for differences between Multiply and AEB (qualification) numeracy learners.

These approaches ensure the analysis focuses on the most comparable learners possible with the data available. However, it is unlikely that the matching or regression models can account for all relevant differences between Multiply learners and learners on other numeracy courses. For example, learners' personal circumstances are not captured in the data available for this analysis. The findings from these analyses should therefore be interpreted as associations between Multiply and other learners, rather than definitive causal effects of taking part in Multiply courses instead of other numeracy courses.

1.5 Data limitations

The impact analysis draws on administrative and survey data, which provides a basis for assessing patterns in learner outcomes. Yet there are a number of important data limitations that should be considered when interpreting the findings.

First, the data does not include information on labour market outcomes, such as employment and earnings, as Longitudinal Education Outcomes (LEO) data were not available at the time of this evaluation. This is an important limitation, because labour market outcomes are central to understanding the longer-term benefits of adult skills provision and the overall costs and benefits of the programme. As a result, the impact analysis focuses on educational outcomes and self-reported measures of confidence and perceived benefits. LEO data would also allow the analysis to account for learners' employment and earnings trajectories before enrolling on numeracy courses. This can be important because individuals often enter training following a negative labour market shock, such as job loss, which can lead to a temporary dip in earnings immediately before participation – a pattern widely documented in the evaluation literature (referred to as the “Ashenfelter dip”).

Second, the impact analysis of educational outcomes uses linked NPD and ILR data, which is constrained by relatively low match rates between the 2 datasets. Among learners who have a “pupil matching reference” (PMR) recorded in the ILR data, only about 35% can be matched to the NPD. As the NPD itself only covers younger cohorts of learners, the matched proportion of all numeracy learners is between 10 and 15% depending on funding stream. This means that findings from the educational attainment analysis apply to the subset of Multiply learners for whom linkage is possible, rather than to the full Multiply population. The reasons for the low match rate are not fully understood.

In Appendix C we present summary statistics comparing the characteristics of Multiply learners in the matched NPD-ILR data to those in the wider ILR wider population to assess the representativeness of the analytical sample. The subset of learners for whom we can successfully match NPD to ILR records have quite different characteristics to other, unmatched learners. For example, matched learners are considerably more likely to be male (and this is especially true of Multiply learners); to be White British; and to have a recorded learning difficulty or disability. This means that the results based on the matched NPD-ILR data (for completion and educational progression outcomes) are unlikely to be representative of the experiences of Multiply learners as a whole.

The impact analyses presented in this report take steps to mitigate data limitations. The educational outcomes analysis focuses on outcomes measured within 6 months of course start, to ensure a consistent and comparable observation window across learners. This avoids differences in estimated impacts being driven by systematic variation across the comparison groups in how long individuals are observed after their first course start (since a greater fraction of Multiply learners took their course towards the end of our sample period, limiting the amount of time we can observe follow-up outcomes).

However, these steps are unlikely to fully eliminate the issues caused by underlying data constraints. While our matching and regression analysis allows us to make the population of Multiply learners more comparable to the counterfactual group of learners, there will still be important and unobserved differences between the groups. As a result, the findings should be interpreted with caution.

Future analysis, incorporating additional data, would allow for a fuller assessment of longer-term outcomes and provide clearer evidence on the effectiveness and value for money of the programme. The availability of LEO data would enable the inclusion of employment and earnings outcomes, giving a more comprehensive picture of the programme’s impacts. LEO data could also support improved matching by accounting for learners’ pre-course employment trajectories (easing some of the challenges of making Multiply and counterfactual learners comparable).

Further work to better understand the drivers of low match rates between the NPD and ILR would also be valuable. If these linkage issues can be resolved, this would increase sample size and improve the representativeness of the analytical sample relative to the

wider learner population. More broadly, especially in analyses relying solely on ILR data, the availability of richer information on learners' prior attainment would strengthen the ability to control for baseline differences between learners, as the ILR currently contains only limited and incomplete information on prior attainment.

1.6 Reporting conventions

Where relevant, differences that are statistically significant at the 95% level are denoted by an asterisk.

Throughout the report, data labels shown in figures are in the same order as categories in the graph. In some cases, data labels for small categories (representing values of 4% or lower) are omitted to make figures more legible. Where differences are statistically significant and values are below 5%, data labels are included within the notes section of the figure. The numbers shown in some figures may not sum to 100% due to rounding.

2. Overview of the Multiply programme

This chapter provides an overview of the Multiply programme. It starts with the background and rationale for Multiply. The programme logic is described, from activities through to intended impact, and the programme's implementation details are presented, framed using the Template for Intervention Description and Replication (TIDieR)⁹.

It goes on to present key statistics about the number and profile of learners engaged, the types of courses delivered, and the different ways learners were recruited into courses. It concludes with a description of the attitudes towards learning and the barriers to taking up a course among non-learners without a Level 2 maths qualification in England.

Some of the evidence in this chapter relates to the evaluation criteria of Effectiveness (how well did Multiply achieve its objectives?) and Impact (what difference did Multiply make?). In particular, this section considers the effects of the programme on overall participation in adult numeracy learning. Other evidence in this chapter relates to the Relevance criteria (was Multiply doing the right things?).

Chapter summary

The Multiply programme was funded from the UK Shared Prosperity Fund and was intended to address low levels of adult numeracy in England. The programme ran for 3 years from April 2022 to March 2025. During this time, there were 288,604 enrolments recorded for Multiply courses, making up 45% of all adult numeracy enrolments over that time.

It is likely that a clear majority of Multiply enrolments would not have taken place without the programme. Under the assumption that without Multiply the total number of adult numeracy enrolments across Community Learning and AEB Numeracy in financial years 2022/23 to 2024/25 would have been the same as in the previous 3 years, 85% of Multiply enrolments were additional. In other words, there was a fairly low level of displacement from other numeracy courses.

Multiply courses tended to be short; around 2 in 5 (43%) were recorded as being less than 5 hours. This report compares Multiply provision against 2 other types of adult numeracy courses, Community Learning and AEB numeracy. The average Multiply course was 5 times shorter than the average AEB Numeracy course, and half as long as the average Community Learning course.

⁹ The TIDieR (Template for Intervention Description and Replication) framework is a structured reporting tool designed to ensure clear and comprehensive descriptions of interventions. Although originally developed for, and most widely used in, healthcare and clinical trial settings, it is increasingly being applied in other fields—including social research—to improve transparency, replicability, and fidelity reporting.

Completion rates were high for Multiply, with around 97% of enrolments being completed. This is a higher completion rate than seen for similar Community Learning courses over the same timeframe even after accounting for differences in learner characteristics and for course duration.

Multiply was generally successful in bringing people with low levels of numeracy into some form of maths learning, especially where they might not have otherwise considered adult education. For example, less than half (47%) of Multiply learners reported having any GCSE or equivalent qualifications. Around a quarter (23%) of Multiply learners said they had already achieved a GCSE in maths at grade C (or grade 4) or above, although they may still have felt they needed help with developing their numeracy skills.

Multiply recruited people from a broad range of backgrounds, including various hard-to-reach groups, such as people for whom English is not their first language (48% of Multiply learners), people with a physical or mental health condition (29%), people with caring responsibilities for someone with a physical or mental health condition (15%), people who had spent time in the care system (7%), and ex-offenders (5%).

The programme acted as a “stepping stone” for these types of learners to then engage with more formal and accredited courses. As discussed in Chapters 3 and 4, this reflected a shift in focus for Multiply from originally intending to support learners to achieve a Level 2 qualification in maths. This shift in focus followed feedback from local areas about who they thought would most benefit from Multiply. A common perception reported by local areas and learning providers was that many potential learners would not be willing or able to take part in long or formal courses.

Given this shift in focus, it is unsurprising that the vast majority of Multiply funded courses were non-regulated and did not lead to a formal qualification. Around 2% of Multiply starts led to a completed qualification, and under 1% led to a completed qualification at Level 2.

Multiply learners had first heard about their course from a variety of sources, especially friends or family (15% of Multiply learners), a college or learning provider’s website (14%), or a Jobcentre Plus work coach (13%). Compared to AEB Numeracy learners, Multiply learners were more likely to have heard about their course from a Jobcentre Plus work coach or speaking to someone promoting it, and less likely to have heard about it through college or learning providers websites or google searches about maths courses.

Overall, personal interactions seemed to be more important for engaging Multiply learners compared to other forms of engagement and compared to other types of learners. Local stakeholders thought that peer-led outreach sessions had been especially important for building trust and encouraging participation among these kinds of groups. Participation in outreach activities was relatively more common for certain learner groups such as ex-offenders (40% reported attending at least one outreach activity), those who had spent time in care (39%), ethnic minority learners (30%) and learners with caring responsibilities (29%).

The most common reasons for taking a course cited by Multiply learners were to improve skills or knowledge (mentioned by 59% of Multiply learners), followed by personal interest (28%) and to help get a job they want (27%). However, Multiply learners were generally less likely than AEB (qualification) learners to say they were taking their course as a step towards further training (22% of Multiply learners, compared with 38% of AEB learners) or to get a job they want (27% of Multiply learners, compared with 36% of AEB learners).

Many of Multiply's initial target population of non-learners without a Level 2 maths qualification were not looking for support with numeracy skills, and had relatively little interest in a programme like Multiply. Non-learners were generally already confident in their everyday numeracy skills. For example, only 16% said they were not at all or not very confident working with numbers in everyday life. The most commonly cited reason among non-learners for not taking a course was feeling that they did not need to improve their maths (39%), followed by a lack of time or difficulty juggling with other commitments (20%). Most non-learners (66%) said they would not be interested in taking a course like Multiply.

Nonetheless, there was still a significant minority of non-learners without a Level 2 maths qualification who were open to numeracy learning, with around 1 in 4 (27%) saying they would be very or fairly interested in taking a course like Multiply. Among those who were interested, the most common barriers were concerns about the time commitment (mentioned by 38%) and the costs of attending a course (mentioned by 34%).

These findings indicate that while many Multiply learners were not interested in gaining Level 2 maths, there was still demand for Multiply courses. It may be possible to further stimulate the latent demand for adult numeracy education to further increase participation. However, this would likely require more engagement with a wider pool of potential learners to persuade them of the benefits of further learning and to address concerns about practical barriers such as time or cost.

2.1 The Multiply programme

2.1.1 Background and rationale

'Multiply' is the name given to a programme of activities designed to address low adult numeracy, delivered between April 2022 and March 2025. The UK Shared Prosperity Fund¹⁰ provided the programme funding. The evaluation focuses on the programme in England which was delivered by the Department for Education. Funding was allocated to local areas¹¹ to design tailored interventions in coordination with community groups and

¹⁰ The UK Shared Prosperity Fund (UKSPF) was introduced in April 2022 by the UK government as a key component of the Levelling Up agenda. The UK Shared Prosperity Fund was focussed on 3 pillars – communities and place, local businesses, and people and skills – with the Multiply programme incorporated under the latter.

¹¹ The collective term 'Local areas' covers the authorities that commission and coordinate Multiply programme delivery in their area. These are the Greater London Authority (GLA), Mayoral Strategic Authorities (MSAs) and upper tier and unitary local authorities outside of these areas.

employers. Multiply was designed to support adults (aged 19+) with low levels of numeracy to improve their skills up to Level 2 maths (GCSE grade 4/C). In doing so, Multiply aimed to address low numeracy skills among adults in England, contributing to improved labour market outcomes for learners and productivity benefits for employers.

Evidence assessment

At the start of the Multiply programme in 2022, evidence showed that:

- despite a statutory entitlement to free maths courses up to Level 2 (GCSE grade 4/C) through the Adult Education Budget, participation and achievement levels in adult maths courses had fallen in the decade prior to Multiply
- 9 million working age adults in England and Northern Ireland had low basic skills, placing them in the lower half of OECD numeracy rankings, behind comparator countries such as Japan, Germany and Canada (OECD, 2013)¹²
- 1 in 4 people would be deterred from applying for a job if it listed using numbers and data as a requirement (National Numeracy, KCL, Ipsos Mori, 2019)
- more than 5 million adults with low levels of English and maths were in work, potentially creating challenges in the workplace (Kuczera, 2016)
- 68% of workplaces with a basic skills gap did not provide basic skills training (Tu, 2016)
- high numeracy is linked to a range of positive financial capable behaviours (Money Advice Service, 2018), with low confidence in numeracy associated with increased debt and money problems (Financial Conduct Authority, 2021)
- economic loss from poor numeracy was equivalent to an average of £1,600 p.a. for an individual in the UK (Pro Bono Economics, 2021)
- for the UK as a whole, poor numeracy equated to an estimated £25bn of economic loss, in lost wages (Pro Bono Economics, 2021)
- improvements in skills were estimated to directly account for 20% of UK productivity in recent decades (NIESR, 2015)
- learners were more likely to sign up for classes that are flexible and framed as “essential skills”, covering multiple components, rather than “basic skills classes” only (Alma Economics, 2023)

¹² Updated data from the Programme for the International Assessment of Adult Competencies (PIACC) published in 2023 (fieldwork took place between September 2022 and June 2023) found an estimated 8.5 million working age adults in England with low proficiency in literacy, or numeracy, or both. The same report found that England ranked above average in basic skills, but behind Finland, Japan, Sweden, Norway, Netherlands, Estonia, Flemish Community (Belgium), Denmark, Switzerland, Singapore and Germany. [Survey of Adult Skills 2023 Technical Report | OECD](#)

Rationale

Specifically, Multiply sought to address key barriers to learning highlighted by local areas, such as low confidence, competing responsibilities and negative prior experience of formal education. Low numeracy can limit an individual's employment prospects, wages and wellbeing, while maths qualifications unlock the door to more training and skilled jobs, providing businesses with productive employees, increasing profits and improving workforce retention. Improving adult numeracy was therefore considered critical for driving economic growth and central to reducing regional disparities and creating opportunities across the country.

2.1.2 Programme description: theory of change

Multiply aimed to bring about change at 3 levels: learners, local areas and employers. The theory of change is described below and summarised in Figure 1. An accessible version can be found in the Appendices.

Learners

Through creative outreach, local engagement activities and communications at the national level (activities), it was hoped Multiply would reach and motivate hard-to-reach adults who might otherwise not consider maths learning. As learners enrolled in and began Multiply courses (output), positive early experiences would build confidence, spark interest and encourage learners to pursue further provision (change mechanism). Learners would be increasingly satisfied with courses, feel more confident using maths in everyday life and would increasingly recommend Multiply to others (outcomes).

As learners completed courses (output), it was hoped they would see improvements in their maths, and social benefits such as improved wellbeing, stronger community connection and a sense of accomplishment, reinforcing their motivation and learning behaviour (change mechanism). Feedback loops between learners, providers, employers and local areas would improve provision and responsiveness to learner needs. These changes would result in sustained numeracy improvements among learners, leading to more course completions and more learners reporting positive life impacts and employment related benefits (outcomes).

As learners progressed in numeracy (outputs), it was hoped tangible benefits such as gaining Entry Level or Level 1 qualifications or securing employment opportunities would sustain their learning momentum (change mechanism). As a result, individuals would progress into more advanced qualifications, workplace learning or sustained employment, including moving from nonregulated Multiply provision to qualification-bearing courses within a year of finishing a Multiply course (outcome).

Local areas and employers

Through local area outreach and engagement (activities), it was hoped community organisations and employers would collaborate in designing Multiply courses (outputs). As learner confidence and engagement grew, along with progression and tangible benefits, local areas and employers would continue investing in and shaping numeracy provision (change mechanism), leading to closer collaboration, greater satisfaction with delivery and observable benefits for businesses and local areas. As a result, local areas and employers would increasingly support a more embedded and strategic approach to adult numeracy (outcomes).

Impact

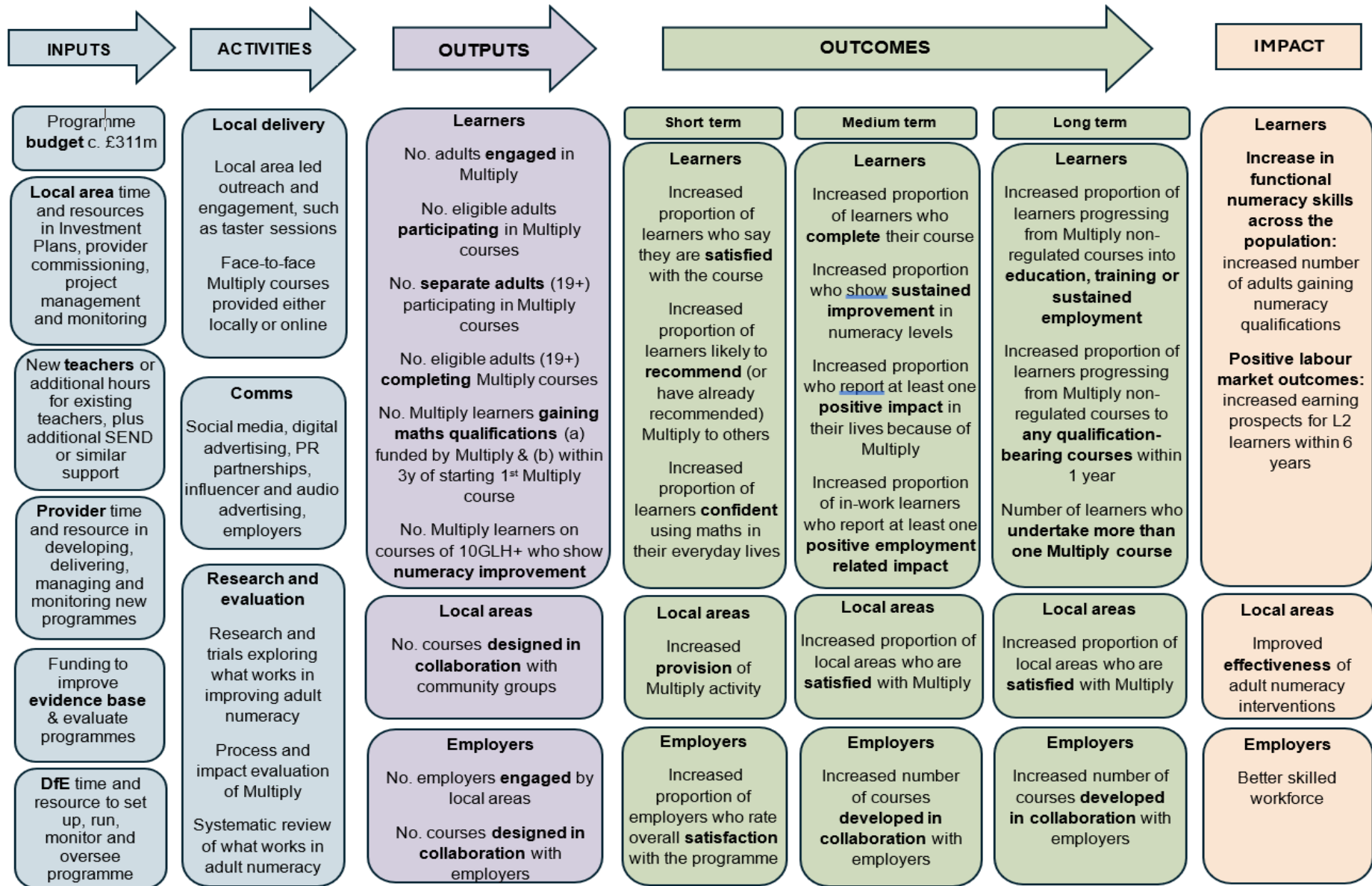
Ultimately, there were 2 intended impacts:

- First, improved functional numeracy skills across the population (i.e. more adults gaining numeracy qualifications)¹³
- Second, positive labour market outcomes, i.e. increased earning prospects for Level 2 learners within 6 years of course completion¹⁴

¹³ This contributed to the Levelling Up Mission 6 which was a strategic priority set out in the UK Government's Levelling Up White Paper (2022). It aimed to ensure that by 2030, the number of people successfully completing high-quality skills training significantly increased in every area of the United Kingdom. This was the relevant policy context at the time the programme was designed.

¹⁴ This contributed to the DfE's Priority Outcome of Driving Economy Growth through improving the skills pipeline, levelling up productivity and supporting people to work.

Figure 1: Description of the Multiply programme Theory of Change



2.1.3 Template for Intervention Description and Replication (TIDieR)

Rationale

Multiply was introduced by DfE to address barriers to participation and progression in adult numeracy courses. By offering learners free and flexible courses, the programme aimed to improve functional numeracy in England's adult population and, in turn, secure positive labour market outcomes such as boosted employment and earnings prospects for individuals and enable more people to progress into the Government's Level 2 and above skills offer. More details of the rationale are included in the Background and rationale section.

Participants

Recipients of Multiply were adults aged 19 and over who were not confident in basic numeracy. Learners included individuals who were in work as well as individuals who were unemployed.

Materials

The Multiply programme involved a large number of locally designed courses, utilising a range of physical and digital resources to support delivery and learner engagement. Examples of materials provided to participants include: printed workbooks, contextualised numeracy worksheets, and access to online learning platforms offering interactive exercises and video tutorials. A wide range of courses applicable to everyday activities were offered. For some courses additional items relevant to the course were provided to incentivise learner engagement, for example, access to ingredients for cooking-related courses. Delivery partners used facilitator guides, lesson plans, and presentation slides to ensure quality and consistency in teaching approaches.

Training providers developed comprehensive manuals and e-learning modules, covering pedagogical strategies, safeguarding, and learner support techniques. Additional promotional materials, such as leaflets and posters, were distributed locally to encourage participation. Most digital resources were hosted on local authority learning portals or partner websites, while national guidance and templates were made available through the Department for Education's Multiply resource hub.

Procedures

The Multiply Programme was delivered through a combination of structured learning sessions and enabling support activities designed to build confidence and skills in

numeracy. Participants typically attended small-group classes, either in community venues, colleges, or online platforms. Sessions focused on practical numeracy skills contextualised to everyday tasks such as budgeting, shopping, and workplace applications.

Providers followed local processes that included initial learner assessment, personalised learning plans, and ongoing progress reviews. Enabling activities included outreach and recruitment campaigns, provision of childcare or travel support where needed, and signposting to additional learning opportunities. Tutors were encouraged to adopt flexible teaching methods, incorporating digital tools and interactive exercises to maintain learner motivation. Continuous monitoring and feedback loops ensured that interventions were responsive to learner needs and local priorities.

Research and evaluation activity complemented delivery by supporting the refinement of practice and the generation of evidence on what works.

Implementation

Delivery was led by local areas, who identified needs, commissioned providers, coordinated delivery, and oversaw monitoring. Delivery partners included colleges, local authority adult learning services, community organisations and employers.

Staff at these providers typically held teaching qualifications in adult education or functional skills and had prior experience working with learners who face barriers to engagement. Specialist providers that had previously engaged with employers were also used within the programme. This allowed for specialist maths courses to be provided for employees in specific sectors.

To ensure consistency and quality, delivery staff received relevant training that included guidance on contextualised numeracy teaching, learner-centred pedagogy, and strategies for building confidence among adults with low prior attainment. Additional training covered safeguarding, equality and diversity, and the use of digital learning tools. In some cases, support staff such as learning mentors and community organisations were involved to facilitate recruitment and provide wraparound support for learners.

Mode of delivery

The Multiply Programme was delivered through a mix of face-to-face sessions and online learning options, allowing flexibility to meet diverse learner needs. Face-to-face

provision typically took place in small groups to encourage peer support and interaction. For learners unable to attend in person, digital platforms offered remote learning via interactive modules, video tutorials, and virtual classrooms. In addition to group-based delivery, some providers offered further support, particularly for learners requiring personalised assistance or confidence-building before joining group sessions.

Location of delivery

The Multiply Programme was delivered across a range of accessible community-based and educational settings to maximise reach and inclusivity. Common locations included further education colleges, adult learning centres, libraries, and community hubs, as well as workplaces for employer-based provision. These venues were close to target populations and were intended to provide a welcoming, non-intimidating environment for adults with low confidence in numeracy. Necessary infrastructure included classrooms equipped with basic teaching resources, digital devices for blended learning, and internet connectivity to support online components. In rural or hard-to-reach areas, mobile learning units and pop-up venues were occasionally used to overcome geographic barriers.

Timing and number of courses delivered

Delivery took place over a flexible timeframe to accommodate learner needs and local delivery models. Most interventions consisted of short courses ranging from 6 to 12 sessions, with each session lasting 1 to 2 hours. Some providers offered intensive formats, such as daily sessions over a 1 or 2 week period, particularly for learners aiming to progress quickly towards a qualification. The overall duration of engagement varied, with many learners completing their course within 4 to 8 weeks, while others participated in extended programmes for up to 3 months. Additional support activities, such as drop-in sessions and online practice modules, were available throughout the learning period to reinforce skills and maintain engagement.

Programme tailoring

The Multiply programme was designed to be highly adaptable to meet the diverse needs of adult learners with varying levels of confidence and prior attainment in numeracy. Personalisation occurred at several stages: during initial assessment, learners completed diagnostic activities to identify specific skill gaps and learning goals, which informed the creation of individual learning plans; delivery was then tailored by adjusting the pace, content, and teaching methods to suit each learner's circumstances, such as incorporating real-life contexts relevant to their work or daily life. Implementers also made adaptations for accessibility, including flexible timings of the sessions and

provision of support for those with additional needs. In many cases, Multiply courses were developed and tailored for specific learner groups, for example, learners working in a particular industry or with a particular employer.

Delivery models were also adapted to include more flexible online options, shorter sessions, and one-to-one provision in response to learner feedback and attendance challenges. These changes aimed to address barriers such as childcare, work commitments, difficulties in group settings, and digital exclusion, which were identified during early implementation.

Programme modifications

Programme modifications were introduced progressively from mid-implementation onwards, following initial monitoring and feedback cycles. Local areas and delivery partners implemented these changes by revising timetables, introducing hybrid learning formats, and providing additional digital support resources. In some cases, outreach strategies were also modified to target underrepresented groups more effectively. There were 3 key programme modifications:

- **Programme outcomes:** although Level 2 qualifications were initially a key learner outcome, most funded courses were non-regulated and did not lead to a formal qualification (around 1% of Multiply starts led to a completed Level 2 qualification). The programme therefore focused on bringing people with low levels of numeracy into some form of maths learning, especially where they might not otherwise consider adult education. Evaluators measured progress in terms of progression onto other forms of education, employment and training, reported positive life and employment outcomes and increased learner confidence with maths. Although improvement from pre-course numeracy assessment scores to post-course scores was an intended measure of distance travelled, the evaluation was not able to collect this data.
- **Eligibility:** Multiply initially targeted adults over 19 who did not already have a Level 2 qualification; however, this was later expanded to include learners who had previously achieved a GCSE in maths at grade C (or grade 4) or above, but who were not confident in basic numeracy. Around a quarter (23%) of learners said they had already achieved a GCSE in maths at grade C (or grade 4) or above.
- **Digital platform:** The Multiply programme initially planned to include a UK-wide digital platform. This did not progress and the programme focussed on

supporting local areas to ensure Multiply was delivered in a way that best met local needs.

Strategies to monitor delivery - planned

Fidelity was monitored through reporting requirements and quality assurance processes led by local authorities and overseen by the DfE. Providers submitted progress reports on attendance and adherence to guidance. Local areas engaged in strategies to maintain fidelity including standardised templates, facilitator training, and audits of materials. Spot checks and learner feedback surveys were used to ensure alignment with programme objectives.

Strategies to monitor delivery - actual

Overall, the intervention was delivered largely as planned. Most providers adhered to Multiply's core principles, supported by standardised guidance and training. The key variations to the programme as planned were the greater proportion of Multiply courses being shorter than expected, and only a small minority of courses leading to a qualification.

More information about each of these elements of the programme can be found throughout this report.

2.2 Multiply in numbers

This section provides key statistics about the Multiply programme, derived from the Individualised Learner Record (ILR).

2.2.1 Multiply, AEB¹⁵ and Community Learning¹⁶

Across this report, the Multiply Programme is presented within the wider context of adult numeracy learning. Two types of adult numeracy learning programmes are included within this section as a comparison to Multiply, Adult Education Budget (AEB) numeracy courses, and Community Learning numeracy courses.

The AEB funded education and training courses for adults aged 19 and above to gain skills for work or further study. Community Learning was a funding stream within the

¹⁵ In August 2024 the AEB was replaced by the Adult Skills Fund (ASF). As this change came very late in the timeframe of the Multiply programme, these courses are referred to as AEB throughout the report.

¹⁶ With the change to the ASF, Community Learning was replaced by Tailored Learning. As with the AEB terminology, these courses are referred to as Community Learning throughout.

AEB that allowed for providers to deliver bespoke, non-regulated courses to address specific local skills needs. Multiply is presented in comparison to these courses as these were the other main funding streams of adult numeracy targeted at a similar level to the Multiply programme.

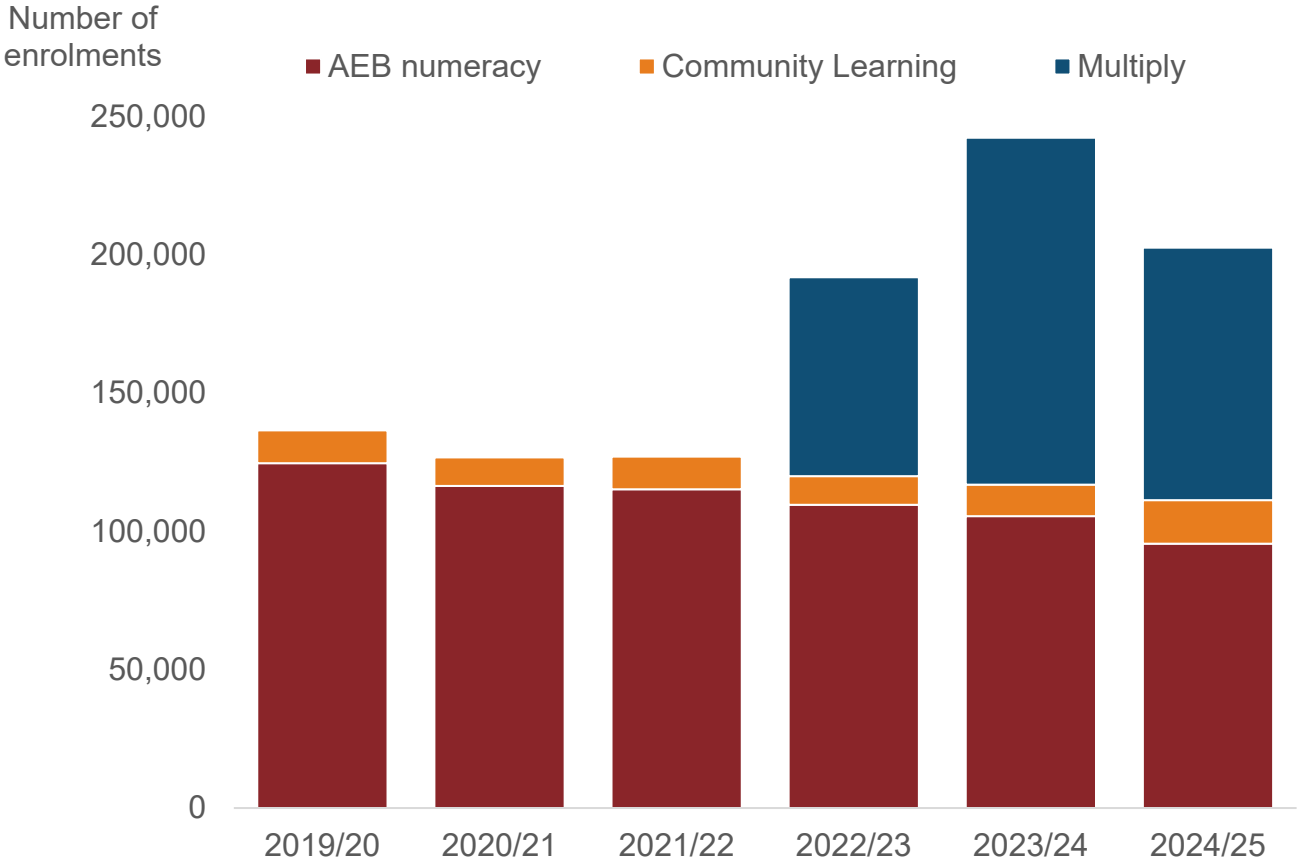
2.2.2 Enrolments

Analysis of the ILR shows that with the introduction of the Multiply programme, there was a notable increase in the number of enrolments in adult numeracy courses. Based on data for the last 6 academic years to date (Figure 2), the trend in the number of enrolments on AEB numeracy and Community/Tailored Learning numeracy courses is downward overall, falling by around 18% since 2019/20. With the introduction of Multiply from 2022/23 to 2024/25, the total number of enrolments on adult numeracy courses increased by 63% compared to the 3 previous academic years. During these 3 years, Multiply courses made up 45% of all adult numeracy enrolments.

These trends suggest that the vast majority of Multiply learners were “additional learners” in the sense that they would not have taken a numeracy course without the programme. If it is assumed that, without Multiply, the number of enrolments on AEB numeracy and Community/Tailored learning courses 2022/23 to 2024/25 would have been the same as the previous 3 years, then 85% of Multiply enrolments would have been additional in this way.

[Official statistics published by DfE](#) have also cited Multiply as a key contributor to the increase in overall adult education participation over 2022/23 to 2024/25. According to these statistics, there was a large increase in participation in the 2022/23 academic year, attributed mainly to the introduction of Multiply and of Skills Bootcamps. Across all subject areas, there were around 2.4 million enrolments across in each of the 2022/23 and 2023/24 academic years, increased from around 2 million in the 2020/21 academic year. Multiply courses could have plausibly accounted for around a fifth of this increase.

Figure 2: Total number of publicly funded numeracy course enrolments, 2019/20 to 2024/25 (academic years)



Source: ILR

Note on Multiply funding: Multiply funds were only issued to local areas from October 2022, and Multiply funding ended at the conclusion of the 2024/25 financial year (March 2025).

Data Note. Across all charts within this report, data labels will always follow the order that they are presented.

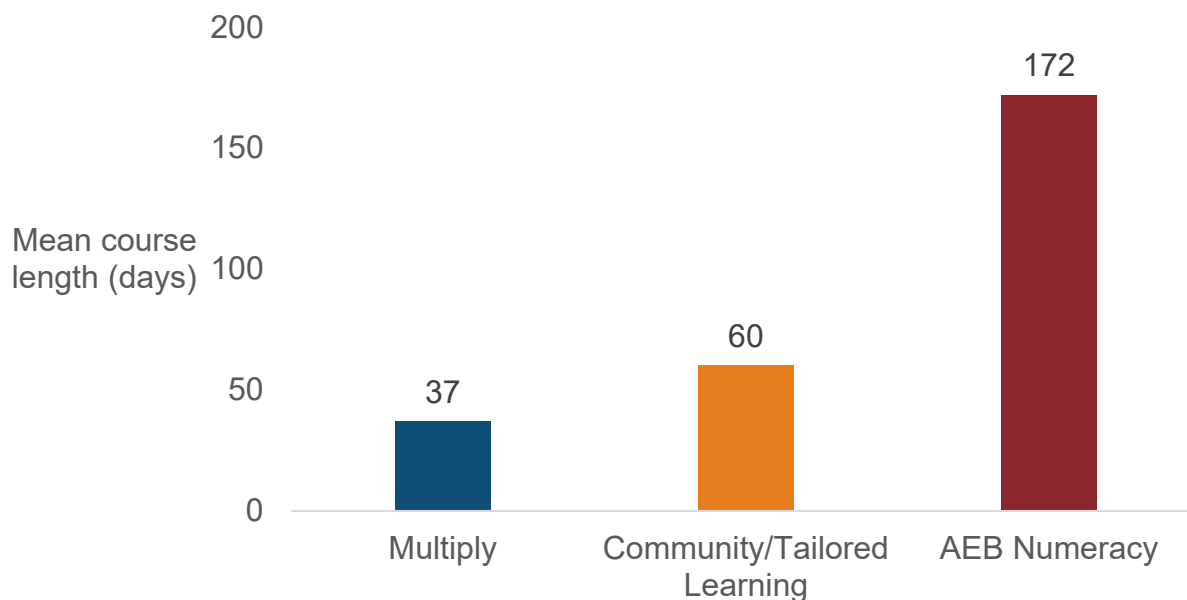
2.2.3 Types of course

One of the primary differences between the types of adult education courses was whether the courses led to a qualification. The vast majority of Multiply courses (97%), and all Community Learning courses (100%) were non-qualification based. The opposite is true for AEB numeracy courses, the vast majority of which over the last 3 academic years led to a qualification. As Community Learning was also funded through the AEB, other AEB courses are referred to as AEB (qualification) courses in this report.

Another difference between Multiply and AEB (qualification) numeracy courses was the overall length of the course, with the typical Multiply course usually being much shorter. Figure 3 presents a comparison of the average Multiply course length to AEB (qualification) numeracy and Community/Tailored Learning courses. On average, AEB (qualification) numeracy courses were nearly 5 times the length of Multiply courses, and Community/Tailored Learning courses nearly twice the length.

This pattern is also reflected in the distribution of course lengths. The median length of AEB numeracy courses was 159 days, compared to 30 days for Community Learning and 14 days for Multiply. The 10th to 90th percentile range spans 50 to 289 days for AEB numeracy, 1 to 169 days for Community Learning, and 1 to 98 days for Multiply. These figures highlight that Multiply courses were consistently shorter than other forms of adult numeracy provision, not just on average. It should be noted that teaching did not necessarily occur on every day of the course period.

Figure 3: Mean course length in days across 2022/23-2024/25 academic years

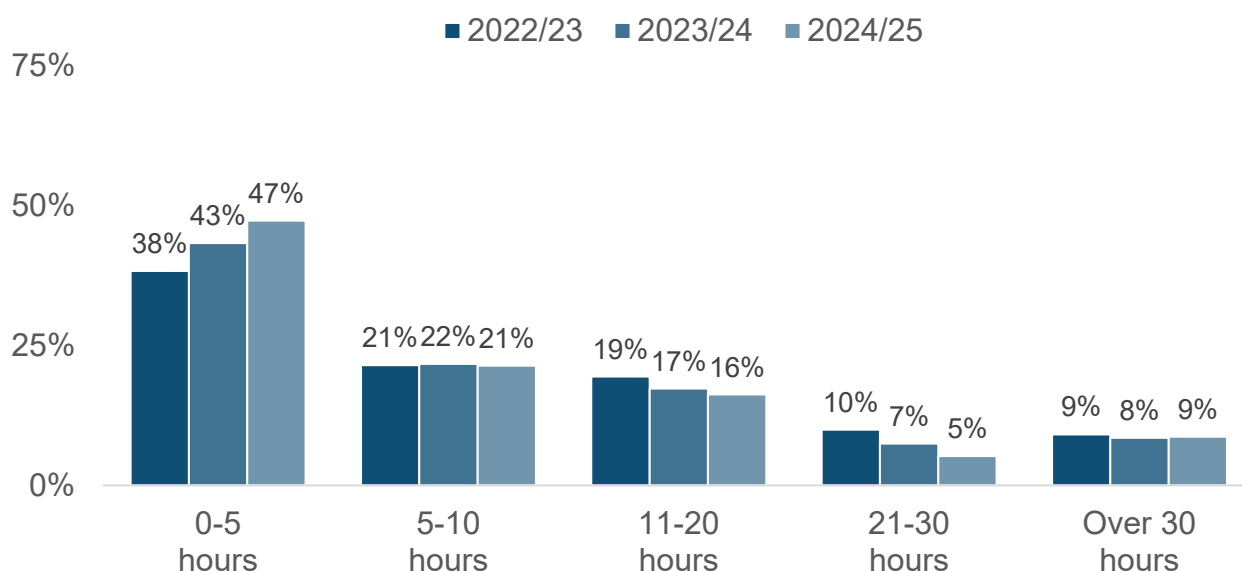


Source: ILR.

To provide further detail on how much learning time is set for Multiply courses, Figure 4 presents the distribution of enrolments on Multiply courses by the course number of hours in each academic year. Overall, more than 2 in 5 (43%) of Multiply starts were on courses lasting only up to 5 hours. This distribution has changed slightly over the 3 years with more courses being shorter in length, almost half (47%) of Multiply starts in

2024/25 were on courses up to 5 hours (compared with 38% in 2022/23 and 43% in 2023/24).

Figure 4: Total Multiply enrolments, by course number of hours and academic year



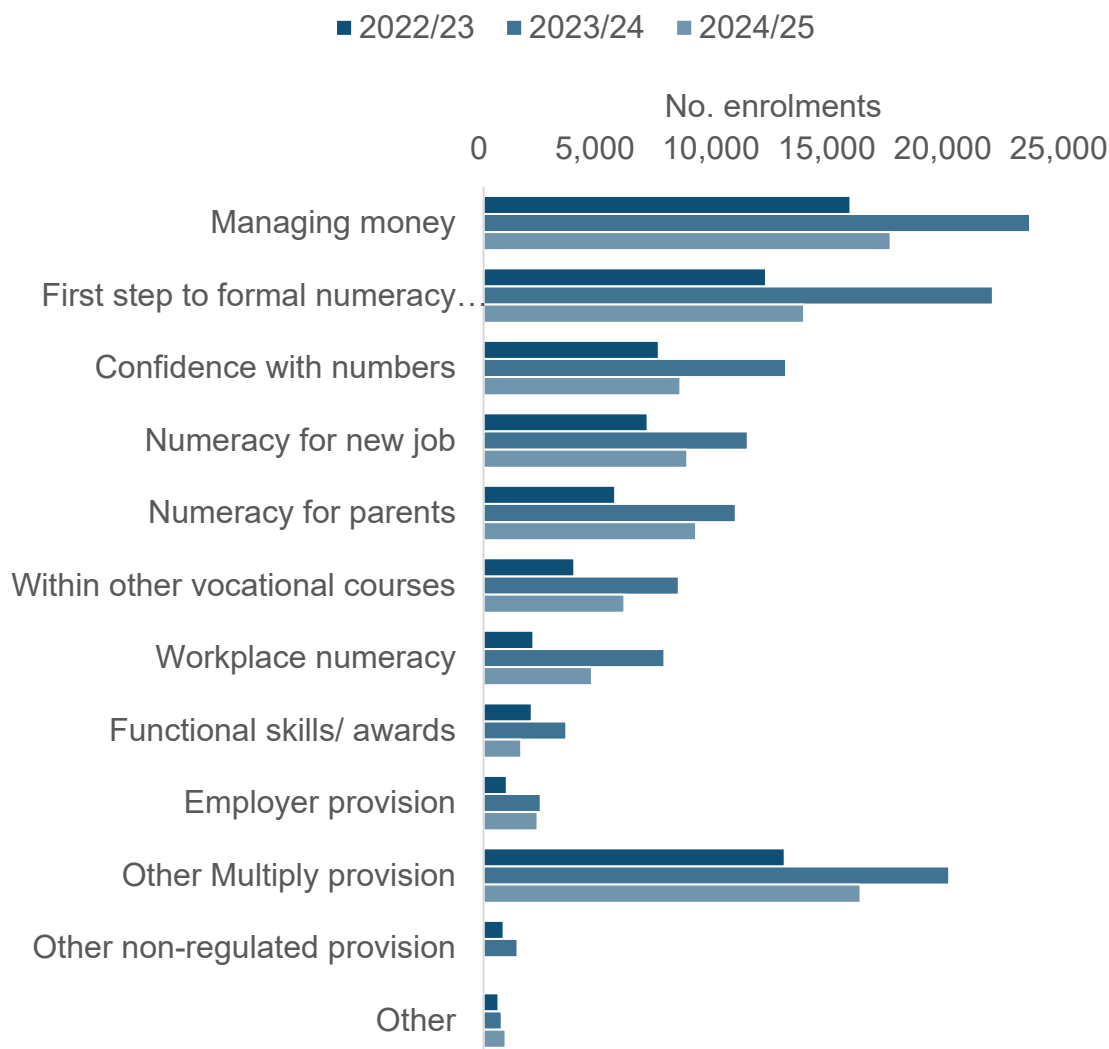
Source: ILR. Note: 2% of Multiply starts did not have a course length specified.

According to the title of the learning aim recorded in the ILR data, the most common Multiply course title was ‘Managing money’ (56,947 course starts in total over the 3 years, representing 20% of Multiply starts). Other common courses included ‘First step to formal numeracy qualification’ (47,968 course starts in total, representing 17% of starts) and ‘Confidence with numbers’ (29,090 course starts in total, representing 10% of starts).

Across the 3 academic years, ‘Other Multiply provision’ covered a notable number of Multiply courses (49,323). While there was a defined list of possible learning aims associated with Multiply, local areas had flexibility to tailor their courses to meet local needs. For example, several local areas developed Multiply courses tailored for ESOL learners to build practical numeracy skills, while other areas designed courses to help teaching assistants strengthen their maths skills so they could better support children across different age groups. Other areas created courses that focused on numeracy adjacent skills, such as using Excel or applying maths in everyday contexts like cooking.

The full breakdown of Multiply courses by learning aim is given in Figure 5.

Figure 5: Total Multiply enrolments, by course type and academic year



Source: ILR.

2.2.4 Course outcomes

Of all the unique Multiply learner starts with a known aim outcome,¹⁷ more than 9 in 10 (265,657 out of 275,132, or 97% of all starts) completed the course. Two per cent of these total starts ended in a completed qualification (6,058 starts), and less than 1 % in total (792, or 0.3% of all starts) ended in a completed qualification of level 2.

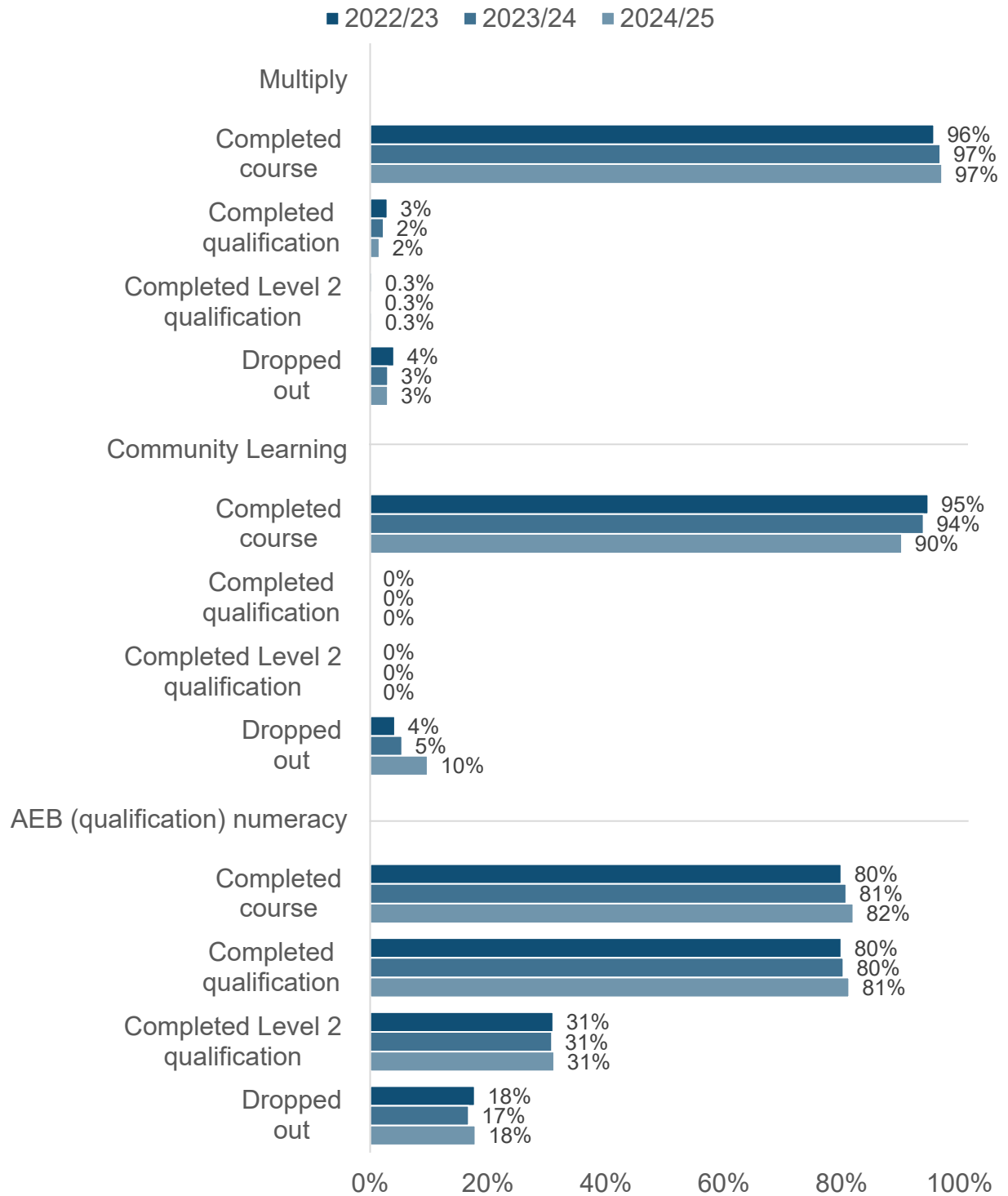
¹⁷ When assessing outcomes across numeracy courses such as non-completion rate, only courses with a record outcome within the ILR are included within the calculation.

Of all the Multiply starts with a known aim outcome, there were 8,974 where the learner dropped out before completing the course, amounting to a drop-out rate of 3%, the drop-out rate did not notably change across all 3 academic years (Figure 6). The short nature of most Multiply courses is likely to be one reason why the drop-out rate was low. As discussed in Chapter 4 of this report, Multiply learners were generally very satisfied with their course, especially the quality of teaching, communication, and content of learning materials. This high level of satisfaction is also likely to have contributed to the low drop-out rate. Chapter 4 also explores the most common reasons for dropping out. These were typically reasons to do with personal circumstances rather than learners' experience of the course itself.

Figure 6 also provides a comparison for AEB (qualification) numeracy and Community Learning courses. Around 4 in 5 (81%) starts on AEB (qualification) numeracy courses between 2022/23-2024/25 ended in completion, 80% in completed qualifications, 31% in completed level 2 qualifications, and a non-completion rate of 17%. Given the different nature of most Multiply courses compared to AEB (qualification) courses (in particular, that Multiply courses tended to be non-regulated and much shorter than AEB numeracy courses), it is not surprising to observe such differences in the completion and non-completion rates across the 2 funding streams, or the number of course starts that end in a completed qualification.

Community Learning courses were more similar to Multiply courses, being non-qualification based and generally shorter in length than AEB (qualification) courses. Nonetheless, learners on Multiply courses were less likely to drop out than learners on Community Learning courses, (3% of Multiply courses ending in non-completion, compared with 4% of Community Learning courses in 2022/23, 3% compared to 5% in 2023/24, and most notably 3% compared to 10% in 2024/25). This may be related to the fact that the Multiply programme had a focus on engagement and support for learners.

Figure 6: Completions, completed qualifications and non-completion rates, Multiply and AEB by academic year



Source: ILR.

2.2.5 Matched comparison of Multiply learners and learners on Community Learning numeracy courses

Multiply was introduced as a time-limited programme to boost adult numeracy, which operated alongside existing Community Learning courses that offer provision at a similar level. While, overall, Multiply learners were less likely to drop out of their course than learners on Community Learning courses, it is possible that this is due to differences in the types of learners on different types of courses. Therefore, the evaluation used a statistical technique called Propensity Score Matching to attempt to account for these differences in learner types.

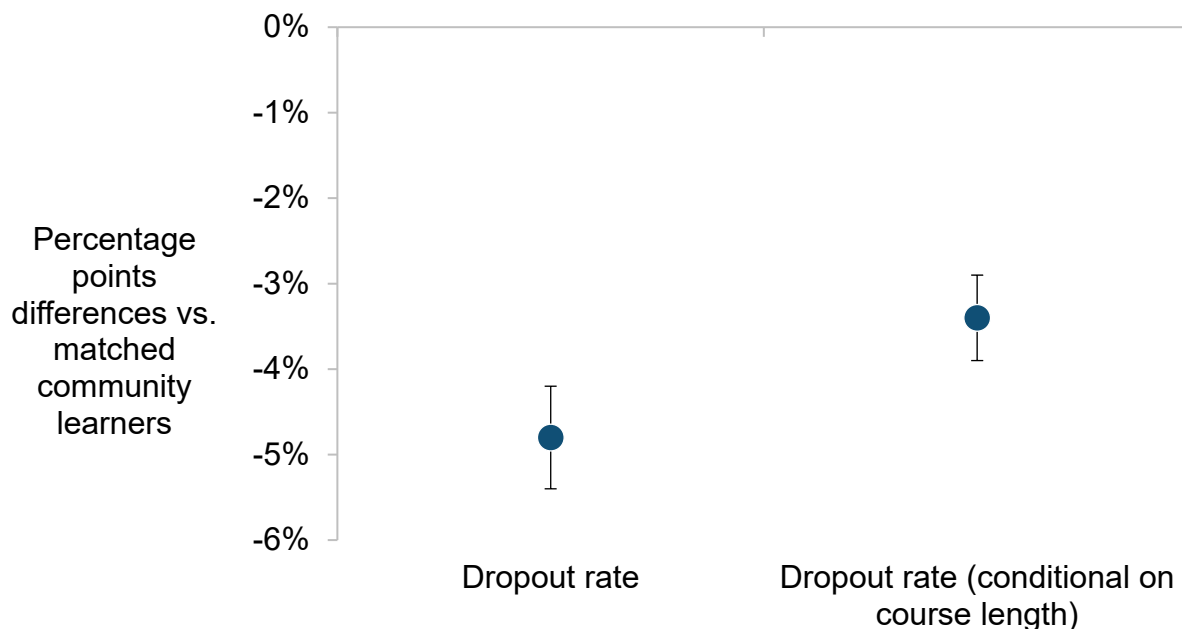
This analysis involved identifying a subset of individuals on Community Learning courses who are similar to Multiply learners across a range of characteristics. Specifically, the analysis used data from the ILR linked to data from the National Pupil Database to match on characteristics such as prior attainment, demographic factors, and support for Special Educational Needs and Disabilities. This approach ensures the analysis focuses on the most comparable learners as possible. Further detail on the analytical approach is provided in Appendix C.

Even after accounting for differences between learners in this way, Multiply learners were less likely to drop out of their aim than comparable learners taking Community Learning courses. Adjusting for learner characteristics, Multiply learners were 5 percentage points less likely to drop out than similar Community Learning learners (Figure 7), a difference that is statistically significant. Given that drop-out rates were generally already low for Community Learning (see Figure 6), this represents a reasonably large difference for Multiply learners.

One possible reason for this difference is that Multiply courses are considerably shorter than other forms of numeracy provision. Shorter courses are typically easier to complete, so part of the observed difference in non-completion may reflect these differences in course duration. To assess this, the analysis was repeated controlling for expected course length. When course duration is included, the estimated difference reduces to around 3 percentage points but remains statistically significant and large relative to the drop-out rate for Community Learning learners. Given that the overall drop-out rate among Community Learning learners is 9%, this means that the drop-out rate was around one-third lower among Multiply learners.

This suggests that shorter course length explains part, but not all, of the lower drop-out rate observed among Multiply learners.

Figure 7: Difference in drop-out rates between Multiply learners and matched Community Learning learners



Source: Linked ILR and NPD data.

Note: Estimates are coefficients from matching models where the outcome is “not completing the first numeracy aim”. The sample includes only aims with expected end dates falling within the observation window, so that completion status can be reliably measured. All models control for demographic characteristics and prior attainment at Key Stage 2 and Key Stage 4; specification shown on the right additionally controls for expected course length. Standard errors are bootstrapped and bars indicate 95% confidence intervals.

2.3 The profile of Multiply learners

This section describes the types of learners who took part in Multiply courses. It draws on data from a combination of the ILR and the learner survey. Where relevant, comparisons are made against AEB (qualification) or Community Learning learners (from the ILR), the wider target population for Multiply (adults without a Level 2 maths qualification, from the non-learner survey), or official statistics about society as a whole.

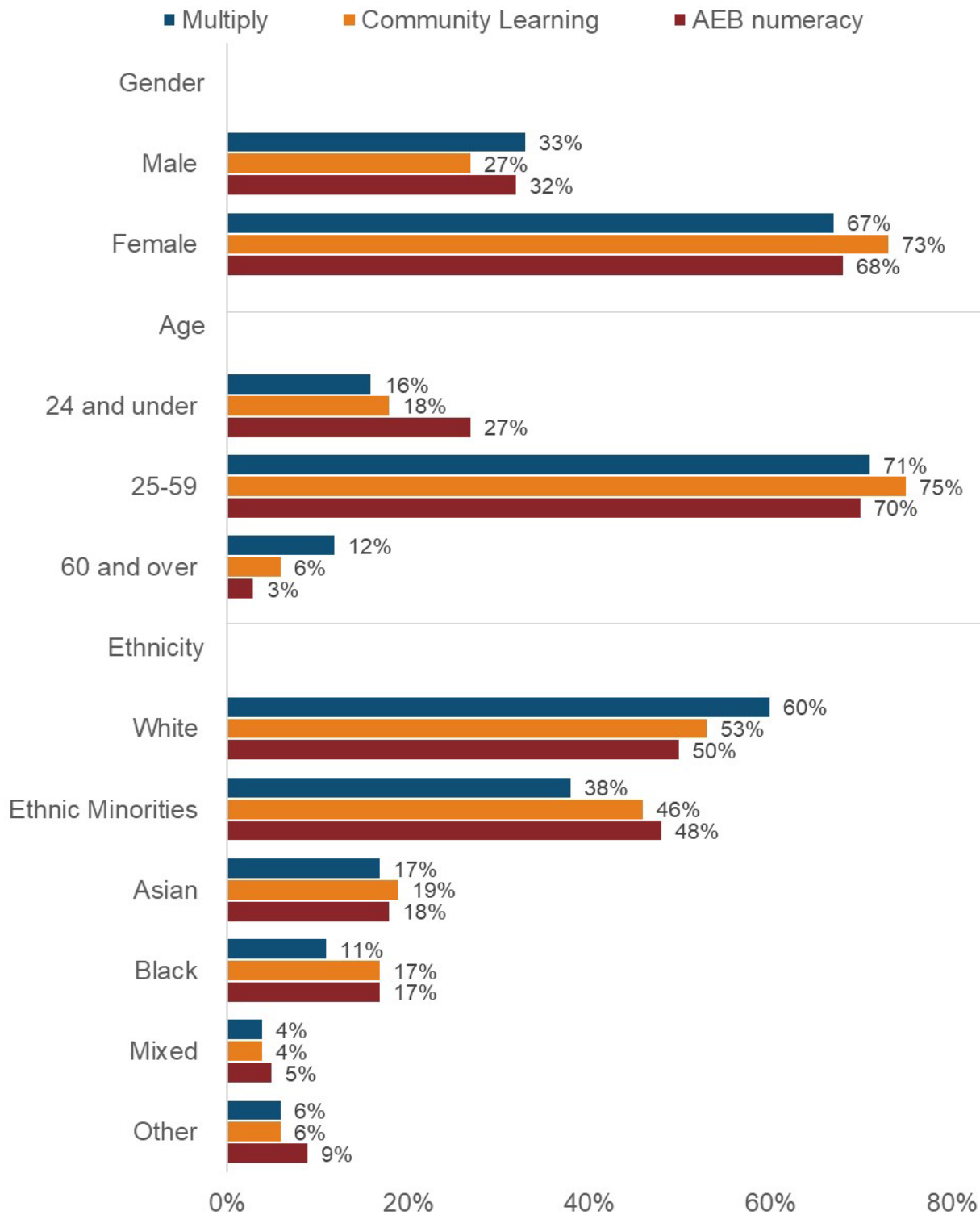
2.3.1 Learner demographics

Figure 8 presents learner demographics across Multiply, AEB (qualification) and Community Learning Learners. Close to two thirds (67%) of Multiply learners across the 3 academic years of implementation were female, while the other third (33%) were male. Across the same time period, the gender split was similar for AEB (qualification)

learners(68% and 32%), Community Learning learners were slightly more likely to be female (73%).

In terms of age group, 16% of Multiply learners were aged 24 years or younger, 71% were aged 26-59 years, and 12% were aged 60 and above. AEB (qualification) learners were more likely to be younger, over a quarter (27%) were aged 24 and under and less than 1 in 30 (3%) were aged 60 and over. Community Learning learners were also less likely to be older than Multiply learners, with around 1 in 16 (6%) aged 60 and over.

Figure 8: Multiply learners, by sex, ethnicity and age group



Source: ILR. Notes: 2% of learners did not have ethnicity recorded in the ILR

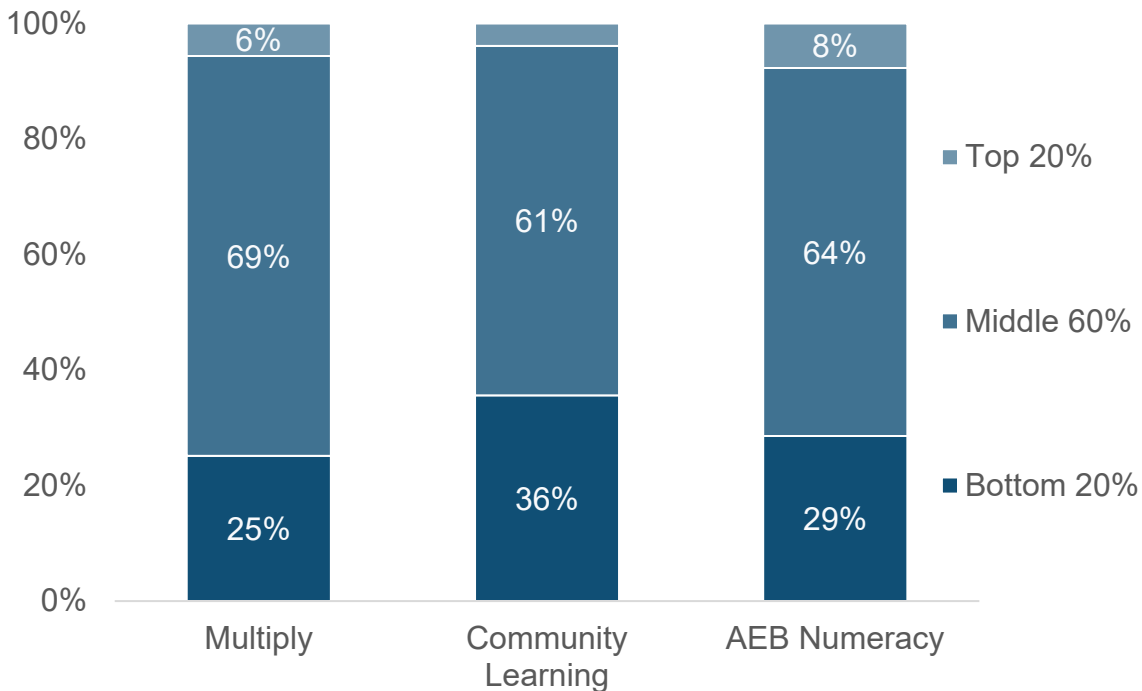
Six in 10 (60%) Multiply learners were from a white ethnic background and around 4 in 10 (38%) were from an ethnic minority background: 11% identified as Black, 17% as Asian, 4% as mixed ethnicity and 6% as other ethnicities. These figures indicate that ethnic minorities were overrepresented among Multiply learners compared with the overall population. In the [2021 Census](#), 83% of adults aged 16 or above in England were recorded as white (9% Asian, 4% Black, 2% Mixed, 2% Other). Compared to AEB (qualification) and Community Learning learners, Multiply learners were more likely to be of White ethnicity (60% compared to 50% for AEB (qualification) learners and 53% for Community Learning), and less likely to be of Black ethnicity (11% compared to 17% for both AEB (qualification) learners and Community Learning).

Figure 9 compares the distribution of learners across areas by level of deprivation as measured by the [Index of Multiple Deprivation \(IMD\)](#).¹⁸ Across all 3 groups, learners are disproportionately drawn from more deprived areas, with a higher concentration in the most deprived areas and a relatively low share in the least deprived areas.

There is some variation across provision types. Community Learning has the highest share of learners in the most deprived areas (36%), followed by AEB (qualification) numeracy (29%) and Multiply (25%). Multiply learners are more concentrated in the middle 3 quintiles of deprivation (69%) compared to AEB (qualification) numeracy (64%) and Community Learning (61%). In all cases, only a small proportion of learners are from the least deprived areas, 4% in Community Learning, 6% in Multiply and 8% in AEB (qualification) numeracy.

¹⁸ IMD is a measure of deprivation of low-level geographical area an individual lives in.

Figure 9: Multiply, Community Learning and AEB Numeracy learners by IMD quintile

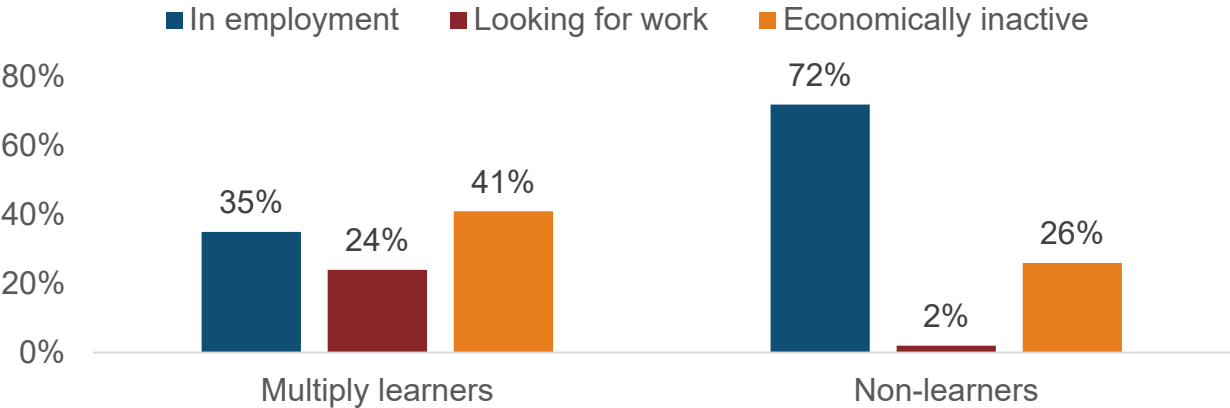


Source: ILR

2.3.2 Employment

In the Learner Survey, learners were asked about their employment status prior to starting their Multiply course. A high proportion of Multiply learners were either looking for work or economically inactive immediately prior to starting their course. Of those aged under 65, just over a third (35%) of Multiply learners were in employment immediately prior to starting their Multiply course, while around a quarter (24%) were looking for work and 2 in 5 (41%) were economically inactive (Figure 10 below). When looking at the survey of non-learners without Level 2 qualifications in maths, the target group for the Multiply programme, 72% were in employment, 26% were economically inactive and only 2% looking for work.

Figure 10: Working age Multiply learners and non-learners, by employment status prior to Multiply

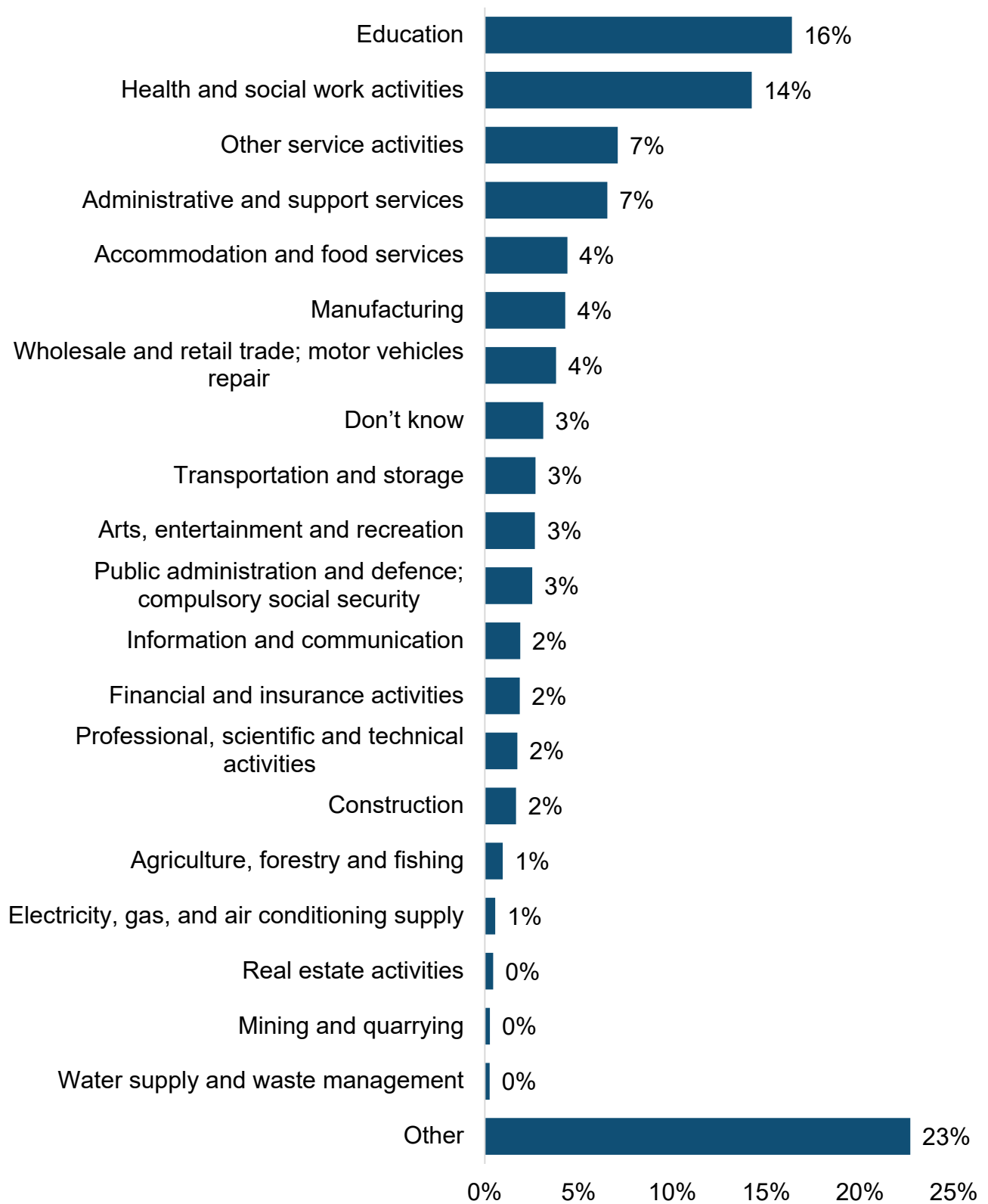


Multiply learners: Thinking back to what you were doing in the four weeks just before you started this course, which best describes what you were doing? Non-learners: Which of the following best describes the main thing you are currently doing

Source: Learner survey (working status pre-Multiply); Non-learners survey (current working status). Base: Multiply learners aged up to 64 (5,602); Non-learners aged up to 64 (1,302). Notes: Within this report, unless when relevant, 'Don't know' or 'Prefer not to say' responses are not included within charts and so percentages may not sum to 100%.

The Learner Survey also shows that over a third (37%) are currently in paid work after completing their Multiply course. Those who are working are spread out across a range of sectors, with the largest share of workers being in Education (16%), Health and social work (14%), and a quarter in 'Other' (23%). Figure 11 shows the proportion of Multiply learners in paid work after completing their course by sector of employment.

Figure 11: Sector of employment for Multiply learners currently in paid work

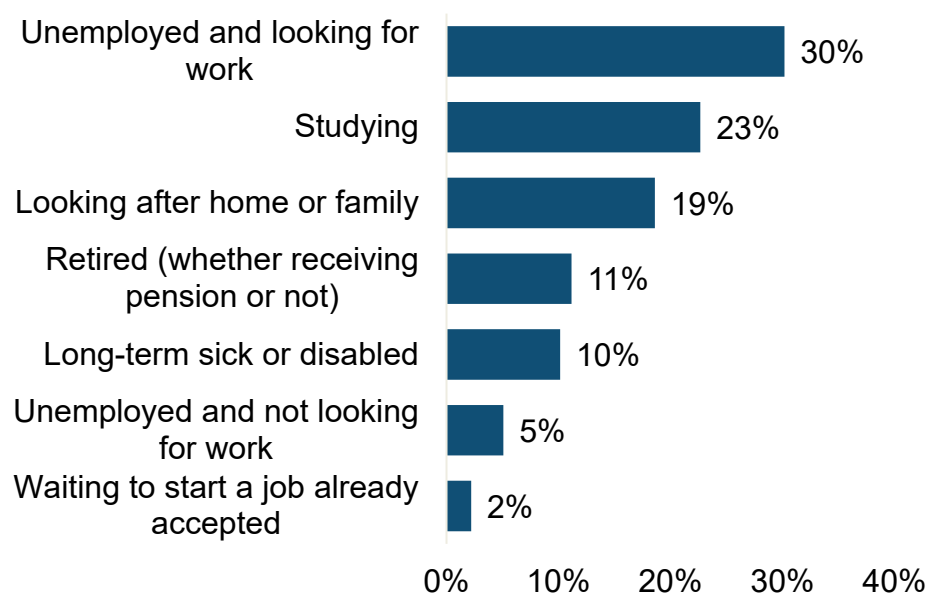


Which of these best describes the industry you currently work in?

Source: Learner survey. Base: Multiply learners currently in work (2,198)

As shown in Figure 12 those not currently in paid work following completion of their Multiply course tended to be either unemployed and looking for work (30%) or studying (23%). Other activities not in paid work were looking after home or family (19%), retired (11%), long-term sick or disabled (10%), unemployed and not looking for work (5%) or waiting to start a job that has already been accepted (2%) (Figure 12).

Figure 12: Activity of Multiply learners not currently in paid work



Which of the following best describes the main thing you are currently doing, now the course has ended?

Source: Learner Survey. Base: Multiply learners not currently in paid work (3,709)

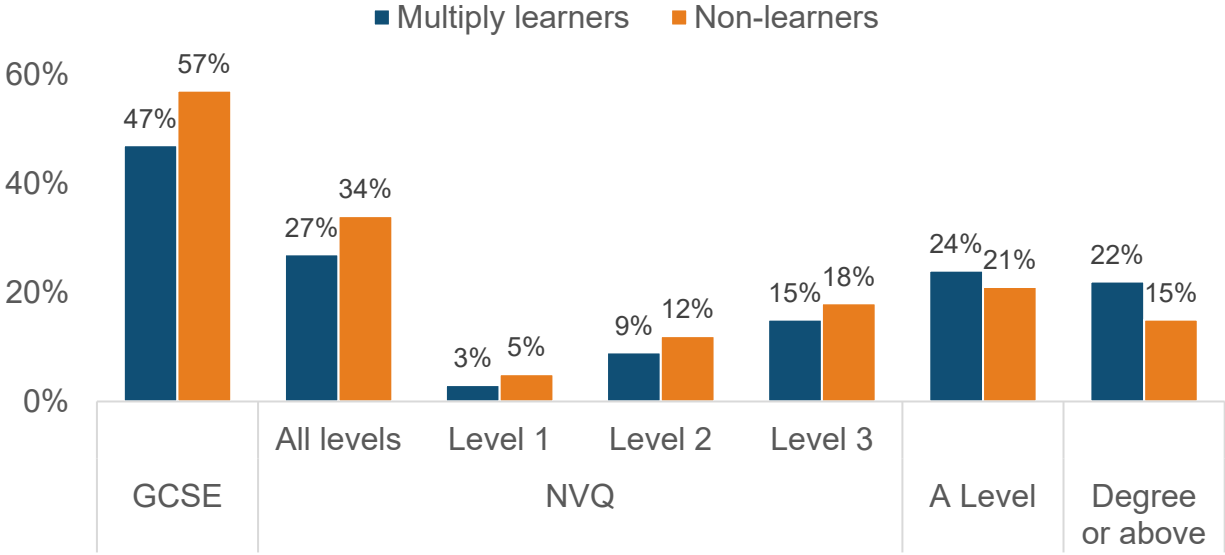
2.3.3 Qualifications

Multiply was generally successful in reaching people with limited qualifications. In the learner survey, almost a third (31%) of Multiply learners said they had no formal qualifications, over half (60%) said they had some kind of formal qualification and 8% did not know. In the non-learners survey, a quarter (26%) of respondents said they had no qualifications. In the UK overall, [according to the 2021 Census](#), 18% of people in 2021 had no formal qualifications.

Just under half of Multiply learners (47%) said they had at least a GCSE qualification, around a quarter (27%) said they had an NVQ at some level, around a quarter (24%)

said they had at least one AS or A-level, and 22% said they had a degree or higher (Figure 13). These are each at a similar or lower level than qualifications reported by respondents to the non-learners survey.

Figure 13: Proportion of Multiply learners that have a formal qualification, by type and level of qualification



Do you have any formal qualifications? Have you achieved a GCSE or equivalent, for example Basic Skills course, O levels, CSEs or a Functional Skills Qualification at Level 2? Have you achieved an AS, A level or equivalent? Have you achieved an NVQ or equivalent qualification? Have you achieved a qualification at degree level or above?

Source: Learner Survey; Non-learners survey. Base: Multiply learners (6,394); Non-learners (1,856)

Around a quarter (23%) of Multiply learners also said they had already achieved a GCSE in maths at grade C (or grade 4) or above. While these learners may have needed support with numeracy skills, they were not part of the original target group for Multiply.

2.3.4 Hard-to-reach groups

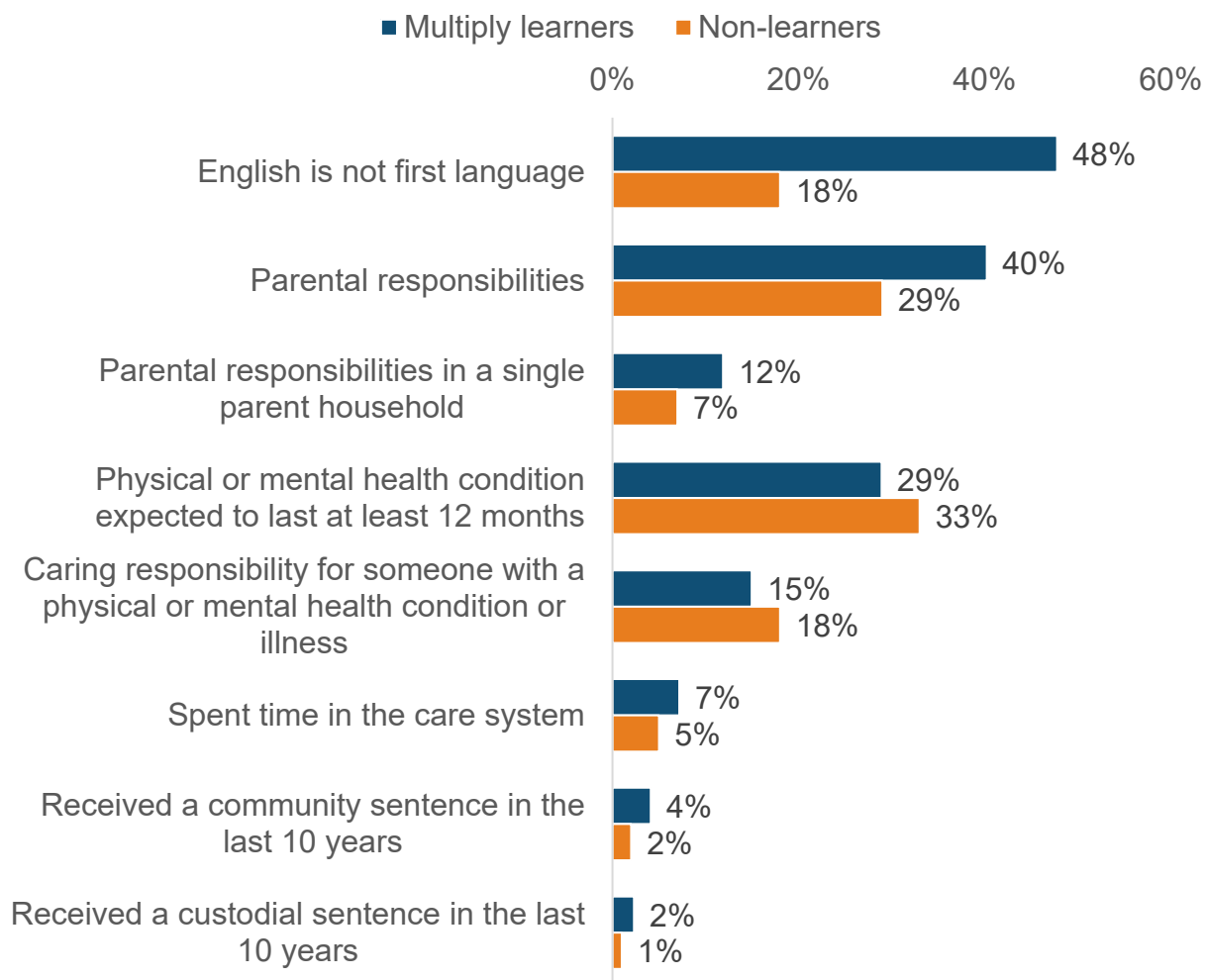
Multiply learners included a number of hard-to-reach groups, that generally have lower participation levels in adult education (Figure 14). Just under half (48%) of all Multiply learners reported having English as a second language, a much greater proportion than amongst non-learners (81% or respondents to the non-learners survey said English was their first language) and the general population (according to the [2021 Census](#), 91% of those aged 3 years and above had English as their main language).

Four out of 10 (40%) Multiply learners had parental responsibilities, and 12% of all learners had parental responsibilities while living in a single parent household. As a comparison, 29% of respondents to the non-learners survey had parental responsibilities, and 7% had parental responsibilities while living in a single parent household.

Three out of 10 (29%) Multiply learners had 1 or more physical or mental health conditions or illnesses lasting or expected to last for 12 months or more. Fifteen per cent of Multiply learners said they had caring responsibilities for people with long-term physical or mental health conditions or illnesses, or problems related to old age. These figures are similar to those for non-learners (33% and 18% respectively).

Seven per cent of Multiply learners have been in the care system while 5% of Multiply learners have either received a community sentence (4%) or a custodial sentence (2%) at any time in the last 10 years. These figures are slightly higher than in the survey of non-learners, in which 5% of respondents said they had been in the care system, 2% had received a community sentence in the last 10 years, and 1% had received a custodial sentence. Across both learner and non-learner groups, those who had been in the care system were much more likely to have received a community or custodial sentence.

Figure 14: Hard-to-reach groups among Multiply learners and non-learners



Is English your first language? How many children under the age of 18 do you have parental responsibility for and/or legal guardianship? Are you in a single parent household? Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more? Do you look after, or give any help or support to, anyone because they have long - term physical or mental health conditions or illnesses, or problems related to old age? Have you ever spent time in the care system? In the last 10 years, have you received any of the following sentences from a court and a Judge?

Source: Learner survey; Non-learners survey. Base: Multiply learners (6,394); Non-learners (1,856)

2.4 Recruitment of learners for Multiply

This section describes how learners heard about the programme, engagement with any outreach events prior to the programme, and their reasons for taking a course. The findings are drawn mainly from the surveys of Multiply learners and AEB learners, as well as from the local area case studies.

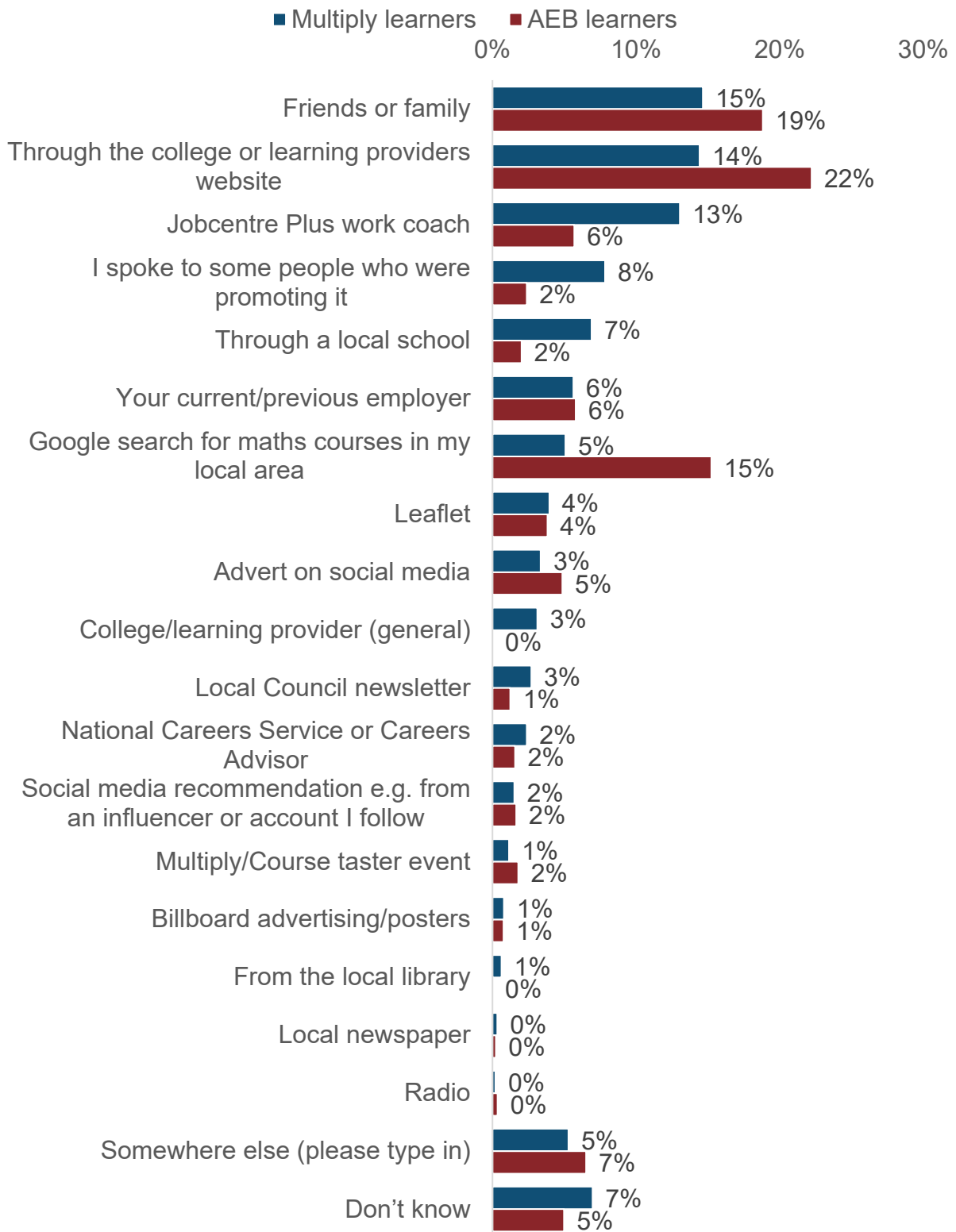
2.4.1 How learners heard about Multiply

The Multiply Learner survey found respondents first heard about their course from a variety of sources. The most likely places where Multiply learners first heard about their course include through friends or family (15% of learners mentioned this source), the college or learning provider's website (14%), and from through a Jobcentre Plus work coach (13%).

Other forms of advertising such as leaflets (4%), adverts on social media (3%), social media recommendations (e.g. from influencers or accounts followed) (2%), and billboard advertising or posters (1%) were not common routes by which learners first heard about the programme. The full list of different channels by which learners first heard about Multiply is shown in Figure 15 below.

Figure 15 also presents the responses for the same question for the AEB (qualification) learners group. Multiply learners were relatively more likely to have heard of their course through Jobcentre plus work coaches (13% vs. 6%), speaking to someone who was promoting it (8% vs. 2%), and through local schools (7% vs. 2%). On the other hand, AEB (qualification) learners were more likely to have heard of their course through college or learning providers websites (22% vs. 14%), or through direct internet searching (15% vs. 5%).

Figure 15: Sources of hearing about courses



Where did you first hear about [the Multiply / your] course?

Source: Multiply learners survey; AEB survey. Base: Multiply learners (6,394); AEB (qualification) learners on similar courses (1,700)

How learners heard about Multiply differed across learner groups. Male learners were more likely to have heard about Multiply through a Jobcentre work coach compared to female learners (20% vs. 10%). On the other hand, female learners were more likely to have heard through a college or learning provider's website (16% vs. 12%) or through a local school (8% vs. 4%). Ethnic minority learners were significantly more likely to have heard about the course through family and friends (16% Black, 24% Asian, 17% Mixed, and 19% Other) compared to learners of white ethnicity (10%).

Ex-offenders were more likely than those who were not ex-offenders to have discovered the course through a Jobcentre Plus work coach, with over a fifth (22%) selecting this option, compared to only 13% of non-ex-offenders. Learners who were looking for work also were much more likely to have heard through this route (35%) compared to learners in employment (5%) and economically inactive learners (8%). Those with parenting responsibilities were more likely to have heard of Multiply through a local school (13%), compared to learners without parenting responsibilities (3%).

The routes into Multiply were varied and, in many cases, specific to the needs and contexts of individual learners. For example, learners on certain course types were much more likely to hear about Multiply through routes relevant to the course. For learners on courses aimed at parents helping their children, over a third (37%) heard about Multiply through a local school. For courses aimed at upskilling to access a certain job/career, a quarter (24%) heard through a Jobcentre Plus work coach. And for courses to improve specific numeracy skills in the workplace, nearly a third (30%) heard about it through their current/previous employer.

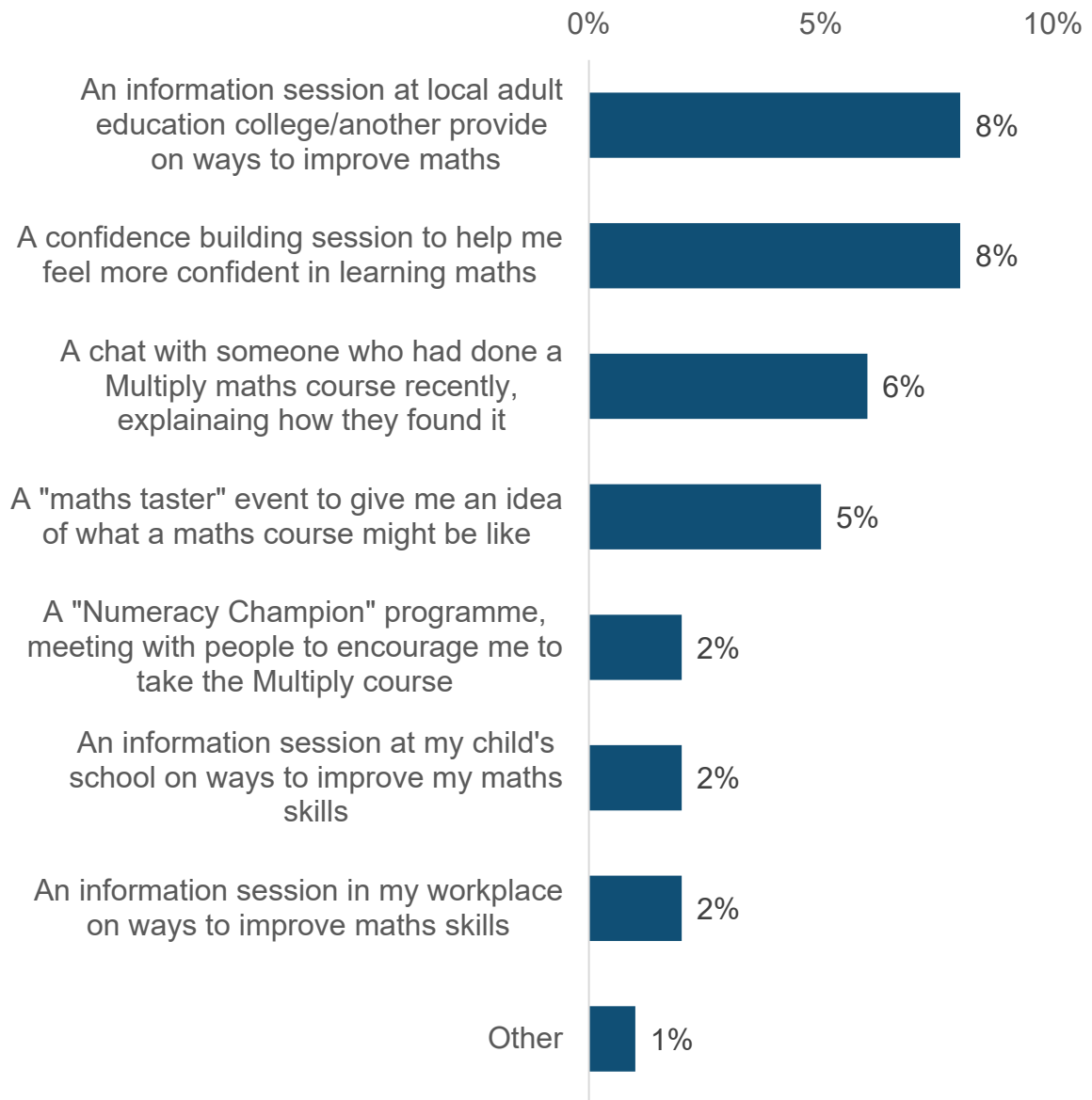
2.4.2 Outreach events

Formal outreach events were established to attract potential learners to take up a Multiply course. The majority of training providers involved with Multiply engaged with these types of events. Of the learning providers who responded to the survey, around 3 in 4 (78% in Year 1, and 72% in Year 2) reported they offered in-person events to raise awareness of Multiply.

A sizeable minority of Multiply learners (25%) reported participating in at least one type of outreach activity. More than half of Multiply learners (59%) did not attend any such events or activities. Outreach sessions included information sessions at local adult

education providers on ways to improve maths skills (8%), confidence building sessions to help people feel more confident in learning maths (8%), and speaking to someone who had recently done a Multiply course (6%). The full list of outreach activities that Multiply learners participated is presented in Figure 16.

Figure 16: Outreach events attended



Before you started your course which, if any, of these types of 'outreach' activities did you take part in?

Source: Learner survey. Base: Multiply learners (6,394)

Outreach activities were more likely to have been attended by harder-to-reach learner groups. For example ethnic minority learners were more likely to attend compared to non-ethnic minority learners (30% vs. 21%), ex-offenders compared to non-ex-offenders (40% vs. 24%), those with caring responsibilities compared to those without (29% vs. 24%), those who had been through the care system compared to those who had not (39% vs. 24%), and learners living in the most deprived areas compared to those in the least deprived areas (28% vs. 22%). This provides some evidence that the formal outreach activities may have been effective in attracting harder-to-reach groups to take up a Multiply course. This could be due to the importance of personal contact when engaging these groups or could reflect the relative inaccessibility of other types of engagement sources for certain individuals.

In the local case study interviews, local area stakeholders reported that outreach sessions that were peer-led were especially powerful in building trust and encouraging harder to reach groups to sign up to a Multiply course. Some areas thought there had been some success from developing a network of 'numeracy champions', by which learners who had completed a Multiply course became advocates to help promote signing up to Multiply amongst their peers.

Local areas that leveraged relationships with community organisations were especially successful in recruiting potential learners. One area provided community organisations with grants to make referrals to adult education. This allowed the use of a wide range of methods to successfully reach learners including door knocking, phone calls, coffee mornings, knitting clubs and placing adverts in local media. These approaches referred over 1,500 learners into Multiply.

These findings, in combination with how learners heard about Multiply, indicate that personal interactions and exhortation were especially effective for enrolling learners into Multiply courses. Personal contact appears to have been a bigger factor in recruitment for Multiply courses than for AEB (qualification) numeracy courses.

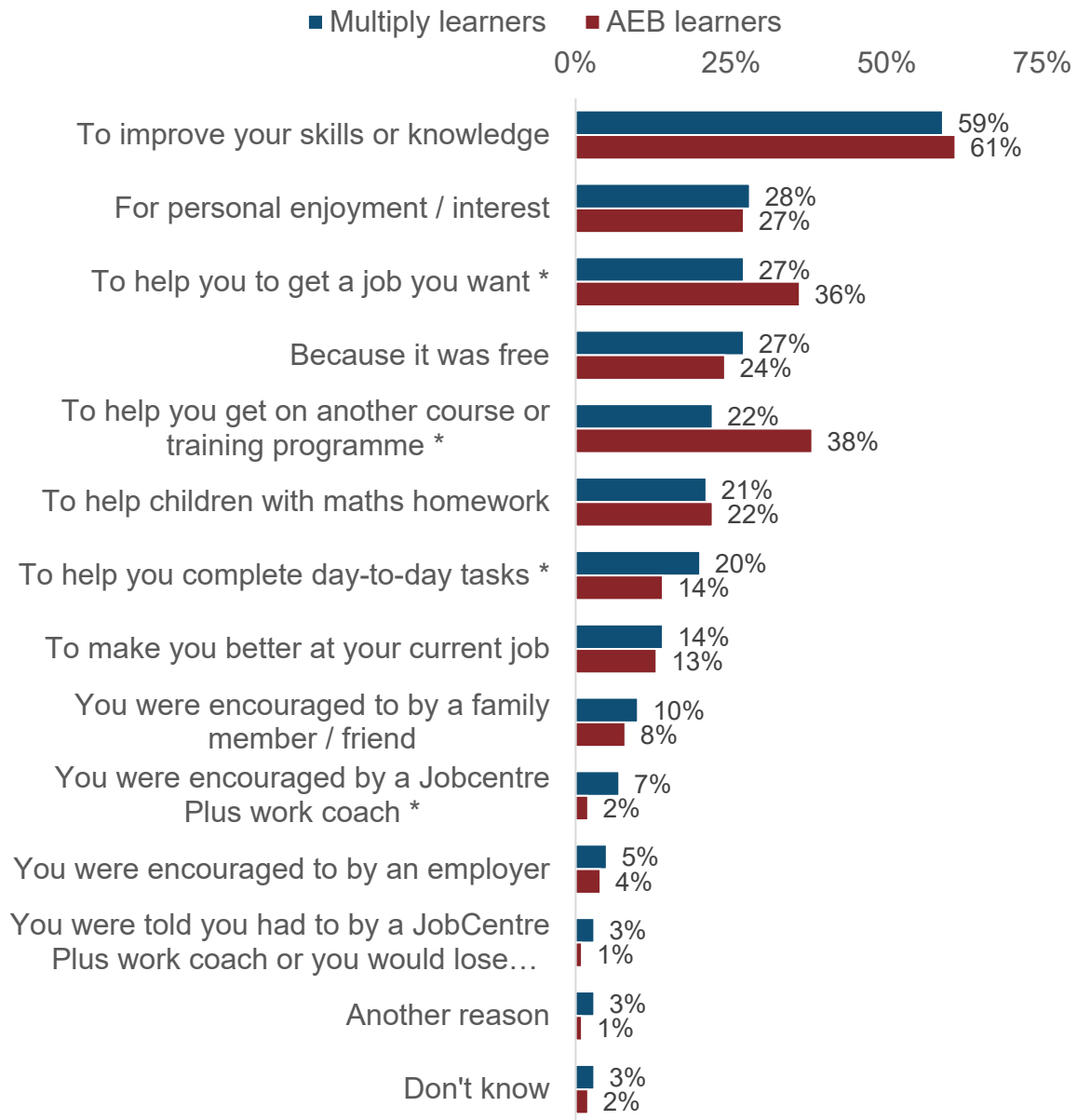
2.4.3 Reasons for taking a Multiply course

Multiply learners took courses for a variety of reasons (Figure 17 and Figure 18). The most common reasons given by Multiply learners were to improve their skills or knowledge (mentioned by 59% of Multiply learners, and the main reason for 36% of Multiply learners), followed by personal interest (28%, main reason for 8%), and to help them to get a job they want (27%, main reason for 13%).

For most reasons, the responses from Multiply learners and AEB (qualification) learners were fairly similar. However, AEB (qualification) learners were more likely to be taking a course for further training or professional development; 38% of AEB (qualification) learners said a reason for doing their course was to get onto another course or training programme (compared with 22% of Multiply learners) and 36% of AEB (qualification) learners said the main reason was to get a job they wanted (compared with 27% of Multiply learners). Overall, 42% of AEB (qualification) learners gave a main reason for taking their course that was related to further learning or development at work (to help get on another course or training programme, to help get a job you want, or to make you better at your current job), compared with 26% of Multiply learners. This suggests that progression in education or employment were the primary objectives for only a minority of Multiply learners.

On the other hand, Multiply learners were relatively more likely to say they were doing their course to help with day-to-day tasks (a reason cited by 20% of Multiply learners, compared with 14% of AEB (qualification) learners) or because they were encouraged by a Jobcentre Plus work coach (7% of Multiply learners, compared with 2% of AEB(qualification) learners).

Figure 17: Reasons for taking a course

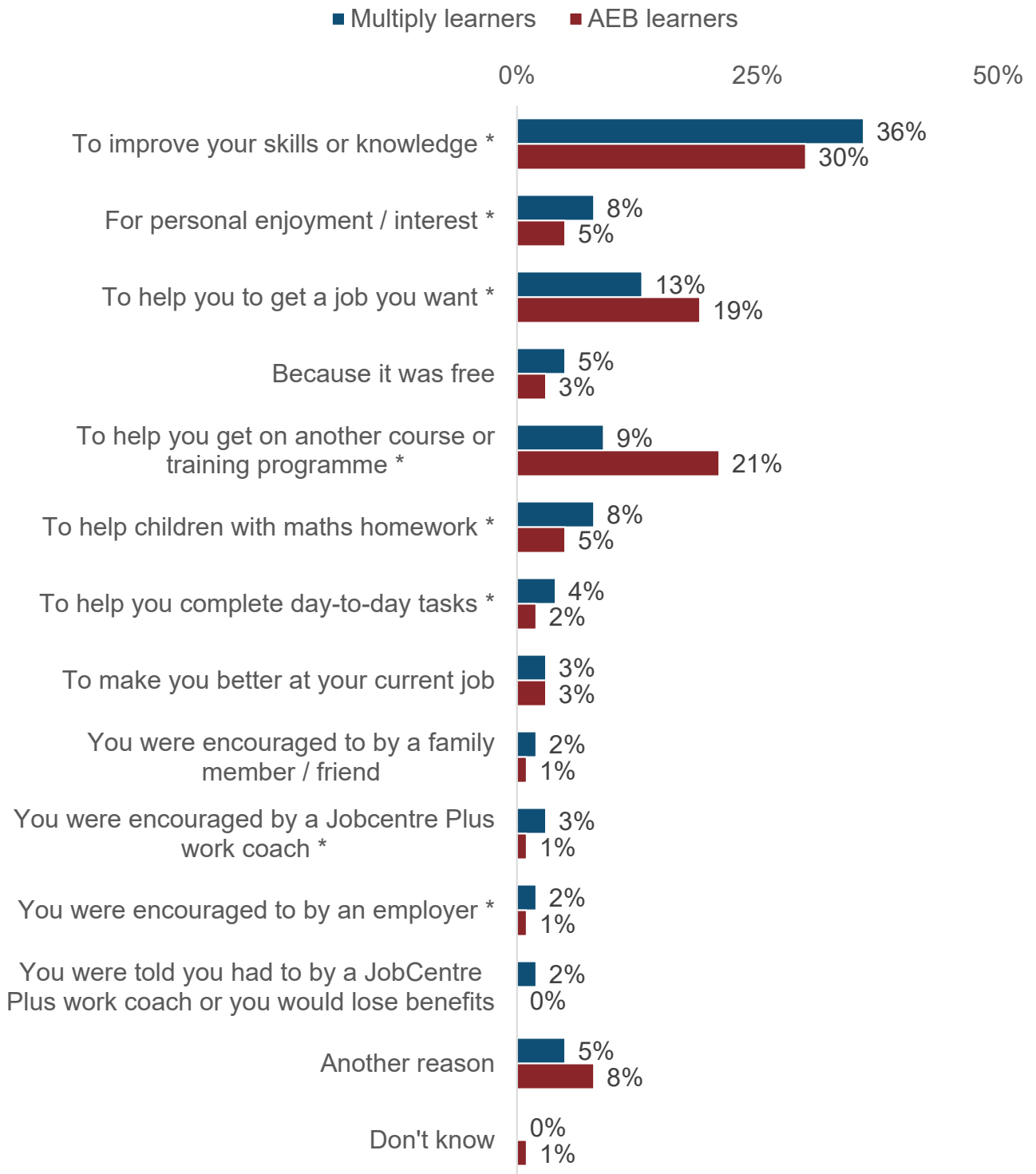


Why did you want to do this course?

Source: Learner Survey. Base: Multiply learners (6,394); AEB (qualification) learners on similar courses (1,498)

Note: Asterisks denote where the difference between Multiply learners and AEB (qualification) learners are statistically significant at the 5% level.

Figure 18: Main reasons for taking a course



What was the MAIN reason you wanted to do this course?

Source: Learner Survey. Base: Multiply learners (5,864); AEB (qualification) learners on similar courses (1,473)

Note: Asterisks denote where the difference between Multiply learners and AEB (qualification) learners are statistically significant at the 5% level.

Among different groups within the Multiply learner population, ethnic minorities were more likely than white Multiply learners to give the main reason for taking a Multiply course as to help them get on another course or training programme (12% vs. 7% respectively). Similarly, ethnic minority learners were also more likely than white learners to give the main reason for taking a Multiply course as to help them get the job they want (16% vs. 10%). Amongst ethnic minority groups, black learners were the most likely to take a Multiply course for the main reason of wanting to get onto another course or training (19%). There are no significant differences between men and women with regard to selecting Multiply for progression to further learning or employment.

2.5 Understanding the target population for Multiply

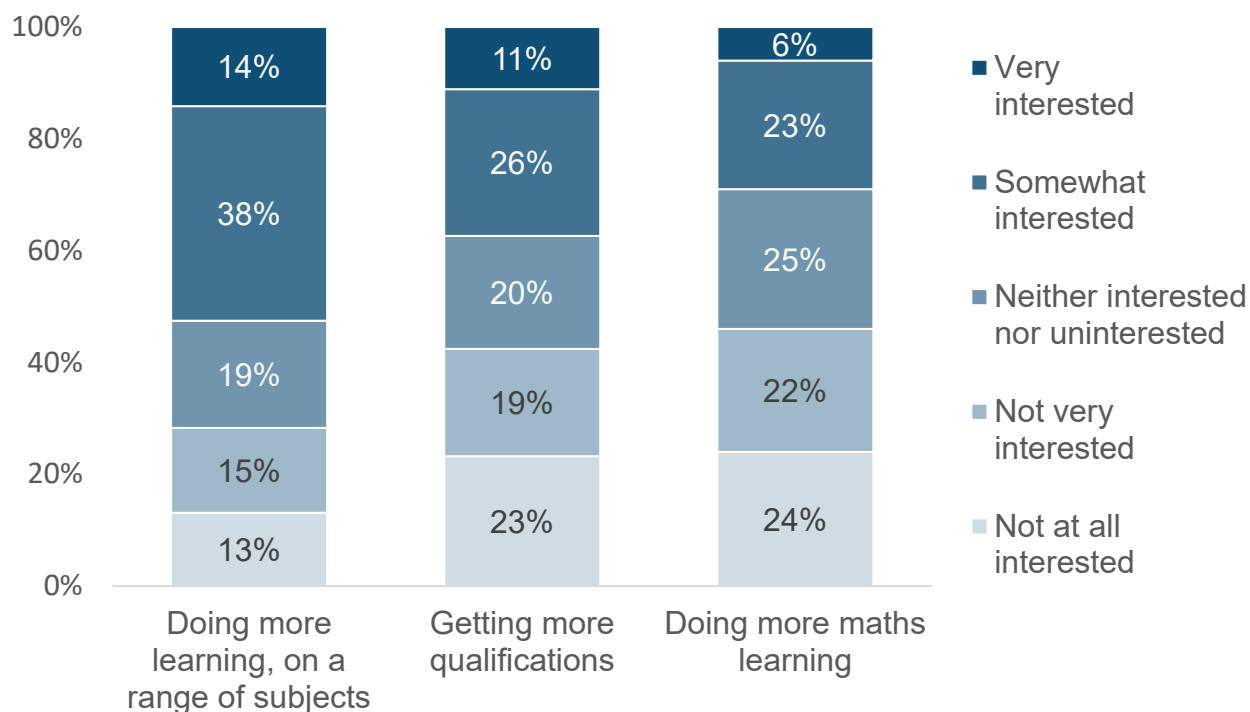
This section focuses on the original target population for the Multiply programme: adults who do not hold a Level 2 maths qualification. The evidence comes from the survey of non-learners without Level 2 maths qualifications, which gathered information including non-learners' attitudes towards learning, confidence with numeracy, and barriers towards engaging with formal learning.

2.5.1 Views about adult learning

Non-learners were asked about their views and experiences with adult learning. The majority of non-learners (78%) said they had not previously considered taking a course as an adult to improve their maths skills, with 16% saying they had considered such a course (and 6% saying they didn't know or could not remember).

Non-learners were fairly positive about the idea of doing more learning in general (51% said they were very or somewhat interested). However, they were somewhat less interested in getting qualifications (37% very or somewhat interested), and even less in doing more maths learning (28% very/somewhat interested) (Figure 19).

Figure 19: Level of interest amongst non-learners in doing further learning



How do you feel about each of the following?

Source: Non-learners survey. Base: Non-learners (1,856)

Non-learners were given the following description of the Multiply programme:

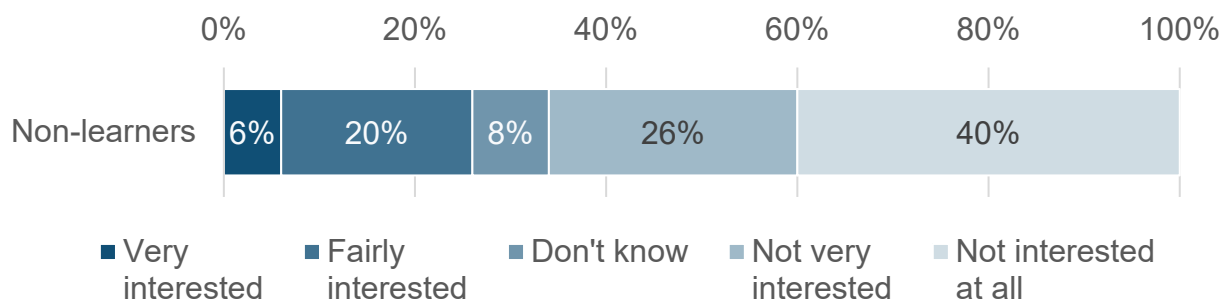
“Multiply is a free, government-funded programme to help adults improve their numeracy skills. If you’re aged 19 and over and don’t have maths GCSE at grade C (or equivalent), you can access free numeracy courses through Multiply to build your confidence with numbers and gain a qualification.”

Following this description, around 1 in 4 (27%) non-learners said they would be either very (6%) or fairly (20%) interested in taking a course like this, although the majority (66%) said they would not be interested (Figure 20). These findings suggest that many people eligible for Multiply who had lower numeracy skills, were not open to further numeracy learning, even if it would have been to their benefit. There is still a sizeable minority of non-learners, who would be potentially interested in further learning.

Certain groups were more likely to indicate they were at least somewhat interested in taking a course like Multiply. Individuals of Asian ethnicity compared to white ethnicity

individuals (42% vs. 25%), individuals aged under 44 compared to older individuals (40% vs. 20%), individuals with care experience compared to those without (41% vs. 26%), individuals with parental responsibilities compared to those without (43% vs. 20%), and those with English as an additional language compared to those who have English as their first language (39% vs. 24%). Levels of interest were more similar between men and women (24% vs. 29%).

Figure 20: Interest in taking a course like Multiply



How interested would you be to in taking a course like this?

Source: Non-learners survey. Base: Non-learners (1,845)

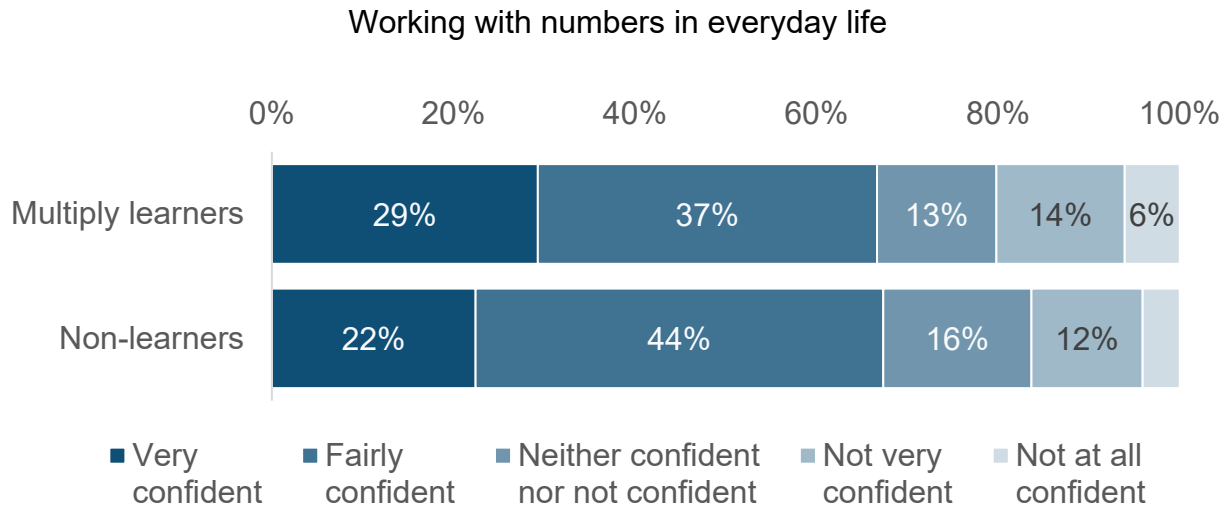
2.5.2 Confidence with numeracy

Non-learners were asked about their confidence working with numbers in everyday life, while Multiply learners were asked about how confident they had been prior to taking their course. Most Multiply learners and non-learners said they were reasonably confident about everyday numeracy (Figure 21). For example, 4 in 5 Multiply learners (81%) and almost 9 in 10 non-learners (87%) said they were either very confident or fairly confident checking change. Only a small minority of respondents from either group said they were not confident at these tasks.

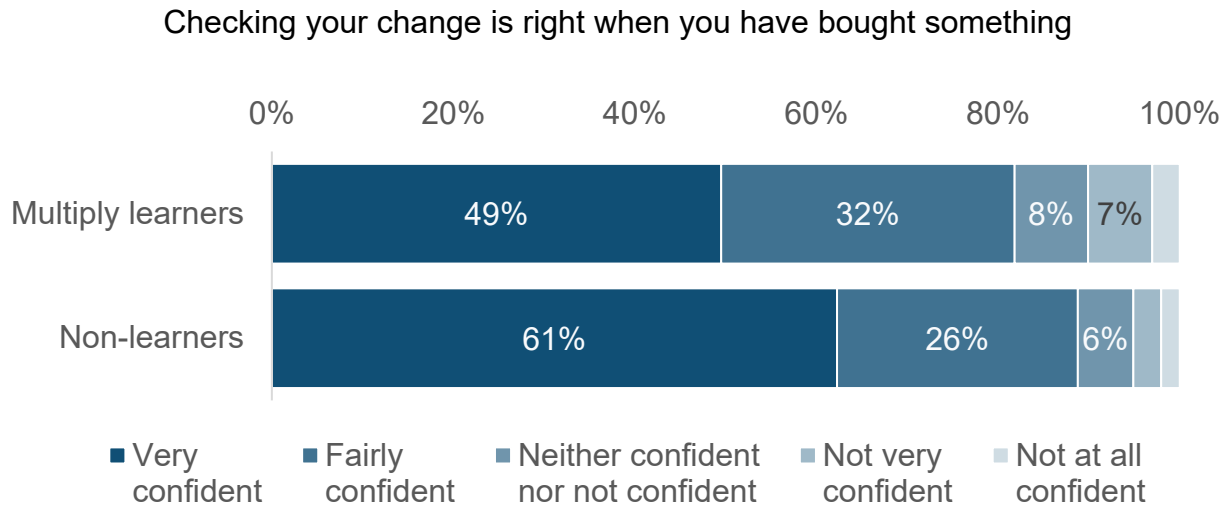
Non-learners were more likely to say they were very or fairly confident at checking change (87%, compared with 81% of Multiply learners), keeping track of their bank balance (87%, compared with 78% of Multiply learners), or working out the best deals when shopping (85%, compared with 75% of Multiply learners).

These findings suggest that many people without Level 2 numeracy qualifications may not feel they need further support or development with their numeracy skills.

Figure 21: Confidence across everyday activities that involved numbers

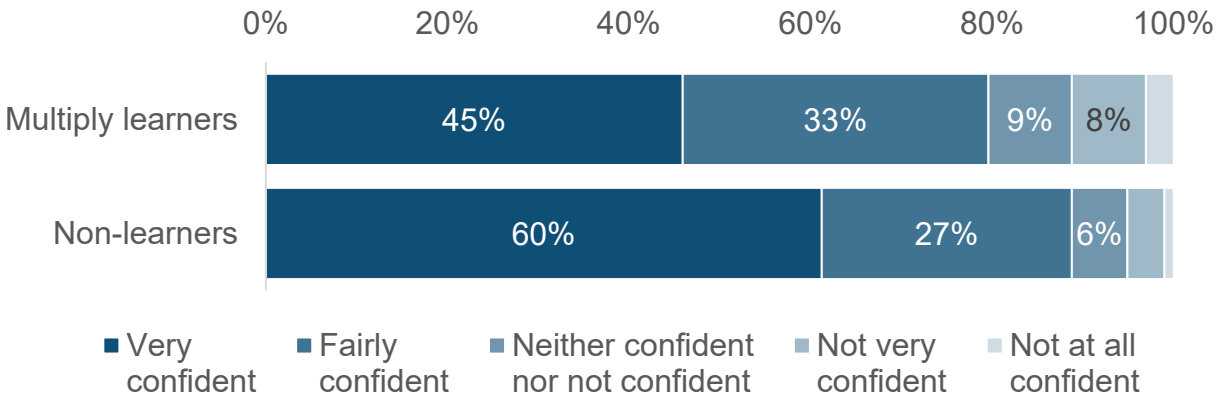


Base: Multiply learners (6,394); Non-learners (1,856)



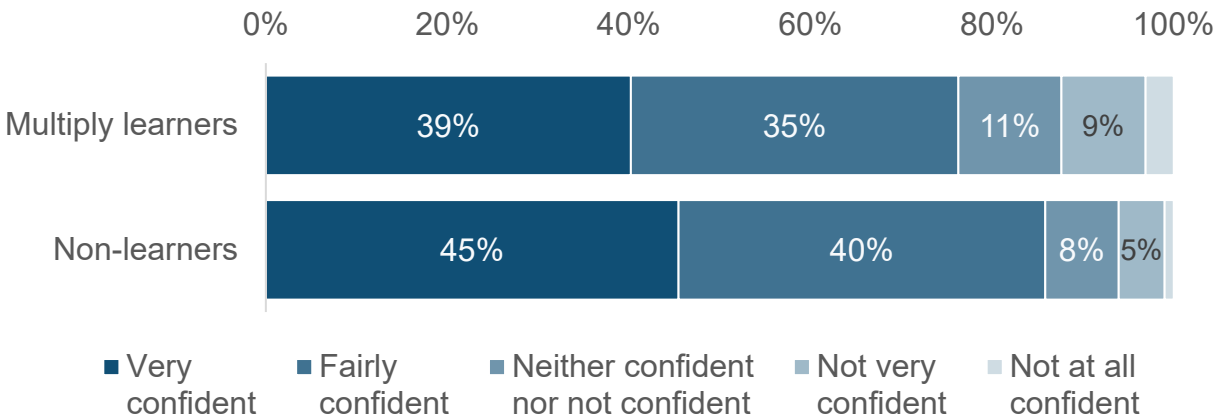
Base: Multiply learners (6,394); Non-learners (1,856)

Keeping track of your bank balance



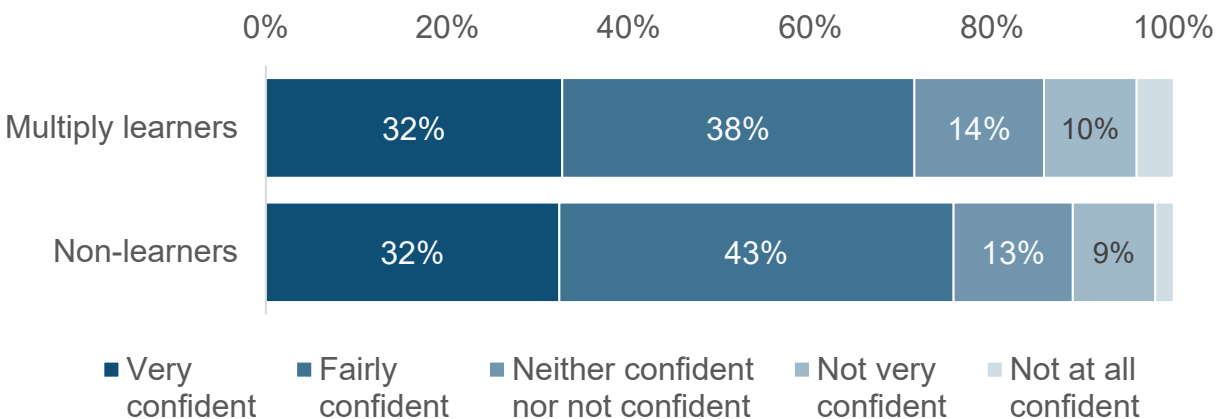
Base: Multiply learners (6,394); Non-learners (1,856)

Working out the best deals when shopping

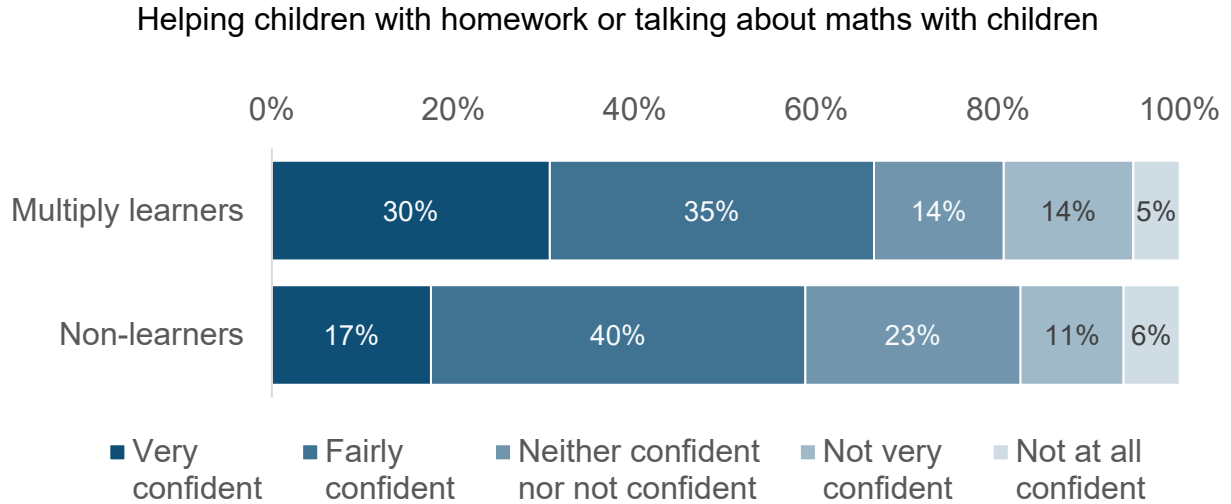


Base: Multiply learners (6,394); Non-learners (1,856)

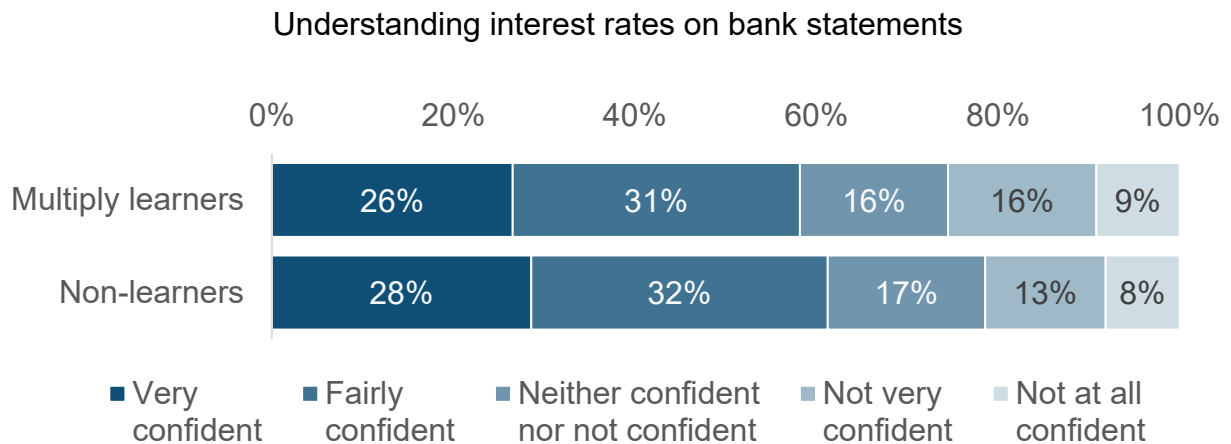
Working with numbers as part of a job



Base: Multiply learners in paid work before their course (1,939); Non-learners in paid work (1,060)



Base: Multiply learners with parental responsibilities (2,641); Non-learners with parental responsibilities (534)



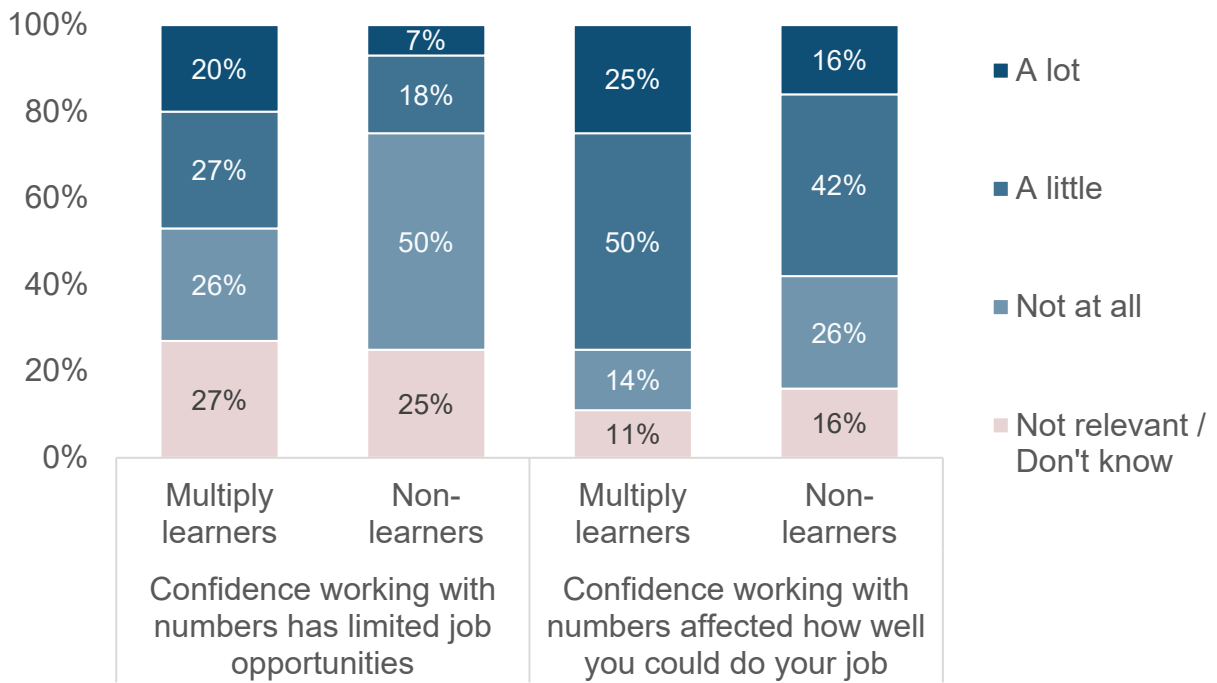
Source: Learners survey; non-learners survey. Base: Multiply learners (6,394); Non-learners (1,856)

A key difference between Multiply learners and non-learners was how much they thought confidence working with numbers had affected their employment prospects (Figure 22).

For Multiply learners, nearly half (48%) said that their confidence working with numbers had limited their job opportunities in any way by a little or a lot. For non-learners, this proportion was only a quarter (25%). Of the individuals who indicated they were not confident in working with numbers as part of a job, three-quarters (75%) of Multiply learners said that this had had an impact on how well they could do their job by a little or

a lot. For non-learners, this proportion was less than 6 in 10 (58%). In other words, while Multiply learners and non-learners had broadly similar self-reported confidence in using numbers in their job (see Figure 21), Multiply learners were more likely to think their confidence affected their job opportunities.

Figure 22: Perceptions of how confidence with numbers affects job opportunities



(1) To what extent, if any, has your confidence working with numbers limited your job opportunities in any way – for example: getting a promotion or a job you want? (2) [Before taking your course you described yourself as feeling [not very/not at all] confident working with numbers as part of a job.] To what extent, if any, do you think this had an impact on how well you could do your job?

Source: Multiply learners survey; non-learners survey. Base: Multiply learners (6,394); Non-learners (1,856); Multiply learners who said they did not feel confident working with numbers prior to their course (276); Non-learners who said they did not feel confident working with numbers (95).

2.5.3 Barriers to learning

Figure 23 shows barriers to taking courses to improve maths skills among Multiply learners, non-learners, and the subset of non-learners who said they would be very or fairly interested in taking a course like Multiply.

By far the most common barrier for non-learners to do a course to improve numeracy skills was feeling that they did not need to improve their maths (39%). This reinforces

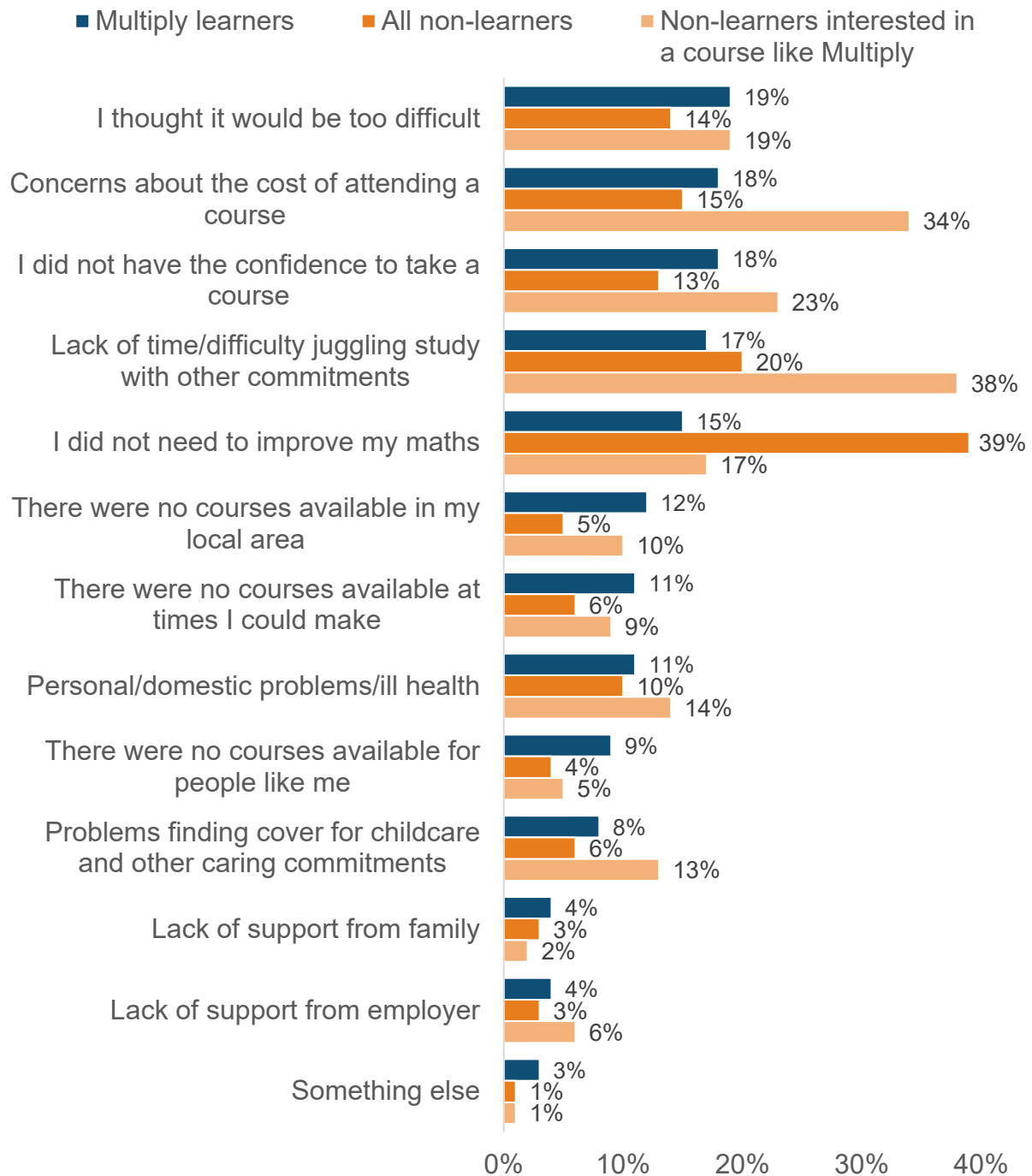
the finding that many of the target population for Multiply were people not looking for support with numeracy skills, and so likely to have little interest in a programme like Multiply. The next most commonly reported barrier for non-learners was a lack of time or difficulty juggling with other commitments (20%).

Prior to their course, Multiply learners had experienced a range of different barriers to taking up numeracy learning. For example, almost 1 in 5 (19%) thought it would be too difficult, 18% said they lacked the confidence to take a course, 18% had concerns about the costs of attending a course, and 17% had concerns about the time commitment. This suggests that a combination of confidence and practical constraints about attending courses contributed to Multiply learners not previously taking a course.

Non-learners who were interested in doing a course like Multiply generally reported a similar set of barriers to Multiply learners. However, they were far more likely to raise concerns about the costs of attending a course (34%, compared with 18% of Multiply learners) and the time commitment (38%, compared with 17% of Multiply learners).

There were some barriers that affected certain groups more than others. Across both groups, costs concerns were higher for people finding it hard to keep up with debt payments (37% for learners, 34% for non-learners). Lack of time/difficulty juggling with other commitments was the most commonly reported barrier for parents across both groups (23% for learners, 29% for non-learners).

Figure 23: Barriers for learners and non-learners to doing further maths learning



[Before you started this course, what, if anything, / What, if anything has] stopped you from doing a course to improve your maths skills?

Source: Learners survey; Non-learners survey. Base: Multiply learners who had not considered taking a course before or had considered it but had not taken one (4,401); Non-learners who had not considered taking a course before, or had considered one and not taken it (1,709)

3. What impact did Multiply have on learners, employers, practitioners and providers?

This chapter focuses on the self-reported impacts of Multiply on learners, employers, practitioners and providers. It considers effects on progression into further learning alongside progression relating to employment, effects on learners' confidence and attitudes towards learning. It covers confidence and learning regarding maths and numeracy specifically, as well as effects for vulnerable and hard-to-reach groups.

These findings are most relevant to the Effectiveness (how well did Multiply achieve its objectives?) and Impact (what difference did Multiply make?) criteria.

Chapter summary

Multiply had strong positive self-reported effects on learners' confidence regarding working with numbers in everyday life across various specific activities, such as working out the best deals when shopping, helping children with maths homework, and working with numbers as part of a job. In each case, a clear majority of Multiply learners said they thought they course had helped them either a lot or a little.

Multiply was also largely seen to have positive impacts on learners' mental health and wellbeing, sense of being part of a local community, chances of finding paid work in the future, chances of earning a higher wage, chances of finding a more fulfilling job, and chances of progressing or being promoted in your current job. Only a very small proportion of Multiply learners reported net negative impacts across any of these dimensions (between 1% and 3% in all cases). These positive experiences of numeracy learning are likely to have contributed to the low drop-out rate for Multiply learners (see Chapter 2).

Stakeholders from local areas, learning providers and practitioners held a similar view that Multiply had been effective in increasing confidence and reducing maths anxiety among learners. The provision of short non-accredited courses was considered important for offering a low pressure and unthreatening route into learning. In this way, Multiply was commonly seen as an effective stepping stone to more formal learning. Similarly, the ability to tailor course content and to embed numeracy learning in non-numeracy contexts was seen as important for supporting learners who were starting with high levels of anxiety or nervousness about maths to build their numeracy confidence. (See Chapter 5 for further evidence about how Multiply courses were designed).

Stakeholders also described how benefits could flow beyond the learners themselves. For example, some learners would bring their improved numeracy skills into the home by engaging with their children, partners and wider family members. In some cases, learners volunteered on subsequent Multiply courses to support the educational development of other people. Examples were provided of learner's wellbeing and quality of life improving from Multiply factors such as increased confidence, better performance at work, and reduced isolation.

Self-reported impacts for Multiply learners were generally fairly similar to learners on AEB (qualification) numeracy courses. However, after accounting for differences in learner characteristics, Multiply learners were significantly less likely than AEB (qualification) learners to report improvements in their chances of earning a higher wage (around 9 percentage points) and finding more fulfilling work (around 7 percentage points). These differences are unsurprising given that the respondents to the AEB learner survey were generally taking longer accredited courses, and it is reasonable to think these will have a more direct link to higher earnings and employability than the shorter, more informal courses provided through Multiply.

Following completion of their course, learners overwhelmingly reported positive impacts on their attitudes towards learning and numbers, including their interest in doing more learning across a range of subjects, doing more maths learning specifically, and obtaining qualifications.

These attitudes were also reflected in progression rates. A third (33%) of Multiply learners were recorded in the ILR as progressing to another numeracy learning aim after their Multiply course. Almost 3 in 5 (58%) were recorded as taking any learning aim (including non-numeracy courses). Self-reported evidence from the learners survey, which suggests that Multiply had positive impacts on learners' decisions to progress on to further study or training. Over half (54%) of all Multiply learners said they had either started more study or training (30%) or are going on to more study or training (24%) after completing their Multiply course. This result is even more pronounced for women as compared to men.

The most common qualification level to progress to by those who go on to further study (if they complete their course) is Level 2, which is the case for a fifth (20%) of all learners saying they were going on to further courses. Eighteen per cent said they were going on to an entry-level course, 15% to a Level 1 course, 8% to a Level 3 course and 7% to a Level 4 course. Over four-fifths (83%) of these learners say that Multiply positively influenced their decision to pursue further study either a lot (51%) or a little (32%).

These progression rates in the ILR were similar for Multiply learners and AEB (qualification) numeracy learners. This is notable because Multiply courses were on average much shorter than AEB courses and many learners were not engaged with adult maths education previously. A key assumption of the programme is that these short, informal courses could act as a gateway, bringing new learners into the adult education system and setting them on a path to further learning. As such, it is encouraging that the programme achieved similar overall progression rates to AEB (qualification) numeracy courses. Similarly, AEB (qualification) learners were more likely to say that further learning was a reason for taking up their course, compared to Multiply learners. The fact that Multiply learners were roughly equally likely to take up further learning compared to AEB (qualification) learners indicates Multiply had a potential effect in fostering a motivation to continue to further learning.

However, progression rates were considerably higher for Community Learning numeracy courses than for Multiply. This is true even after statistically adjusting for differences in learner characteristics. This difference could be because many Multiply learners were new learners (see Chapter 2) while those taking Community Learning courses were more engaged with the adult education system already.

The effects of Multiply on vulnerable and hard-to-reach groups are also generally positive. Given a focus of the programme was to support these groups within the wider population, this is a notable positive outcome of the programme. Multiply tended to be relatively more positive for carers, those who have been in care, ex-offenders and people struggling with debt across different aspects of self-reported plans to continue with further study, confidence, attitudes towards learning and numeracy, and impacts on other dimensions of wellbeing and employment opportunities, but relatively less positive for people with disabilities across all these aspects. Nevertheless, Multiply was still perceived to have largely positive impacts for people with disabilities across all domains enquired about.

Employers tended to be relatively difficult partners to engage in Multiply, and only a small number of employers took part in the evaluation. The key conditions that contributed to successful employer engagement included when there were existing relationships between providers and employers and where employers could release staff. For these employers, Multiply was felt to be generally effective in improving employees' confidence and competence with numeracy and maths, as well as their performance at work. Multiply was not universally successful at reducing reported skills shortages, particularly in sectors or areas without established partnerships or where the business case for engagement was unclear.

From the perspective of providers and practitioners, Multiply was widely seen to stimulate innovation in the provision and delivery of adult numeracy and maths courses. Multiply enabled them to better reach learners with maths anxiety or from hard-to-reach groups, develop effective new course formats, provide a more learner-centred offer, offer more one-to-one and small-group support, embed numeracy in other learning (e.g. English for Speakers of Other Languages (ESOL), family learning, vocational courses), and use incentives to reduce barriers to participation. Most providers and practitioners said they had plans to either run more courses similar to Multiply in the future, and/or to embed learnings from Multiply into future courses.

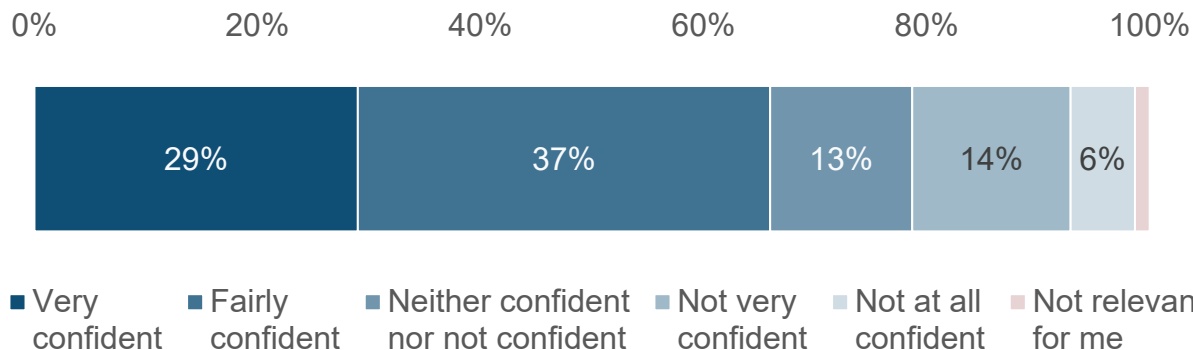
3.1 Self-reported impact on confidence and attitudes towards learning and numeracy

The learners survey included questions about learners' confidence overall, as well as across different specific everyday activities. Chapter 2 highlighted the fact that self-reported confidence with numeracy in the Multiply learner and non-learner surveys was relatively high. This section focuses on the responses from Multiply learners, exploring what Multiply learners thought their confidence had been prior to their course, and how they thought their confidence had been affected by Multiply.

3.1.1 Effects on confidence

Figure 24 shows that prior to completing a Multiply course, some two-thirds (66%) of Multiply learners were either very confident (29%) or fairly confident (37%) about working with numbers in everyday life. Twenty per cent were either not very confident (14%) or not at all confident (6%). Thirteen per cent stated that they were neither confident nor not confident, and 1% answered that the question was not relevant to them. This question was added to the survey after the fieldwork had commenced so not asked to all learners.

Figure 24: Confidence working with numbers in everyday life prior to Multiply



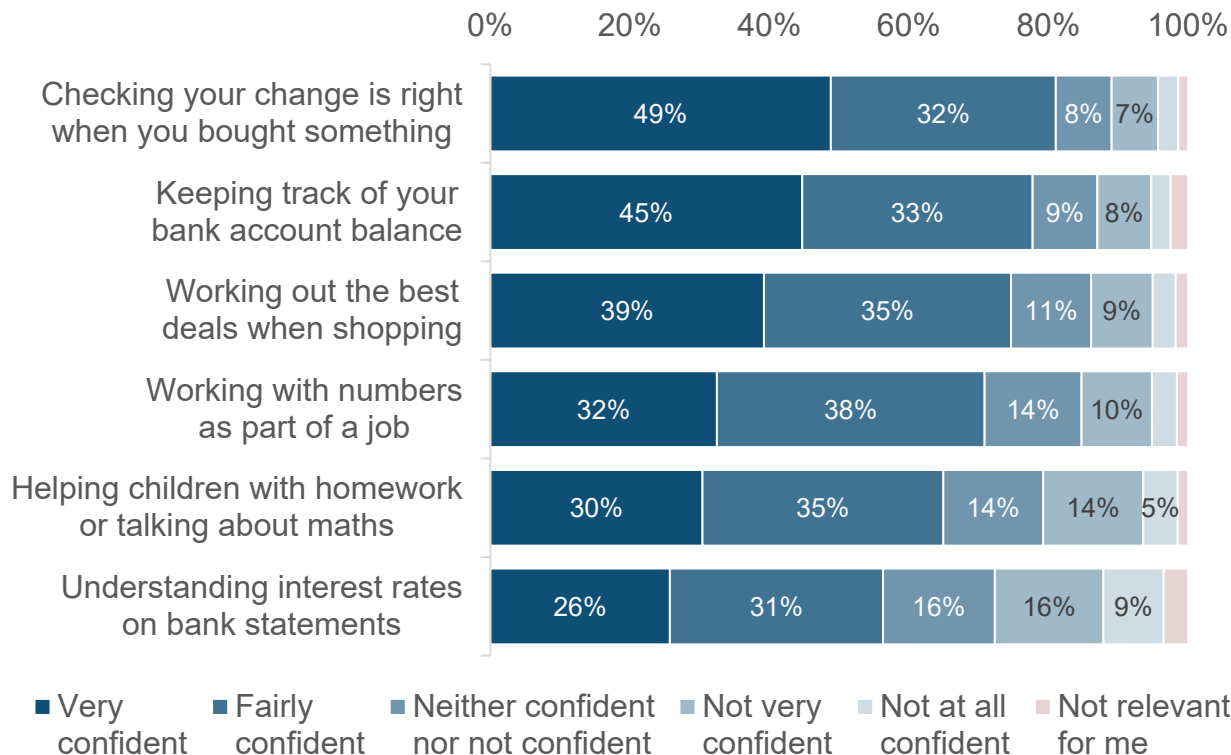
Before taking your course, overall how confident would you feel about working with numbers in everyday life?

Source: Learners Survey. Base: Multiply learners (4,251) (question added after the start of fieldwork).

There were some differences in general levels of confidence with numbers prior to Multiply amongst certain groups. For example, self-reported confidence related to working with numbers in everyday life tends to be higher among men than women (71% of men indicated they were at least fairly confident, compared to 63% for women and 15% of men indicated they were not very confident or not at all confident, compared to 22% for women). Similarly, ethnic minority learners tended to be more confident than white learners (73% vs. 61% for at least fairly confident and 15% vs. 24% for not very confident and below, respectively). This difference was also observed amongst those for whom English is a second language compared to those with English as their first language (73% vs. 59% for at least fairly confident and 14% vs. 25% for not very confident and below, respectively).

There was some variation in self-reported confidence between different types of everyday activities. For example, Figure 25 shows that confidence checking your change (81% either very or fairly confident), keeping track of your bank balance (78%), working out the best deals when shopping (75%), and working with numbers as part of a job (71%) are relatively high, whereas confidence understanding interest rates in bank statements (56%) and helping children with homework (65%) are relatively low.

Figure 25: Confidence with selected everyday activities prior to Multiply

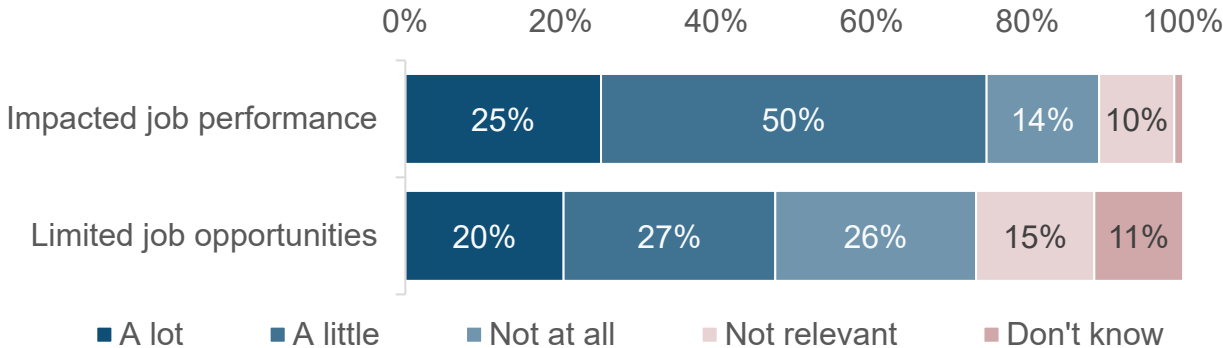


Before taking the Multiply course, how confident would you feel about doing the following things in everyday life?

Source: Learners Survey. Base: Multiply learners (6,394). Base for the question on working with numbers as part of a job is (1,939), only asked to those in paid employment before taking a Multiply course.

Learners who said they did not feel confident working with numbers as part of a job before taking the Multiply course were asked to what extent they thought this had an impact on how well they could do their job. Figure 26 shows that three-quarters (75%) of these learners thought their lack of confidence had negatively impacted their job performance (25% were impacted a lot and 50% impacted a little). Around half (48%) felt their confidence working with numbers had limited their job opportunities, for example getting a promotion or a job they want (20% said they were limited a lot and 27% limited a little).

Figure 26: How lack of confidence working with numbers at work affected a learner's job

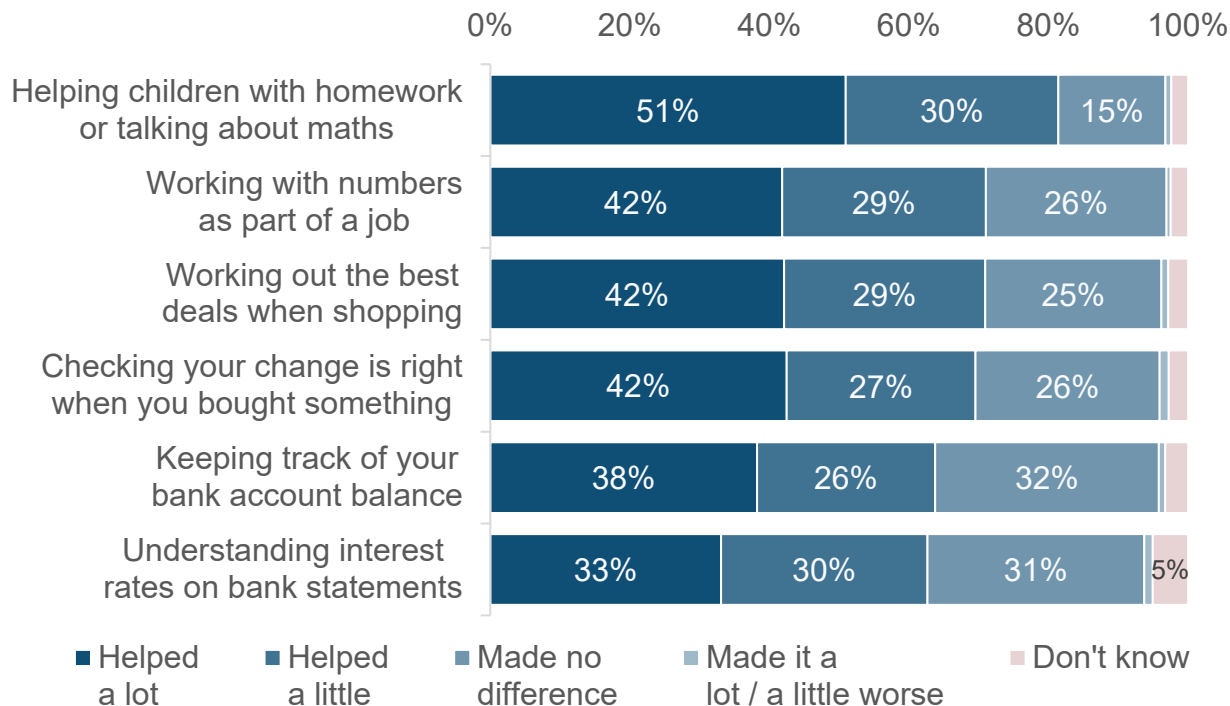


Before taking the Multiply course you described yourself as feeling [not very/not at all] confident working with numbers as part of a job. To what extent, if any, do you think this had an impact on how well you could do your job?

Source: Learners Survey. Base: Multiply learners who said they did not feel confident working with numbers before taking the Multiply course (265); All Multiply learners (6,394)

Following completion of their course, learners reported how much Multiply helped their confidence with selected everyday activities involving numbers. Figure 27 shows that most Multiply learners thought their course had helped a lot or a little for all activities asked about, with the most impact on helping children with their homework or talking to children about maths (51% helped a lot and 30% helped a little), working with numbers as part of a job (42% helped a lot and 29% helped a little), and working out the best deals when shopping (42% helped a lot and 29% helped a little). Where learners reported Multiply making the least difference (relatively) was in relation to understanding interest rates on bank statements and keeping track of your bank balance (31% and 32% of learners said it made no difference respectively). Very few learners stated that Multiply had made things worse (1% for all activities).

Figure 27: How much Multiply helped confidence with everyday activities



To what extent, if at all, do you think this course has helped to improve your confidence when doing the following things in everyday life?

Source: Learners Survey. Base sizes differ by question, conditioned on whether the respondent answered that the question was relevant to them or not. The question relating to helping children with homework was only asked to learners with parental responsibilities. The question related to working with numbers as part of a job was only asked to learners in paid work before the course. Following the order of the questions presented in the graph from top to bottom, base sizes are: 6,304, 6,281, 2,602, 6,170, 6,234, 1,908

The Practitioners survey findings show that there was a clear perception that learner confidence improved as a result of Multiply. In the second year of the survey, close to all practitioners agreed that Multiply has helped increase learners' confidence in dealing with numbers (96%), and that Multiply has helped increase learners' self-confidence in day-to-day life (94%). Only 2% of practitioners disagreed with these statements.

3.1.2 Effects on attitudes towards learning and numeracy

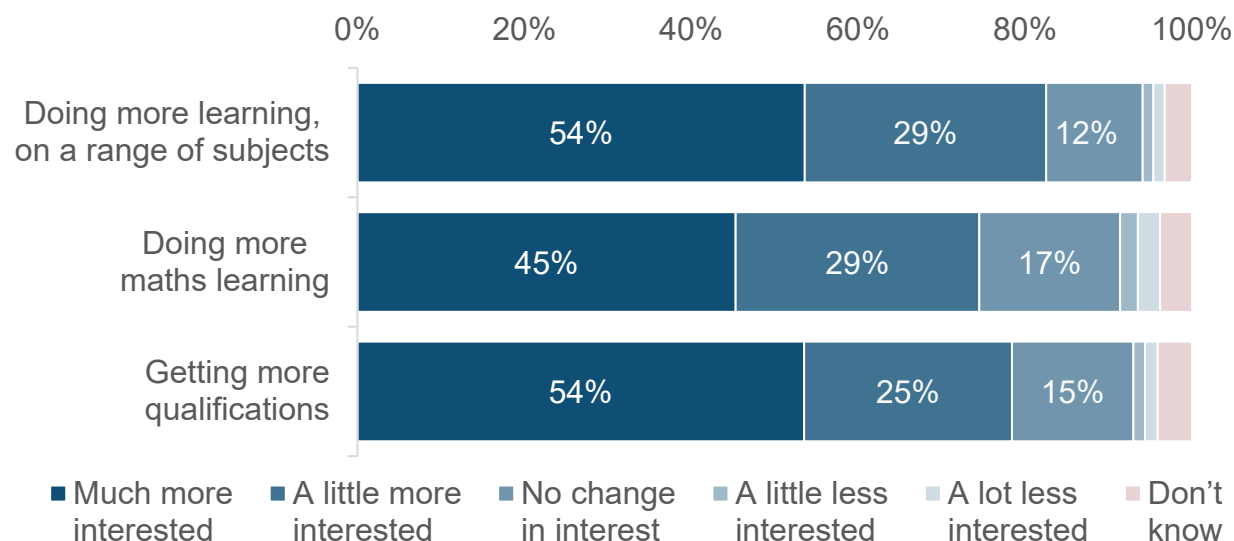
Beyond impacts on confidence, Multiply aimed to affect learners' attitudes towards further training and education. The learners survey asked Multiply learners about how their course had affected their interest in learning in general, further learning in maths, and getting more qualifications.

Figure 28 shows that, overwhelmingly, learners considered that Multiply had positively influenced their interest in doing more learning, doing more maths learning, and getting more qualifications. In each case, a clear majority of learners responded that they were more interested in these options since attending their course:

- 83% of learners were more interested in doing more learning across a range of subjects since doing their Multiply course (with 54% a lot more interested and 29% a little more interested)
- 75% were more interested in doing more maths learning (45% a lot more interested and 29% a little more interested)
- 78% were more interested in getting more qualifications (with 54% a lot more interested and 25% a little more interested)

Only a small proportion were less interested (3%, 5% and 3% respectively), with similar proportions stating that they didn't know (3%, 4% and 4% respectively).

Figure 28: Multiply influence on interest in doing more learning and getting more qualifications



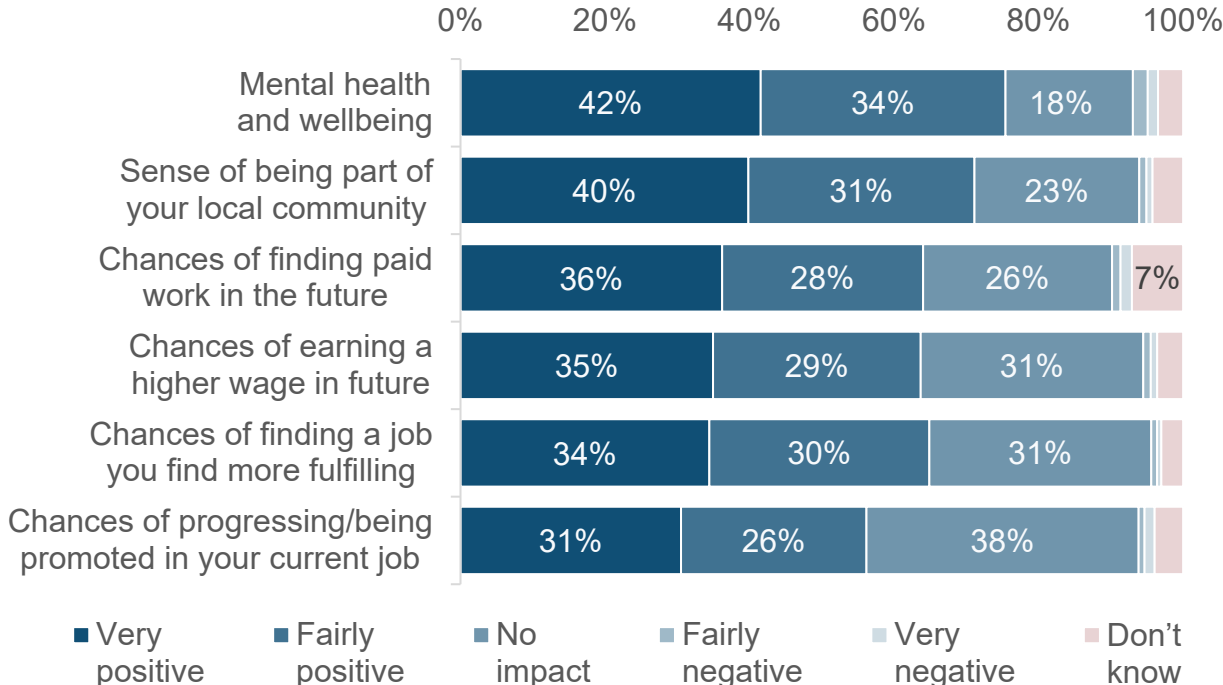
Since attending the course, how do you feel about each of the following?

Source: Learners Survey. Base: Multiply learners (6,394). Notes: Label values not displayed for negative answer options for legibility.

3.1.3 Effects on other aspects of wellbeing and employment opportunities

Multiply was reported to have had a generally positive impact on other aspects of learners’ wellbeing and employment opportunities. These include mental health and wellbeing, sense of belonging in the community, chances of finding paid work in the future, chances of earning a higher wage in the future, chances of finding a more fulfilling job, and chances of progressing or being promoted in your current job. The results of this analysis are presented in Figure 29.

Figure 29: Impact of Multiply on wellbeing and employment opportunities



What impact, if any, do you think the course has had on your...

Source: Learners Survey. Base size for first 3 questions (reading top to bottom): All Multiply learners (6,394); base size for last 3 questions (reading top to bottom): Multiply learners in paid work (2,216).

Notes: Label values not displayed for negative answer options for legibility.

Figure 29 shows that Multiply had largely positive impacts on learners’ wellbeing, with three-quarters (75%) reporting a very positive (42%) or fairly positive (34%) effect on their mental health and wellbeing, and 71% reporting a very positive (40%) or fairly positive (31%) effect on their sense of being part of their local community.

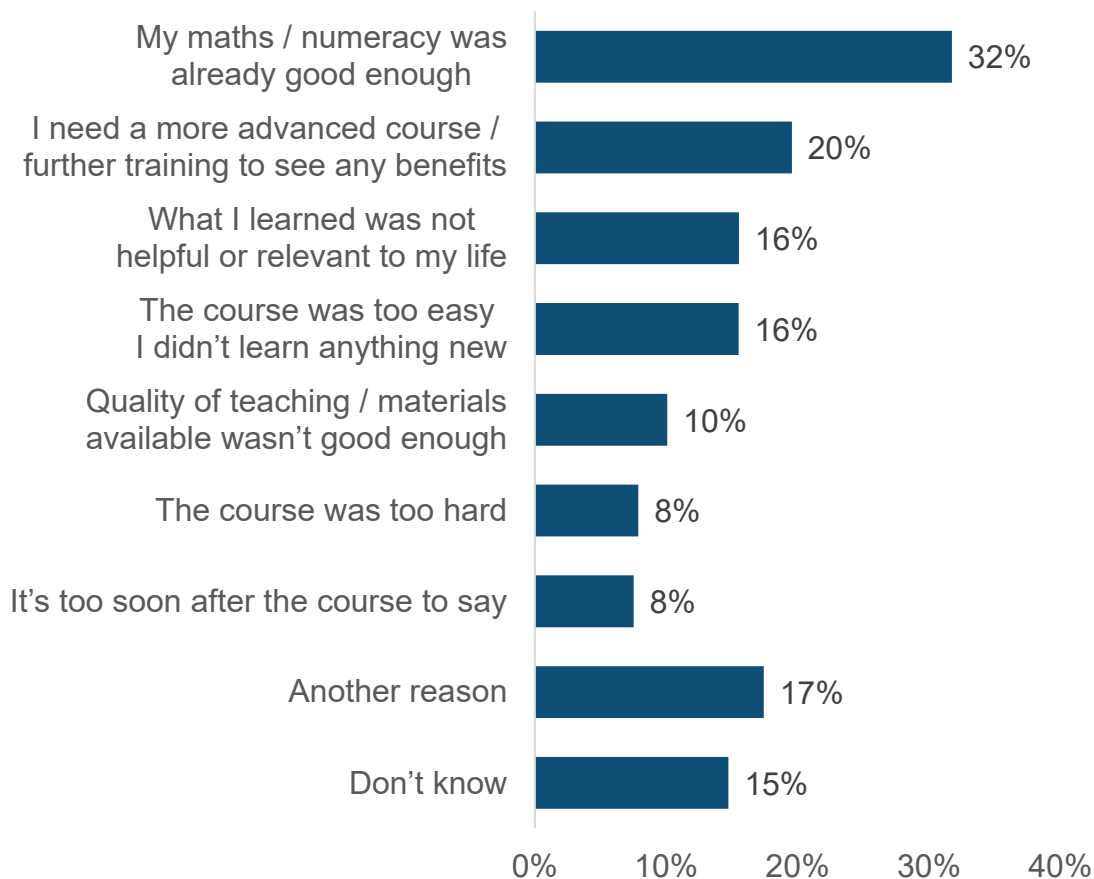
Multiply's impact on learners' perceptions of future work opportunities were also generally positive. Sixty-four per cent of learners reported a very positive (36%) or fairly positive (28%) effect on their chances of finding paid work in the future. Sixty-four per cent of learners reported a very positive (35%) or fairly positive (29%) effect on their chances of earning a higher wage. Sixty-five per cent of learners reported a very positive (34%) or fairly positive (30%) effect on their chances of finding a more fulfilling job, and 56% of learners reported a very positive (31%) or fairly positive (26%) effect on their chances of progressing or being promoted in their current job.

The proportions of Multiply learners citing fairly negative or very negative impacts of Multiply on these dimensions of wellbeing and perceptions of future work opportunities were very low in all cases: 3% or less in all factors asked about.

Female learners were more likely than male learners to report a net positive effect on mental health and wellbeing, and sense of belonging in their local community (78% vs. 71% and 72% vs. 68%, respectively). Learners from ethnic minorities were more likely than white learners to report net positive impacts across all factors asked about.

Learners who answered that Multiply had not had a positive impact on the given dimensions of wellbeing and perceptions of future work opportunities gave various reasons for this. The most common reason given (by 32% of these respondents) was that their maths was already good enough, followed by the need for more advanced or further training to see any benefits (20%). Less common reasons given included: the Multiply content being not relevant to these aspects of their life (16%); the course was too easy or they did not learn anything new (16%); the quality of teaching or learning materials used were not good enough (10%); the course being too difficult (8%); it being too soon to say (8%); or another reason (17%). Fifteen per cent reported that they did not know why the Multiply course had not positively impacted those dimensions of wellbeing or perceptions of future work opportunities. These results are displayed in Figure 30.

Figure 30: Reasons why Multiply did not impact wellbeing and employment opportunities



Why do you think the course hasn't helped with any of these things?

Source: Learners Survey. Base: Multiply learners who said the course had no benefit on factors listed (823)

3.1.4 Comparison with AEB (qualification) numeracy learners

This section compares the responses on self-reported impacts for Multiply learners against those of respondents to the AEB learner survey. The AEB (qualification) learners provide a benchmark of people already participating in adult numeracy education.

The analysis uses regression to adjust for a rich set of demographic and course related characteristics to account, as far as possible, for observed differences between Multiply and AEB (qualification) learners. The models account for:

- self-reported level of confidence from before their course

- demographic characteristics such as age, gender, ethnicity, whether they have a learning difficulty, and whether they have English as an additional language
- whether they had previously undertaken adult maths learning
- whether they were employed prior to their course
- their stated main reason for enrolling (for example, employment related goals, progression to further study, improving skills, personal interest, or supporting their child’s learning)
- region

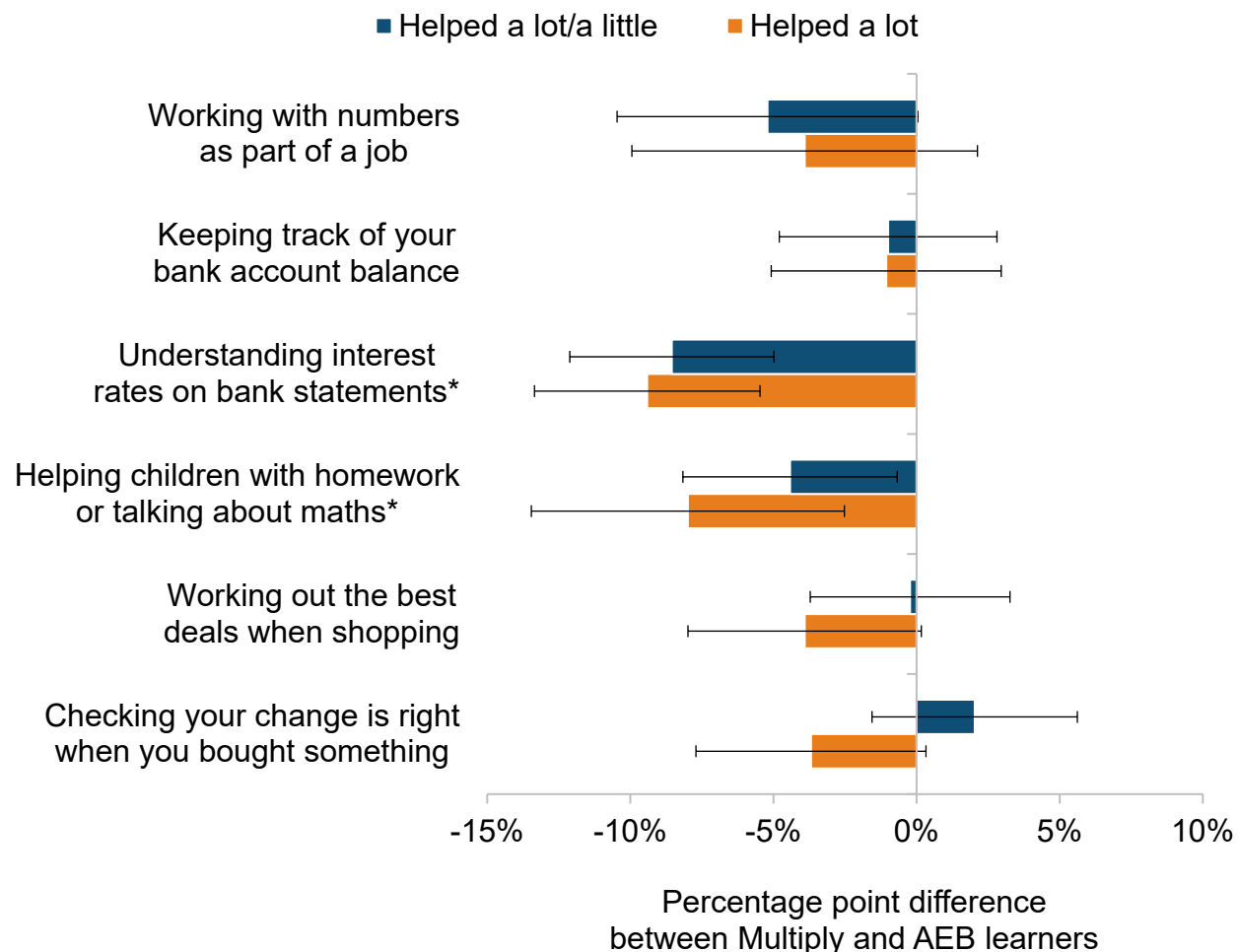
Taken together, these controls help account for differences in their demographic characteristics, prior experience, labour market attachment and motivations for study, thereby improving comparability between Multiply and AEB (qualification) learners. We do not include controls for expected course length in these specifications. Expected course duration differs substantially between Multiply and AEB provision, with limited overlap across groups, making it difficult to use as a meaningful basis for comparison. Including it would therefore be unlikely to improve comparability and could make the estimates harder to interpret. In addition, course length is closely linked to how provision is delivered and the needs of individual learners.

Figure 31 presents the estimated differences between Multiply and AEB (qualification) learners across the 6 confidence measures included in the survey. The values in Figure 31 show the percentage point differences in the probability of reporting that the course “helped a lot” (or, in the lower bar, “helped” overall), relative to AEB (qualification) learners with similar observed characteristics. Negative values therefore indicate that Multiply learners are less likely than comparable AEB (qualification) learners to report improvements on that measure. Importantly, negative values do *not* suggest that Multiply learners’ confidence worsened during their course.

When looking at whether the course helped “a lot”, the estimates are negative – self-reported improvements in confidence were slightly lower for Multiply learners than AEB (qualification) learners– although only statistically significant in 2 cases. Multiply learners were around 8 percentage points less likely to report that their course had helped them a lot with helping children with maths. Given that around 59% of AEB (qualification) learners reported that the course helped “a lot”, the 8 percentage point effect corresponds to a difference of approximately 15% relative to this baseline. Multiply learners were also around 9 percentage points less likely to report that the course helped them “a lot” with understanding interest rates; relative to a baseline of 45% among AEB learners, this represents a difference of around 20%.

With a broader definition of impact (combining “helped a lot” and “helped a little”), the pattern of results is generally similar.

Figure 31: Difference between Multiply and AEB (qualification) learners for self-reported impacts on confidence



Source: Linked ILR and learner survey data. Note: Estimates are coefficients from regression models based on responses to the question: “To what extent, if at all, do you think this course has helped to improve your confidence when doing the following things in everyday life?” Models control for baseline confidence, demographic characteristics, prior learning, employment history, and stated reason for enrolment. Statistical significance is assessed after adjusting for multiple hypothesis testing using a Romano-Wolf error correction. Bars show 95% confidence intervals.

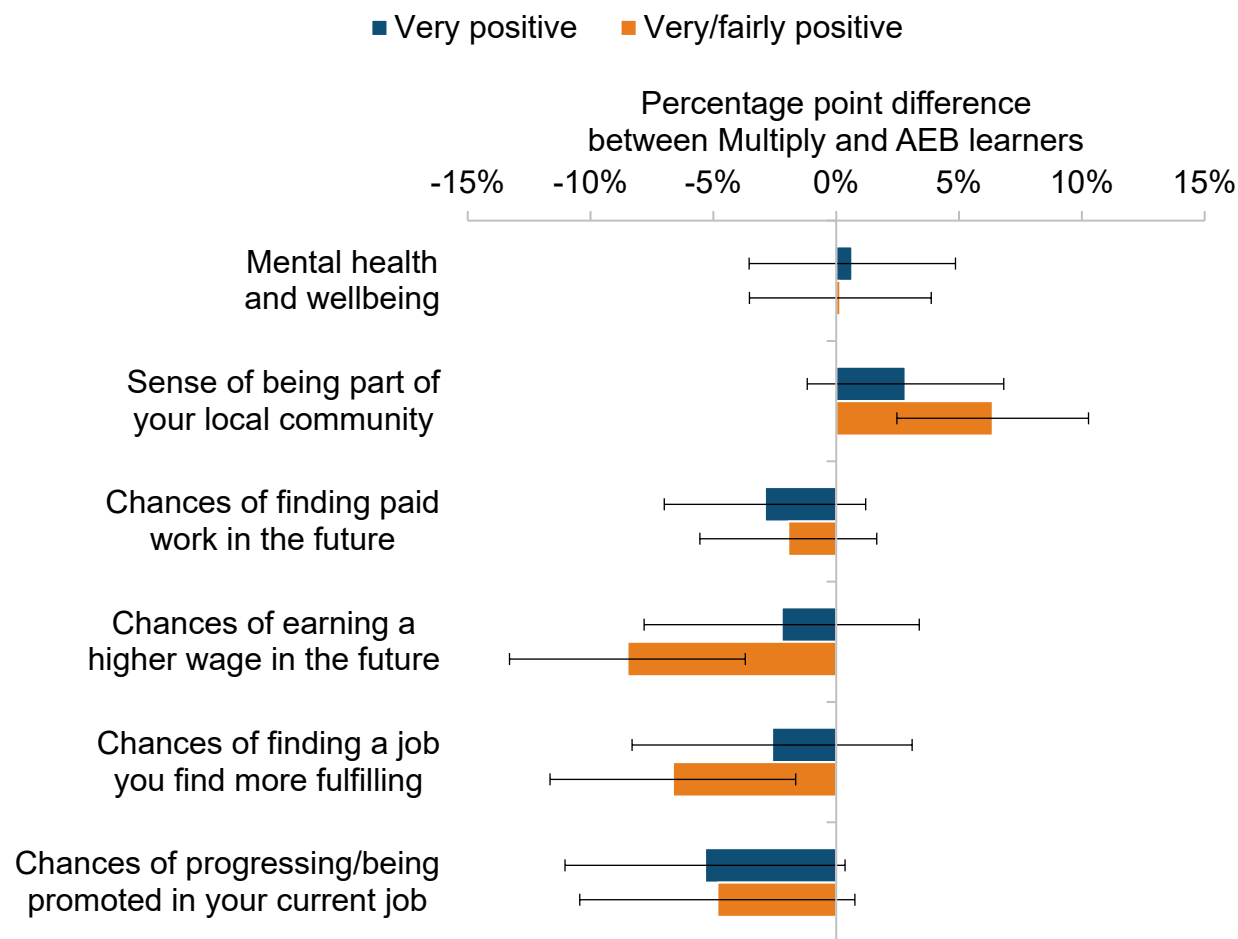
Figure 32 presents the estimated differences between Multiply and AEB (qualification) learners across self-reported outcomes related to wellbeing and employment, after controlling for learner characteristics. As before, values represent percentage point differences in the probability of reporting a “very positive” impact (or, in the case of the lower bar, a positive impact overall), relative to comparable AEB (qualification) learners.

For mental health and wellbeing, there is no statistically significant difference between Multiply and AEB (qualification) learners under either definition of positive impact. For sense of being part of the local community, there is some evidence of stronger reported gains among Multiply learners. While the difference in reporting a “very positive” impact is small and not statistically significant, Multiply learners are around 6 percentage points more likely than comparable AEB (qualification) learners to report a positive impact overall (combining “very positive” and “fairly positive”). Given that 66% of AEB (qualification) learners reported a positive impact on this measure, this represents a 9% increase.

In contrast, Multiply seems to be associated with lower impacts on labour market outcomes than AEB (qualification) provision. Across the measures relating to the chances of finding paid work, earning a higher wage, finding a more fulfilling job or being promoted, we find that Multiply learners report less positive outcomes. For the stricter “very positive” outcome, these differences are generally not statistically significant. However, when considering the broader positive measure, Multiply learners are significantly less likely than AEB (qualification) learners to report improvements in their chances of earning a higher wage (around 9 percentage points) and finding more fulfilling work (around 7 percentage points). The differences for finding paid work and promotion are negative but not statistically significantly different from zero.

Overall, the pattern suggests that learners taking Multiply courses experience similar wellbeing gains, and a stronger sense of belonging to their local community than comparable AEB (qualification) learners. Yet Multiply learners are less likely to report gains in employment-related outcomes. This is consistent with the shorter and typically non-qualification-based nature of most Multiply courses relative to AEB provision. As with the confidence results, these findings should be interpreted as conditional differences relative to the AEB (qualification) learner group rather than causal estimates of programme impact.

Figure 32: Difference between Multiply and AEB (qualification) learners for self-reported impacts on wellbeing and employment outcomes



Source: Linked ILR and learner survey data. Note: Estimates are coefficients from regression models based on responses to the question: “What impact, if any, do you think the course has had on your...” Models control for demographic characteristics, prior learning, employment history, and stated reason for enrolment. Statistical significance is assessed after adjusting for multiple hypothesis testing using a Romano-Wolf error correction. Bars show 95% confidence intervals

3.2 Impacts on progression and employment

3.2.1 Progression to other courses

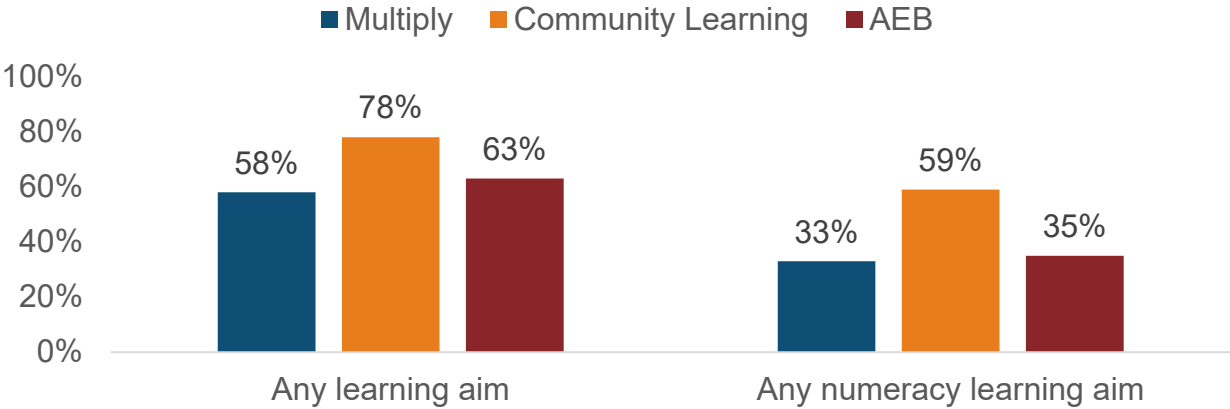
By August 2025, the majority of (58%) of Multiply learners were recorded in the ILR as progressing onto another learning aim (including non-numeracy aims) after their initial Multiply course. A third (33%) were recorded as progressing on to another numeracy specifically (Figure 33). Of these, more than a third (37%) progressed to a qualification-bearing course, representing around one in eight (12%) of all Multiply Learners. This

demonstrates that Multiply learners continued to engage with adult numeracy education after the end of the course, and many progressed on to formal numeracy qualifications.

The overall progression figures for Multiply learners are reasonably similar to AEB (qualification) numeracy learners (35% progressing to another numeracy aim, and 63% to any aim including non-numeracy courses). This is notable given how much shorter Multiply courses were on average than AEB (qualification) numeracy courses, and the fact that Multiply brought many completely new learners into the adult education space. Additionally, as noted in Section 2.4, AEB (qualification) learners were much more likely to say that further learning was a reason for taking up their course, compared to reasons for Multiply learners taking up their course. The fact that Multiply learners were roughly equally as likely to take up further learning than AEB (qualification) learners indicates Multiply had a potential effect in creating a motivation to continue to further learning, when it wasn't there for learners before engaging in Multiply.

Learners on Community Learning numeracy courses were far more likely to progress to further study, with more than half (59%) recorded progressing to another numeracy learning aim, and more than three-quarters (78%) to any further aim.

Figure 33: Differences between Multiply Community Learning and AEB learners AEB (qualification) learners in progressing onto another learning aim



Source: ILR. Base: Multiply (171,931); Community Learning (20,503); AEB (qualification) (206,511)

Further matched analysis was used to compare progression rates for Multiply learners against a set of similar Community Learning learners, accounting for differences in

characteristics such as prior attainment and demographics.¹⁹ To ensure that learners are observed over a comparable period of time, the analysis focuses on progression within 6 months of starting the first recorded numeracy aim in 2022/23 or 2023/24.

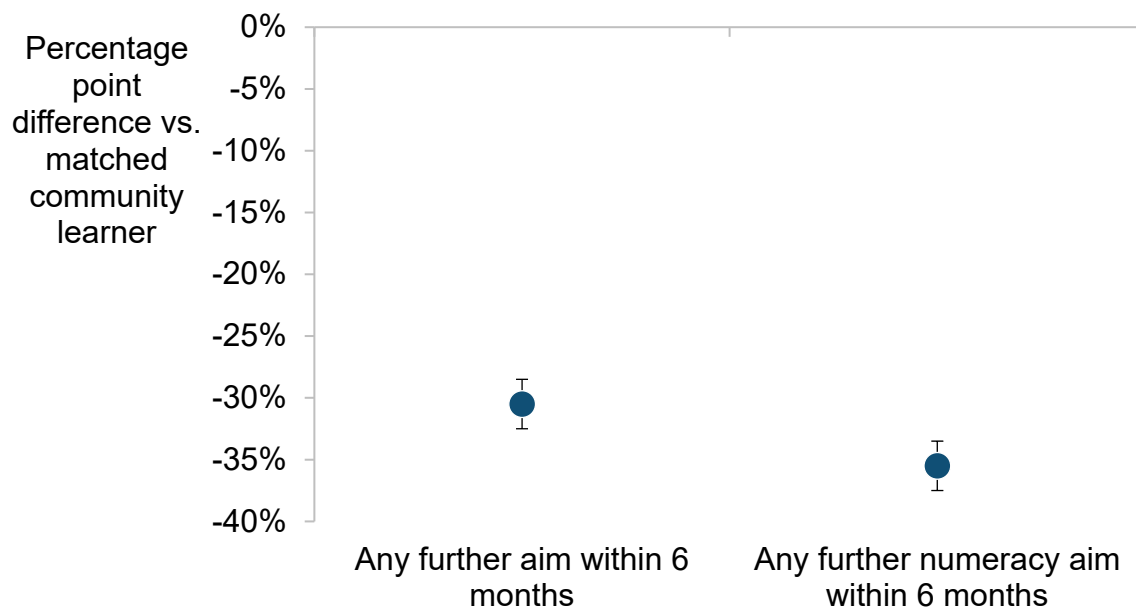
After adjusting for learner characteristics and expected course length, Multiply learners were still less likely to progress to further study than comparable Community Learning learners (Figure 34). This reduction applies both to progression into any further learning aim within 6 months after their initial numeracy aim, and to progression into a further numeracy aim specifically. Participation in Multiply is associated with a 31 percentage point lower probability of starting any further learning aim within 6 months, and a 36 percentage point lower probability of starting a further numeracy aim within 6 months. Given that 71% of Community Learning learners started a further aim within 6 months and 57% started a numeracy aim within 6 months, this means that Multiply was associated with 43% (62%) lower progression to a further aim (a further numeracy aim) within 6 months.

However, as shown above (see Figure 33), progression among Multiply learners remains meaningful in absolute terms: almost 3 in 5 Multiply learners went on to another learning aim, and around a quarter went on to a numeracy aim specifically. The results of the matched analysis indicate lower progression relative to Community Learning learners, rather than an absence of further learning among Multiply participants.

As it is likely that a large proportion of Multiply participants would not have taken a course at all without the programme (see Section 2.2), it is not surprising that progression rates are lower than the very high rates seen for Community Learning.

¹⁹ Further information about how this analysis was conducted can be found in the appendices to this report. Please note that due to data limitations, this analysis only covers a subset of learners in both the Multiply and Community Learning group.

Figure 34: Difference in progression rates between Multiply learners and matched Community Learning learners



Source: Linked ILR and NPD data. Note: Estimates are coefficients from regression models where the outcomes are indicators for starting any further learning aim, and for starting a further numeracy aim, within 6 months of beginning the initial Multiply or Community Learning numeracy course. Models control for demographic characteristics, prior attainment at Key Stage 2 and Key Stage 4, and expected course length. Standard errors are bootstrapped and bars indicate 95 % confidence intervals.

3.2.2 Self-reported intention to progress to further study

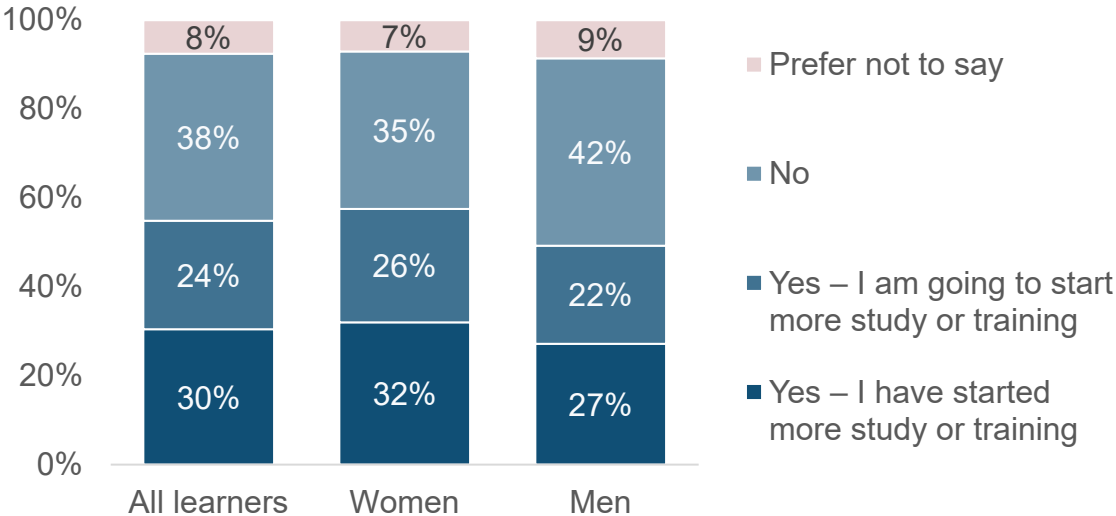
Half (50%) of all Multiply learners reported that they received information about other courses they could do after the Multiply course; 30% said they did not receive any such information and 20% answered that they did not know if they had received such information or not.

Female learners were marginally more likely to report receiving information about further courses compared with male learners (52% and 47% respectively). As one might expect, these results differ somewhat from the responses of Multiply course providers when asked about whether they supplied information to learners about options for pursuing further study. The year 1 providers survey found that 88% of providers said they did encourage learners to take a regulated course once they have completed their Multiply course, and 72% of providers that deliver both Multiply and AEB courses developed a progression pathway linking Multiply learners to AEB courses. Of these, 43% rated their pathways successful, 38% as neither successful nor unsuccessful, and 18% as unsuccessful.

Whether going on to further study was one of the reasons they took a Multiply course or not, or whether they received information from their course provider about options for further study or not, just over half (54%) of all Multiply learners expressed intentions to go onto further study or training (Figure 35); with 30% having already started further study and 24% saying they will go on to further study. Over a third (38%) of learners said they would not go on to further study or training and 8% preferred not to say.

These findings indicate that more Multiply learners actually - or intend to - go on to further study or training than their original stated motivations would imply. This suggests that, on aggregate, Multiply added to people’s existing motivation to go on to further study or training, or, in a lot of cases given many Multiply learners were new to adult education, led to a motivation where it did not exist before.

Figure 35: Learners’ actual or intended progression to further study following Multiply



Since finishing the course, have you done, or are you about to start, any more courses or training?

Source: Learners Survey. Base: Multiply learners (6,394)

Learners more likely to say they had already started more study or training included:

- Female learners (32%) compared with male learners (27%), shown in Figure 35
- Ethnic minorities compared with white learners (33% vs. 28% respectively)

Similarly, female learners and learners from ethnic minority groups were also more likely to report an intention to go on to further study or training:

- 26% of female learners compared with 22% of male learners, shown in Figure 35
- 29% of ethnic minorities compared with 21% of white learners

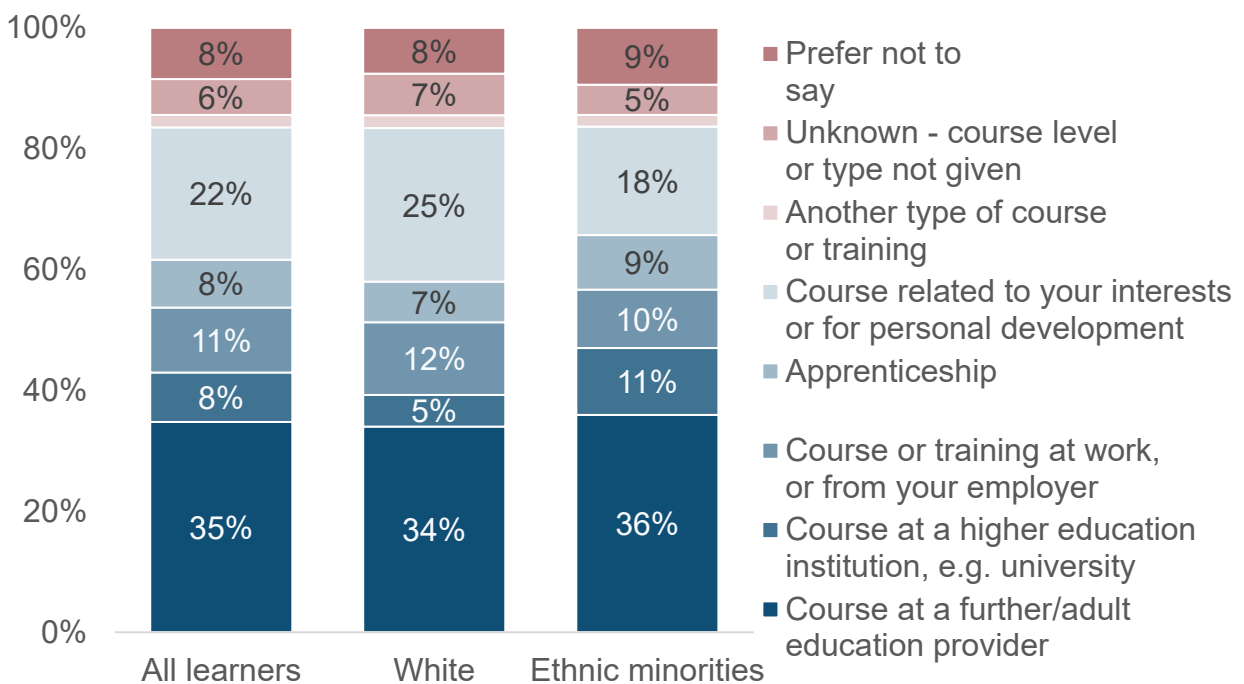
Amongst ethnic minority groups, black learners again were more likely to report having already started further study or training (34%) and intending to start further study or training (35%). Asian learners were more likely than white learners to have already gone on to further study (34%), but less likely than other ethnic minority groups to report intention to go on to further study (25%).

For those who have already started or intend to go on to further study, just under two-thirds (62%) stated that they were taking the course to further improve their maths skills. This proportion was the same for both male and female learners, but higher for learners from ethnic minority groups compared to white learners (73% vs. 51% respectively).

3.2.3 Type of study that Multiply learners progress on to

Figure 36 below presents the types of course that Multiply learners said they had gone on to or intended to go on to. It shows that, amongst those who have or intend to go on to further study or training, the most common type of course they select is one delivered by a further education or adult education provider. Thirty-five per cent of learners progressing or intending to progress on to further study choose this type of course. Eight per cent of Multiply learners that elect to progress do so at a higher education institution such as a university. Eleven per cent do so via a course or training provided through their work or employer, while 8% do so through an apprenticeship. After courses at a further education or adult education institution, the next most common type of course that Multiply learners select to go on to is a course related to their personal interests or development. Twenty-two per cent of learners that go or intend to go on to further study or training choose this type of course.

Figure 36: Learners' progression to other courses following Multiply, by course type and ethnicity

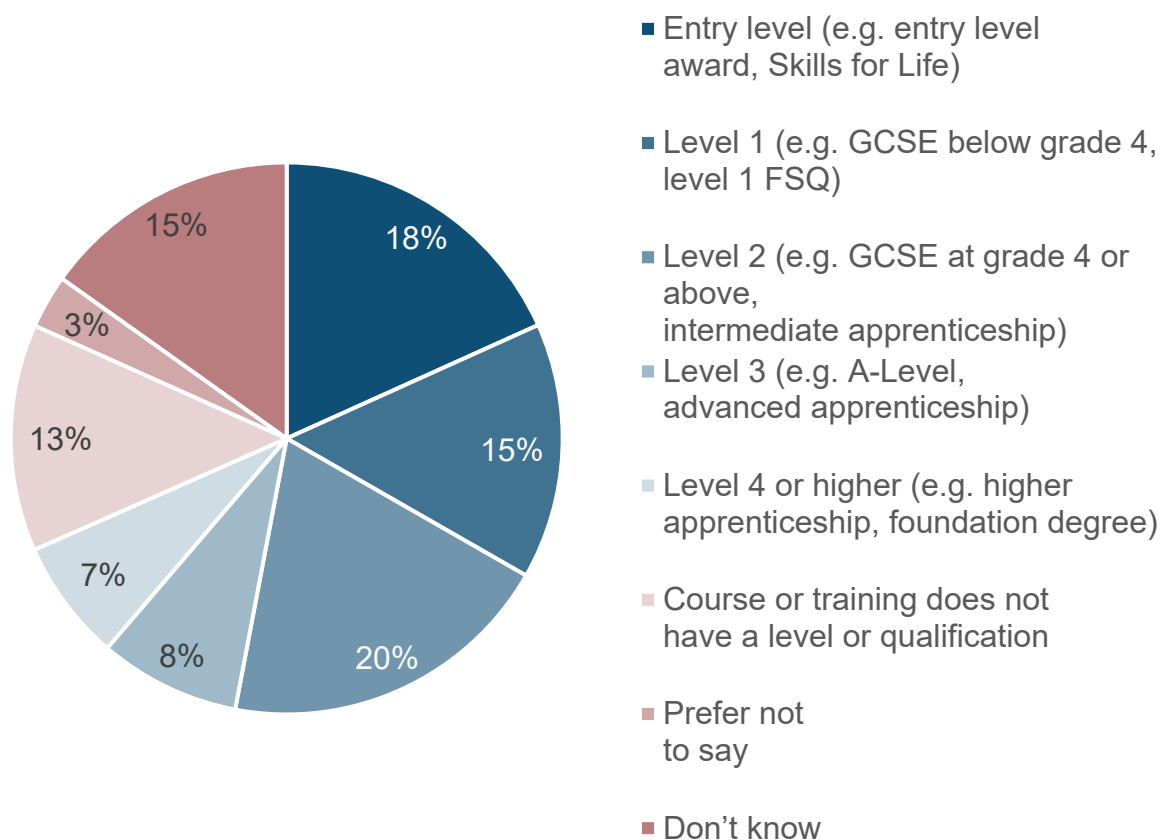


What sort of course or training [are you / will you be] doing?

Source: Learners Survey. Base: Multiply learners who have or will start more courses or training (3,508)

As regards the level of qualification they would achieve if they complete their further courses of study or training, most commonly this would be a Level 2 (e.g. GCSE at grade 4 or above, intermediate apprenticeship, Level 2 Functional Skills Qualification (FSQ)) (20%), Entry level (e.g. entry level award, entry level ESOL, Skills for Life) (18%), or Level 1 (e.g. GCSE below grade 4, Level 1 FSQ) (15%). Other levels of qualification that Multiply learners intend or actually go on to study include: Level 3 (e.g. A-Level, advanced apprenticeship) (8%); Level 4 or higher (e.g. higher apprenticeship, foundation degree, degree) (7%); or a course or training does not have a level or qualification (13%). Eighteen per cent either prefer not to say (3%) or don't know (15%) (Figure 37).

Figure 37: Learners' actual or intended progression to other courses following Multiply, by course level or qualification



What level of qualification will you have if you finish that course or training?

Source: Learners Survey. Base: Multiply learners who have or will start more courses or training (3,508)

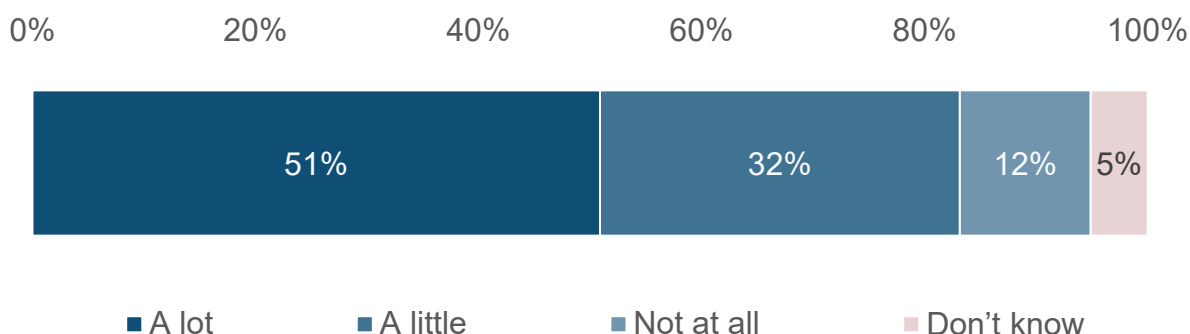
There are differences across learner demographics in the types of study that learners progress to, and in their reasoning for doing further study. White learners are more likely than ethnic minority learners to go or intend to go on to a course related to their interests or personal development, and/or a course or training at work or provided by their employer (25% vs. 18% and 12% vs. 10%, respectively). Meanwhile ethnic minority learners are more likely than white learners to intend to or actually progress onto a course or training at a higher education institution and/or an apprenticeship (11% vs. 5% and 9% vs. 7%, respectively).

Almost two-thirds (62%) of Multiply learners going on to further study or training say they are doing so to further improve their maths skills. This is especially pronounced among the following groups:

- Learners from an ethnic minority background (73%) compared with learners from a white ethnic background (51%)
- Learners aged 25 and below (71%) or 26-49 (65%) compared with those aged 50 and above (51%)
- Learners who have ever been in the care system (80%) compared with those who have never been in care (60%)
- Learners who are ex-offenders (84%) compared with those who are not (60%)

When asked to what extent, if any, did learners' experience of Multiply influence their decision to do further study or training, 83% said it either influenced them a lot (51%) or a little (32%), while only around 1 in 8 (12%) said Multiply did not influence their decision (Figure 38).

Figure 38: Extent to which Multiply influenced decision to go on to further study



To what extent, if any, did your experience of the Multiply course influence your decision to do more study or training?

Source: Learners Survey. Base: Multiply learners who have or will start more courses or training (3,508)

3.3 Impacts on confidence and progression: perceptions of local areas, learning providers and practitioners

Findings from the qualitative case studies strongly support the quantitative findings reported in sections 3.1 and 3.2. Multiply was seen by local area, provider and practitioner stakeholders to have boosted learner confidence and reduced maths anxiety, especially through the provision of non-accredited, low-pressure courses. Multiply was believed to be particularly effective in reaching learners who had previously disengaged from formal education due to negative school experiences. Stakeholders

noted how the informal, nonjudgemental tone of Multiply courses helped rebuild learners' confidence and sense of belonging. As a result, this enabled learners to progress in their learning and build skills. Indeed, Multiply was commonly viewed as an effective stepping stone to more formal learning, helping learners build confidence before progressing to AEB-funded qualifications.

"I think when you've actually delivered the sessions, it is just seeing how confident they are at the end session compared to the start. There's nothing you can measure in terms of quantitative depth of that, but you can see that you definitely had an impact there." – *Practitioner*

"We've helped people gain their confidence... we've reached out to people who would otherwise be forgotten by education." – *Provider*

While Multiply was seen to have made learners more confident with numbers specifically (one case study area reported several learners going from maths anxiety to taking maths GCSEs), it was also seen to have made them more confident with learning or stepping outside of their comfort zone more generally. For example, one provider saw half of their participants progressing onto courses at the local college, while another emphasised that learners had become less isolated due to the friends they had made during the Multiply courses. For some, the courses were reported to be the first structured group activity they had attended in years. For these reasons, strategic stakeholders felt that Multiply had widened access to and participation in education, thereby increasing equality of opportunity.

Across several interviews, local area stakeholders highlighted the long-term impact Multiply had on learners' quality of life and confidence. A pertinent example was a learner who was previously agoraphobic but who now volunteers at a local shop:

"We have one lady who hadn't left her house for 18 months before she did the [NumberFit] course... She's got a brain disorder and she was quite agoraphobic; she nearly left within 20 minutes! (...) I shadowed her and helped her along [with] some of the courses. She is volunteering in a local shop now. She absolutely loves it. She said if she hadn't done [the Multiply course], she would have still been sat at home." – *Local area strategic lead*

Another example was of an ex-smoker who quit after completing several Multiply courses on 'Wealth for Health' with the local council. She used the course app to log how much money she was spending, which helped her work out how much she would

save if she quit smoking. She also participated in NumberFit, which helped her to increase her mobility and health:

"She said, this has potentially saved my life because I'm not smoking anymore. She took her grandkids to the park and she didn't take her walker and she didn't get out of breath because she'd been doing the NumberFit course." – *Local area strategic lead*

Stakeholders recounted multiple accounts of learners progressing onto other courses, volunteering roles, or further in their careers, as well as bringing their learnings into the home to engage children, partners, and wider family members. Some learners even took their engagement a step further by volunteering on subsequent Multiply courses, demonstrating increased confidence, commitment to learning, and a desire to support others on similar educational journeys.

"One lady ended up getting a job as a care worker. [The course] finished in December, she went onto do her Level 2 Maths in January and passed it, which she needed to do the carers course. But when she came to us she could only do her 5 and 10 times tables." – *Provider*

The kind of positive effects Multiply has had on some learners' confidence, learning, and employment opportunities can be illustrated by a particular example. Here, one local area detailed the experience of one of their learners, Ali,²⁰ within a case study. They described how Ali was initially employed as a retail assistant and enrolled in a Multiply numeracy course because of the flexibility and one-to-one support it offered. They highlighted how the course equipped Ali with some basic foundational skills which were crucial for the day-to-day responsibilities he had in his retail job, like handling cash and managing stock levels. The case study also illustrated how Multiply supported Ali with his ambitions to grow professionally through its impact on his confidence in handling numerical and logistical tasks. This furthered his proficiency in managing inventory, accurately interpreting sales and stock data, and optimising the store's goods flow. These skills improved his performance in his existing role and positioned him as a strong candidate for career advancement. This then caused Ali's employer to recognise his enhanced abilities and supported him to enrol in their apprentice programme for better career opportunities.

Similarly, another provider reported how the quality of work conducted by Multiply learners in health and social care professions improved as a result of their course,

²⁰ Not respondent's real name.

leading to medication errors dropping for the employers they engaged with. For example, at a care home that was engaged as part of their delivery on Multiply, medication errors dropped from 164 errors per quarter before the course to 48 errors per quarter after.

Another example of the kind of positive impacts Multiply was seen to have on learners was in relation to learners for whom English was not their first language. Delivery stakeholders gave numerous examples of ESOL learners progressing after improving their comprehension, demonstrating how the issue was not always numeracy but language. One College cited that 95% of ESOL students progressed from Multiply to a maths qualification after it helped introduce them to more maths terminology. Another noted that Multiply aided ESOL students to progress more quickly onto GCSE courses.

Academic progression was also perceived to lead to changes to other areas of these students' lives. One college described the knock-on effect of Multiply on improving English for ESOL students, including more participation in extracurricular activities:

“They've been able to progress through the courses and get a maths qualification. And they've improved their English; they've made different friends. It's a rounded experience for them. It's not just about coming to learn maths. They're [also] more likely to get involved with all the different projects that are running around the college.” – *Provider*

While many stakeholders reported positive outcomes anecdotally, some also highlighted that their progression data is still being synthesised. For instance, one local area stakeholder credits their Management Information System with being able to track learner progression into Functional Skills, but because they only began delivering qualification-bearing Multiply provision in Year 3 of the programme, they were still gathering outcome data for it at the time of our interview. Similarly, some central-level stakeholders see the legacy spanning beyond the 3 years of the programme due to the non-linear pathway to progression that learners may take. They highlighted how someone who took part in Multiply might be ready to engage in further learning, but that their progression is not officially counted until they enter formal education which may take more or less time depending on individual circumstances.

These findings from the qualitative case studies conducted with LAs, providers and practitioners provide corroborating support alongside illustrative testimony epitomising many of the results from the quantitative Learners Survey and ILR data. Taken together, these data indicate that Multiply had generally positive effects on learners' progression

and employment opportunities, their confidence with numbers and other aspects of their lives, their attitudes to learning, and their physical and mental health.

3.3.1 Learner numeracy assessments

A limitation of the evaluation is the lack of an objective measure of numeracy improvement: the measures used to understand impacts on numeracy ability and confidence are self-reported. As part of the evaluation, it was also planned for a subset of learners to take a short numeracy assessment at the start and end of their Multiply course, to collect an objective measure of change in numeracy ability. Scores for these numeracy assessments would then have been analysed to understand to what extent taking a Multiply course led to an improvement in numeracy ability for learners.

The evaluation attempted to collect this data both through providers, and by going directly to learners through offering an incentive to take part. However, buy-in from both learning providers and learners was very low, with provider feedback suggesting that assessments were having a negative impact on delivery. Due to the significant administrative and monetary cost associated with the small number of assessments that were completed, the decision was made that it would not be value for money to continue trying to collect numeracy assessment data.

3.4 Impacts on vulnerable and hard-to-reach groups

Multiply was designed to be accessible for adults with low numeracy, including those from vulnerable or hard-to-reach groups who have lower rates of participation in adult learning. These include learners that have one or more long-term physical or mental health conditions (referred to in what follows as people living with disabilities), those that have caring responsibilities for people who have long-term physical or mental health conditions or problems related to old age (carers), those that have been in the care system, those that have received either a community or custodial sentence in the last 10 years (ex-offenders), and learners that are in debt and struggling with payments (see section 2.3).

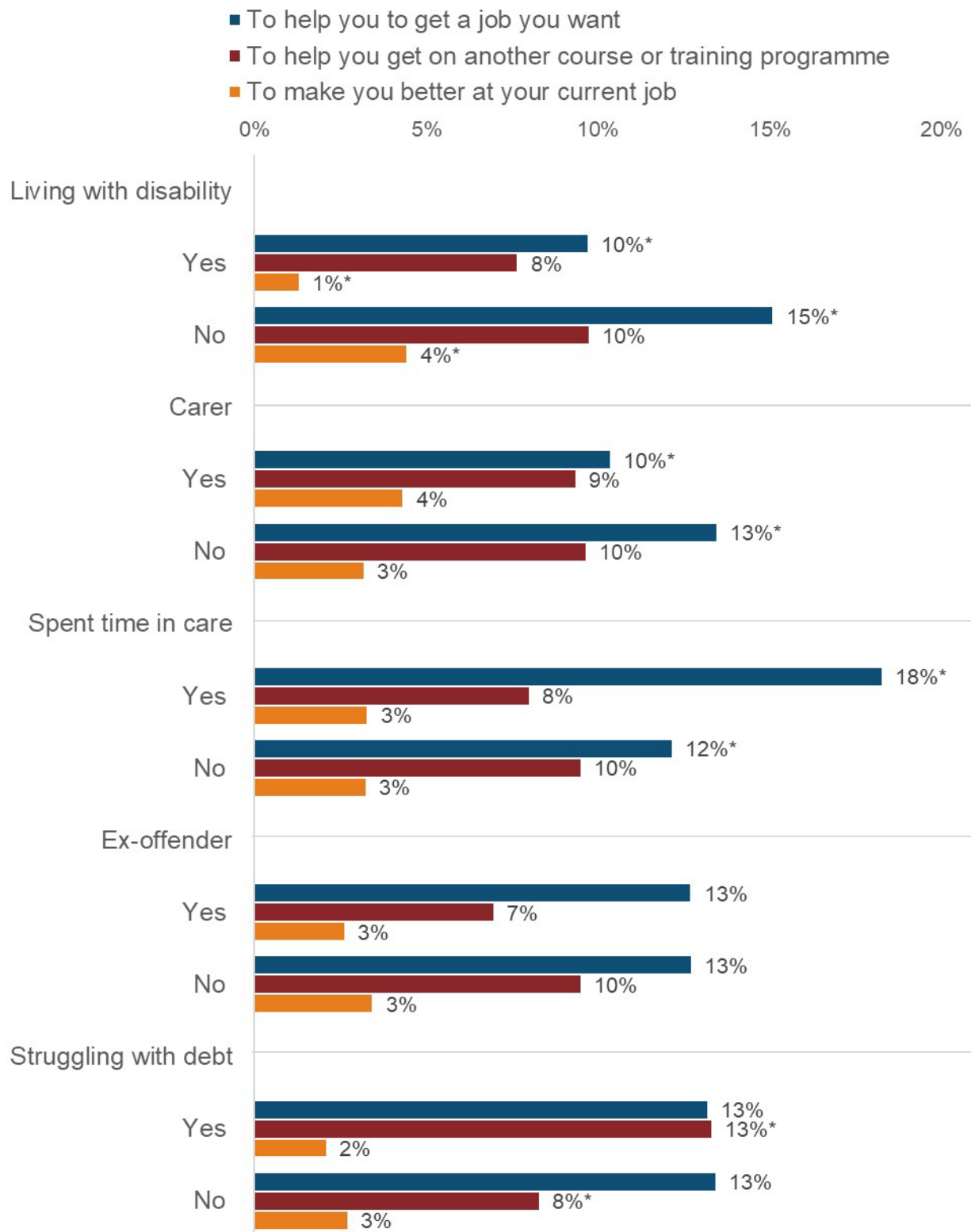
For these groups, motivations, ability to attend and get the most out of their course, and the impacts and effects of Multiply may be different to other groups within the Multiply learner population. This section outlines some of the key differences observed in relation to progression, confidence, attitudes towards learning and numeracy, and other aspects of wellbeing and employment opportunities.

3.4.1 Progression

Comparing vulnerable and hard-to-reach groups with their counterparts (non-vulnerable or hard-to-reach groups), there were differences both in terms of their main motivations for taking a Multiply course and their self-reported progression plans onto further courses or training.

Figure 39 shows that getting a job you want was less important for those living with disabilities compared to those not living with disabilities (10% vs. 15% respectively), and for carers compared to non-carers (10% vs. 13% respectively). Getting a job was more important for those who have ever been in care compared to those who had not (18% vs. 12% respectively). Multiply learners living with disabilities were less likely than those not living with disabilities to be motivated by performing better in their current job (1% vs. 4% respectively). Learners that were struggling with debt were more likely than those without debt to want to use Multiply to help them get on to another course or training programme (13% vs. 8% respectively).

Figure 39: Main reasons for taking a Multiply course – vulnerable and hard-to-reach groups

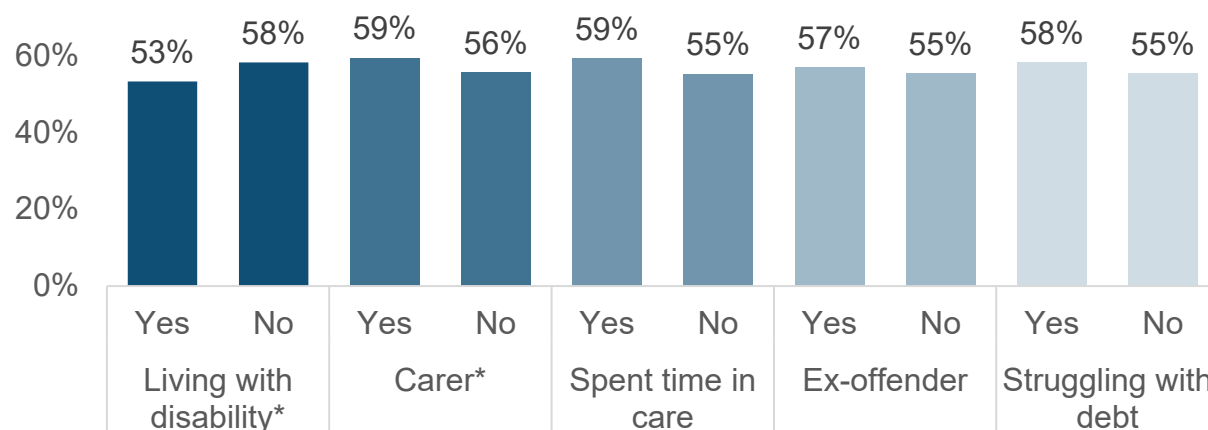


What was the MAIN reason you wanted to do this course?

Source: Learners survey. Base sizes for groups reading left to right along the graph: 1,409, 3,378, 874, 3,883, 426, 4,886, 269, 5,174, 439, and 2,742. Notes: For legibility, data labels only shown with asterisks where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level

Certain vulnerable or hard-to-reach groups were also slightly more or less likely to say they were progressing to further study. However, these differences were small. For example, Figure 40 shows that learners living with a disability were slightly less likely to say they were going on to further study than those without a disability (53% vs. 58% respectively), whereas carers were slightly more likely non-carers to say they were doing or about to do another course (59% vs. 56% respectively).

Figure 40: Learners' actual or intended progression to further study following Multiply – vulnerable and hard-to-reach groups

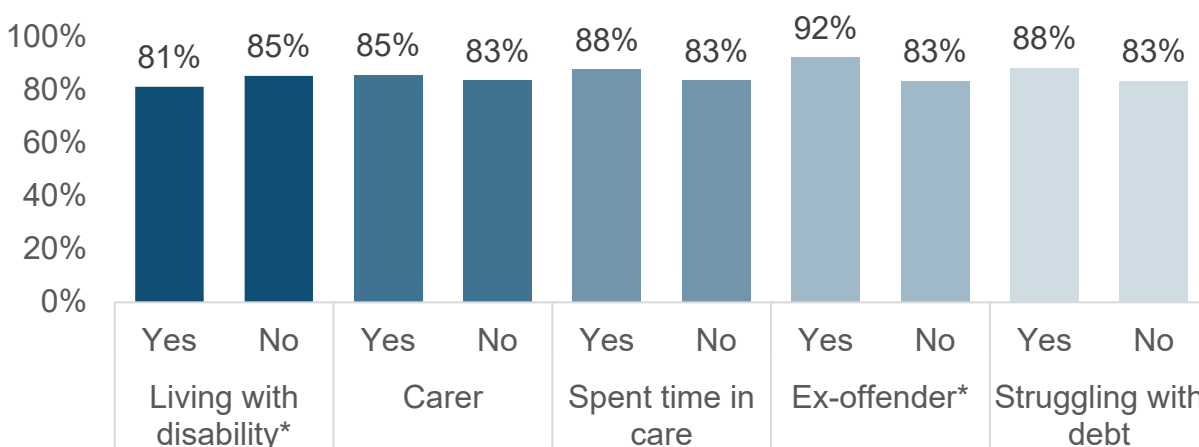


Since finishing the course, have you done, or are you about to start any more courses or training? Per cent answering “Yes – I have started more study or training” or “Yes – I am going to start more study or training”

Source: Learners Survey. Base sizes for groups reading left to right along the graph: 1,525, 3,649, 957, 4,224, 459, 5,302, 304, 5,596, 466, and 3,023. Notes: The inclusion of asterisks denotes within-group differences which are statistically significant at the 95% level

When asked how far their experience with Multiply influenced their decision to go on to further study. Ex-offenders were comparatively more likely to say that it did either a lot or a little (92% vs. 83% for non-ex-offenders), while people living with disabilities were less likely to say that (81% vs. 85% for people not living with disabilities) (Figure 41). It should be acknowledged that overall, the influence of Multiply on learners' decisions to go on to further study was high (above 80% in all cases).

Figure 41: Extent to which Multiply influenced decision to go on to further study – vulnerable and hard-to-reach groups



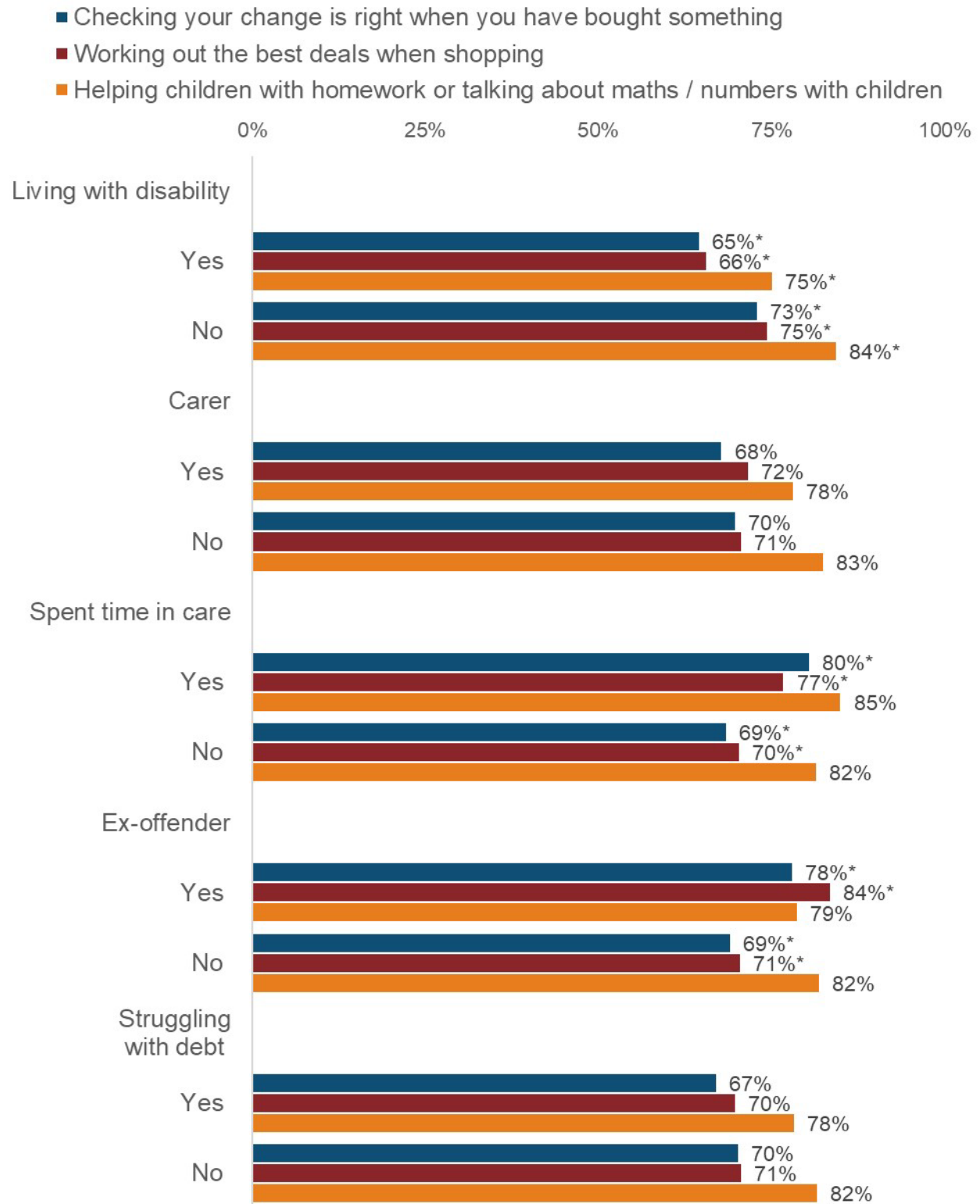
To what extent, if any, did your experience of the Multiply course influence your decision to do more study or training? Per cent answering: “A lot” or “A little”

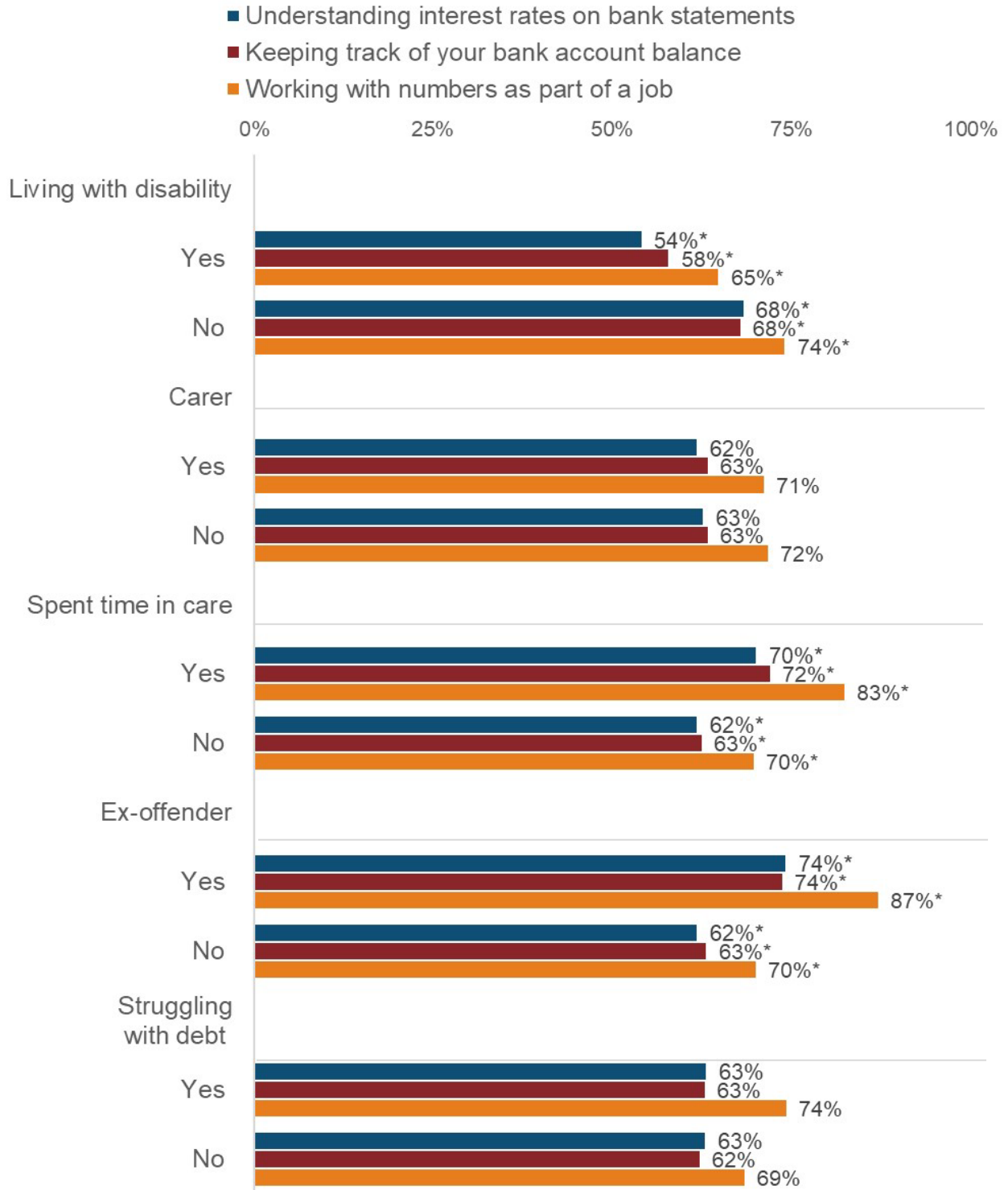
Source: Learners Survey. Base sizes for groups reading left to right along the graph: 813, 2,127, 569, 2,346, 272, 2,930, 173, 3,102, 272, and 1,674. Notes: The inclusion of asterisks denotes within-group differences which are statistically significant at the 95% level.

3.4.2 Confidence

Evidence from the learners survey demonstrated that Multiply helped raise confidence with selected everyday activities for vulnerable and hard-to-reach groups. Multiply was more likely to be effective in this regard for those that have been in care and ex-offenders, but less likely to have been effective for learners living with disabilities (Figure 4). This is the case for all activities except helping children with homework or talking about maths / numbers with children, where differences between carer and ex-offenders groups were not statistically significant.

Figure 42: Multiply helped confidence with everyday activities – vulnerable and hard-to-reach groups





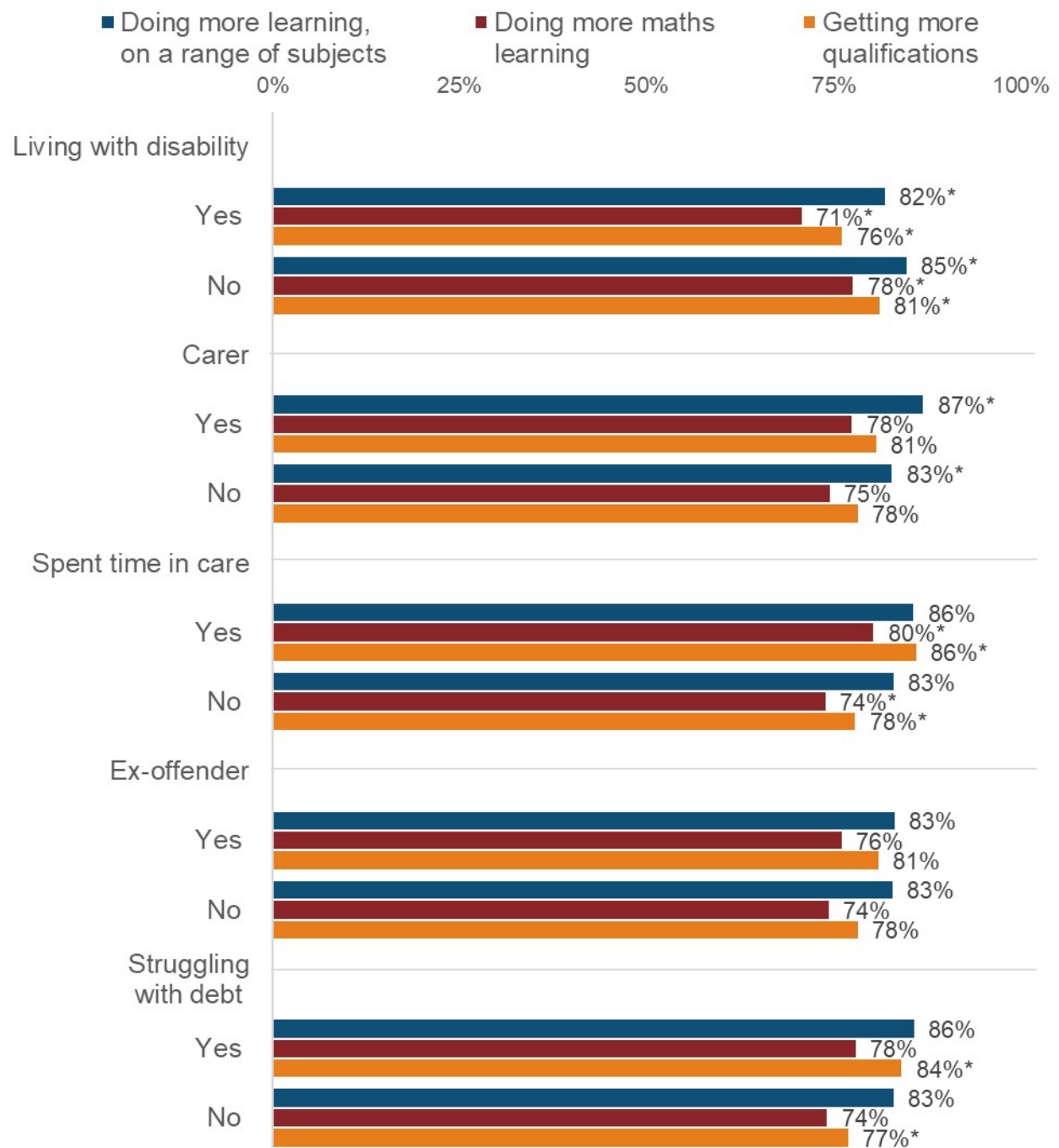
To what extent, if at all, do you think this course has helped to improve your confidence when doing the following things in everyday life?

Source: Learners Survey. Base sizes differ for each question and group. Notes: The inclusion of asterisks denote where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level.

3.4.3 Attitudes towards learning and numeracy

The degree to which Multiply influenced attitudes towards learning and numeracy for vulnerable and hard-to-reach groups is presented in Figure 43. This shows that learners with disabilities were generally less likely to become more interested in doing more learning on a range of subjects, including maths, or getting more qualifications as a result of Multiply, compared to learners without disabilities. Those that had been in care were more likely to be positively influenced by Multiply in terms of doing more maths learning and getting more qualifications, compared to people that have not been in care. Carers were more likely than non-carers to be interested in doing more learning on a range of subjects following Multiply.

Figure 43: Multiply influence on interest in doing more learning and getting more qualifications – vulnerable and hard-to-reach groups



Since attending the course, I am more interested in...

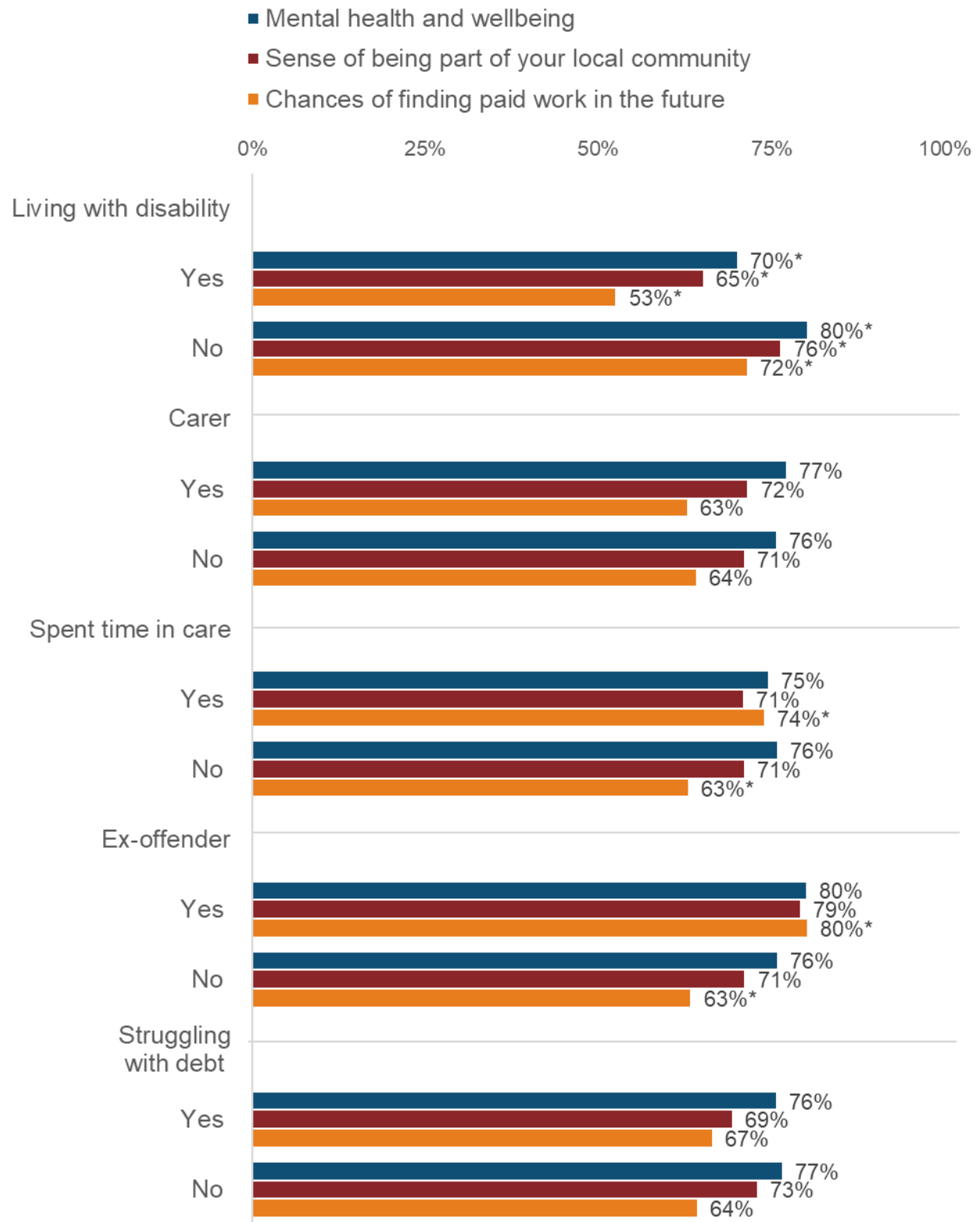
Source: Learners Survey. Base sizes for groups reading top to bottom along the graph: 1,525, 3,649, 957, 4,224, 459, 5,302, 304, 5,596, 466, and 3,023. Notes: The inclusion of asterisks denote where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level

3.4.4 Other aspects of wellbeing and employment opportunities

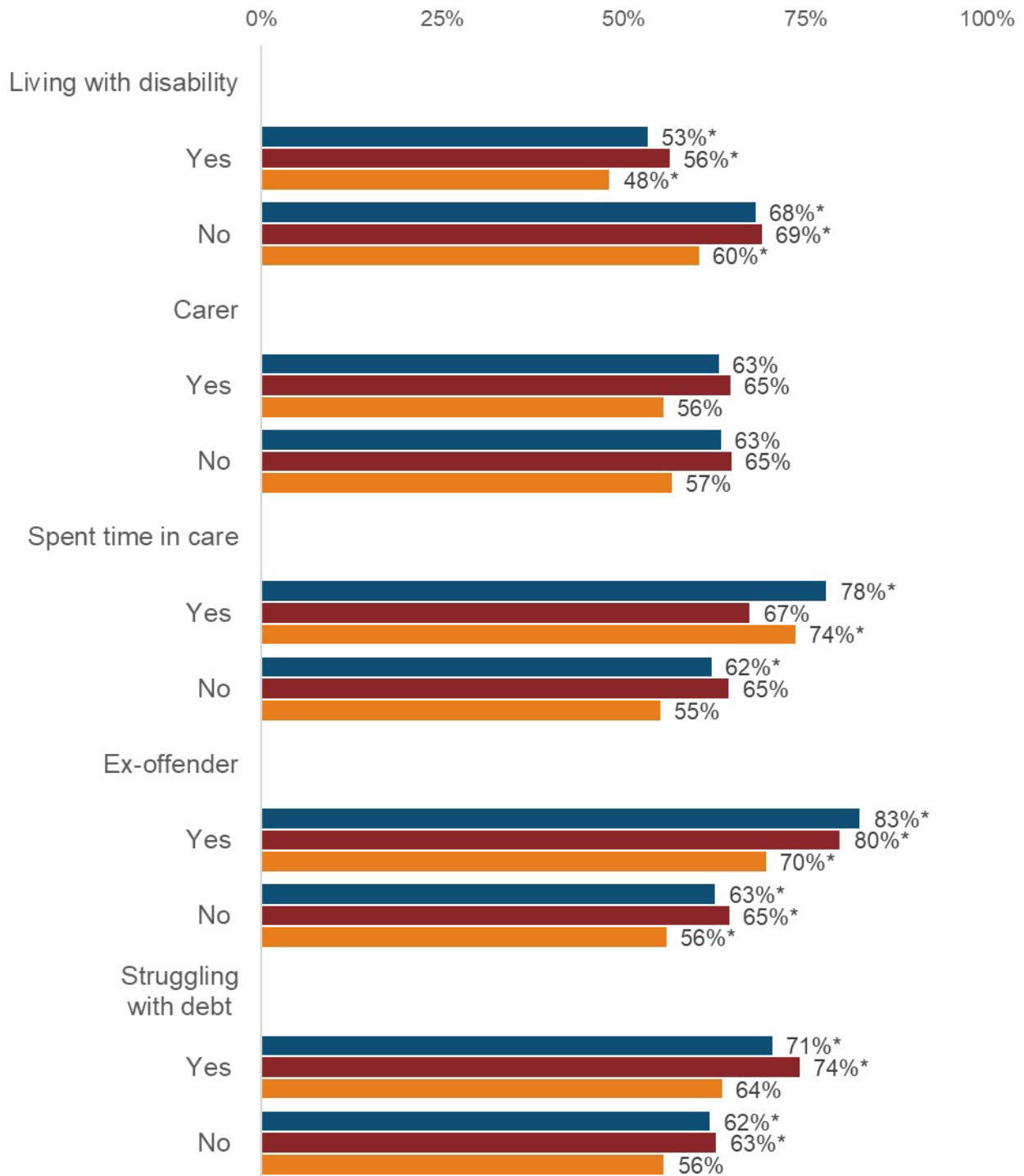
As above, the impact of Multiply on other aspects of wellbeing and employment opportunities was less positive for people with disabilities compared to those without disabilities. Figure 44 shows that across all aspects of wellbeing and employment opportunities asked about, people with disabilities were less likely to report positive impacts than people without disabilities.

Meanwhile, those who had ever been in care were more likely to report positive impacts on chances of finding paid work in the future, chances of earning a higher wage in the future, and chances of finding a more fulfilling job, compared to those who have not been in care. This was also the case for ex-offenders compared to non-ex-offenders, who were also more likely to report positive impact of Multiply on their chances of progressing or being promoted in their current job. People struggling with debt were more likely than those without debt to report positive impacts on chances of earning a higher wage in the future and chances of finding a more fulfilling job.

Figure 44: Net positive impact of Multiply on wellbeing and employment opportunities – vulnerable and hard-to-reach groups



- Chances of earning a higher wage in future
- Chances of finding a job you find more fulfilling
- Chances of progressing / being promoted in your current job



What impact, if any, do you think the course has had on your ...

Source: Learners Survey. Base sizes for groups reading top to bottom along the graph: 329, 1494, 374, 1486, 130, 1924, 86, 2007, 175, and 953. Notes: The inclusion of asterisks denote where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level

On the whole, the self-reported effects on Multiply learners were generally positive across these vulnerable and hard-to-reach groups. Given a focus of the programme was to support these groups within the wider population, this is a notable positive outcome of the programme.

3.5 Impacts on employers, practitioners and providers

3.5.1 Impact on employers

Local areas and providers faced challenges engaging employers in the design and delivery of Multiply (section 5.2). Similarly, the evaluation was only able to garner 29 responses to the Employers Survey (section 1.4). Nevertheless, the qualitative case studies research was able to gather some information which, supplemented by the results of the Employers Survey, does give some insight into Multiply's impacts on and for employers. This said, these findings should not be taken as representative of all employers engaged by Multiply.

Interviews conducted with employers indicated that key reasons for engaging with Multiply included attracting workers, upskilling workers, and supporting career development for staff. As one employer put it:

“If your workforce are upskilled in numeracy, they can increase your profitability through different ways...” – *Employer*

The qualitative case studies found that, for those employers that were able to be engaged, Multiply made a positive contribution to upskilling employees and, in some cases, addressing skills gaps, especially where delivery was tailored and relationships were strong. However, as employer engagement was highly challenging and inconsistent, Multiply was not universally successful at reducing reported skills shortages, particularly in sectors or areas without established partnerships or where the business case for engagement was unclear.

In the cases it was seen to be successful, with examples across sectors including health, social care, manufacturing, waste management and retail, employers developed tailored courses in partnership with providers and practitioners. For example, in 2 local areas, tailored Multiply courses were developed for NHS staff and manufacturing companies, leading to improved confidence and progression among employees. Similarly, as reported in section 3.4, improved performance of staff in a care home as a result of attending a Multiply course led to a reduction in medication errors.

Multiply was less successful in sectors or areas where employers were not already engaged with providers. Many employers were reluctant to release staff for training, especially for non-accredited courses, and struggled to see the direct business benefit. This was particularly true in sectors focused on compliance or where staff time was tightly managed (e.g. in some manufacturing and retail settings).

According to the Employers Survey, employers were generally positive about the perceived impact of Multiply on their employees:

- 21 out of 29 employers agreed that employees who have taken part in Multiply are, overall, more self-confident at work
- 22 out of 29 agreed employees who have taken part in Multiply are more confident in dealing with numbers
- 23 out of 29 agreed that employees who have taken part in Multiply have improved their numeracy or maths skills
- 25 out of 29 agreed that Multiply is an effective way of improving employees' numeracy skills
- 20 out of 29 agreed employees who have taken part in Multiply are more effective at their job

Employers were also positive about some perceived impacts of Multiply on their organisation:

- 18 out of 29 agreed Multiply had enabled their organisation to use their training budget on other important areas
- 16 out of 29 agreed Multiply has changed how their organisation thinks about training their workforce in a positive way
- 20 out of 29 agreed Multiply has enhanced their relationship with learning providers
- 21 out of 29 agreed Multiply has helped their organisation deliver courses more flexibly

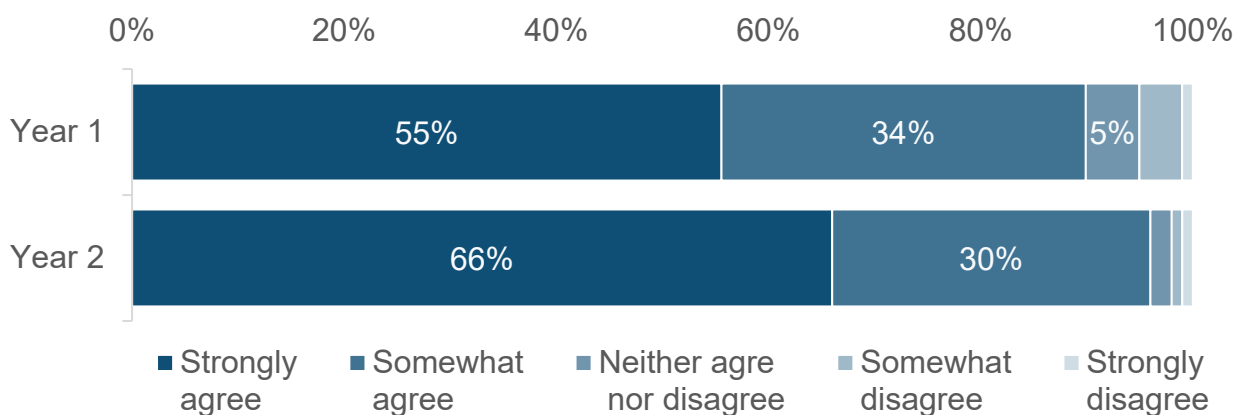
These findings suggest that surveyed employers generally found Multiply to be appropriately designed and delivered for the objectives of raising confidence and

improving employees' competence with maths and numeracy. There is some qualitative evidence that this resulted in improved performance at work. However, there is less evidence of Multiply changing the way employers think about training their workforce.

3.5.2 Practitioners' and providers' views of the impacts to learners

Overwhelmingly, practitioners considered Multiply to be an effective way to improve learners' numeracy skills. Figure 45 shows that in year 1, almost 9 out of 10 (89%) practitioners agreed with this proposition, with 55% strongly agreeing and 34% somewhat agreeing. Five per cent neither agreed nor disagreed, 4% somewhat disagreed and 1% strongly disagreed. In Year 2, almost all (96%) practitioners agreed that Multiply was an effective way to improve learners' numeracy skills, with 66% strongly agreeing and 30% somewhat agreeing. Just 1% neither agreed nor disagreed, 2% somewhat disagreed and 1% strongly disagreed.

Figure 45: Extent to which practitioners regard Multiply as an effective way of improving learners' numeracy skills, Year 1 and Year 2



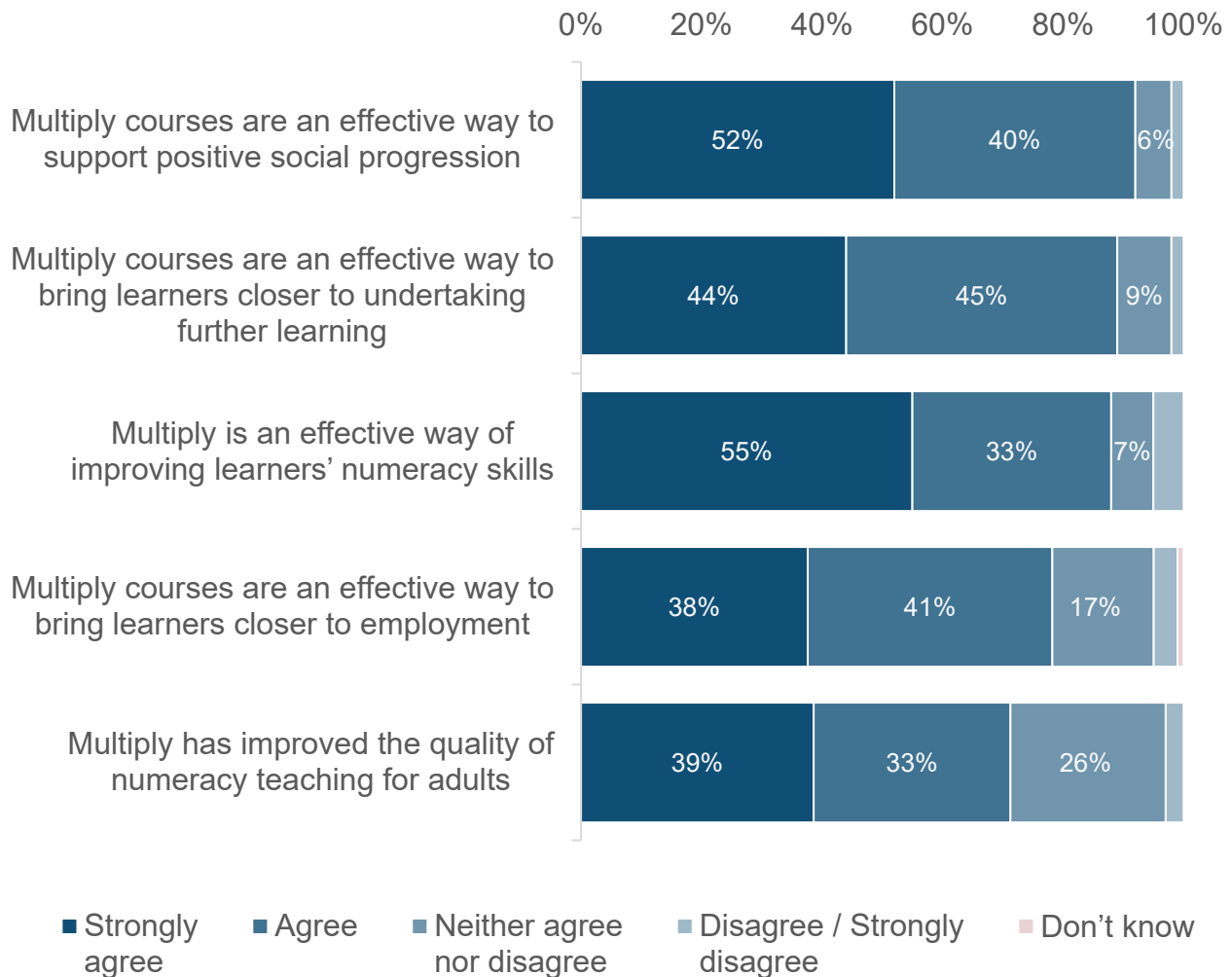
To what extent do you agree that Multiply is an effective way of improving learners' numeracy skills?

Source: Practitioners Surveys. Base: Year 1 (73); Year 2 (98)

In the second year of the programme, providers also viewed Multiply as a broadly effective way of improving learners' numeracy skills (55% strongly agree with this statement, 33% agree), bringing learners closer to employment (38% strongly agree, 41% agree) or to undertaking further learning (44% strongly agree, 45% agree), and supporting social progression (52% strongly agree, 40% agree). Those providers that deliver adult numeracy courses that are not funded by Multiply also tend to see it as having improved the quality of numeracy teaching for adults (39% strongly agree, 33% agree). These findings (shown in Figure 46 below) strongly corroborate the findings

reported in section 3.1, where learners reported positive effects on their confidence with numbers and numeracy, employment opportunities, options and plans to progress to further learning.

Figure 46: Provider perceptions about Multiply’s effectiveness



To what extent do you agree or disagree with the following statements?

Source: Providers Survey, Year 2. Base (all): 156. Base size for second question (Multiply has improved the quality of numeracy teaching for adults): 76 (all who deliver adult numeracy courses that are not funded by Multiply). Notes: Label values for don’t know answer option not displayed for legibility.

3.5.3 Impacts on Practitioners and providers

Practitioners and providers tended to stress the innovation Multiply had enabled, with the flexibility that was built into the programme’s design allowing local areas to pilot new

commissioning models, including micro-grants to grassroots organisations and co-design with community partners. According to providers, this led to more evidence-based and responsive provision, especially in areas with limited adult learning infrastructure.

From the perspective of practitioners, Multiply was commonly seen to enable pedagogical innovation. This took the form of experimenting with new learner-centred approaches, such as embedding numeracy in real-life contexts (budgeting, cooking, sports, crafts), and delivering in more informal and community-based settings. These pedagogical techniques were perceived to help reduce maths anxiety and engage learners who had previously disengaged from formal education. Practitioners themselves also found it energising and motivating to work in these ways.

"Maths and numeracy are not popular subjects to deliver and I really believe without the breadth, creativity and outreach available to "un-scare" maths and develop relationship with potential learners we would likely have had very few learners at all." – *Provider*

"Courses such as party planning, soap making and cookery have allowed the use of many maths skills without learners thinking too much about maths as a subject." – *Provider*

Together, these innovations contributed to professional development for practitioners, with Multiply funding also sometimes used to provide training for staff to teach basic numeracy and share best practice across networks. Provider respondents to case study interviews also emphasised how Multiply enabled them to both hire new staff and upskill existing staff, which improved the quality and diversity of their provision.

In addition, providers reported investing in building or deepening partnerships with community organisations, employers, and local authorities, which expanded their reach and delivery capacity. This helped facilitate them to reach learners who would not have engaged with traditional adult education, especially those with low confidence, maths anxiety, or from harder-to-reach groups such as ESOL learners, care leavers, ex-offenders, parents, and people in rural or deprived areas.

Some providers even reported that Multiply had shifted their organisational culture, making them more learner-centred and innovative. In some areas, the approaches developed under Multiply are being embedded into future provision (e.g. through AEB or other funding streams), though most providers indicated that this would be on a smaller scale without Multiply funding.

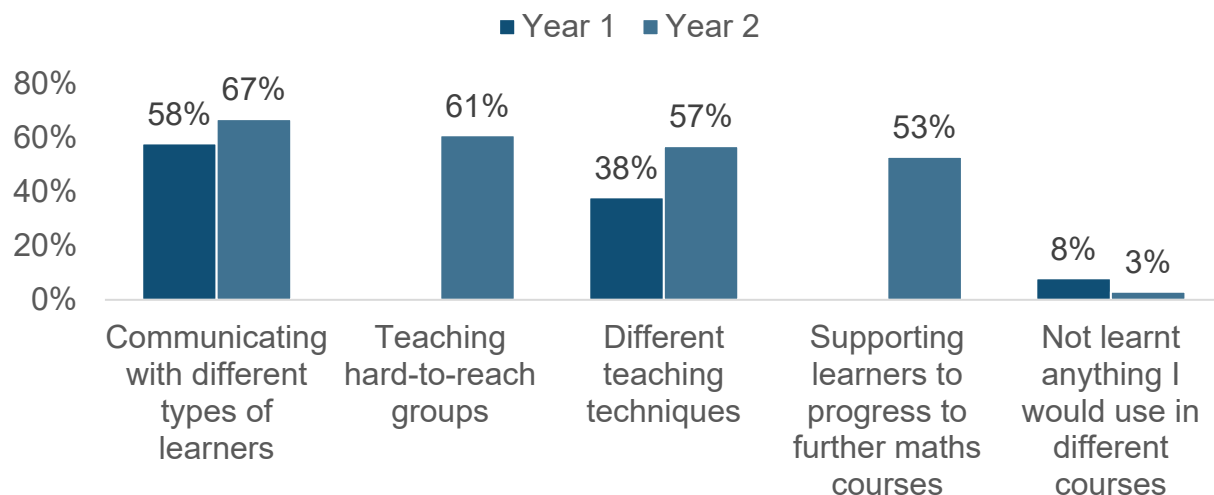
“When Multiply funding has ended, we would like to bring in more elements of functional numeracy to cookery courses. We would be unable to do this to the same extent, due to less funding, but it is something we would look at embedding where we can.” – *Provider*

Overall, providers reported that Multiply funding allowed them to:

- deliver in non-traditional, community-based venues (libraries, foodbanks, workplaces, housing associations)
- develop and pilot new course formats (short, practical, non-accredited, embedded in other activities)
- offer one-to-one and small group support, which would not have been financially viable otherwise
- embed numeracy in other learning (e.g. ESOL, family learning, vocational courses)
- use incentives (vouchers, food, childcare) to reduce barriers to participation

Results from the surveys conducted with providers and practitioners add weight to these qualitative findings. Practitioners responding to the survey reported a variety of different ways in which they had learnt from delivering Multiply, in particular, communicating with different types of learners (67% in Year 2), teaching hard-to-reach groups (61% in Year 2), using different teaching techniques (57% in Year 2), and supporting learners to progress to further maths courses (53% in Year 2). Only a very small minority (3% in Year 2) said they had not learnt anything that they would use in different courses (down from 8% in Year 1) (Figure 47).

Figure 47: Learning from Multiply for future courses

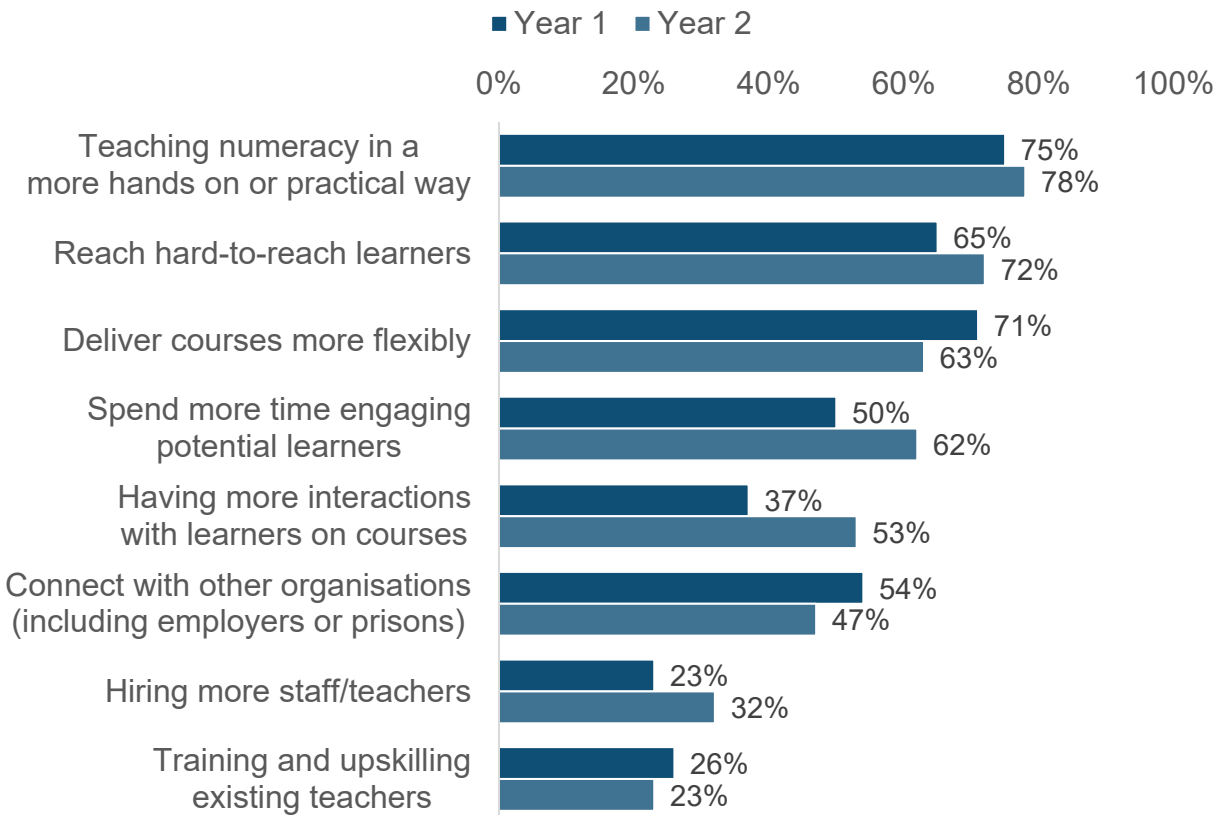


What, if anything, have you learnt from delivering Multiply courses between [April 2022 and March 2023 / April 2023 and March 2024] that you would use when delivering courses in the future?

Source: Practitioners Survey. Base: year 1: 73; year 2: 98. Notes: “Teaching hard-to-reach groups” and “Supporting learners to progress to further maths courses” not asked in Year 1

Providers reported similar results to practitioners when they were surveyed. At least half of providers said they had conducted activities and/or experienced impacts that would not have been possible without Multiply funding in Year 1, with this proportion rising to nearly all providers (98%) in Year 2. These included: teaching numeracy in a more hands on or practical way (78% in Year 2); reaching harder to reach learners (72% in Year 2); delivering courses more flexibly (63% in Year 2); spending more time engaging potential learners (62% in Year 2); having more interactions with learners on courses (53% in Year 2); connecting with other organisations, including employers or prisons (47% in Year 2); hiring more staff/teachers (32% in Year 2); and training and upskilling existing teachers (23% in Year 2). Again, many of these measures rose between Years 1 and 2, indicating that providers continued to innovate and develop their offer under Multiply over the course of the programme (Figure 48).

Figure 48: Provider activities and impacts made possible by Multiply funding



What activities or impacts would not have been possible without funding from Multiply?

Source: Providers Survey. Base: year 1: 149; year 2: 156.

As a result of their experiences in Year 1, nearly all (95%) surveyed providers had plans to embed aspects of Multiply into future provision to adult learners. Over two-thirds (68%) said they had plans to run more courses similar to Multiply in the future, and almost half (44%) said they had plans to embed learnings from Multiply into future courses. Providers responded slightly differently in Year 2, with fewer (46%) saying they had plans to run more courses similar to Multiply in the future, and more (55%) saying they had plans to embed learnings from Multiply into future courses.

4. How did learners and other stakeholders experience Multiply?

This chapter explores the experiences and perceptions of learners, practitioners, providers and employers regarding Multiply. It considers their overall satisfaction with the programme alongside their actual vs. expected experience. It analyses the experiences of learners who dropped out of the programme, as well as considering the perceived barriers to engaging with Multiply. It also includes a specific sub-section on the experience of Multiply working in prisons.

These findings are most relevant for the Effectiveness (how well did Multiply achieve its objectives?), Relevance (was Multiply doing the right things?) and Coherence (how well does Multiply fit within the wider context) criteria.

Chapter summary

Learners' experiences of Multiply tended to exceed their expectations both overall and in connection to specific aspects of course delivery. Ninety per cent said Multiply either met (17%) or exceeded (73%) their expectations overall. The quality of teaching received in person received the highest rates of exceeding expectations among all the aspects of course delivery asked about. Only a very small proportion of learners felt Multiply was worse than expected overall (5%). Most learners (68%) felt the level of maths covered on their course was about right, with 17% finding it too easy and 8% finding it too hard.

The main form of support Multiply learners had access to and indicated that they made use of was a teacher they could see in person: 79% used this form of support. Online learning resources (55% used these), a teacher you could contact by telephone, email or online (50%) and a peer support network organised by the learning provider (44%), were other forms of support commonly used. Teaching delivered online was accessed by 28% of Multiply learners, reflecting the small proportion (12%) of Multiply learners that received their course online only.

As a result of their experiences, Multiply learners reported high levels of overall satisfaction: 83% were satisfied overall (55% very satisfied and 28% fairly satisfied). Only 4% were dissatisfied. The high levels of satisfaction extended across all aspects of the course enquired about. Multiply was generally perceived by learners as valuable, especially when courses addressed practical needs such as managing personal finances.

Learners were very likely to recommend a similar maths course to people they know. Almost half (48%) of Multiply learners said they were likely to recommend a similar maths course to people they know, and a further third (33%) said they had already recommended such a course.

Among vulnerable and hard-to-reach groups, learners with disabilities were most likely to report negative experiences across different dimensions of their Multiply experience, albeit those reporting negative experiences represent only a minority view within this group. Other vulnerable and hard-to-reach groups tended to report slightly more positive experiences than their less vulnerable or hard-to-reach counterparts, with the partial exception of those who struggle with debt, whose experiences are more mixed.

Both practitioners and providers expressed high levels of satisfaction with Multiply (86% of providers and 85% of practitioners respectively were overall satisfied with Multiply in Year 2), with experiences generally improving across all aspects of course delivery between Year 1 and Year 2. By Year 2, most practitioners said they thought Multiply had been better than their expectations across a range of dimensions. In particular, they thought the ability to tailor provision more closely to learner needs and the level of interaction with learners had been more positive than expected (68% saying this was better than expected).

Providers highlighted that Multiply helped them to engage with hard-to-reach groups. They emphasised the satisfaction they derived from seeing improvements in learner confidence and participation. Generally, Multiply courses were considered to be easy to deliver and to deliver good impacts for learners. Multiply tended to fare well in comparison to other AEB maths or numeracy courses for these reasons.

The evidence base for employers is not as extensive as for learners, providers and practitioners. Nevertheless, the majority of employers participating in the research reported broadly positive experiences and overall high levels of satisfaction, citing its positive impact on workforce skills and morale as key benefits. Most employers indicated they would recommend Multiply to others.

As discussed in Chapter 2, the drop-out rates for Multiply courses were generally very low. In part, this is likely to reflect the high levels of satisfaction learners reported for their courses. The learners' survey provides further evidence about the reasons why some learners did not complete the course. The most common reasons given were personal circumstances such as family problems or ill health (34%), or conflicts with other commitments were the main reasons given (27%). Learners were less likely to say they had dropped out of the course because of reasons to do with the course itself.

Self-reported drop-out rates were generally similar across different learner groups, although slightly higher among learners with a disability, those with English as an additional language, and learners in more deprived areas. Learners that were not confident with numbers before taking the course were also slightly more likely to say they had not completed their course compared to those who were confident with numbers, but the differences were not pronounced (12% vs. 8%).

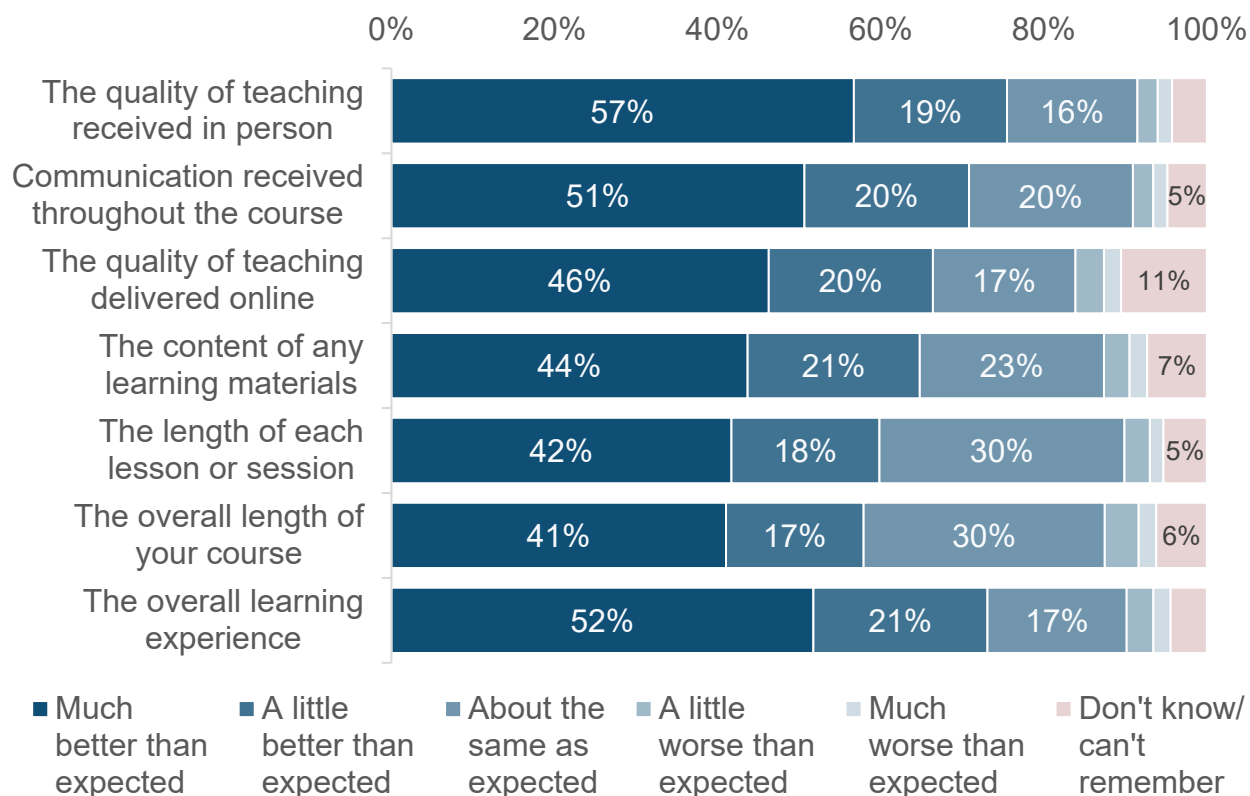
4.1 Satisfaction with Multiply

4.1.1 Learners

Expectations about Multiply

Learners' experiences tended to exceed expectations both overall and in connection to specific aspects of course delivery. Figure 51 presents this analysis, and shows that the overall learning experience was better than expected for 73% of Multiply learners, with 52% stating it was much better than expected and 21% stating it was a little better than expected. Only 5% of learners found it at least a little worse than expected, (3% a little worse than expected and 2% a lot worse than expected).

Figure 49: Experience vs. expectations regarding different aspects of Multiply delivery



How did each of the following compare with your expectations when you signed up for the course?

Source: Learners Survey. Base (Multiply learners): quality of teaching received in person (5,315); quality of teaching received online (1,248); all other aspects (6,031)

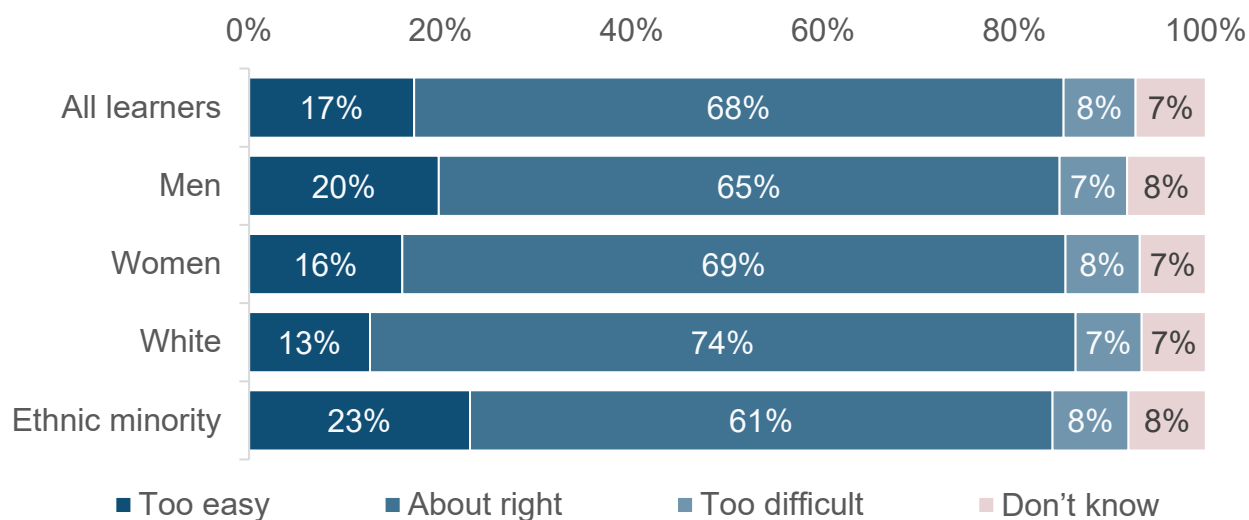
The quality of teaching delivered in person received the highest overall ratings in terms of being better than expected, with 75% finding it was better than expected (57% much better and 19% a little better). Teaching delivered online did not exceed expectations by quite so much, with 66% stating that it was better than expected (46% much better and 20% a little better). The communication students received throughout the course was also felt to be better than expected by the majority (71% better), again with more learners finding it much better (51%) than found it a little better (20%). Similarly, 65% of learners said the content of learning materials were net better than expected (44% much better and 21% a little better), while 60% found the length of each lesson or session to be better than expected (42% much better and 18% a little better), and 58% found the overall length of the course to be better than expected (41% much better and 17% a little better) (Figure 49).

There was little difference between male and female learners regarding whether they found any aspects better or worse than expected, while ethnic minority learners were more likely than white learners to find the experience overall better than expected (77% vs. 70% respectively), and conversely, white learners were more likely than ethnic minority learners to find the overall experience worse than expected (6% vs. 4% respectively). This difference was especially pronounced with regards to expectations vs. experience relating to communication received during the course (76% of ethnic minority learners felt communication was better compared to 67% of white learners), the content of learning materials (71% of ethnic minority learners said learning materials were better compared to 60% of white learners), lesson length (68% of ethnic minority learners said length of each lesson or session was better compared to 54% of white learners), and overall length of the course (66% of ethnic minority learners said this was better compared to 52% of white learners).

Level of maths covered

Assessing the level of maths covered on their Multiply courses, the majority of learners (68%) felt it was about right, with 17% finding it too easy and 8% finding it too hard. Seven per cent said they didn't know or were unsure (Figure 50).

Figure 50: Level of maths covered on the course



Would you say that the maths covered on your course was...

Source: Learners Survey. Base: All Multiply learners (6,394); male learners (2,059); female learners (4,335); White learners (3,450); ethnic minority learners (2,774).

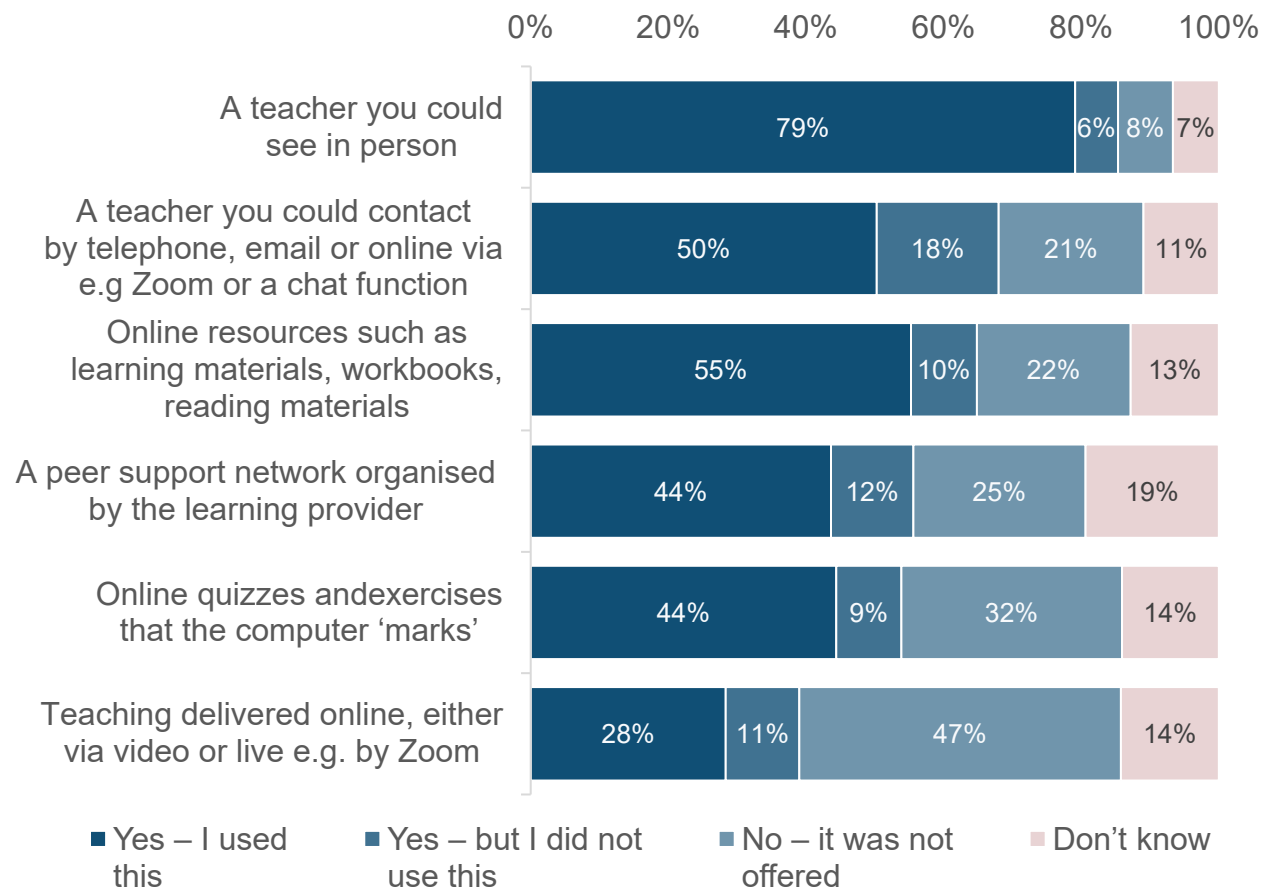
Female learners were more likely than male learners to find the level of maths covered about right (69% vs. 65% respectively), while male learners were more likely than female learners to find it too easy (20% vs. 16% respectively).

A larger proportion of ethnic minority learners found the maths covered too easy, compared to white learners (23% vs. 13% respectively), while white learners were more likely than ethnic minority learners to find it about right (74% vs. 61% respectively).

Access to support

Learners were asked whether they had access to and used various forms of support during their Multiply courses. Figure 51 presents the results of this analysis.

Figure 51: Learners' access to and use of different forms of support during their Multiply course



As part of your course did you have access to any of the following?

Source: Learners Survey. Base: Multiply learners (6,394)

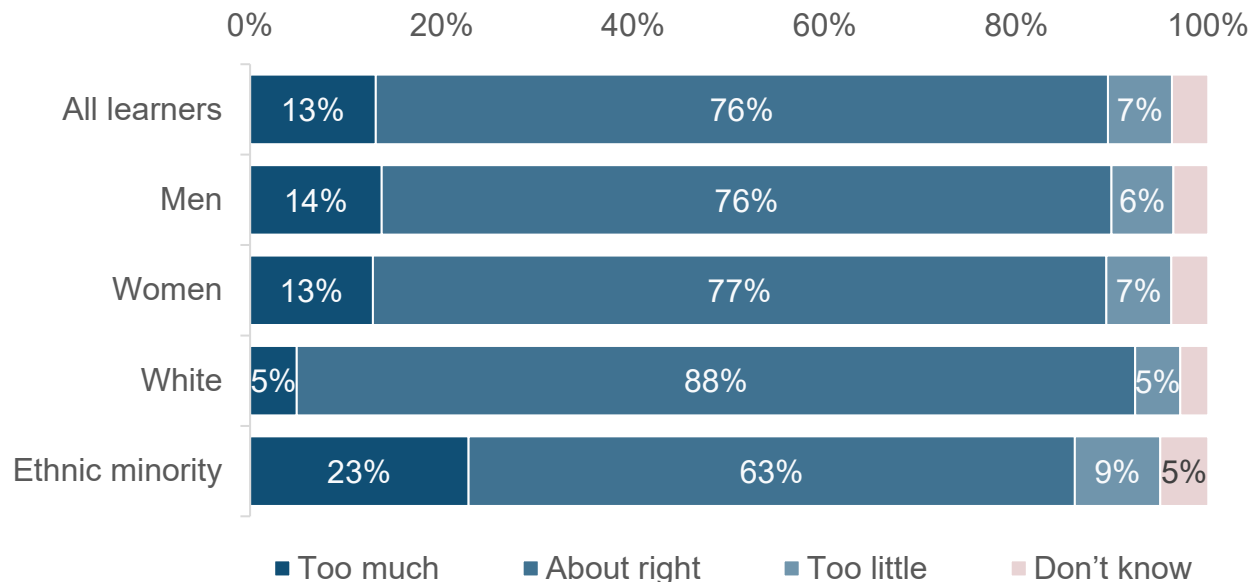
By far and away the main form of support that learners had access to and made use of was a teacher they could see in person. Seventy-nine per cent of Multiply learners mentioned this form of support. The next most used form of support was online learning resources (55% said they used these, while 10% said they had access but did not use them). A teacher you could contact by telephone, email or online (e.g. via Zoom or chat function) was accessed by half (50%) of all learners, with 18% stating that this option was available, but they did not use it. Forty-four per cent accessed a peer support network organised by the learning provider, with the same proportion making use of online quizzes and exercises marked by a computer, while 12% and 9% of students, respectively, had access to these forms of support but did not use them. Teaching delivered online was accessed by 28% of Multiple learners, with 11% saying they had access to this form of support but did not make use of it. These latter figures no doubt reflect the fact that the mode of delivery was online only for just a small proportion (12%) of Multiply learners overall (see section 2.1 above).

Male Multiply learners were marginally more likely to use a peer support network than female Multiply learners (46% vs. 42% respectively), while women were marginally more likely than men to state that teaching delivered online (48% vs. 45% respectively) and online quizzes and exercises (33% vs. 30% respectively) were not offered.

Ethnic minority learners were more likely than white learners to make use of all forms of support except a teacher you could see in person, for which there was no statistically significant difference between the 2 groups.

With regard to the amount of time spent with their course teacher, over three-quarters (76%) of all Multiply learners felt it was about right, with 13% feeling it was too much and 7% saying it was too little. Four per cent said they didn't know (Figure 52).

Figure 52: How Multiply learners rated the amount of time spent with the teacher



How would you rate the amount of contact you had with your teacher?

Source: Learners Survey. Base: All Multiply learners (5,516); male learners (1,757); female learners (3,759); White learners (2,919); ethnic minority learners (2,455)

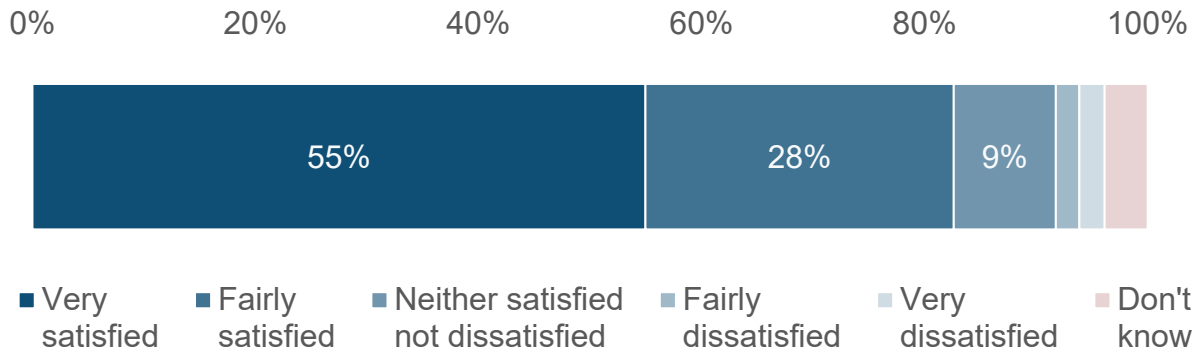
There were no statistically significant differences between male and female Multiply learners regarding how the amount of time spent with the teacher was rated, though ethnic minority learners were more likely than white learners to rate it as both too much (23% vs. 5% respectively) and too little (9% vs. 5% respectively). White learners, on the other hand, were more likely than ethnic minority learners to rate the amount of time spent with the teacher as about right (88% vs. 63% respectively) (Figure 52).

Satisfaction

In general, learners' experience of Multiply led to high levels of overall satisfaction. Over 4 out of every 5 (83%) learners were satisfied with their Multiply course, with 55% very satisfied and 28% fairly satisfied. Only 4% were dissatisfied, with 2% fairly dissatisfied and 2% very dissatisfied. Four per cent didn't know (Figure 53).

A larger proportion of women tended to be satisfied overall than men (84% vs. 80% respectively), while white learners were more likely than ethnic minority learners to be overall dissatisfied (5% vs. 3%).

Figure 53: Overall learner satisfaction with Multiply

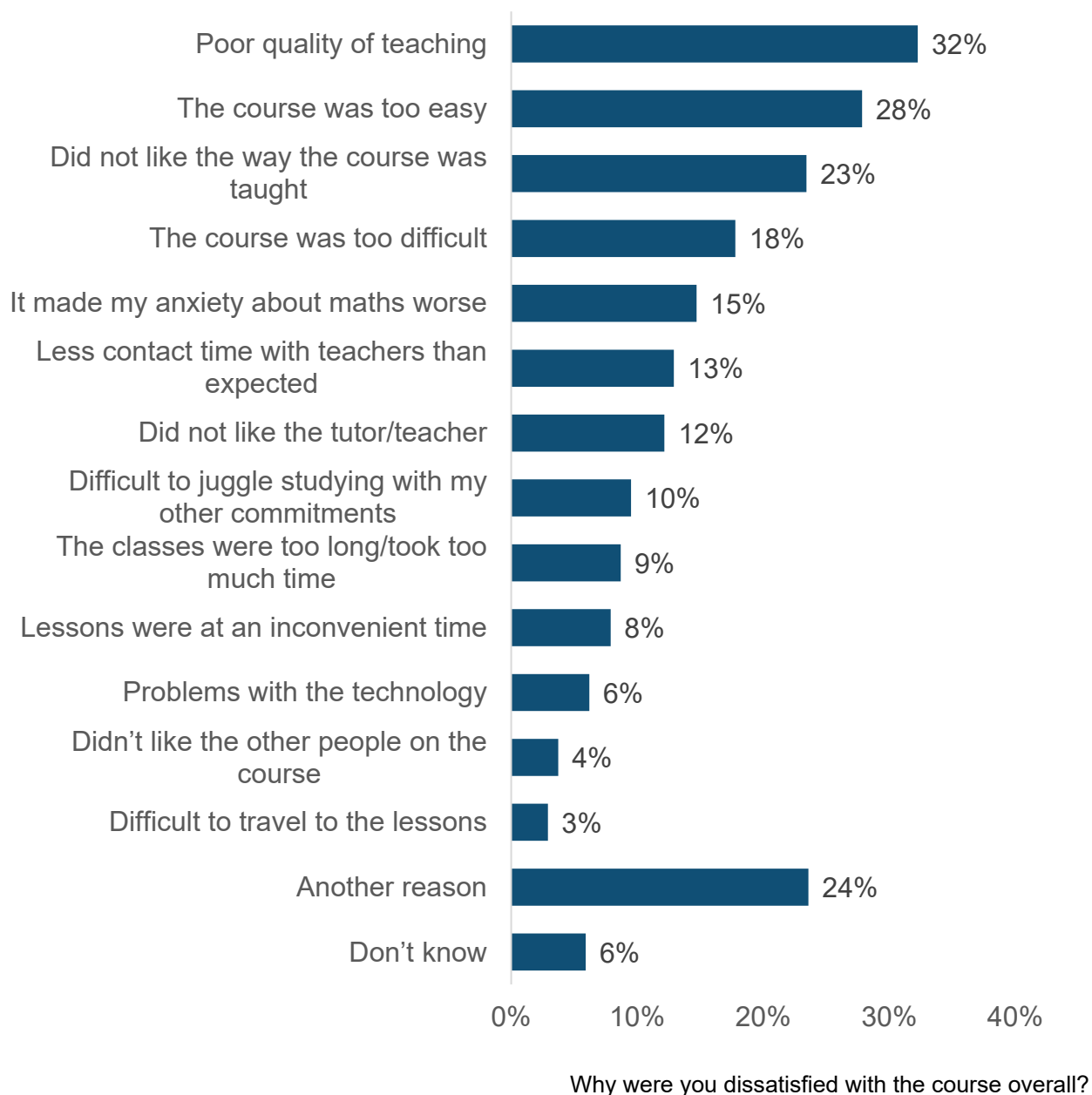


Overall, how satisfied or dissatisfied were you with the Multiply course?

Source: Learners Survey. Base: Multiply learners (6,394)

For the small proportion of learners that were dissatisfied with their Multiply course, the main reasons given were: quality of teaching (32%); the course being too easy (28%); not liking the way the course was taught (23%); the course being too difficult (18%); and the course making their anxiety about maths worse (15%). Difficulty with juggling other commitments (10%), classes taking too long (9%) or being at inconvenient times (8%), problems with technology (6%) or difficulty travelling to the lessons (3%) were some of the reasons given that indicate dissatisfaction with their Multiply course may stem from more personal circumstances for some learners. (Figure 54).

Figure 54: Reasons given for being dissatisfied with Multiply

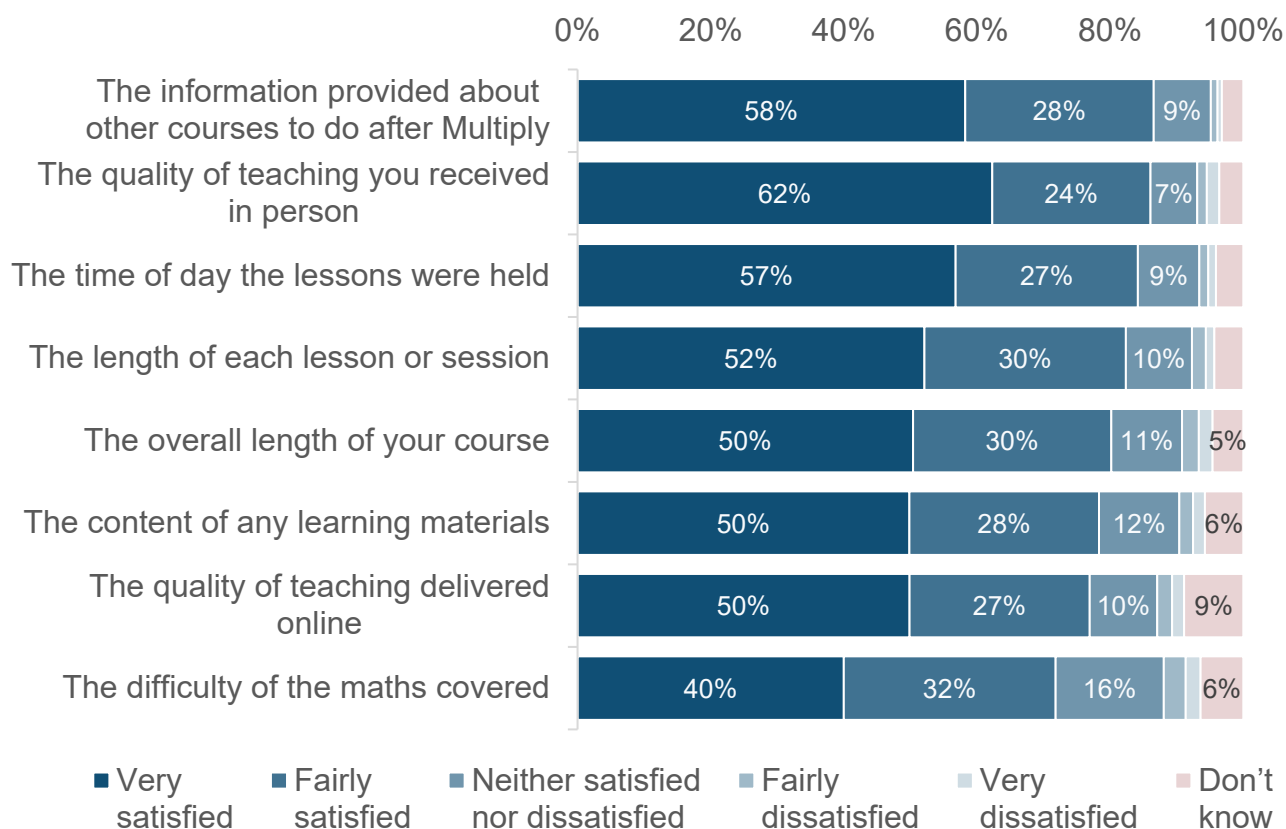


Source: Learners Survey. Base: Multiply learners who were dissatisfied with their course (279)

With regard to specific aspects of their Multiply courses, learners again largely reported high levels of satisfaction (Figure 55). Eighty-six per cent of those who received teaching in person reported that they were satisfied with the quality of that teaching, with 62% reporting they were very satisfied and 24% reporting they were fairly satisfied. For those receiving online teaching, 77% were satisfied with its quality, with 50% stating they were very satisfied and 27% stating they were fairly satisfied. Very similar

proportions were satisfied (78%) with the content of any learning materials (50% very satisfied, 28% fairly satisfied), the length of each lesson or session (52% very satisfied, 30% fairly satisfied) and the overall length of the course (50% very satisfied, 30% fairly satisfied). Satisfaction rates were even higher with the time of day lessons were held (57% very satisfied, 27% fairly satisfied) and the information provided about other courses to do after Multiply (58% very satisfied, 28% fairly satisfied). Levels of satisfaction were relatively lower (though still high in general) regarding the difficulty of the maths covered (40% very satisfied, 32% fairly satisfied).

Figure 55: Learner satisfaction with different elements of Multiply delivery



How satisfied or dissatisfied were you with the following?

Source: Learners Survey. Base: Multiply learners who received in-person teaching (5,636); Multiply learners who received online teaching (1,329); Multiply learners who received information about other courses (3,222); all other answer options, All Multiply learners (6,394). Notes: Label values not displayed for negative answer options for legibility.

Female learners tended to be marginally more satisfied than male learners on average in relation to quality of teaching in person and online, the length of each lesson, the timing of lessons, and the difficulty of the maths covered. White learners, meanwhile,

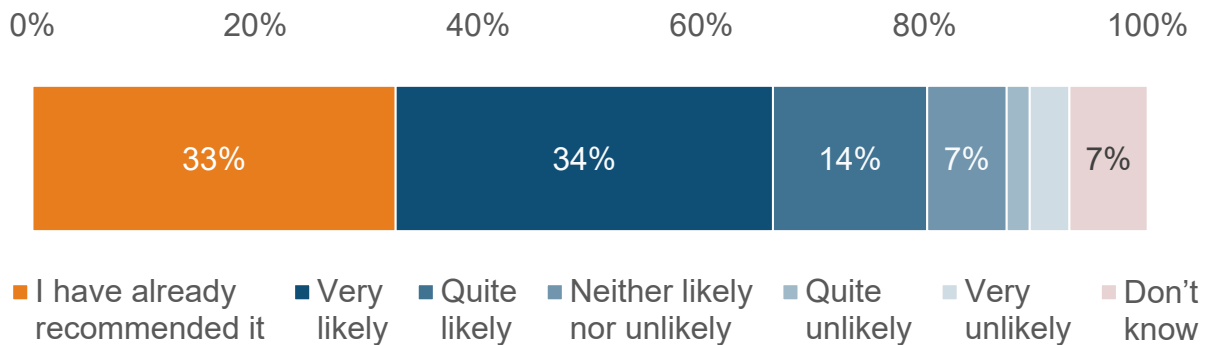
tended to be more likely than learners from ethnic minorities to report dissatisfaction across various elements of Multiply delivery (quality of teaching in person, content of learning materials, overall length of the course, and the difficulty of maths covered), though the proportions reporting dissatisfaction are all very small.

Likelihood to recommend Multiply

Given their experiences and overall satisfaction with Multiply, learners were highly likely to recommend a similar maths course to people they know. Figure 56 shows that some 80% of Multiply learners either already have recommended it (33%), are very likely to recommend it (34%), or quite likely to recommend it (14%). Only a relatively small proportion are quite unlikely (2%) or very unlikely (4%) to recommend a similar maths course.

Men were marginally more unlikely to recommend a similar maths course than women (7% vs. 5% respectively), as were white learners compared to ethnic minority learners (7% vs. 3% respectively).

Figure 56: Likelihood of recommending Multiply



How likely are you to recommend a similar maths course to people you know?

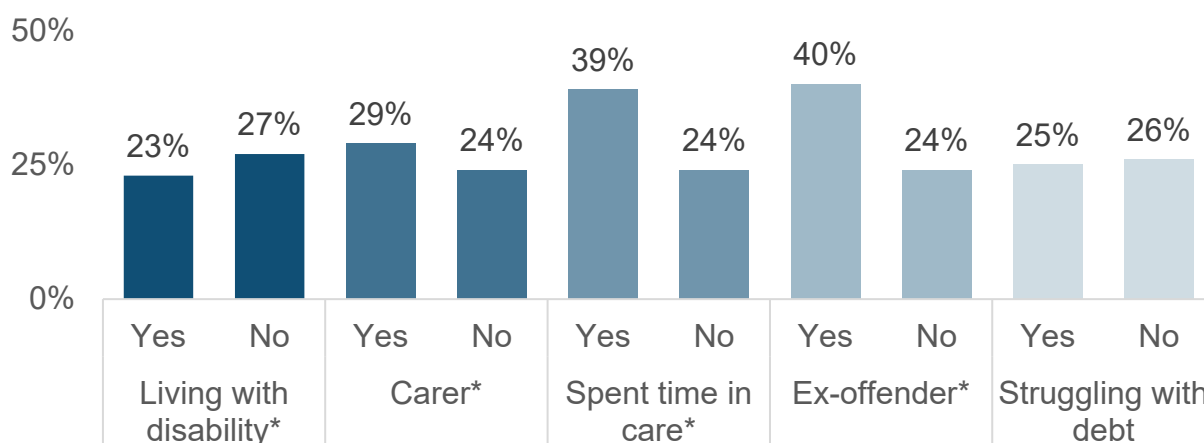
Source: Learners Survey. Base: Multiply learners (6,394)

4.1.2 Vulnerable and hard-to-reach groups

Comparisons between vulnerable and hard-to-reach groups and other learners indicate that experience of Multiply differs somewhat across these populations.

Firstly, some vulnerable and hard-to-reach groups are less likely to have attended any outreach activities, and some more likely (Figure 57).

Figure 57: Outreach activities participated in – vulnerable and hard-to-reach groups



Source: Learners Survey. Base sizes for groups reading left to right along the graph: 1,470, 3,764, 1,006, 4,250, 412, 5,395, 250, 5,687, 490, and 3,030. Notes: Asterisk indicates statistically significantly higher than the alternative group (for example, comparing those living with a disability and those not living with a disability) at the 95% level.

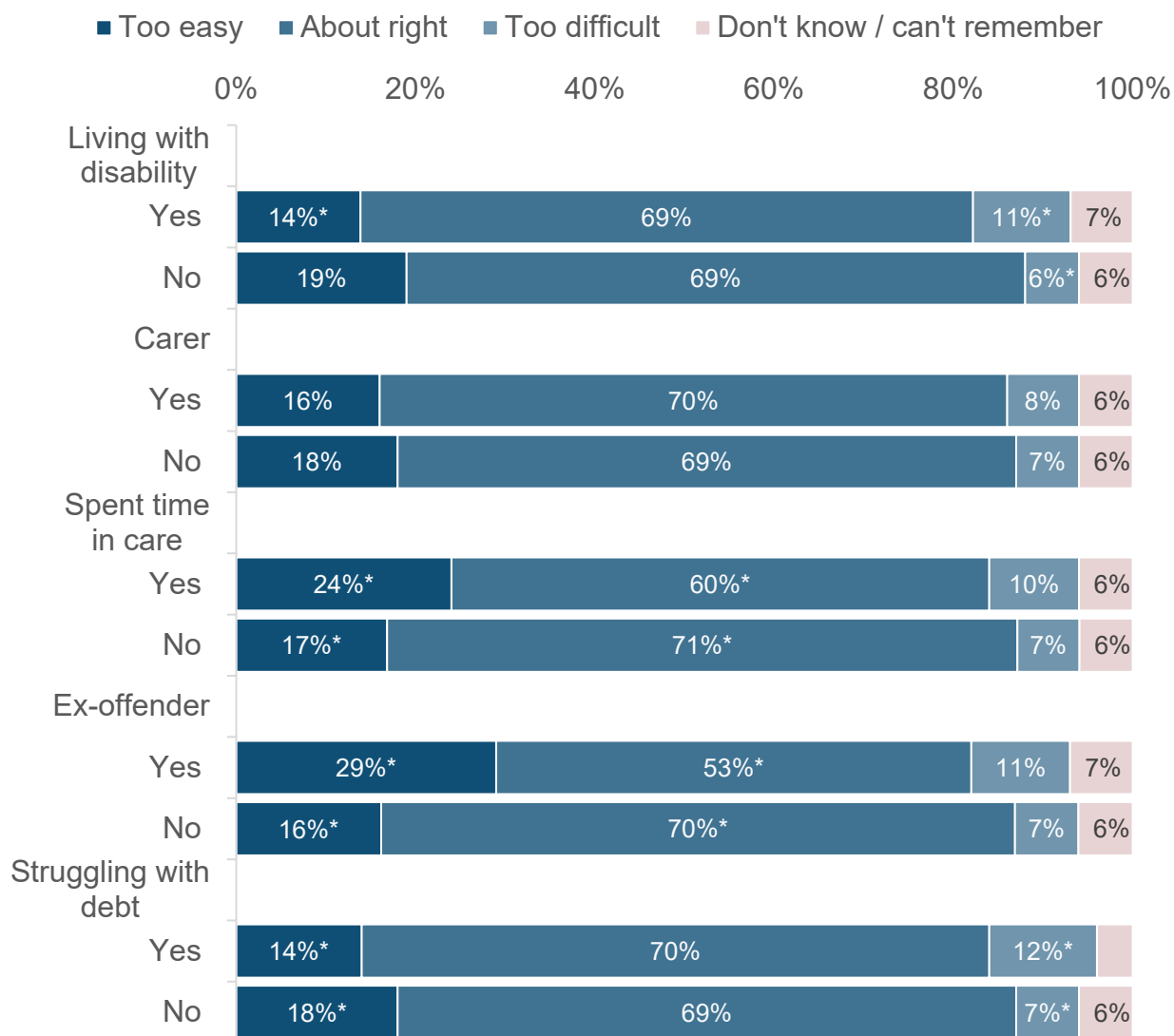
Figure 57 indicates that Multiply learners with disabilities are slightly less likely than those without disabilities to have participated any outreach activities (23% vs. 27%), while carers (29% vs. 24%), learners that have been in care (39% vs. 24%) and ex-offenders (40% vs. 24%) are all more likely to have participated in any outreach activities. We find no differences between those who are struggling with debt and those who are not.

Regarding expectations, those struggling with debt were the only vulnerable or hard-to-reach group that was significantly more likely to report a net worse experience than expected in relation to their overall learning experience (9% vs. 5% for those without debt). This was the case for all aspects of the course asked about (including the length of the course, the length of each lesson, the content of any learning materials, the communication received throughout the course, and the quality of teaching delivered online), except the quality of teaching delivered in person, for which they were no more or less likely to report worse expectations than those not in debt.

When asked about the level of maths covered in the course, learners with disabilities were more likely to report the level was too difficult (11% vs. 6% for those without disabilities) and less likely to report it as too easy (14% vs. 19% respectively). Those struggling with debt reported a similar pattern. Meanwhile, those that have ever been in care and ex-offenders were more likely to report the level of maths covered as too easy,

against those who have never been in care and non-ex-offenders, who were more likely to report the level of maths covered as about right. There were no statistically significant differences found between carers and non-carers. (Figure 58).

Figure 58: Level of maths covered – vulnerable and hard-to-reach groups



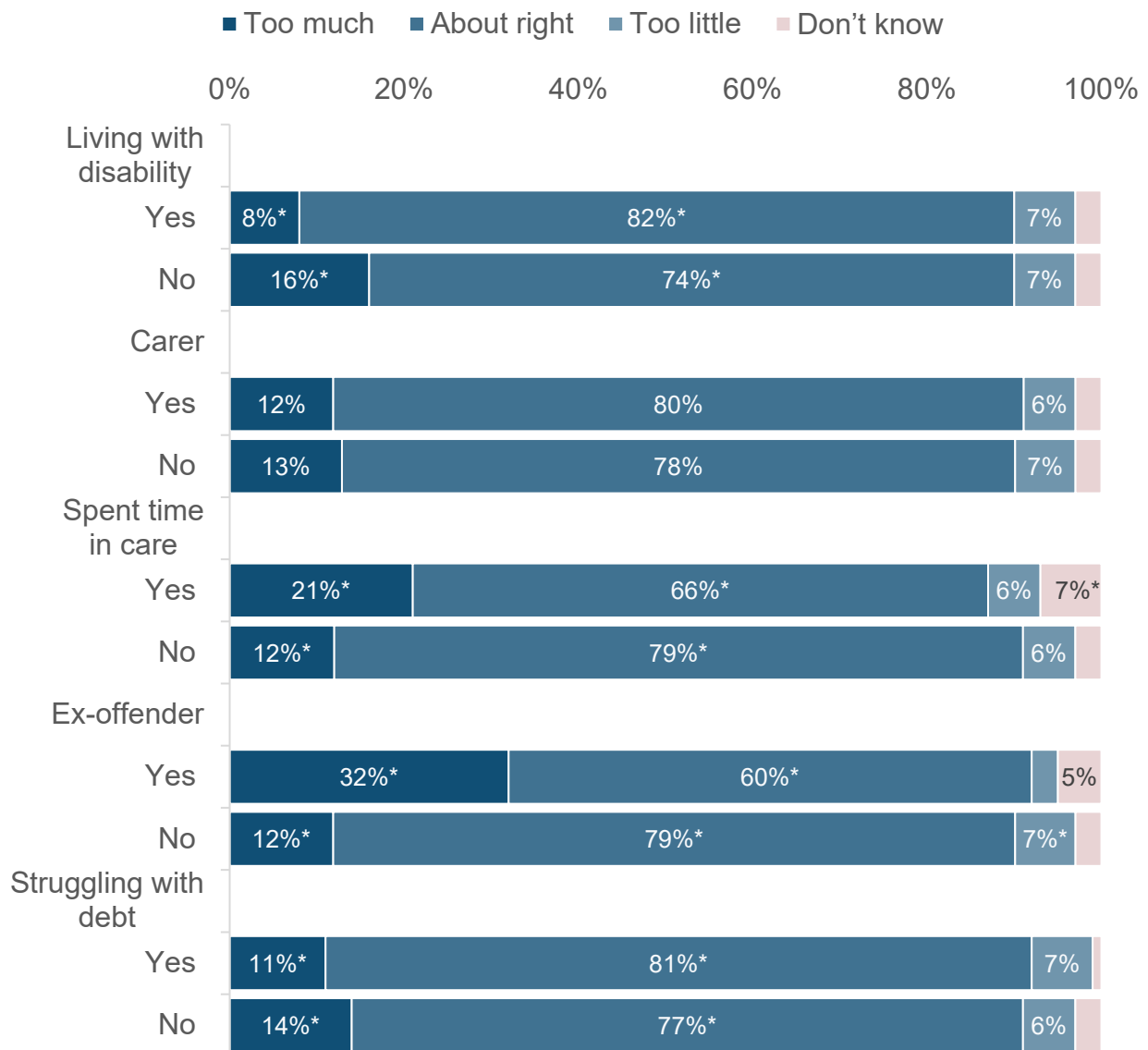
Source: Learners Survey. Base sizes for groups reading top to bottom: 1,470, 3,764, 1,006, 4,250, 412, 5,395, 250, 5,687, 490, and 3,030. Notes: Asterisk indicates statistically significantly higher than the alternative group (for example, comparing those living with a disability and those not living with a disability) at the 95% level.

Learners with disabilities were less likely to access and make use of any of the forms of support enquired about, while those who have ever been in care and ex-offenders were more likely to access and make use of most forms of support, except online resources

(in the case of people who have ever been in care) and a teacher you could see in person (in the case of both ex-offenders and people who have ever been in care). For these measures there was no statistically significant difference between the relevant comparison groups. Those struggling with debt, on the other hand, were slightly more likely to access and make use of teaching delivered online, but less likely to access and make use of a teacher you could see in person. There were no statistically significant differences between carers and non-carers.

When asked about the amount of time spent with their teacher, learners with disabilities were less likely than those without disabilities to say it was too much, and more likely to say it was about right. Again, this same pattern is observed for people struggling with debt compared to people without debt. Conversely, learners that have ever been in care and ex-offenders were more likely to feel the amount of time spent with the teacher was too much, and less likely to feel it was about right. As above, there were no statistically significant differences found between carers and non-carers (Figure 59).

Figure 59: Amount of time spent with the teacher – vulnerable and hard-to-reach groups

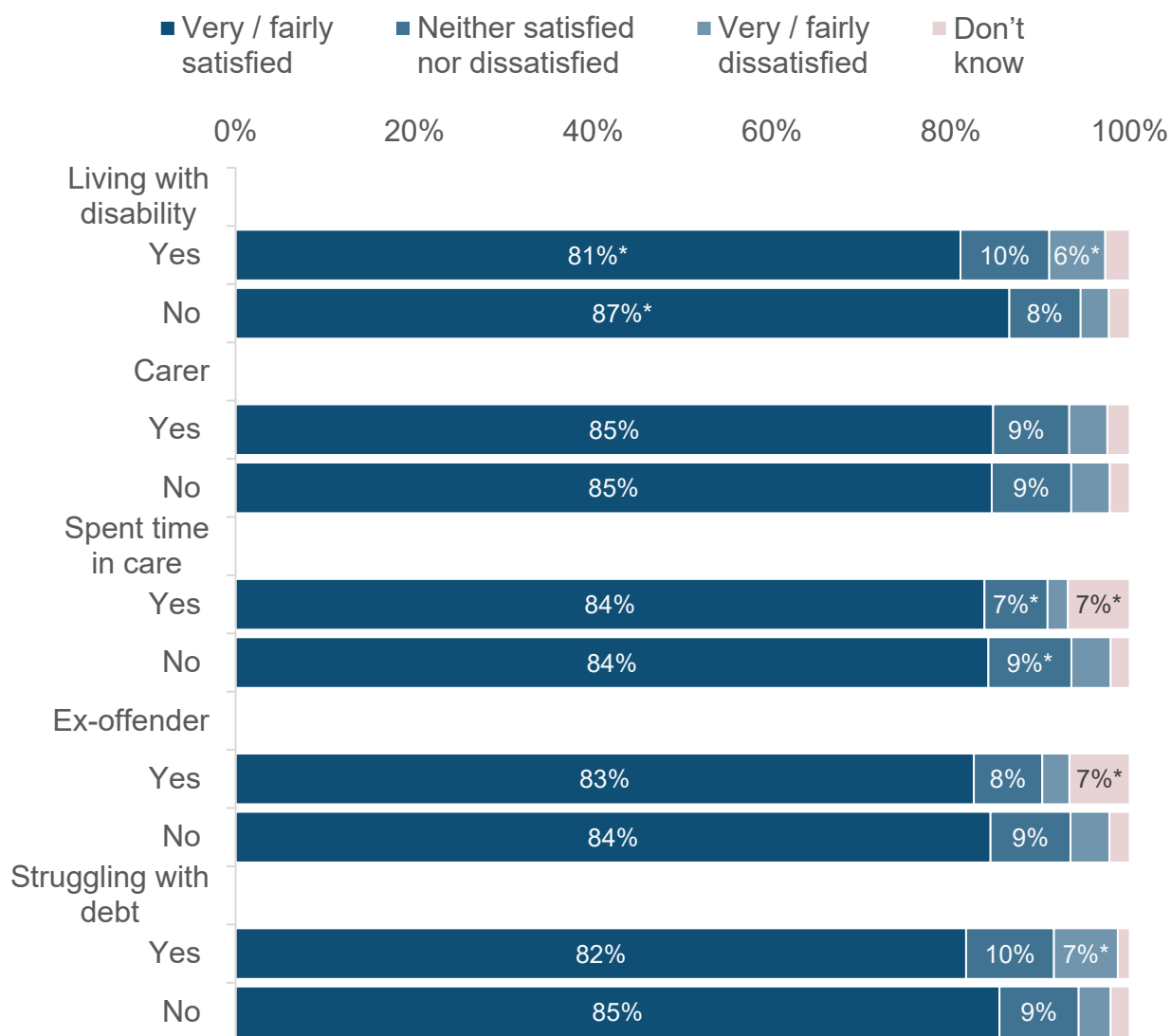


Source: Learners Survey (Respondents whose course had a teacher). Base sizes for groups reading top to bottom: 1,269, 3,348, 904, 3,723, 367, 4,748, 225, 5,010, 428, 2,697. Notes: The inclusion of asterisks denote where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level. Values below 5% where the within group difference is statistically significant are as follows: Ex-offender – Yes – Too little – 3%, Struggling with debt – Yes – Don't know – 1%, Struggling with debt – No – Don't know – 3%.

As a result of these differences in experiences across vulnerable and hard-to-reach groups, it is not surprising to see that learners with disabilities were more likely than those without disabilities to report overall net dissatisfaction with their course, and less

likely to report overall satisfaction – albeit that levels of dissatisfaction are generally low (6%) and levels of satisfaction generally high for this group (81%). Those who have ever been in care are less likely than those who have not to report overall dissatisfaction, while the opposite is the case for people struggling with debt compared to people without debt (Figure 60).

Figure 60: Overall satisfaction with Multiply – vulnerable and hard-to-reach groups



Source: Learners Survey. Base sizes for groups reading top to bottom: 1,470, 3,764, 1,006, 4,250, 412, 5,395, 250, 5,687, 490, and 3,030. Notes: The inclusion of asterisks denote where there is a statistically significant within-group difference (for example, between those living with a disability and those not living with a disability) at the 95% level. Values below 5% where the within group difference is statistically

significant are as follows: Living with disability – No – Very / fairly satisfied – 3%, Spent time in care – No – Don't know – 2%, Ex-offender – No – Don't know – 2%, Struggling with debt – No – 4%.

These findings suggest that, amongst vulnerable and hard-to-reach groups, people with disabilities are most likely to report negative experiences across different dimensions of their Multiply course, albeit those negative responses still represent only a small minority view within this group. Other vulnerable and hard-to-reach groups tend, if anything, to report slightly more positive experiences than their less vulnerable or hard-to-reach counterparts, with the partial exception of those who struggle with debt, whose experiences are more mixed.

4.1.3 Employers

As described in section 3.5, the evidence base for employers is not as extensive as for learners, providers and practitioners. Nevertheless, some qualitative and quantitative research was undertaken with employers about their experience with Multiply, the key findings from which are reported below.

With regard to their expectations, the qualitative research found that employers' hopes were to empower staff by improving their confidence and essential numeracy skills, enabling further progression in qualifications and workplace effectiveness. Results from the quantitative survey suggest that these expectations were largely met, with:

- 26 out of 29 of employers reporting that the overall learning experience was better than expected
- 25 out of 29 rating the way Multiply delivered courses in a different way to other courses as better than expected
- 25 out of 29 saying that the quality of teaching was better than expected
- 24 out of 29 stating that the ability to tailor provision more closely to learner needs was better than expected
- 24 out of 29 finding that their overall experience as an employer within Multiply was better than expected

As a result of these experiences, many employers expressed a high level of satisfaction with Multiply, citing its positive impact on workforce skills as a key benefit (see also section 3.5). Their satisfaction was largely attributed to the tailored approach Multiply offered, which was perceived to enable employers to address specific skills gaps within their teams and observe tangible improvements in productivity and morale. Most employers indicated they would recommend Multiply to others.

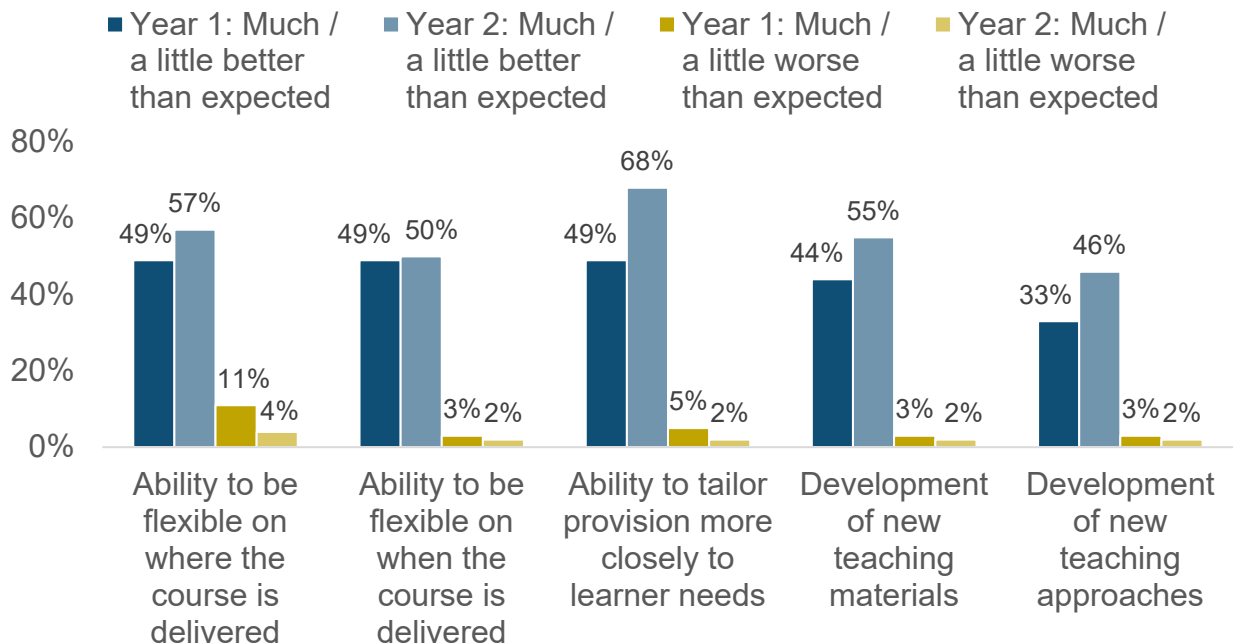
4.1.4 Practitioners

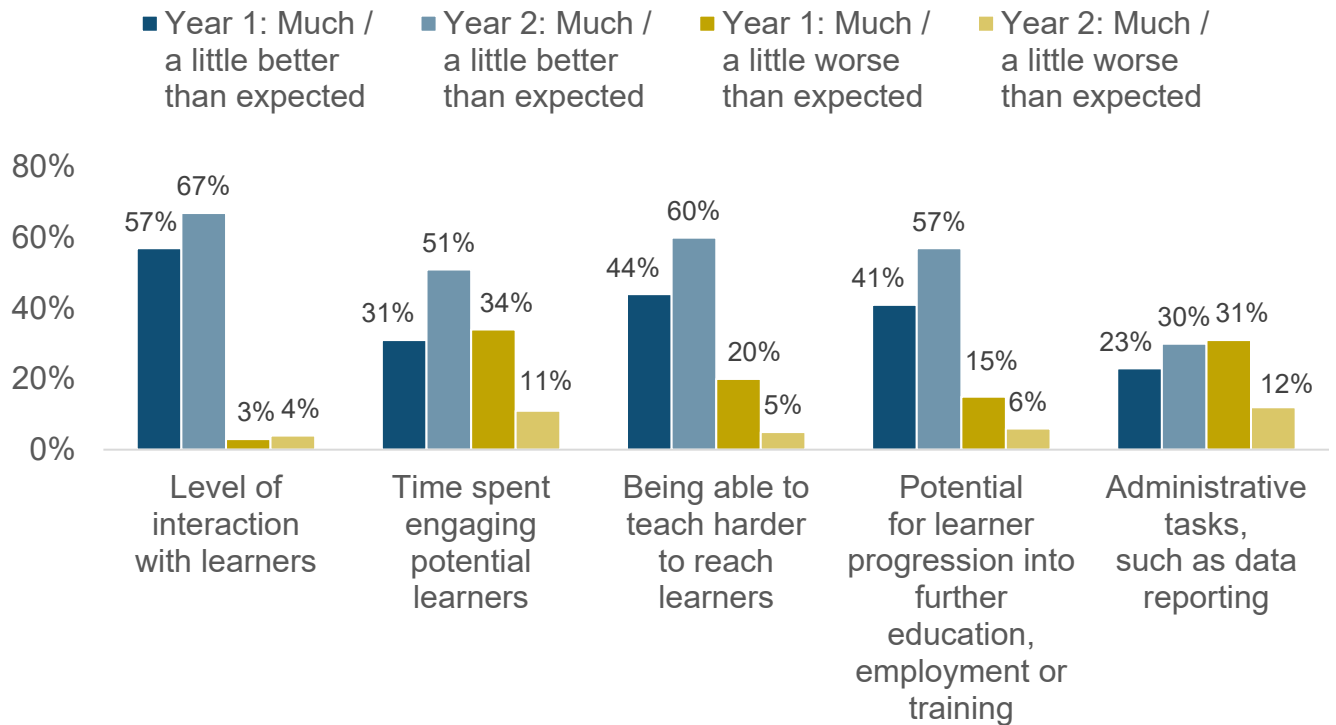
Expectations about Multiply

Practitioners' expectations of Multiply were exceeded by their experiences of the programme across the majority of aspects asked about. This was especially the case in the second year of the programme.

Figure 61 shows that the degree to which experiences were better than expectations rose across all aspects of programme delivery enquired about between Year 1 and Year 2. The area where experiences were the least likely to be better than expectations, and the most likely to be worse, was administrative tasks relating to the programme. Just under a third (31%) of surveyed practitioners who delivered Multiply courses said that administrative tasks were worse than they expected in Year 1, though this proportion had dropped markedly to 12% in Year 2. Conversely, the relatively low 23% of practitioners in Year 1 who felt experiences were better than expectations regarding administrative tasks had grown to 30% in Year 2.

Figure 61: Practitioners' experience vs. expectations regarding different aspects of Multiply delivery, Year 1 and Year 2





When delivering Multiply, how did each of the following compare with your expectations?

Source: Practitioners Surveys. Base (all who teach multiply courses): Year 1 (61); Year 2 (82)

Another area where experiences vs. expectations were relatively low was the time spent engaging learners. Around 1 in 3 (34%) practitioners in Year 1 said this was worse than expected, and only 31% said it was better than expected. However, as with administrative tasks, perceptions of this aspect of Multiply delivery had improved by Year 2, with only 11% of practitioners stating that it was worse than expected, and 51% stating that it was better than expected.

The areas where expectations were exceeded the most were:

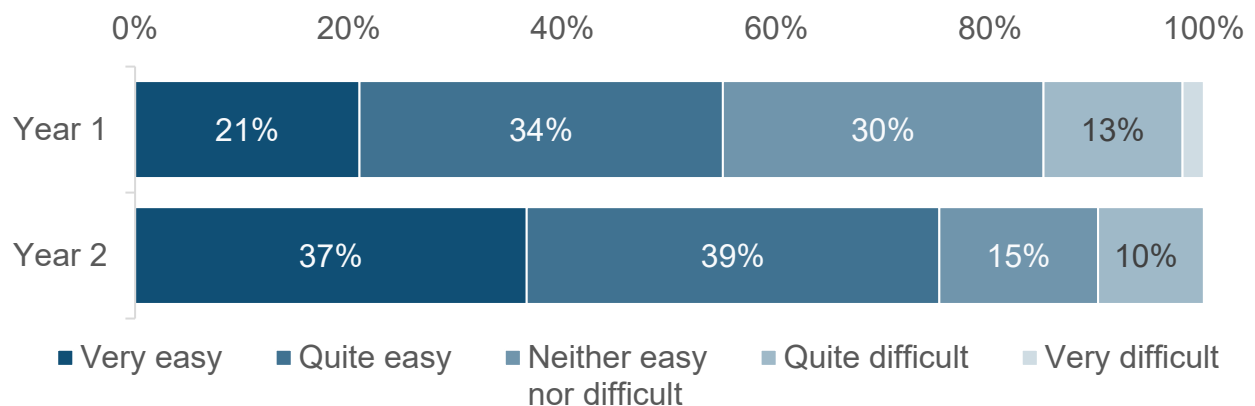
- The ability to tailor provision more closely to learner needs (68% better than expected in Year 2)
- the level of interaction with learners (67% better in Year 2)
- being able to teach hard-to-reach learners (60% better in Year 2)
- the ability to be flexible on where the course is delivered (57% better in Year 2)
- the potential for learner progression into further education, employment or training (57% better in Year 2)

- the development of new teaching materials (55% better in Year 2)

Ease of delivery

Multiply was generally felt to be easy to deliver by practitioners, again with this measure improving between Year 1 and Year 2. Figure 62 below shows that, in Year 1, some 56% of practitioners found it either very easy (21%) or fairly easy (34%) to deliver maths or numeracy courses funded by Multiply.²¹ Thirty per cent found Multiply courses neither easy nor difficult to deliver, while 15% found them difficult (13% fairly difficult; 2% very difficult). In Year 2, the proportion of practitioners who found Multiply easy to deliver had risen to 76% (37% very easy and 39% fairly easy), while the share who found it difficult had fallen to 10% (10% fairly difficult).

Figure 62: Multiply ease of delivery amongst practitioners, Year 1 and Year 2



Overall, how easy or difficult did you find it to deliver maths or numeracy courses funded by Multiply?

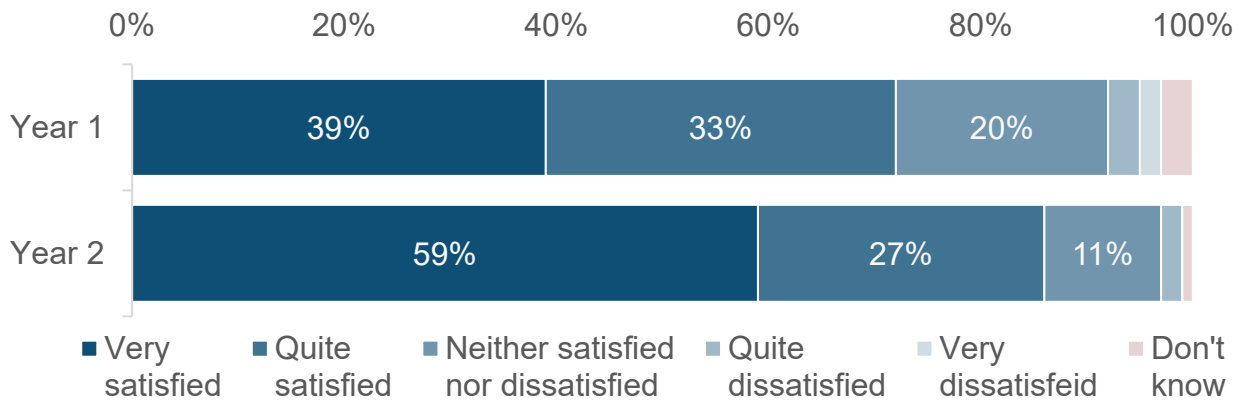
Source: Practitioners Surveys. Base (all who teach multiply courses): Year 1 (61); Year 2 (82). Notes: Label values for don't know answer option not displayed for legibility.

Satisfaction

Given the findings discussed above, it is not surprising that, overall, satisfaction with Multiply amongst practitioners was high. In Year 1, 72% of practitioners were either very satisfied (39%) or fairly satisfied (33%). These proportions had risen to 59% and 27% respectively by Year 2. Accordingly, the proportions of practitioners that were dissatisfied were low, 5% in Year 1 (3% fairly dissatisfied and 2% very dissatisfied) and just 2% in Year 2 (2% fairly dissatisfied and 0% very dissatisfied). (Figure 63).

²¹ Totals may not sum exactly due to rounding.

Figure 63: Overall satisfaction with Multiply amongst practitioners, Year 1 and Year 2

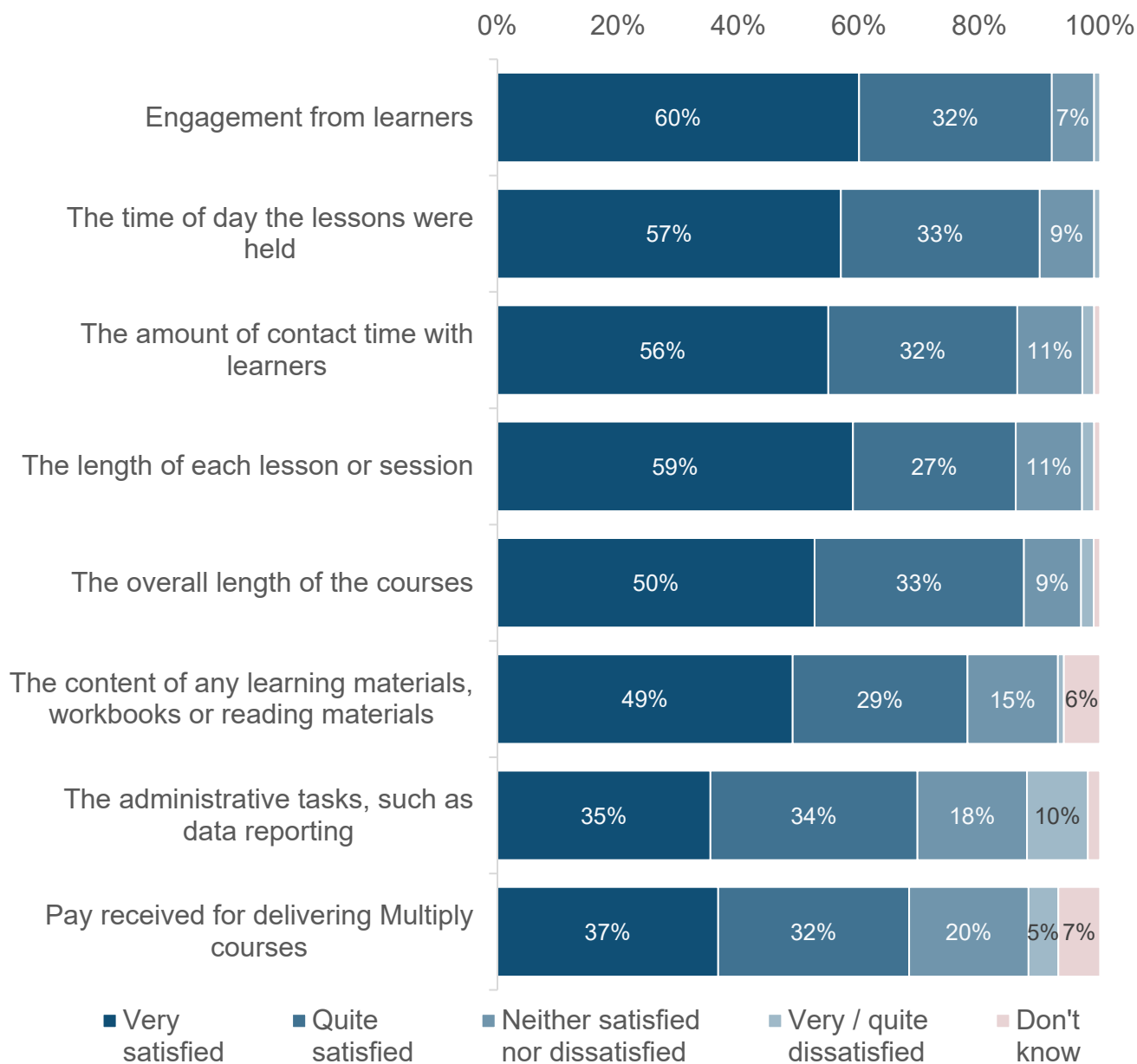


Overall, how satisfied or dissatisfied were you with the experience you had of teaching or delivering Multiply courses?

Source: Practitioners Surveys. Base (all who teach multiply courses): Year 1 (61); Year 2 (82)

When asked about different aspects of course delivery, practitioners again reported high levels of satisfaction. Figure 64 presents the results of this analysis for Year 2, which show a marked improvement on Year 1 (Figure 65).

Figure 64: Satisfaction with Multiply amongst practitioners across different aspects of course delivery, Year 2



How satisfied or dissatisfied were you with the following aspects of delivering Multiply courses?

Source: Practitioners Survey, Year 2. Base: All who teach Multiply courses (82)

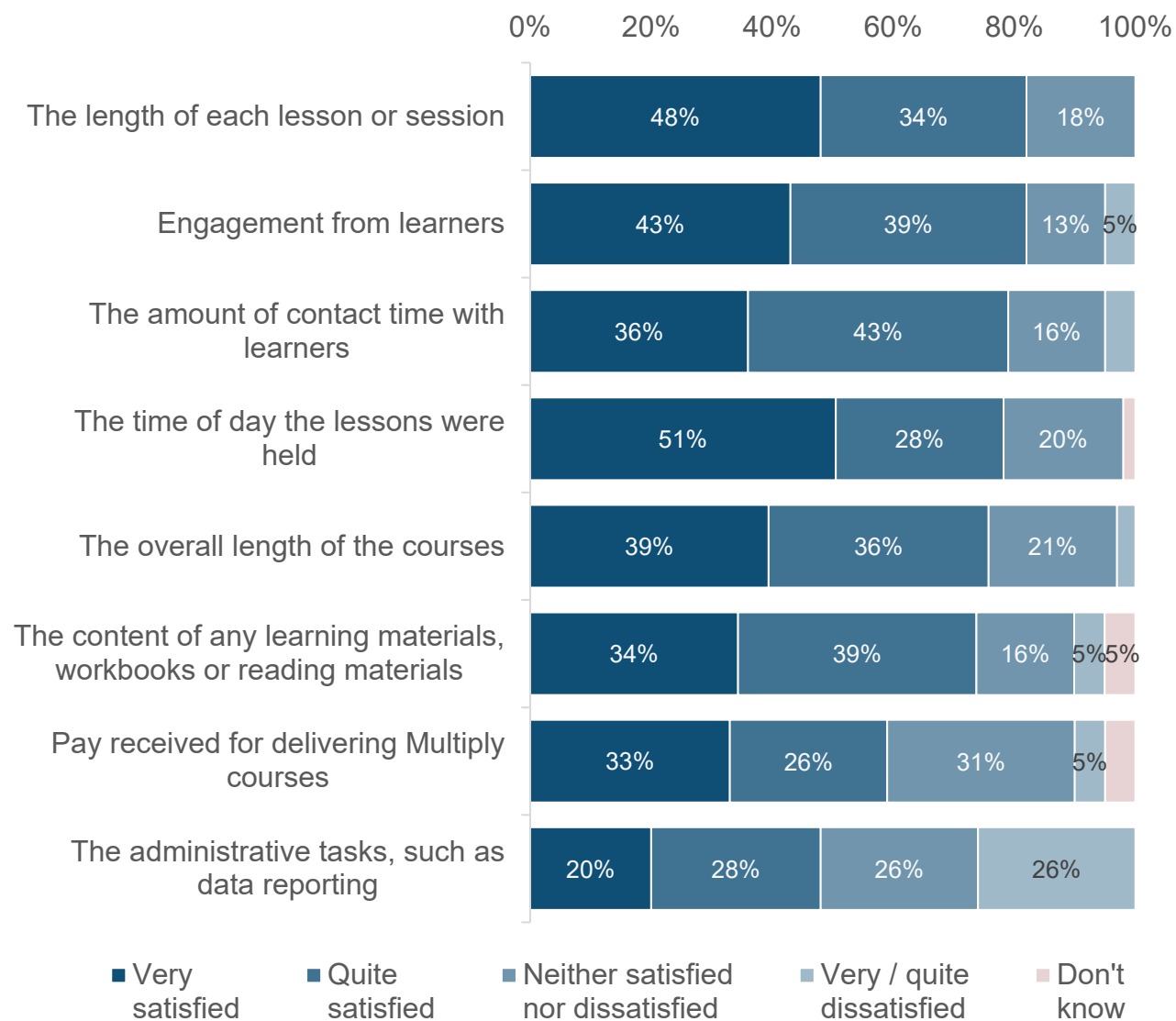
In Year 2, the most satisfying aspects of delivering Multiply courses practitioners were:

- the engagement from learners (91% satisfied overall; 60% very satisfied; 32% quite satisfied)

- the time of day the lessons were held (90% satisfied overall; 57% very satisfied; 33% quite satisfied)
- the overall length of courses (83% satisfied overall; 50% very satisfied; 33% quite satisfied)

As with expectations, the area where practitioners were most dissatisfied was administration: 10% dissatisfied overall; 6% fairly dissatisfied and 4% very dissatisfied. Alongside administrative tasks, the area where practitioners were least satisfied was the pay received for delivering Multiply courses (68% satisfied overall; 37% very satisfied; 32% quite satisfied; and 5% very/quite dissatisfied).

Figure 65: Satisfaction with Multiply amongst practitioners across different aspects of course delivery, Year 1



How satisfied or dissatisfied were you with the following aspects of delivering Multiply courses?

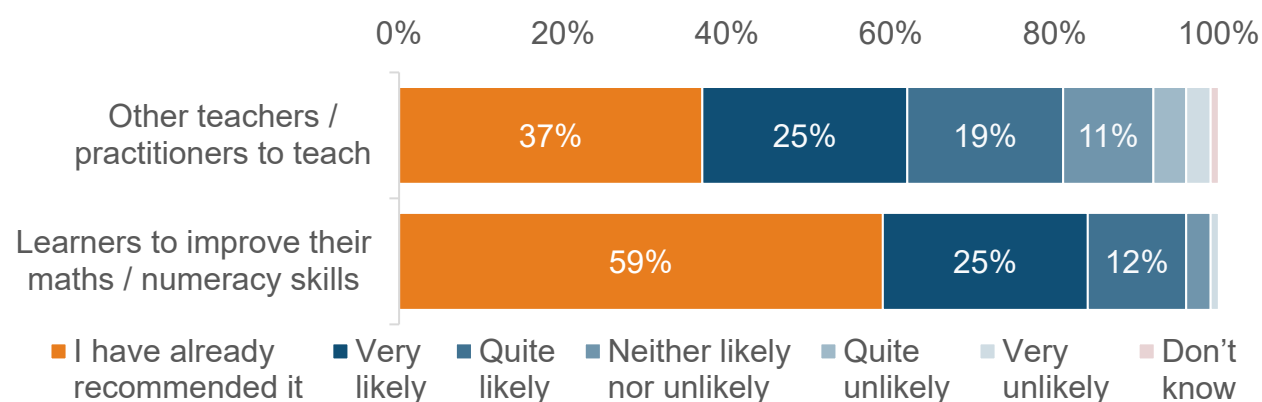
Source: Practitioners Survey, Year 1. Base: All who teach Multiply courses (61).

According to the qualitative interviews, satisfaction among practitioners was particularly high where delivery was flexible, relevant and enjoyable for learners, especially in overcoming maths anxiety and engaging new audiences. The approach of delivering practical, real-life scenarios and promoting peer advocacy (e.g. “Numeracy Champions”) was highlighted as particularly valuable.

Practitioners' likelihood to recommend

As a result of their generally positive experiences in Year 1, most practitioners either already have, or would recommend Multiply to others. Figure 66 shows that some 81% of practitioners already have (37%), are very likely to (25%) or fairly likely to (19%) recommend Multiply to other teachers or practitioners to teach, while only 7% are net unlikely to recommend it (4% fairly unlikely and 3% very unlikely). Even larger proportions would recommend Multiply to learners to improve their maths skills (59% already have; 25% are very likely to; and 12% fairly likely to). Only 1% would be unlikely to recommend Multiply to learners. This question was not asked at Year 2 in the practitioners survey.

Figure 66: Likelihood of recommending Multiply for practitioners, Year 1



How likely are you to recommend Multiply to the following groups?

Source: Practitioners Survey, Year 1. Base: All who teach Multiply courses (73). Notes: Label values for don't know answer option not displayed for legibility.

Qualitative interviews indicated that practitioners were especially likely to recommend Multiply where local autonomy and established networks were successful. However, in contexts with limited population or engagement, expectations were not fully met due to low uptake as well as digital barriers, tempering recommendations.

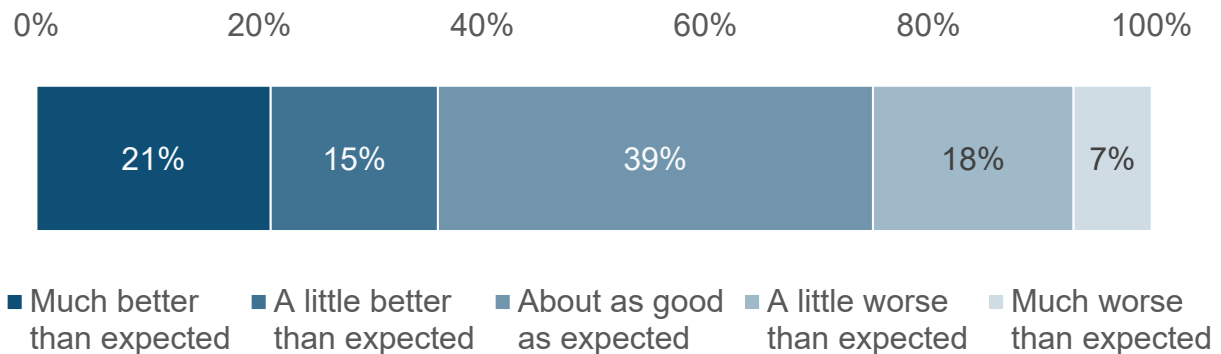
4.1.5 Providers

Expectations about Multiply

Providers' experiences with Multiply in Year 1 were more tempered than that of practitioners. When asked about their overall experience delivering Multiply compared to their expectations, 35% stated that it was net better than expected (21% said it was

much better than expected, 15% said it was a little better than expected). Thirty-nine per cent said it was about as good as expected, 18% said it was a little worse than expected, and 7% said it was a lot worse than expected. No providers answered that they didn't know (Figure 67).

Figure 67: Providers' overall experience vs. expectations of Multiply delivery, Year 1



Overall, how would you say your experience as a provider delivering Multiply has been?

Source: Providers Survey, Year 1. Base (all): 149.

Considering how experiences compared to expectations in relation to different aspects of Multiply delivery in Year 1, providers indicate significant variation. Figure 68 shows that the aspects where experiences most exceeded expectations were:

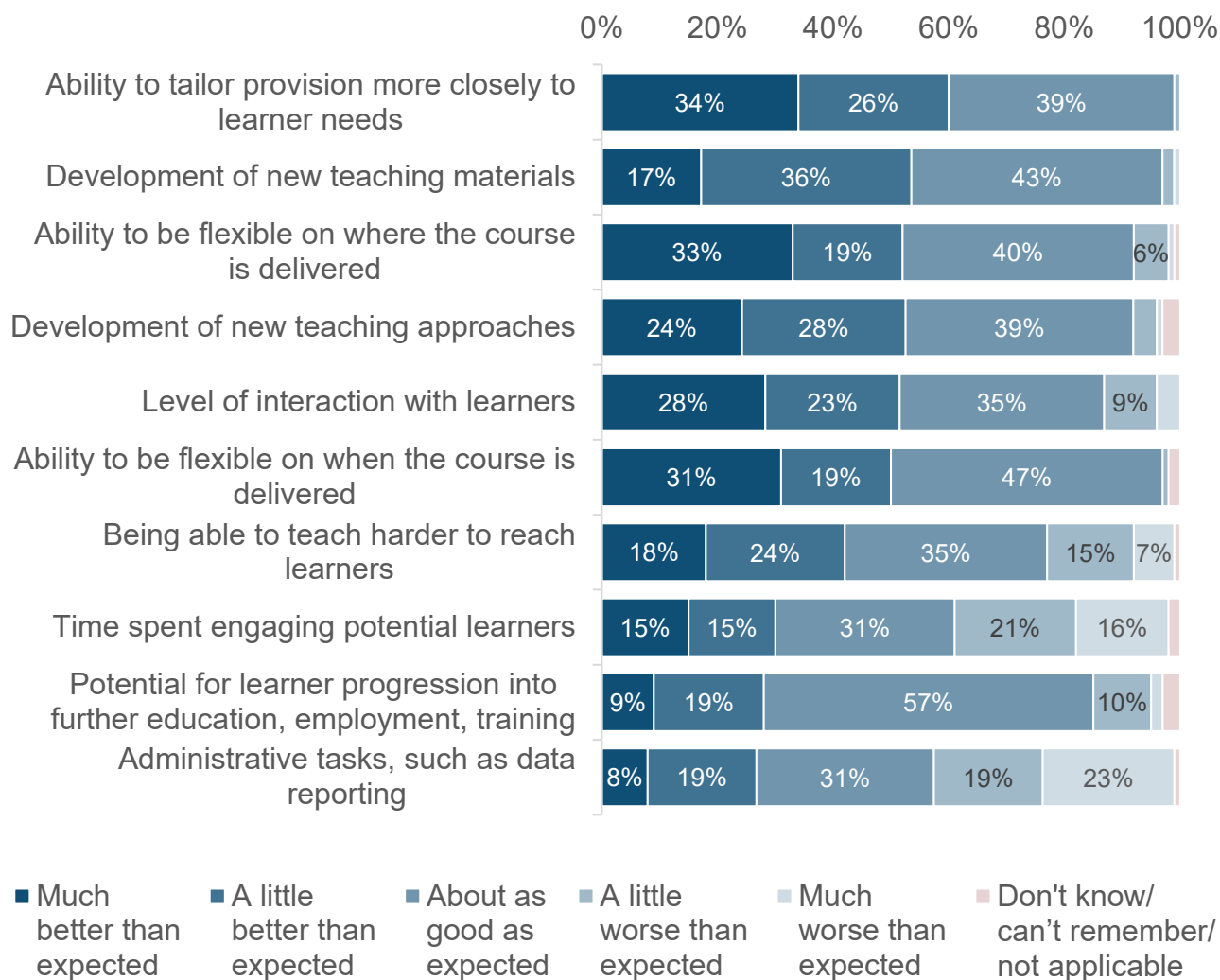
- the ability to tailor provision more closely to learner needs (60% better than expected; 34% much better and 26% a little better)
- the development of new teaching materials (53% better than expected; 17% much better and 36% a little better)
- the development of new teaching approaches (52% better than expected; 24% much better and 28% a little better)
- the ability to be flexible on where the course is delivered (51% better than expected; 33% much better and 19% a little better)
- the level of interaction with learners (51% better than expected; 28% much better and 23% a little better)
- the ability to be flexible on when the course is delivered (50% better than expected; 31% much better and 19% a little better)

The areas where providers were most likely to feel delivery of Multiply was worse than expected were:

- administrative tasks, such as data reporting (42% worse than expected; 19% a little worse and 23% much worse)
- time spent engaging potential learners (37% worse than expected; 21% a little worse and 16% much worse)
- being able to teach harder to reach learners (21% worse than expected; 15% a little worse and 7% much worse)
- the level of interaction with learners (14% worse than expected; 9% a little worse and 4% much worse)
- the potential for learner progression into further education, employment or training (13% worse than expected; 10% a little worse and 2% much worse)

Generally, providers tended to see Multiply either meeting or exceeding expectations in the majority of cases for all but a few of the aspects of course delivery enquired about.

Figure 68: Providers' experience vs. expectations across different aspects of Multiply delivery, Year 1



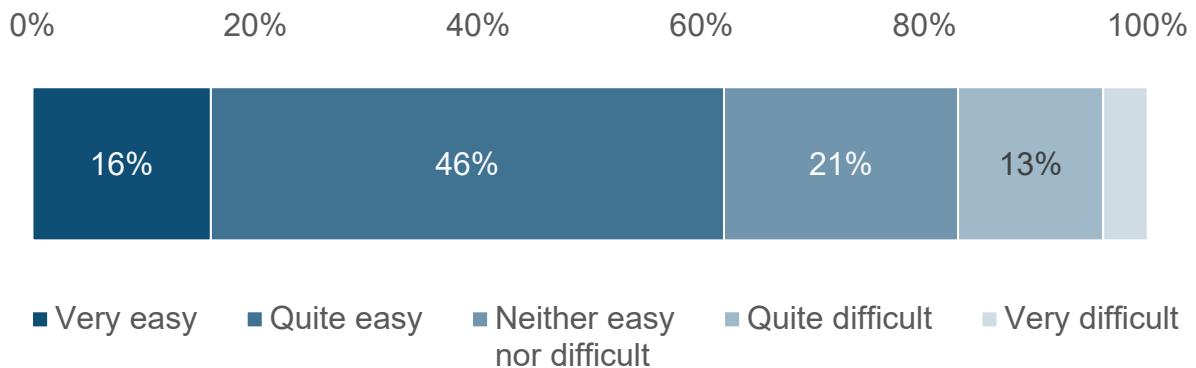
How did each of the following compare with your expectations when you started delivering Multiply?

Source: Providers Survey, Year 1. Base (all): 149. Notes: Label values for don't know and not applicable answer options not displayed for legibility.

Ease of delivery

Despite some areas of course delivery not always meeting expectations in year 1, Providers generally found Multiply easy, or at least not difficult, to deliver. Figure 69 shows that 62% of provider respondents found Multiply easy to deliver, with 16% finding it very easy and 46% finding it quite easy. Twenty-one per cent found it neither easy nor difficult, 13% found it quite difficult and 4% found it very difficult. No providers answered don't know to this question.

Figure 69: Multiply ease of delivery amongst providers, Year 2



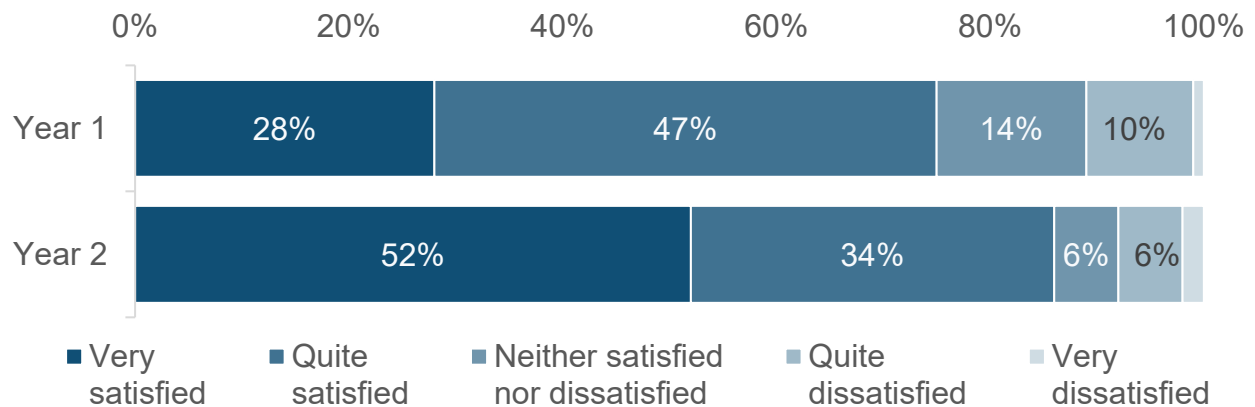
Overall, how easy or difficult did you find it to design and deliver Multiply courses?

Source: Providers Survey, Year 2. Base (all): 156

Satisfaction

Overall, providers reported high levels of satisfaction with Multiply, with this measure improving between Year 1 and Year 2. Figure 70 below shows that in Year 1, some three-quarters (75%) of providers were satisfied overall, with 28% very satisfied and 47% quite satisfied. Fourteen per cent were neither satisfied nor dissatisfied, while 10% were quite dissatisfied and 1% were very dissatisfied. By Year 2, these proportions had all improved for the better, with close to 9 out of 10 (86%) of providers being satisfied overall (52% very satisfied and 34% quite satisfied), 6% being neither satisfied nor dissatisfied, 6% being quite dissatisfied and 2% being very dissatisfied.

Figure 70: Overall satisfaction with Multiply amongst providers



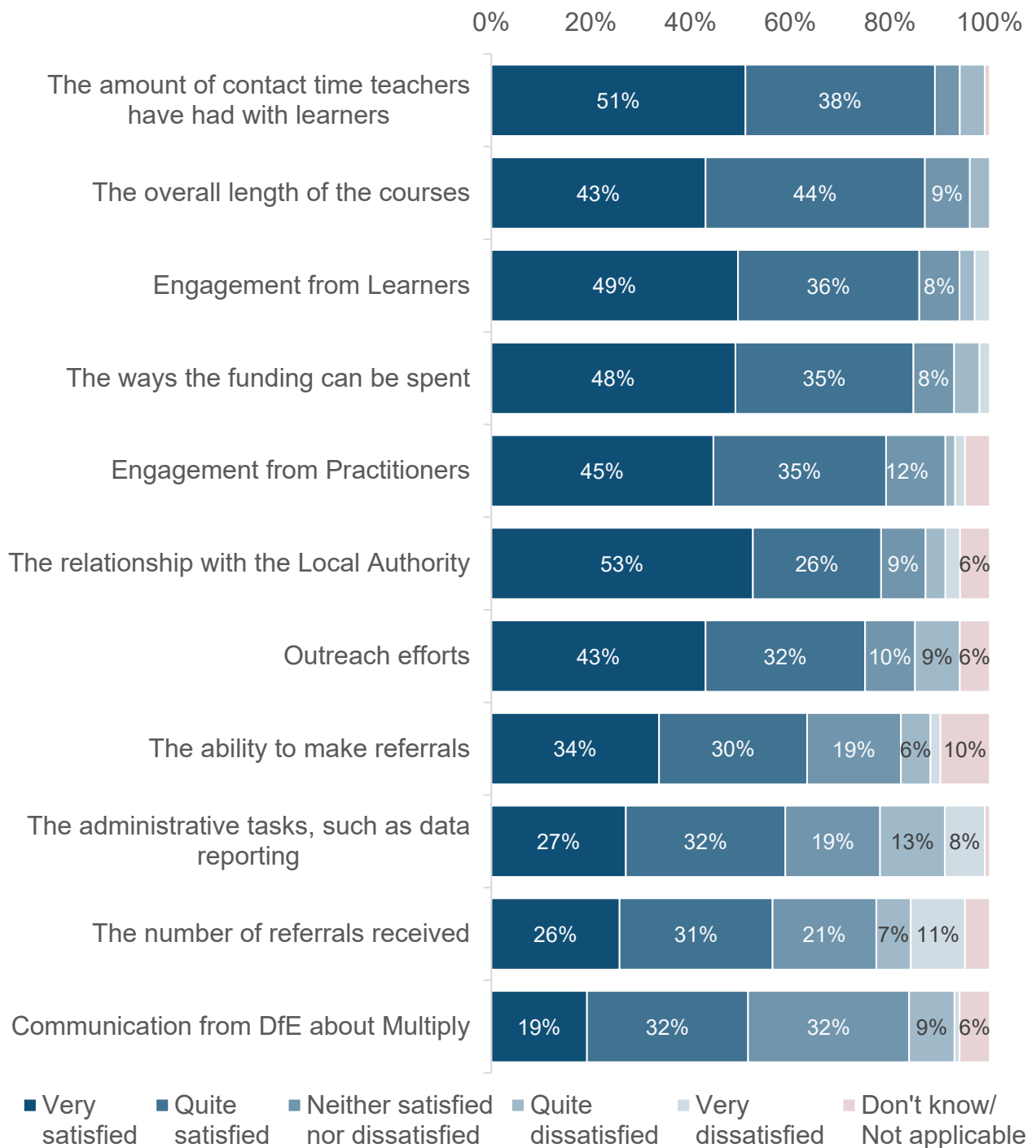
Overall, how satisfied or dissatisfied were you with the experience of delivering Multiply?

Looking at levels of satisfaction with the programme across different aspects of course delivery (Figure 71 below), the most satisfactory elements were:

- the amount of contact time with learners (88% satisfied overall; 51% very satisfied; 38% fairly satisfied)
- the overall length of courses (87% satisfied overall; 43% very satisfied; 44% fairly satisfied)
- the engagement from learners (85% satisfied overall; 49% very satisfied; 36% fairly satisfied)
- the ways the funding can be spent (83% satisfied overall; 48% very satisfied; 35% fairly satisfied)

The least satisfactory aspects of the programme were administrative tasks, such as data reporting (13% quite unsatisfied, 8% very unsatisfied), the number of referrals received (7% quite unsatisfied, 11% very unsatisfied), and communications from DfE about Multiply (9% quite unsatisfied, 1% very unsatisfied). These issues are discussed further in section 5.2.

Figure 71: Satisfaction with Multiply amongst providers across different aspects of course delivery, Year 2



How satisfied or dissatisfied were you with the following aspects of Multiply?

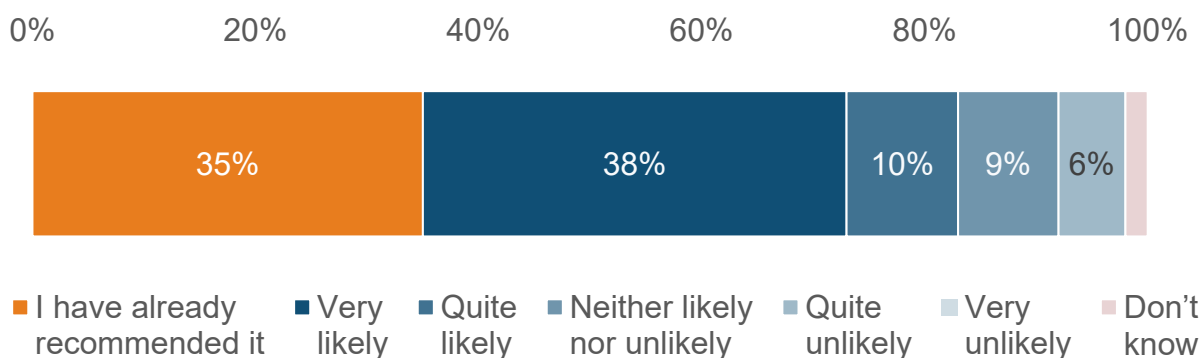
Source: Providers Survey, Year 2. Base (all): 156. Notes: Label values for values of 5% not displayed for legibility: The amount of contact time teachers have had with teachers – Neither satisfied nor dissatisfied – 5%, The amount of contact time teachers have had with teachers – Quite dissatisfied – 5%, The ways the funding can be spent – Quite dissatisfied – 5%, Engagement for practitioners – Don't know / Not applicable – 5%, The number of referrals received – Don't know / Not applicable – 5%.

Responses from providers during qualitative interviews emphasised how much satisfaction they derived from seeing tangible improvements in learner confidence and participation. They felt that Multiply sessions delivered in practical, enjoyable formats successfully helped overcome learners' maths anxiety. Providers stated that Multiply was able to add value through its ability to engage hard-to-reach groups and the support it provided to foster existing community relationships. For example, collaboration with local organisations and employers enabled greater access to target learners. Providers said that they appreciated the relaxed eligibility criteria introduced in Year 2, which further amplified the programme's reach and inclusivity.²²

Likelihood to recommend

As a result of their generally positive experiences with Multiply, providers tended to be very likely to recommend the programme to other adult education providers as part of their offer. Figure 72 below shows that 35% of providers had already recommended it, 38% would be very likely to recommend it, and 10% would be quite likely to recommend it. Nine per cent are neither likely nor unlikely to recommend Multiply, 6% are quite unlikely to recommend it, and 0% very unlikely.

Figure 72: Likelihood of recommending Multiply for providers



How likely are you to recommend Multiply to other adult education providers as part of their offer?

²² DfE updated the eligibility requirements of Multiply in Year 2 of the scheme to allow learners with prior Level 2 qualifications to access the scheme.

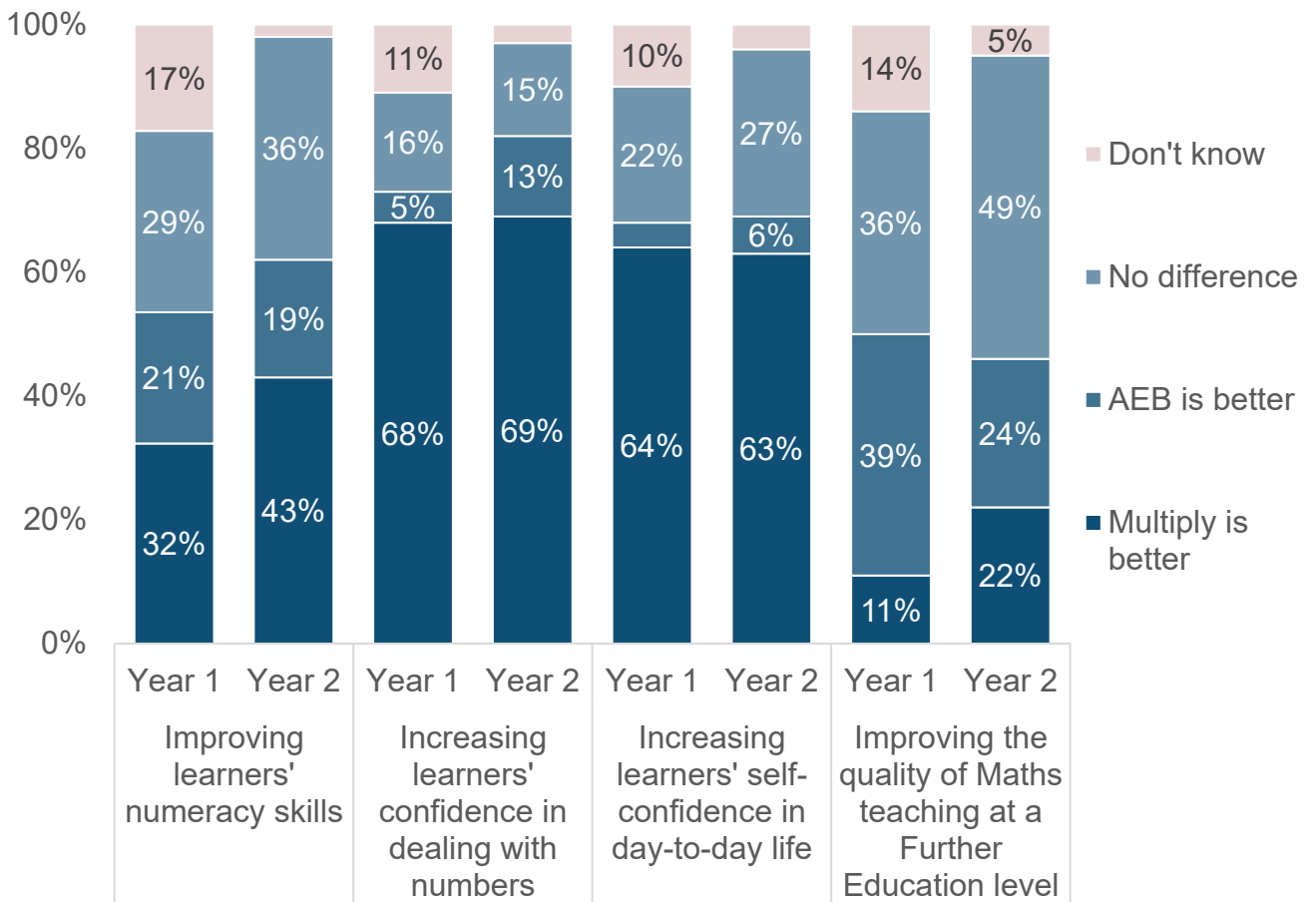
4.2 Comparing Multiply and adult education maths and numeracy courses

Whilst Multiply and AEB courses were similar in that they both offered numeracy courses for adults, Multiply was designed to sit alongside existing AEB numeracy provision, and Chapter 2 highlights some of the notable underlying differences between the two in terms of course type and length. This section presents a comparison of the experiences of Multiply against the other types of existing numeracy courses, funded by the AEB. To reflect the difference between the two course types, and because Community Learning was also funded through the AEB, these courses are referred to as AEB (qualification) numeracy courses in this report. In the survey questions discussed in this section, ‘AEB’ is used as a shorthand.

When asked to compare Multiply course with other AEB courses across a range of possible impacts, providers responses varied according to the impact or aspect asked about as well as across time, with Multiply improving between Year 1 and Year 2 in comparison to AEB on some aspects.

Figure 73 below presents this analysis and shows that in both Year 1 and Year 2, more providers thought Multiply was better at improving learners’ numeracy skills than thought AEB courses were. Thirty-two per cent thought Multiply was better in this regard compared to 21% who thought AEB was better. This difference grew further in Year 2, with 43% of providers answering that Multiply was better, and 19% responding that AEB was better. Twenty-nine per cent in Year 1, and 36% in Year 2 said there was no difference between courses under the 2 budgets. The 17% who answered that they didn’t know in year 1 had dropped to just 2% in Year 2.

Figure 73: Comparing maths and numeracy courses funded by Multiply and the AEB



Thinking about the maths and numeracy courses funded by Multiply and the Adult Education budget (AEB), which would you say were better at...?

Source: Providers Surveys. Base (all who deliver AEB courses): Year 1 (82); Year 2 (55)

The proportion of providers that thought Multiply was better compared to AEB stayed very similar between Year 1 and Year 2 in relation to increasing learners' confidence with numbers (68% and 69% in Years 1 and 2 respectively). But the proportion that felt AEB was better at increasing learners' confidence with numbers rose from 5% in year 1 to 13% in year 2. Around the same proportion felt there was no difference in each year (16% in year 1, 15% in year 2), while those answering don't know fell from 11% in Year 1 to 3% in Year 2.

Regarding increasing learners' self-confidence in everyday life, again the proportions thinking Multiply was better at this than AEB (qualification) numeracy courses stayed

roughly the same (64% and 63% in years 1 and 2 respectively). While the proportions rating AEB as better rose slightly (from 4% to 6%) and those believing there was no difference rose slightly more (from 22% to 27%). The proportion answering that they didn't know fell from 10% to 4%.

The only aspect or impact that providers were more likely to state as better under AEB than Multiply was improving the quality of maths teaching at further education level. In year 1, 39% of providers thought AEB was better at this, compared to 11% who felt Multiply was better, while in year 2 that difference had closed somewhat, with those proportions changing to 24% and 22% respectively. Thirty-six per cent and 49% respectively at years 1 and 2 felt that there was no difference between Multiply and AEB in this regard, while the proportion answering don't know fell from 14% in Year 1 to 5% in Year 2.

The relationship between Multiply and AEB numeracy offers is discussed in more detail in section 5.4.

4.3 Experiences of learners who did not complete their Multiply course

This section will focus on understanding the experiences of those learners who did not complete their course. Some evidence will come from ILR data (e.g. the number of learners who dropped out), although much of the evidence will come from the qualitative work with learners who did not complete their course.

4.3.1 Extent of non-completion across Multiply learners

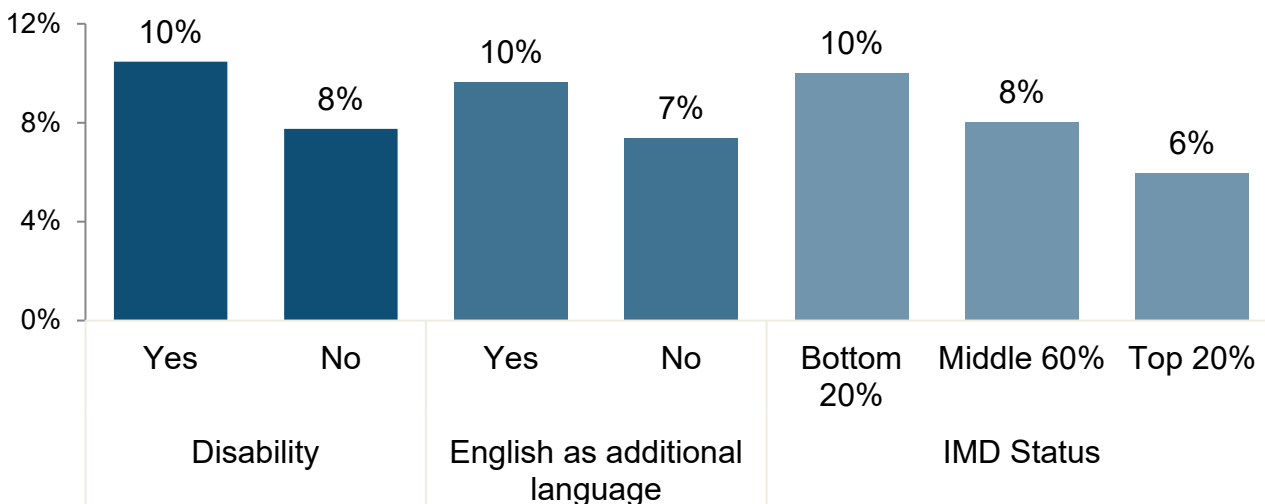
In the learners survey, 9% of respondents said they had not completed their course and left part way through.²³ The survey findings provide some further insights into whether harder-to-reach groups were more or less likely to complete their Multiply course.

Multiply learners that were less likely to complete their course were those with a disability that reduced their ability to do day-to-day activities compared to those without (10% vs. 8%), learners with English as an additional language compared to those who

²³ This is higher than the drop-out rate for Multiply courses from analysis of the administrative ILR data (3%, see Chapter 2). This difference could partly reflect the fact that some drop-outs may not have been recorded in the ILR at the time of analysis. For example, if a learner decides not to continue with a course but does not inform the provider, they may not have been recorded as having dropped out in the ILR. Additionally, learners who dropped out may have been slightly more likely to have been sampled for the survey if they were more likely to have a course end date recorded in the ILR at the time fieldwork took place.

did not (10% vs. 7%) and learners who lived in the top fifth most deprived areas compared to those in the least deprived areas (10% vs. 6%) (Figure 74).

Figure 74: Proportion of Multiply learners that did not complete their course



And did you complete this course?

Source: Learner Survey. Base: Disability (1,454); No disability (3,731); English as additional language (3,081); English not as additional language (3,106); IMD bottom 20% (2,064); IMD middle 60% (3,207); IMD top 29% (571)

Across other key hard-to-reach groups, there was little evidence that completion rates differed across learners. There were no significant differences across drop-out rates for those with caring responsibilities, ex-offenders, those with parenting responsibilities, by work status, and whether they had been part of the care system.

Unsurprisingly, learners that expressed they were dissatisfied with the course, were much more likely to have not completed the course (25% compared to 6% of those who were satisfied). Learners that were not confident with numbers before taking the course were slightly more likely to not complete the course compared to those who were confident with numbers before taking the course, however the differences were not stark (12% vs. 8%).

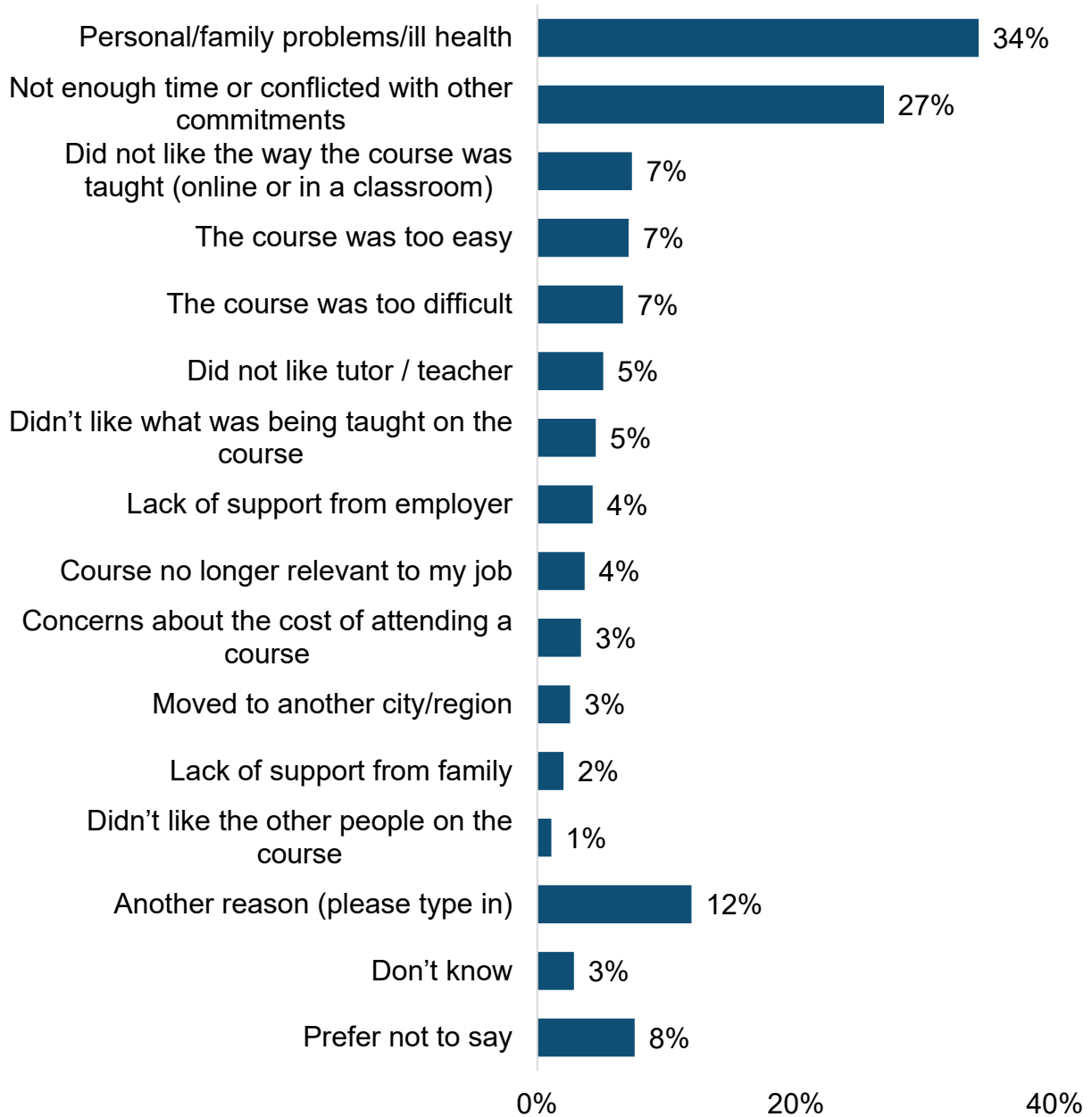
4.3.2 Reasons for not completing the course

On the whole, learners were more likely to indicate that they did not finish their course due to external factors, rather than factors to do with the course or teaching itself. In the learners survey, the most common reason given, by over a third (34%) of Multiply

learners who did not complete their course, was personal or family problems, or problems with ill health. The next most common reason given, by around a quarter (27%) of learners who did not complete their course, was not having enough time or conflicts with other commitments.

After these 2 key reasons, the other reasons were less common. Reasons to do with the teaching and the course included saying they did not like the way the course was taught (7%), the course was too easy (7%), or the course was too hard (7%), that they did not like their teacher (5%), and that they did not like what was being taught on the course (5%). The full set of reasons given are presented in Figure 75 below.

Figure 75: Reasons given by Multiply learners for not completing their course



Why didn't you complete the course?

Source: Learner Survey. Base: Multiply learners who did not complete their course (482)

Multiply learners who did not complete their course and had disabilities that reduced their ability to carry out everyday tasks were more likely than those without such disabilities to give personal/family problems or ill health as a reason for not completing

their course (50% of learners who did not complete their course with severe disabilities gave this as the reason compared to 36% of those with less severe disabilities and 30% of those without any disabilities).

There were some differences between non-completion learners and those who completed in terms of the course meeting their expectations, however it was still only a minority of dropped-out learners that said their experience was worse than expected (21%). For learners that gave 'external factors' (either personal/family problems/ill health or not enough time of conflicted with other commitments) as a reason for not completing their course, they were much more likely to indicate that the course was better than expected and were more likely to express they were satisfied with the course. Furthermore, of those that did not complete the course, over two thirds (68%) had either already recommended a similar maths course to people they knew, or were likely to, indicating that not completing the course was not indicative of negative feelings about the course.

Qualitative findings from Multiply learners who did not complete their course presented a similar picture. The most common barrier to course completion was personal commitments. Most often, these were childcare commitments such as the school run or children's extra-curricular activities. Reasons surrounding the course and teaching were also mentioned, yet less common. These included the cost and time required for travelling, technical issues, negative experiences with the tutor, and the course taking longer than expected. However, on the whole, the learners who did not complete their course that participated were very positive in their experience on Multiply courses.

For learners that mentioned other commitments and travel requirements as reasons for dropping out, they would have been able to stay on the course if the course provider had been able to offer lessons online, or at different times. This level of flexibility was offered by a wide range of providers running Multiply courses, however where this was not the case, it caused issues for learners in attending.

For other learners who mentioned issues with the course itself, structural changes would have been required to have kept them on the course. There were examples where learners expected courses to focus on content that was not part of the course offering, or that the pace of learning did not suit them, and so required different courses.

There was a lack of follow-up from providers after a learner had dropped out of the course, outside of a satisfaction survey being sent or asking for reasons for not continuing the course. Rarely was additional support or alternative provision offered to learners by providers. Some participants mentioned if they had received

communications after missing lessons, they would have been more likely to remain on the course.

Whilst retention was not an issue for Multiply given the learner drop-outs were both low and not driven largely by dissatisfaction with the programme – several enablers, improvements and recommendations have been identified to support adult learners on similar courses:

- Clear communication about course content is important to set the right expectations and avoiding learner disappointment. Keeping learners informed about what content will be covered in each session and when lessons are on, may help retain learners by keeping the course “front of mind” as well as aligning expectations.
- Additional communication with learners who stopped attending could support re-engagement.
- A more joined-up knowledge of local provision could help signpost learners who would like to continue, but whose needs cannot be met by their current provider. Where the provider cannot cater to the need of the learner, providers could consider how to refer learners to other providers with more appropriate offers. Whilst this was in place for most areas, where provision was not joined up it affected learners.
- Finally, providers could further consider course structures which reflect the diversity of learner requirements such as evening courses for those who cannot take time away during the day, online courses for those with childcare responsibilities or intensive courses for seasonal workers.

4.4 Experience of Multiply in prisons

As part of the focus on engaging hard-to-reach groups, 10 Multiply delivery areas delivered numeracy courses for those in prisons. The evaluation explored, with delivery teams, the experience of setting up, managing and implementing these courses. Nineteen interviews were conducted with Multiply leads in local areas where Multiply provision included those in prison as well as, in a few cases, ex-offenders in the community.

4.4.1 How provision was developed

Prison teams were knowledgeable about their existing providers' offerings, such as formal education and functional skills – and where the gaps were that Multiply could fill. Stakeholders highlighted that they needed to work in partnership with prisons to develop their offerings appropriately to ensure the new courses complemented existing programmes. This required Multiply strategic and delivery teams to build positive relationships with prisons.

Courses were often adapted from existing Multiply programmes and materials, to better suit the needs of the prison population. Some adult education tutors also consulted other organisations, such as Shannon Trust, to ensure that they were not duplicating provision.²⁴

Although getting learner inputs into the course proved challenging, an iterative approach to provision was adopted during delivery where possible. While some stakeholders acknowledged that it would have been valuable to get learner input on the content prior to the course, most recognised the difficulties in accessing this hard-to-reach group. Moreover, stakeholders highlighted that they did not have information in advance of the session about who was attending the course, their background and their numeracy needs and interests. In the absence of this input, all stakeholders emphasised the value of being flexible, shaping provision around individual needs in-situ. They highlighted that adaptations made during the delivery of the courses enhanced learner engagement and effectiveness.

“We were guided by the prison service, the prison education [team] as to where the gaps were.”

- *Local area stakeholder*

²⁴ Shannon Trust works in 65 prisons across England, Wales and Northern Ireland, after starting as a pilot programme in HMP Wandsworth in 2001. They now support learners in the criminal justice system with essential literacy and numeracy skills so that they can pursue wider opportunities and thrive in the community.

"Our most successful [provision] was the development that came with those prisoners themselves [telling us what they want] obviously because they know what they want. ... It was like night and day in terms of the engagement. I spoke with them, and I said: "You guys are really bored [in this session]. What's wrong?' And they were like, 'We don't want to do this. We're made to do this". And I said, 'well, how can I make it more fun?' They said, 'We want to [learn about] small business[es] but there's no funding for that [kind of learning]'. And I'm like, well, obviously I can't do that. But what I can do is ... budgeting based on a small business [instead]."

- Local area delivery partner

4.4.2 Eligibility and learner selection

Eligibility was principally determined by DfE's criteria for Multiply but was sometimes widened. Local areas explained that a key criterion for prisons was that they must be within their local area postcode in order to be eligible for Multiply-funded interventions. Additionally, local areas and providers were clear on DfE's Multiply eligibility criteria for learners, but they found that this was sometimes difficult for prisons to manage with the interest that the courses generated.

Interventions were targeted at learners with 6 months or less remaining of their sentence. This approach, determined by the prisons, aimed to better support individuals nearing release by engaging them in adult learning and skills development to support their transition.

The selection of learners was determined by the prison; the majority of prisons made Multiply sessions open to all individuals who showed an interest. There was limited insight on what data, if any, was used to select prisoners since this was determined by prisons, but some stakeholders suggested that prisons used their knowledge of the prisoners' literacy and numeracy levels. Where learners wanted to take part in sessions but did not meet the Multiply eligibility criteria, they were sometimes allowed to join sessions but were not counted in official numbers of learners reported back to delivery area commissioners.

Interventions were entirely voluntary; individuals could choose whether to attend sessions, but some stakeholders explained that attendance was often a privilege for those in prisons. This means that those who engaged in the learning self-selected in.

Tutors could only access lower category prisons on account of safety concerns. Typically, this meant that the interventions only reached individuals with less serious offences.

"There [were] only some prisons where they were able to get access to and those were the lower category prisoners. So, by sort of a default, it's kind of people on lesser sentences or less violent sentences just by the nature of ability to get access to prisons."

- *Local area stakeholder*

"We just offered it to everyone ... We did not want to put out a criteria and segregate people in a prison environment."

- *Local area delivery Partner*

4.4.3 Common design elements of Multiply-funded prison provision

Multiply-funded prison provision was very varied across the sample of participants Verian spoke to - but there were some common elements, including:

- **Flexible, personalised delivery.** Many courses were designed to be tailored to the individual needs of learners, including additional support for literacy and special educational needs.
- **Interventions were generally delivered over a short period of time, focused and delivered in-person.** Some sessions were delivered as one-off single sessions, often lasting a few hours, and designed to engage learners while being impactful and manageable within a prison setting. Other sessions were delivered 3 – 4 days per week, sometimes to small groups. All were designed to be face to face.
- **Focused on bite-sized courses rather than substantive learning.** Programmes did not offer formal qualifications though some learners were awarded completion certificates. Stakeholders highlighted that these short format sessions (referred to as 'outreach') were better suited to the prison environment and simpler to deliver as they did not have formal outcome measures beyond the number of learners. Some interventions were standalone sessions because it was difficult to ensure learner attendance – which were due to factors outside the provider or local area's control.
- **Focused on practical skills.** Maths skills were integrated into practical tasks and activities, making learning more relatable and engaging. Examples included engineering, woodwork, cake decorating, and sessions designed to help learners

support their children with maths – but also often included budgeting, money management, and confidence building elements.

- **Interventions were delivered in prison spaces.** Prison libraries, or classroom spaces were commonly used. Some used communal areas in prison blocks which led to increased awareness of the courses as other prisoners could see the sessions taking place. Other interventions were delivered ‘on site’ if they were related to on-the-job training, where prisoners were working in the prison garden, kitchen or workshop, for example.
- **Provision aimed at ex-offenders.** Provision for this audience was discussed infrequently as many respondents were not delivering Multiply provision to ex-offenders. However, where this was happening, respondents explained that ex-offender provision was generally more directly tailored to employment.

4.4.4 The challenges of delivering within prisons

Setting up and delivering Multiply courses in prisons came with many additional challenges over and above Multiply provision in the wider community.

First, it took several months for local areas to engage with prisons, get them to agree to participate and gain security clearance. For some areas, adult education providers did not already have relationships with local prisons, so these needed to be built. Linked to this, some interviewees reported not knowing the appropriate lead to contact within prisons. A common challenge was prisons having lots of other competing priorities, often compounded by high workload and staff shortages.

As well as challenges engaging prisons, local areas found it difficult to recruit learning providers and tutors. Some local areas thought that available providers lacked experience working in prisons, reducing the pool of suitable applicants for to deliver the course. Local areas responded flexibly to these challenges, although in some cases found this led to additional costs or delays. One local area recruited an internal team member to deliver the provision. Another local area noted that their provider had concerns about personal safety during delivery as they had not worked in a prison setting before. The local area paid for a prison officer to be present to support the tutor.

“It’s a very intense pressurised environment...We tried to try to encourage the previous providers...we’re going to expect you to go into the prison environment that was really difficult to recruit...one of the key barriers was this, this idea that they would have to ‘respond like a prison officer to a situation’ and there wouldn’t...necessarily be a prison officer [present]...That was a real barrier which we had some difficulty overcoming. [We] decided to pay the prison to cover that prison officer additional time...so that the tutor wouldn’t be left on their own...and that seemed to work.” – *Local area stakeholder*

Once providers were recruited, there were further challenges in gaining clearance to enter prison settings. This could take months where providers had already been commissioned, losing significant delivery time. Additionally, separate prison clearances were required where tutors delivered in multiple prisons even within the same local area.

Further, restrictions on internet access and the types of equipment that could be used affected how courses could be delivered. Delivery teams reported that tutors had limited ability to use digital resources and had to carefully consider what equipment could be used for practical courses (for example, knives in cooking classes).

“Yes, there was lots in terms of how we went through a very hefty security procedure in terms of resources to bring in. So, we had to look at things that had minimal resource but maximum impact because everything had to be security cleared. So, when we were looking at can we have a projector? No, because I couldn’t take a memory stick in.” – *Local area delivery partner*

Recruitment of learners was difficult where prisons were not proactive in promoting the course. When learners had been recruited, there were many reasons why they may not attend a session, including individuals being moved away from the prison at short notice. Additionally, staff shortages and high staff turnover in prisons was a major barrier, frequently disrupting delivery schedules. This caused delays and periods where delivery was halted.

The approach to data sharing varied between prisons. Where providers or local areas had existing data agreements in place, data sharing was not a barrier. However, in other cases, data on prisoners was not provided by the prison. In some cases, paper forms had to be checked by prison staff before being shared, or they could not share the data digitally which led to delays. For one tutor delivering the course, this meant

they were unable to access important information about learners – many of whom had additional needs – in advance of the session.

“I’d found out that every Monday morning the prison education staff would receive a document that listed everybody that was on the programme and any things to be mindful of, to watch out for in terms of their previous behaviours or any sort of triggers, whether they have learning difficulties, whether they need a support worker. I went in completely blind to every session...I’d asked for that information, but because I wasn’t set up within the prison system as a prison member of staff, I wasn’t allowed access to that.” – *Provider*

Finally, providers spoke candidly about the scale of the challenges in setting up and delivering courses. One provider explained that due to these challenges they had lost money and would want to think very carefully about working with prisons again.

4.4.5 Enablers of successful delivery in prisons

Strong buy-in from prisons was critical to secure commitment, understand the needs of the prison population, and to navigate the operational challenges of delivery in prisons. In some cases, local areas were able to work with providers who were already delivering other programmes in prisons, allowing for faster set up and easier delivery.

The flexibility of the Multiply programme, as well as the flexibility to amend programmes after delivery started was crucial. This allowed for tailored interventions at the prison level, the learner-cohort level and the individual level. Course content tailored to be relevant to everyday life in prison or after prison, focusing on practical maths skills and life skills, resonated with the learners. Shorter courses and one-off sessions were better suited to the unpredictability of prison environments, enabling more learners to take part.

Some of the prisons had learning mentors in the sessions (people in prison who had previously done learning courses and could now support others). Since they already knew the prisoners, they were able to step in, share their lived experience and work alongside tutors. Similarly, having tutors with experience of working with vulnerable cohorts and/or additional needs helped maintain higher levels of learner participation.

Incentives were also used by some prisons. For instance, one prison awarded "Learner of the Month" to selected Multiply learners, whereas others opted to give all learners completion certificates.

“You get a certificate and that has been - that's one of the early learning points ... that is a real currency in the prison [and] they really responded well to it. And it's so yeah, we quickly implemented that and it's all about them getting their certificates. You know, it was a real achievement, I think for the inmates to get them.”

- *Local area stakeholder*

4.4.6 Views on the impact of Multiply interventions delivered in prisons

Generally, stakeholders felt that the programme met and often exceeded expectations in terms of learner numbers and completion rates, attributing this to the engaging, informal nature of the sessions and the fact that courses were often short.

Four key outcomes were identified by stakeholders:

1. **Practical life skills:** Gaining life skills like budgeting, money management or business skills which could support prisoners to reintegrate after their release.
2. **Increased learner confidence:** Improving learners' enjoyment of learning and confidence in their own ability was expected to lead to less negative sentiment towards adult education. This was also a key foundation for unlocking further learning and skills opportunities in the future.
3. **Progression to further adult learning:** The hope was that learners are encouraged to progress onto other courses, either within the prison, or after their release.²⁵

" I think that more of the harder to reach group, those were the ones I worked with. They were more inclined to even consider another course or doing a Level 1 in the prison." – *Local area delivery partner*

4. **Enhanced employment opportunities:** Since Multiply funded provision was targeted at those who were within 6 months of being released, the hope was that interventions would be a foundation for inmates to gain skills that would ultimately enhance their employability.

²⁵ One provider for West of England Combined Authority already delivered provision within prisons prior to Multiply, as well as offering Multiply-funded courses for prison leavers and ex-offenders, embedded into local adult skills provision. They highlighted that this in-prison engagement can be crucial for this progression and ongoing engagement.

“It works nicely because it's a very relaxed delivery [and] it worked well for those who were looking to re-engage with education, not necessarily focused on the numeracy, but it's just [those] first steps back into engagement. They saw the benefit of it ... and having them sort of turn up every day for 4 days - that alone is a massive achievement for somebody who's not done that before.” – *Local area delivery partner*

There were varied accounts of tracking outcomes and impacts, with many stakeholders explaining that some of the positive outcomes of the programme were not tracked because they related to ‘softer metrics’ like engagement, confidence or enjoyment. Other examples included:

- Providers and local areas holding monthly meetings to check in on progress or holding a quarterly ‘community of practice’ meetings for all providers to share experiences and solutions
- Providers asking learners to complete surveys at the start and end of sessions to measure distance travelled – providers considered this more effective than producing a learning plan where the sessions were one-off
- The use of Excel spreadsheets to track learner attendance and completion– though some highlighted that human error could be an issue here
- Some tutors collecting qualitative data for case studies, which stakeholders felt were extremely valuable

“Multiply is ... really difficult to monitor outcomes, because of the style of delivery ... on other programmes the outcome could be getting people into jobs or education, so that is a very easy outcome to monitor. With this, it's about measuring a feeling, how they felt at the start and how they feel afterwards. We used the Warwick–Edinburgh Mental Wellbeing Scale to measure outcomes. It is a distance travelled measure. ... The qualitative way, which is almost more important to us, it's through case studies and testimonies, which are submitted to [the Council].”

- *Local area stakeholder*

“We measured at the beginning what their confidence was with the task. So, we showed them what they'd be making [and] they rated on a little line of 1 to 10 how confident they were - and we revisited that again at the end and said how confident do you feel about it [now]. ... I think it was effective in the in the sense that they can look back and reflect on how they felt at the beginning and how they felt at the end. And you could tell that there was a massive difference, [but] I think being in the room you could see the effectiveness more effectively than looking at what was recorded.”

- *Local area stakeholder*

Local areas and providers both said that they received generally positive feedback from learners, particularly highlighting the impact on “soft skills” like motivation, self-confidence and socialisation. Providers reported that learners particularly appreciated the hands-on, non-traditional classroom environment. One provider had to pause delivery for a few months as they ran out of funding quickly because Multiply was so popular.

“I spoke to prisoners when I went in [and] it was really nice things they were saying, all really enjoying [it]...It was so popular that we ran out of funding at one point, as we were getting through so many prisoners. And we had to pause it and restart it again when we had funding...The feedback from the prisoners was that how disappointing and upsetting it was not to keep getting this support...A lot of them were saying, we never had the confidence to do maths and English before, we did not think we could do it...Now we feel like we can do it. A lot of them did go on to do maths, English, functional skills. They had built that confidence through the Multiply project.” – *Delivery partner*

Prison staff provided positive feedback, highlighting the success and enjoyment of the courses among inmates. Some providers also engaged with staff delivery, sometimes on topics beyond numeracy. In one case, the tutor had discussions with staff, sharing information about neurodiversity which they felt helped staff to understand and support their prisoners. In another, the tutor supported the prison’s employability team to update the CV writing materials and approach.

As a result of the programme, providers and local areas developed stronger relationships with prisons and the wider criminal justice system. Some stakeholders spoke about the programme increasing prisoners’ awareness of services they could access, both inside and outside prison. One local area also built a new relationship with

their local Police and Crime Commissioner, which they felt would be a useful contact for any future work with prisons and ex-offenders.

However, while stakeholders focused on outreach and engagement, local areas and tutors were sometimes unsure how much the courses had contributed specifically to improved numeracy skills, especially when the maths was embedded in vocational sessions. From stakeholders' perspectives, what was considered more important for these vulnerable populations far from the labour market was the confidence, engagement, ambition and hope that the course provided. It was thought that these laid the foundation for other impacts and opportunities for progression in the future.

5. How was Multiply designed and delivered?

This chapter explores how Multiply was designed and delivered at a local level, the interaction between local and national delivery, and how the programme fits with other policies or priorities.

As with the previous chapter, these findings are most relevant for the Efficiency (how well were resources used?), Relevance (was Multiply doing the right things?) and Coherence (how well does Multiply fit within the wider context) criteria.

Chapter summary

Local areas collaborated with a range of groups to develop their local investment plans and to identify numeracy needs in their area. In particular, local areas worked with learning providers, voluntary and community organisations, and local employers. This process often relied on existing networks and relationships, especially when engaging with employers and local businesses.

Community groups were key partners enabling Multiply to engage with harder to reach learner groups. Partnerships with community groups often led to bespoke courses being tailored for specific groups. Many areas worked with other partners, including Jobcentre Plus, the National Careers Service, and DWP. However, among some areas there was a perception that Multiply was a relatively lower priority for DWP than other programmes, leading to fewer referrals to Multiply than initially expected.

Almost all of the local areas responding to the survey said they thought it was important to engage with employers to identify skills gaps, develop course materials to better meet the needs of the labour market, and assist with learning provision. However, many areas found it difficult to engage with employers. This was often due to employers' lack of awareness of Multiply, their reluctance to release staff for training, and uncertainty about the business benefits of non-accredited courses.

Employers often provided limited support themselves for their staff to develop numeracy skills. They also generally did not use formal numeracy assessments to identify staff who would benefit from further training. Instead, they tended to rely on informally identifying skills gaps when staff encountered difficulties completing tasks that involved numeracy.

Most local areas, employers, practitioners and providers surveyed said they thought Multiply had supported innovation. Types of innovation included embedding numeracy

in everyday activities, peer-led models of delivery, and tailoring courses for the needs of specific groups. The use of incentives (such as vouchers) was considered an especially important innovation for engaging harder to reach learner groups.

However, local areas identified some barriers which they thought had limited the amount of innovation on Multiply. In particular, administrative requirements, short funding cycles, and the inability to roll over underspend were thought to have held back innovation.

In comparing Multiply to AEB, the main funding route for qualification-bearing adult numeracy courses, providers generally said that Multiply was better across a number of dimensions, including: increasing learners' confidence with numbers, increasing learners' self-confidence in day-to-day life, innovation, and impact on learners. However, Multiply was generally considered worse than AEB in terms of administrative burden and reporting requirements. In particular, the level of data collection required was thought to be disproportionate for short courses and small providers.

Local areas typically commissioned partners to deliver Multiply. In some areas, there was tension between the timelines for Multiply and the time needed for procurement of delivery partners. Some areas highlighted the value of commissioning a relatively small number of learning providers to make the process easier to manage.

Many areas put in place mechanisms for knowledge sharing within their area, for example, workshops or bi-monthly meetings. There was limited evidence of knowledge sharing between areas, although local stakeholders tended to agree this would be valuable.

Local areas' perceptions about interactions with DfE were mixed. Around a third of LAs responding to the survey said interacting with DfE was better than expected, while a similar proportion said it was worse than expected. Stakeholders were generally positive about communication with DfE, saying DfE staff were supportive, open and responsive. However, there was a perception that DfE staff did not always have the information to answer local queries, and did not always appreciate the differences between different models of local government.

Local areas also thought a national campaign for Multiply and best practice resources would have helped engage learners. Additionally, there were concerns about the sustainability of Multiply courses with the end of the funding period.

5.1 Local-level design and focus

This section describes:

- how areas developed their local investment plans
- how areas identified the needs of learners and employers
- how areas collaborated with employers and other stakeholders in the design of Multiply courses
- how employers assessed and supported numeracy skills in the workplace
- the extent to which Multiply supported innovative approaches

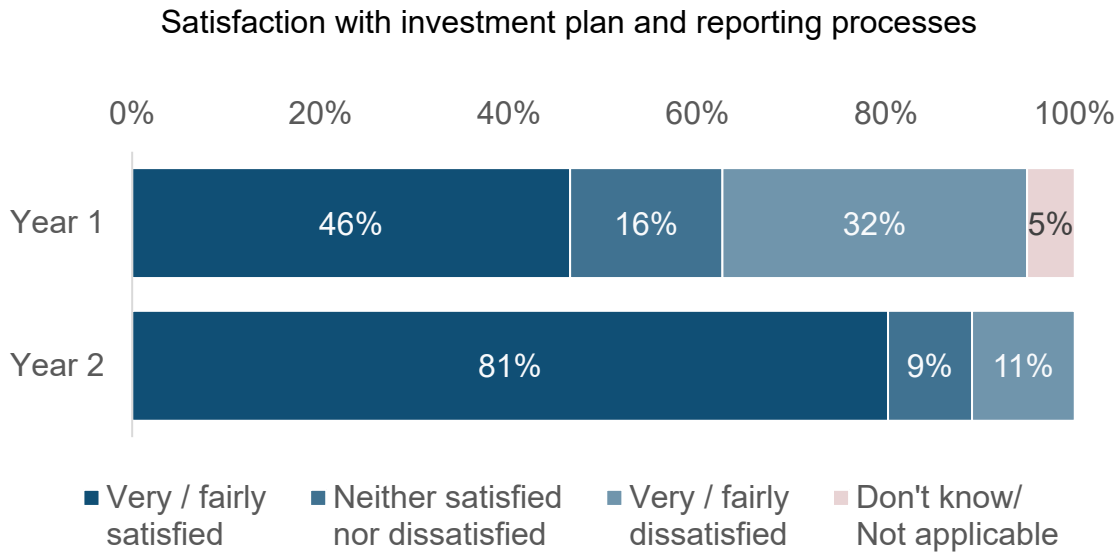
The evidence in this section comes from a combination of the local area case studies, the surveys of local areas, employers, and providers, and further qualitative work with employers.

5.1.1 Developing local investment plans

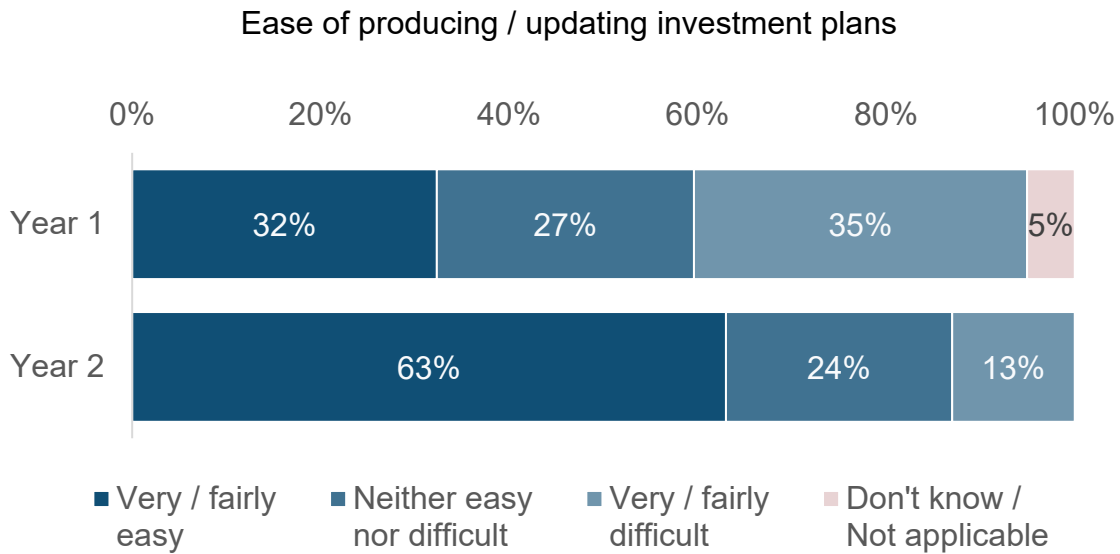
Figure 76 shows results from the local area survey regarding areas' experiences of the investment plan and reporting processes for Multiply. Among responding local areas, perceptions improved markedly by Year 2, by which point most respondents were positive about investment plans and the support provided by DfE.

In Year 1, around half (46%) of responding local areas said they were very or fairly satisfied with the investment plan and reporting processes for Multiply (32% very or fairly dissatisfied). By Year 2, this had increased to around 4 in 5 (81% very or fairly satisfied, 11% very or fairly dissatisfied). Around a third (32%) said they found producing investment plans easy in Year 1, rising to around two thirds (63%) in Year 2. Around 2 in 5 (38%) in Year 1 agreed that the guidance and advice from DfE was sufficient to develop and investment plan, rising to more than 4 in 5 (85%) in Year 2.

Figure 76: Local area perceptions related to investment plans

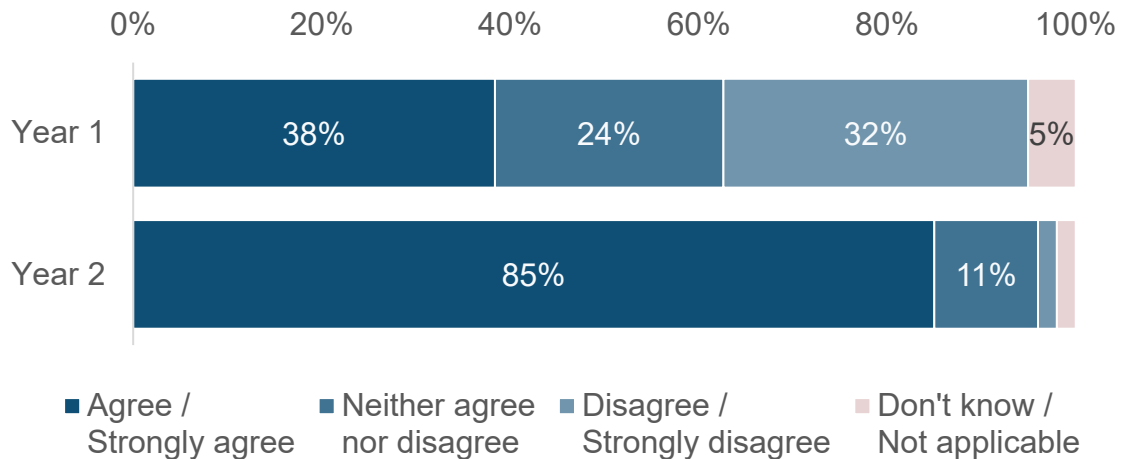


How satisfied or dissatisfied were you with the following aspects of Multiply during the second year of the programme, between [April 2022 and March 2023 / April 2023 and March 2024]?



How easy or difficult did you find the following aspects of delivering Multiply in the [first / second] financial year of the programme?

Perceptions of guidance and advice provided by DfE



To what extent do you agree or disagree with the following statements regarding support for delivering and funding Multiply? The guidance and advice provided by DfE was sufficient to develop / update an investment plan

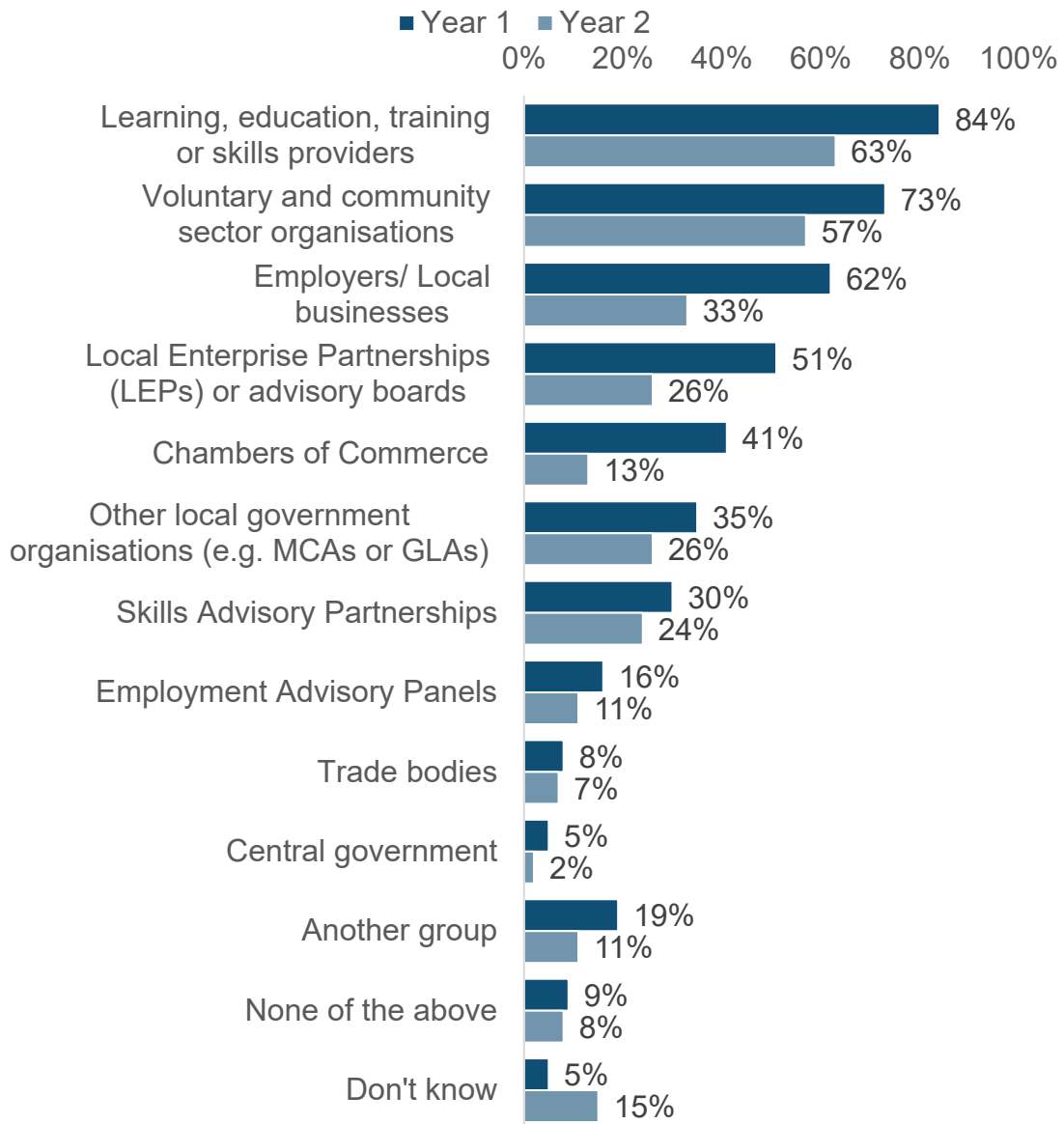
Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

From the case studies in Year 1, some areas mentioned that short timescales were a constraint for developing initial investment plans. In some cases, the timescales meant that some learning providers were unable to put in applications for funding. Lack of capacity within local areas and time needed for internal approval processes were seen as adding to the burden.

“A lot of the deadlines that DfE imposed on us were quite tight...we did have some providers come to us and say...they weren’t going to apply for an application because the timescale was too tight for them as an organisation, so we potentially lost some things because of that.” –
Local area case study interview

Developing investment plans was typically a collaborative process. As shown in Figure 77, across the both years, local areas most commonly reported developing investment plans working with learning providers (84% of responding LAs in Year 1, and 63% in Year 2), voluntary and community sector organisations (73% in Year 1, and 57% in Year 2), and employers or local businesses (62% in Year 1, and 33% in Year 2).

Figure 77: Groups involved in developing local investment plans



Between [April 2022 and March 2023 / April 2023 and March 2024] which of the following did you work with to...Develop your Local Investment Plan?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

Case study areas reported working with the same groups to ensure their local investment plans reflected local needs and delivery capacity. Areas described using a combination of approaches when developing their local investment plans.

First, desk research helped identify unmet and future adult numeracy needs. This included looking at national data from the Office for National Statistics, reports from the Learning and Work Institute, and analysis of data about AEB learners. Desk research also helped identify areas of focus for the local area. For example, one Mayoral Strategic Authority identified high levels of in-work poverty in their region and that there was a persistent numeracy skills shortage for employers. This led them to focus on residents who were employed, also to avoid duplication with the AEB.

Data analysis was often supplemented with information from stakeholders, to validate findings and explore needs in more detail, including to understand the target audience and identify gaps and barriers to learning. Local area stakeholders reached out to membership bodies and network organisations to collect feedback across a large pool of stakeholders and geographical areas. Engaging with college groups or wider learner provider networks was considered to be key in identifying potential providers. To assist with employer engagement, local authorities often engaged with employer networks such as the Chamber of Commerce or Federation of Small Businesses in order to identify employers and access networks. Some hired business engagement consultancies to help them reach employers. Voluntary organisations were engaged to understand specific target audience groups such as care leavers. Stakeholders fed back that established relationships and structures already in place (for instance, existing connections due to AEB) were key in engaging with all types of stakeholders.

Primary research with local residents to understand their needs was only undertaken in one case study area. This County Council commissioned a market research agency to undertake qualitative research among local residents without level 2 maths to explore their attitudes towards maths and improving numeracy skills, and their thoughts on how maths courses should be delivered.

Case study example

This Combined Authority consulted with local authority leads and wider stakeholders such as colleges groups and the local learning provider network. The local learning provider network has over 115 members and went to these to request feedback on gaps, issues and skills needed to embed maths in vocational delivery.

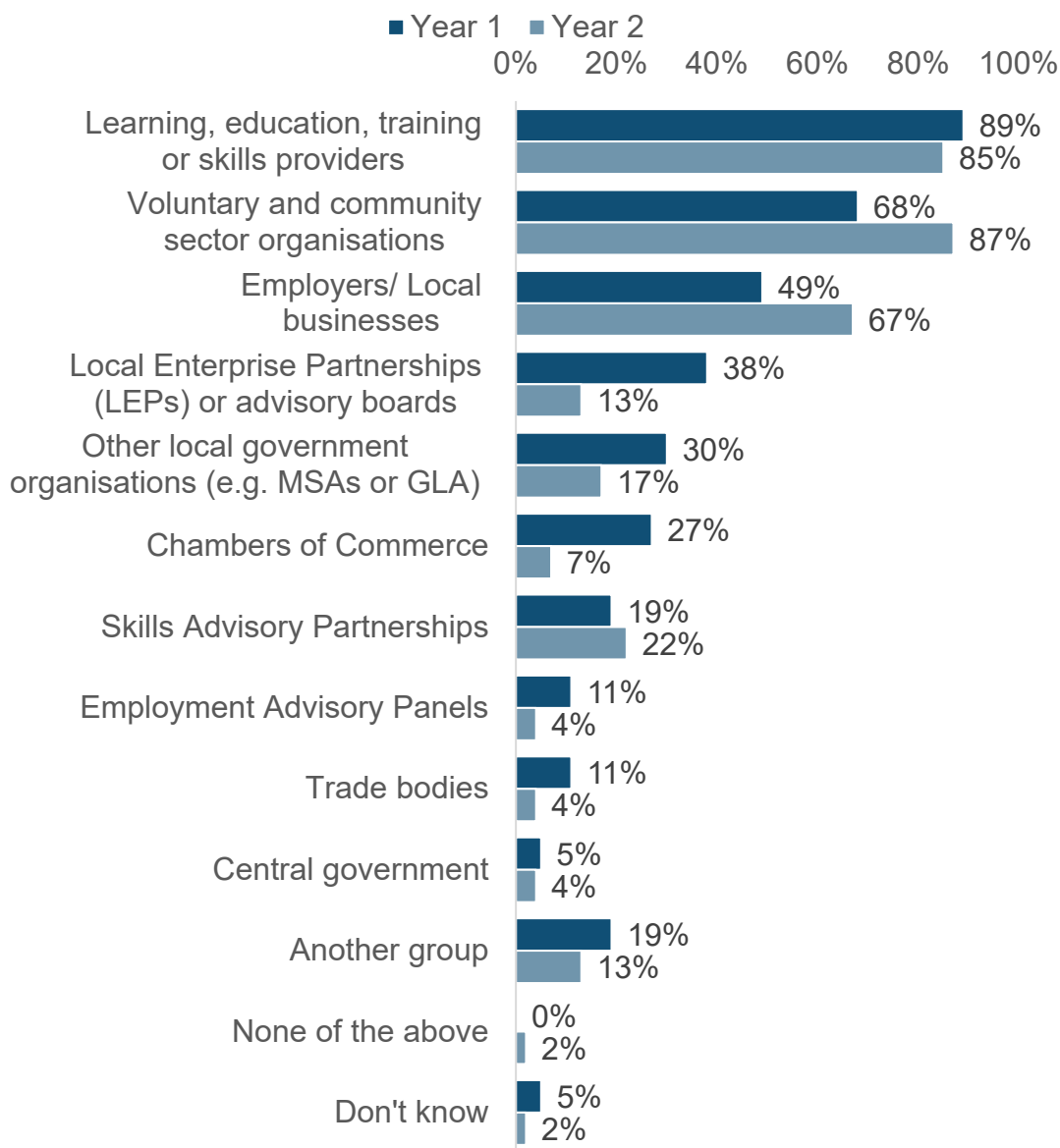
When preparing for the investment plan (before submission) they had a skills and work executive group that met on a monthly basis to discuss proposals. It included senior leaders from key organisations from the provider network, colleges, local authority, DWP and ESFA. They also had a bi-monthly employment and skills advisory panel that included the aforementioned organisations as well as the voluntary community sector and approved sign off before going to the Combined Authority committee.

The Combined Authority also analysed AEB data related to Level 2 maths provision over the previous 2.5 years, including how many people had engaged, how many had completed, and reasons for not completing their course.

5.1.2 Identifying needs

As shown in Figure 78, almost 9 in 10 local areas responding to the survey said they worked with providers to identify adult learners' numeracy needs (89% in Year 1 of the programme, and 85% in Year 2). Most also reported working with voluntary and community sector organisations (63% in Year 1 and 87% in Year 2), and many with employers and local businesses (49% in Year 1 and 67% in Year 2).

Figure 78: Groups involved in identifying learner needs



Between [April 2022 and March 2023 / April 2023 and March 2024] which of the following did you work with to...Identify adult learners' maths / numeracy needs?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

The local area case studies and pro forma returns provided evidence about the ways in which local areas identified the needs of the local community.

Many areas used local data to target interventions, including data on local deprivation, employment rates and skills gaps. For example, one local area aligned Multiply with its published vision for 2040 and used local data insight tools and ward-level analysis to

identify priority areas and target groups. Some local areas referenced their Local Skills Improvement Plans or other strategic documents they used to inform their approach.

Local areas often relied on the expertise and networks of local providers and community organisations to understand needs, especially for hard-to-reach groups. For example, one local area developed a champions programme in partnership with a local SME growth hub to widen participation and identify needs in diverse communities including prisons, factories, the NHS and traveller communities.

In some areas, providers were given the autonomy to propose interventions based on their knowledge of local communities. In many cases, local areas undertook engagement activities such as outreach in community venues, food banks, schools, job centres, and local events. These activities were used both to identify needs and to recruit learners. For example, one council's approach was intended to reflect the local context, in particular, the rural nature of the area and local social mobility challenges. The council used existing community group relationships to identify and reach target groups, and hired a dedicated member of staff for engaging with employers.

Some local areas established feedback mechanisms with learners, providers and community partners to refine their understanding of needs over the course of the programme.

Many areas relied on existing relationships with employers and providers. In some cases, Chambers of Commerce or sector-specific employer groups were involved in identifying needs and shaping provision. Engagement with Local Enterprise Partnerships, Skills Advisory Panels and similar bodies was less consistently reported; some LAs referenced using these networks for intelligence or validation of their plans.

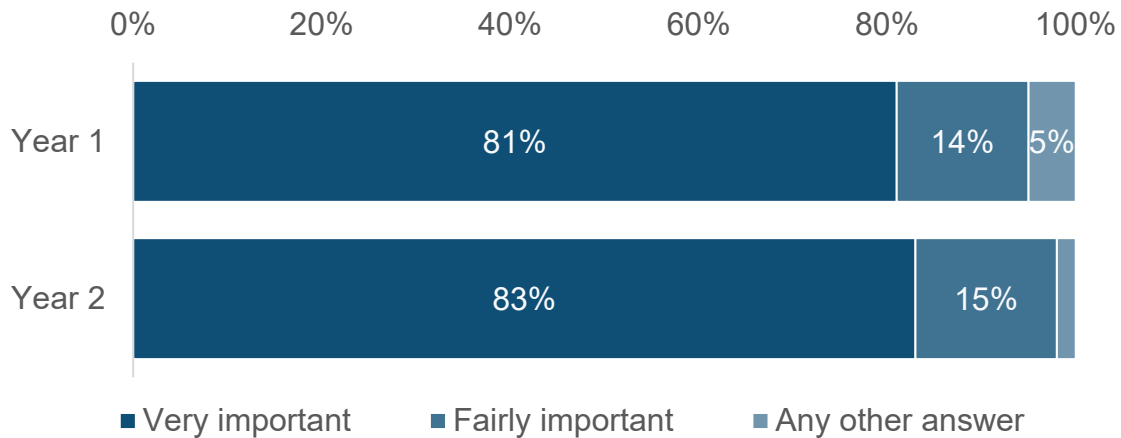
Partnerships with national organisations (such as National Numeracy) were used in some areas to train local champions and support needs identification, especially in job centres and schools.

5.1.3 Collaboration with employers

Nine in 10 local areas responding to the survey had some form of engagement with employers as part of their delivery (89% in Year 1 and 89% in Year 2). As shown in Figure 79, nearly all local areas thought engaging with employers was important to identify skills gaps (95% in Year 1, 98% in Year 2), develop course materials to better meet the needs of the labour market (97% in Year 1, 91% in Year 2), or assist with their own learning provision (97% in Year 1, 91% in Year 2).

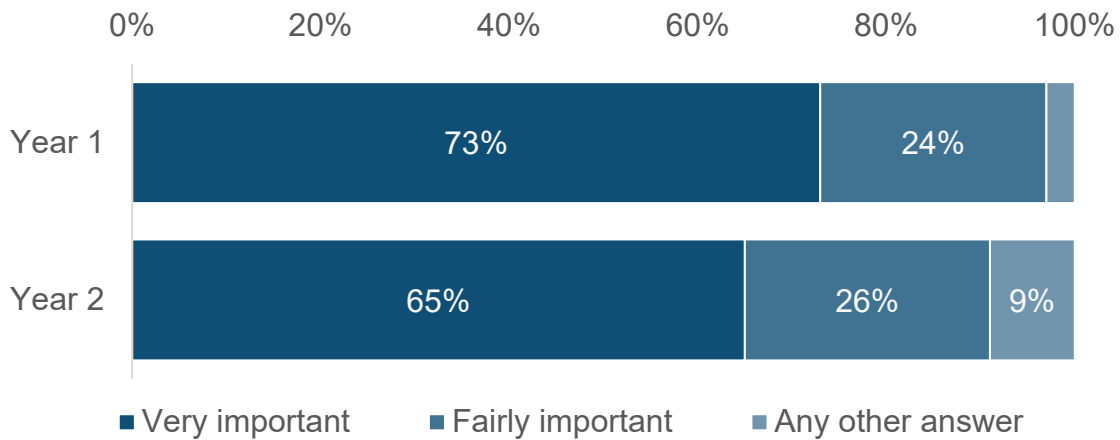
Figure 79: Local area perceptions of importance of engaging with employers

Engaging with employers to identify skills gaps and learning needs in the area



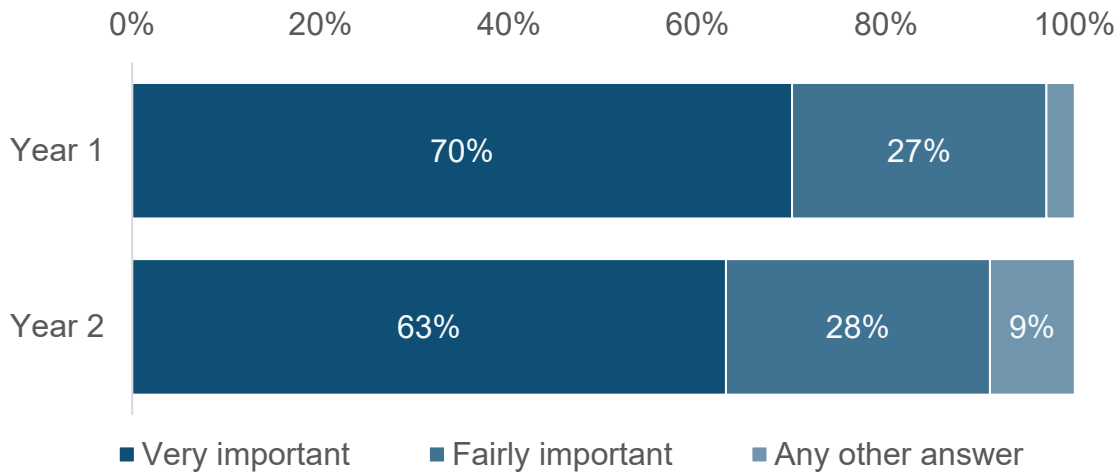
To what extent do you think it is important to engage with employers to...identify skills gaps and learning needs in their area?

Engaging with employers to develop course materials to better meet the needs of the labour market



To what extent do you think it is important to engage with employers to...develop course materials to better meet the needs of the labour market?

Engaging with employers to assist them with their own learning provision

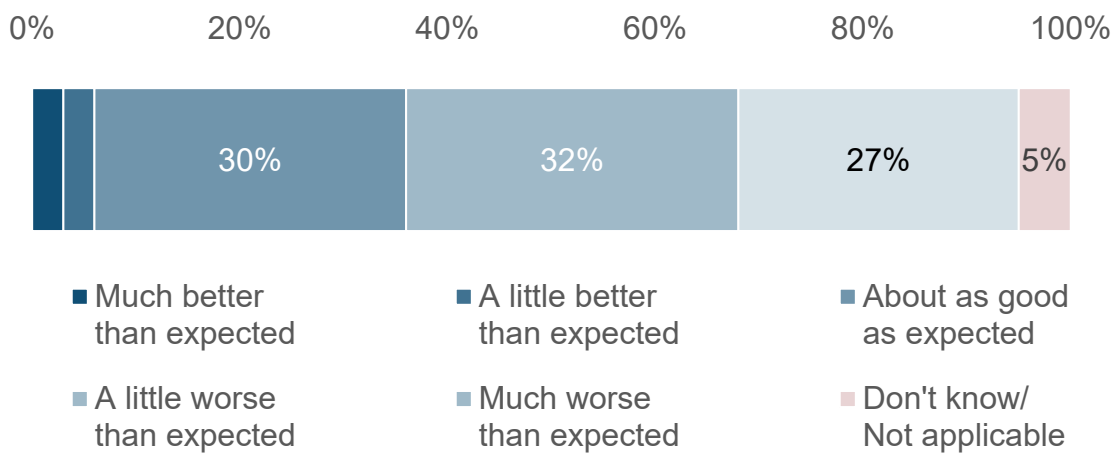


To what extent do you think it is important to engage with employers to...assist them with their own learning provision?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

However, local areas reported considerable challenges in engaging with employers. As shown in Figure 80, 6 in 10 LAs surveyed (59%) said collaboration with employers for Multiply was worse than expected and most (68% in Year 1, and 81% in Year 2) said they found engaging with employers difficult (Figure 81).

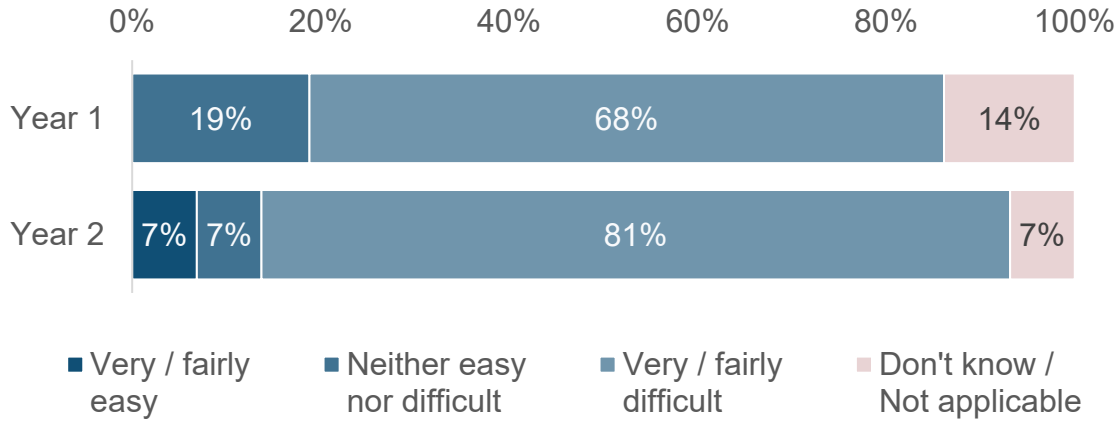
Figure 80: Local area experience of engaging with employers



Thinking about each of the following, how did these compare with your expectations before Multiply began? Collaboration with employers

Source: Local area survey, Year 1. Base (local areas participating in Multiply): 37. Notes: Question not asked in Year 2

Figure 81: Local area perceptions of ease engaging with employers

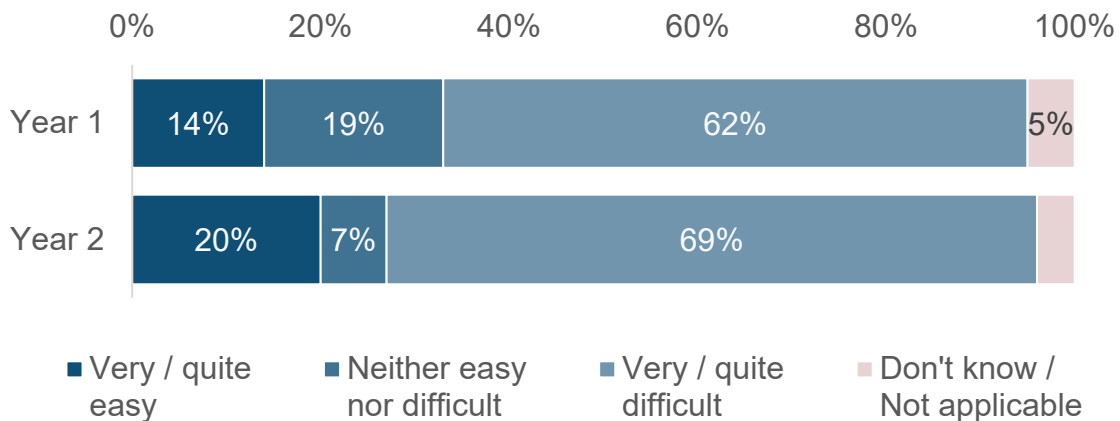


How easy or difficult did you find the following aspects of delivering Multiply in the [first / second] financial year of the programme? Engaging employers

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

Similarly, as shown in Figure 82, most learning providers surveyed said they found it difficult to engage with local employers to deliver Multiply (62% in Year 1, and 69% in Year 2).

Figure 82: Learning provider perceptions of ease engaging with employers



How easy or difficult was it to engage local employers to deliver Multiply between [April 2022 and March 2023 / April 2023 and March 2024]?

Source: Learning providers survey. Base (Learning providers who tried to engage with employers): Year 1 (95); Year 2 (46)

Surveyed learning providers were asked to explain in their own words why they had found it difficult to engage with employers. Common themes were timing and/or capacity constraints, lack of awareness or interest in Multiply, and lack of awareness or acceptance of the potential benefits to employees.

“Funding only became available to us for January 23-Mar 23 not only did this limit how many employers we could work with in the time, it added a barrier for interested employers in terms of the time commitments for their employees being condensed. More time would have enabled dialogue with employers to be less pressured and made it easier for them to commit their teams to the support.” – *Respondent to survey of learning providers*

“Employers not aware of Multiply, would have been useful to have national marketing campaign to raise awareness.” – *Respondent to survey of learning providers*

“Some employers stated they did not see a need for their staff to have maths skills as they have calculator equipment.” – *Respondent to survey of learning providers*

The evidence from the case study interviews was consistent with these findings. Local stakeholders mentioned that the primary barrier to engagement was that employers did not see the direct benefit of courses to their business and were thus reluctant to release staff to attend. There was a sense that while Multiply was a good thing to do, it would not change the bottom line for the business. This was especially relevant in the face of the increasing financial challenges faced by businesses and the need to reduce discretionary spending.

Additionally, some local stakeholders thought there was a lack of understanding about Multiply among employers. Employers did not necessarily see how it differed from existing maths courses, and some employers did not see learning for non-accredited courses as being valuable.

Case study example

Getting employers to engage was very challenging for many of the local areas and providers involved in delivery within this Combined Authority. Local areas emphasised that employers could not always release groups of their workforce for courses. They also stated that, as part of Multiply, front-line staff were often the most in need of additional learning, but were also the least likely to be released by employers. One provider also mentioned that employers were only willing to release their employees for accredited courses.

Some stakeholders felt that employers did not understand how Multiply worked in the early stages due to the broad nature of its offering. As a result, some organisations decided they needed to streamline their Multiply offer. For example, one local area described originally trying to target employers through business parks and areas where they could gather larger groups to offer online tuition. However, they realised this approach was too generic as it did not address specific problems employers faced. They therefore began to deliver an Excel-based course to employers that they felt was more directly aligned to their needs. The local area reported that this new course enabled them to start achieving their employer targets in the second year of the programme.

Collaboration was more successful in sectors with clear numeracy needs (such as health, care and construction) and where providers had strong pre-existing relationships with employers. Community and FE college providers were more likely to collaborate with employers than independent providers.

Collaboration was often driven by the need to make learning relevant to workplace tasks, to address specific learner needs, and to overcome barriers such as maths anxiety or a reluctance to engage with formal education. Entry-level and bespoke courses were most likely to be developed collaboratively as these required and suited tailoring to specific workplace tasks; examples included using numeracy in a café, in care work, and in horticulture. Higher-level and accredited courses were less frequently mentioned as being co-designed or being specifically related to the Multiply programme. Instead, employers often signposted staff to existing provision.

Where collaboration occurred, it often resulted in tailored workplace-relevant courses, for example, in NHS medicine management, or construction engineering.

“We had meetings about designing a programme, bringing in contract managers, supervisors, operatives asking them what they thought would be beneficial. We wanted to make it really relevant. We identified that it's everything from calculating how much material they need to fill a pothole, for example, to filling in their timesheets and their wage slips.” - *Employer*

Case study example

Attempts to engage employers had mixed success in this local area, with only one delivery partner reporting successful employer delivery. This college led an effective partnership with the local NHS trust, focused on career progression moving learners onto Level 2 maths after completing Multiply. Courses were run online and included an introduction to Level 2 maths before the end of the course. A key element of success was the willingness of the local NHS trust to ringfence the assigned two hours of training at the specified time during the working week.

Prior to delivering Multiply, the NHS had found some employees struggling with attempting Level 2 maths qualifications, becoming easily disengaged with their learning. Multiply had the benefit of building learners' confidence throughout the courses, enabling them to feel better equipped to take on Level 2 maths training afterwards.

The same college also attempted, unsuccessfully, to work with other employers including a major retailer which had a large distribution centre nearby. Many of the employees at the distribution centre had English as a second language. As a result, at the time of engagement the retailer was only interested in English skills courses for their employees. Nonetheless, the college thought that the retailer may be open to subsequently running the Multiply course in future years.

Two of the other voluntary and community delivery partners in the area had also been tasked to run Multiply with employers. However, despite best efforts, were not able to fulfil this. They found that employers were not keen to let staff attend the course during work hours and some were reportedly put off by the lack of qualification upon completion.

The evaluation included interviews with a small number of employers. Common suggestions to improve the collaboration from employers' perspectives were:

- greater flexibility in delivery and eligibility (for example, removing the Level 2 criteria)²⁶
- more national promotion to raise awareness among employers and employees
- better tailoring to individual and workplace needs, with trainers understanding the specific context of the employer
- ongoing support after initial training to reinforce learning and build confidence

²⁶ That is, the initial requirement that learners should not have Level 2 maths to be eligible for Multiply.

Case study example

Two colleges in this local area had success running Multiply courses for local employers who they already had existing relationships with. This included private organisations and the local NHS. Collaboration with employers led to very tailored courses. Courses were run from workspaces and timings were designed to best meet the needs of learners. In some cases, this led to courses on Saturday mornings. Lessons were developed in line with the context of the collaborating employers to ensure they were relevant and useful for employees. For example, in partnership with the local NHS, one of the colleges created specialist Multiply courses including a course for people who wanted to become a nurse or nurse associate but didn't have a Level 2 maths qualification, and a course for trainee nurses with a Level 2 maths qualification who had anxiety about numeracy. This course led to the development of a session titled "Medicines Management" which focused on numeracy related to prescriptions, such as converting milligrams to grams. This session acted as a taster to a module with the same name in the Nursing degree. When this first session was run, 20 learners signed up but 45 attended.

Similarly, one of the colleges ran courses for small business owners and sole traders focused on tax for small businesses.

It took some time to liaise with employers and work together to create an appropriate course for their employees. As a result, uptake was higher in Year 2 of the programme. Uptake was also helped by the rule change that Multiply courses could be completed by those who already had a Level 2 qualification. This opened the courses to employees who had lost confidence in their maths skills or felt their numeracy had deteriorated over time.

As a result of the courses with the NHS, local stakeholders said there was now improved career progression for employees.

However, despite these successes, the colleges were only able to bring Multiply to employers who they were already working with. Other employers were reluctant to give up valuable work time and were unconvinced of the value of running a course in their workplace. This was because numeracy training was not directly aligned with their priorities for training, which instead were related to ensuring the working was compliant with quality and health and safety standards.

5.1.4 Assessing and supporting numeracy in the workplace

From the case study interviews, employer-led support was limited. Many employers relied on external providers rather than developing in-house support. Some employers were also hesitant to engage with courses due to time and capacity constraints or lack of perceived benefits.

Most employers did not formally assess numeracy skills in the workplace. Gaps were instead usually identified through recruitment processes or through informal observation on the job when employees had difficulty with tasks involving numeracy. There were some exceptions reported. Some employers used formal diagnostic tools such as BKSB (Basic Key Skills Builder) or Key Stage tests to identify gaps. Others ran initial maths courses to establish baseline skills and then tailor subsequent learning.

Formal tools and assessments were considered effective in identifying specific gaps but could be intimidating for adults with anxiety about numeracy. Initial assessment courses were valued for tailored learning but depended on good communication between employer and provider. On the other hand, relying on informal observations alone risked missing less obvious needs and required managers to identify issues or employees to self-identify their needs.

Employers suggested a number of considerations for conducting assessments effectively, in particular:

- reassuring employees so that the assessments are seen as supportive rather than intimidating so as to reduce anxiety and stigma.
- contextualising assessments to workplace tasks, making them more relevant and less “school-like”.
- conducting ongoing assessment rather than one-off so as to track progress and changing needs.
- ensuring assessments are supported by strong communication and understanding between trainers and employers, for example, trainers visiting the workplace to understand real needs.

5.1.5 Other partnerships

In the case study interviews, community groups were considered especially important for engaging hard-to-reach learners. Community groups were thought to be important for building trust. They often acted as referral partners or co-delivery partners, helping

Multiply stakeholders to understand specific challenges and tailor support to particular needs.

These partnerships resulted in bespoke courses created for specific groups, such as ESOL learners, care leavers and ex-offenders. These courses often used creative 'hooks' such as music, crafts and cooking. These were thought to engage learners and to make learning numeracy less intimidating. For the same reasons, they were often delivered in non-traditional venues.

Housing associations and voluntary organisations such as Citizens Advice and Back on Track (an organisation supporting ex-offenders) were also engaged with the purpose of signposting learners towards Multiply courses.

Areas often engaged with Jobcentre Plus, the National Careers Service, and DWP through regular meetings. The purpose of these meetings was to increase awareness of Multiply so that it might be shared with jobseekers. However, there was a mixed response among stakeholders regarding these partnerships. Some local areas reported that working with DWP had not led to as many referrals as hoped. They attributed this to a perception that Multiply was a lower priority initiative for DWP, especially as it was not led by DWP. Other programmes, such as the launch of in-work progression coaches, added to the perception of Multiply being comparatively lower priority for DWP.

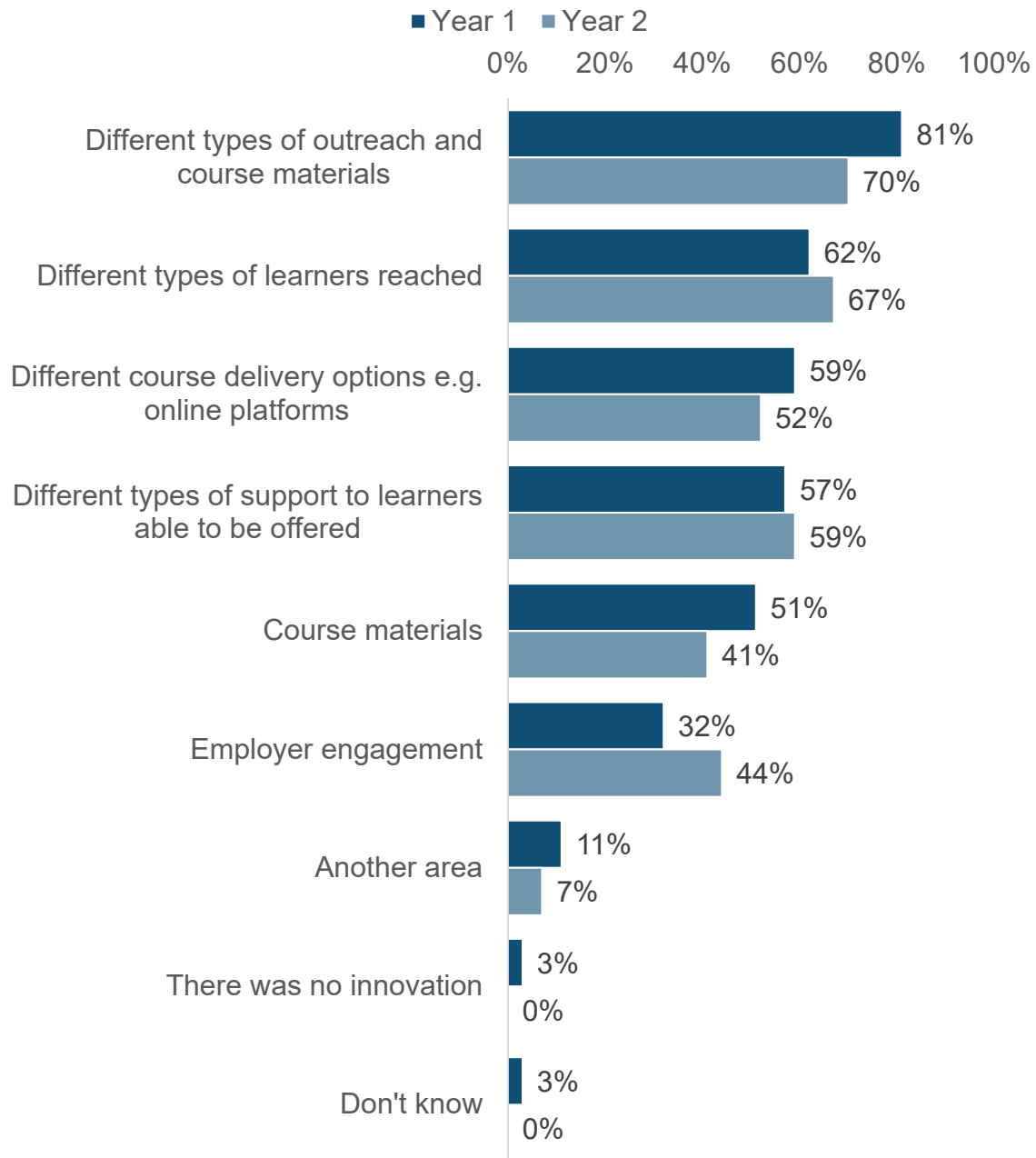
Across the different types of partnership, challenges in building and maintaining these relationships included time and capacity constraints, a lack of awareness or engagement from some groups, and administrative burdens.

“When you’re doing partnership working, you’re relying on that partner really understanding what you’re trying to do, and being a good advocate for it, so you have to really invest in that partnership working.”
– *Local area case study interview*

5.2 Innovation

Figure 83 shows perceptions of innovation from the local area survey. Among local areas responding to the survey, most reported innovation in outreach and marketing (81% in Year 1, and 70% in Year 2), reaching different types of learners (62% in Year 1, and 67% in Year 2), and in different delivery approaches (59% in Year 1, and 52% in Year 2). Innovation in engagement with employers was lower (32% in Year 1, and 44% in Year 2). Additionally, nearly 9 in 10 (87%) said the innovation in delivery to be better in Multiply compared to working with the AEB in Year 2 (Figure 84).

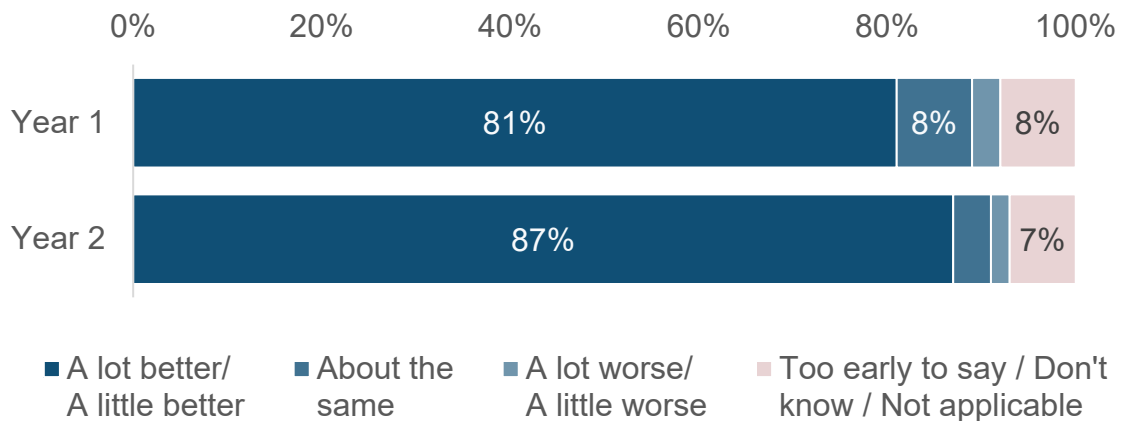
Figure 83: Types of innovation reported by local areas



In which, if any, of these areas was there innovation in the second year of Multiply, between [April 2022 and March 2023 / April 2023 and March 2024]?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

Figure 84: Local area perceptions of innovation in delivery

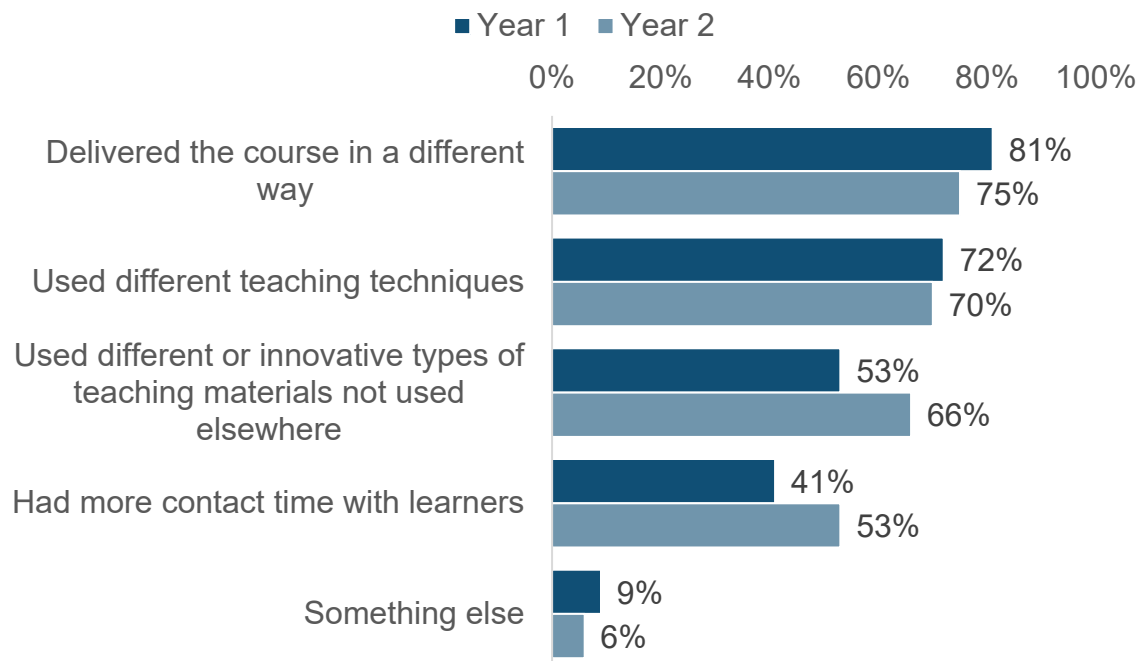


Compared to your experience of working with AEB funding, would you say your experience with delivering Multiply in [year 1, between April 2022 and March 2023 / year 2, between April 2023 and March 2024], has been better, worse or the same for the following areas? Innovation in delivery

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

Figure 85 shows perceptions of innovation from the practitioners survey. Among practitioners responding to the survey (those who had taught Multiply courses and had previous numeracy teaching experience), most felt that Multiply provision allowed them to do things they had not previously done when delivering other maths or numeracy courses (73% of respondents in Year 1, and 86% in Year 2). This was commonly delivering the course in a different way (81% of those who said Multiply allowed them to do new things in Year 1, and 75% in Year 2), and using different teaching techniques (72% in Year 1, and 70% in Year 2).

Figure 85: Types of innovation reported by practitioners

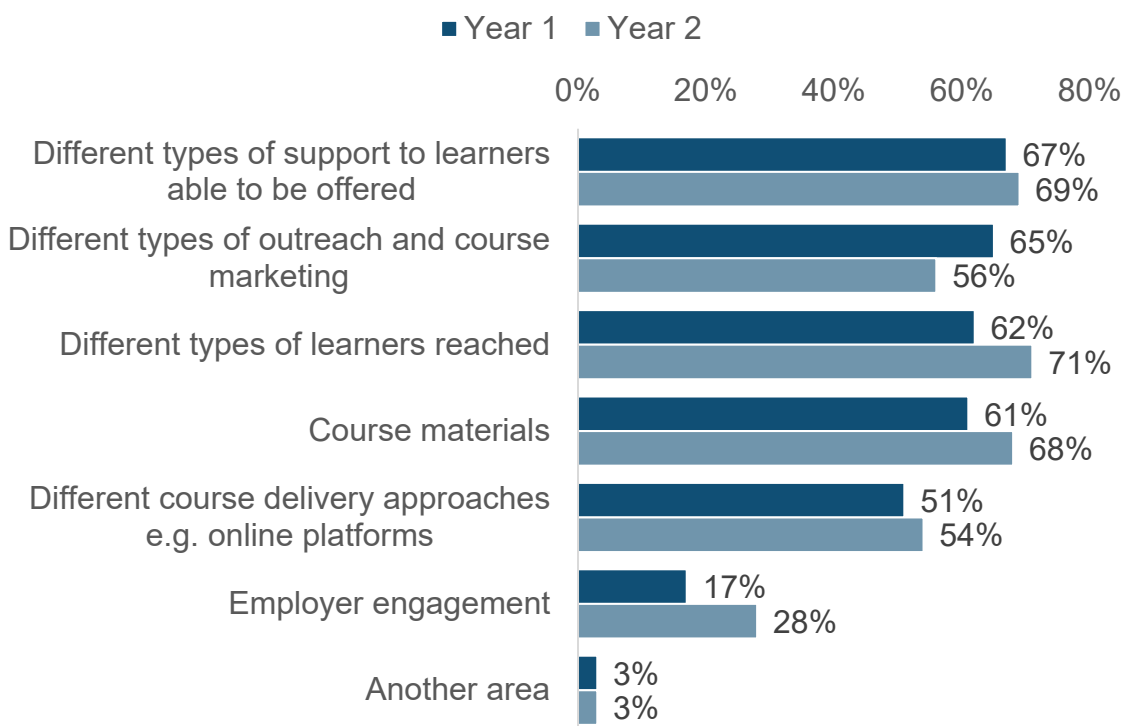


Which of the following have you done whilst delivering Multiply provision between [April 2022 and March 2023 / April 2023 and March 2024] that you haven't done previously when delivering other maths or numeracy courses?

Source: Practitioners survey. Base (Practitioners who had taught Multiply courses and had previous numeracy teaching experience): Year 1 (32); Year 2 (47)

Figure 86 shows perceptions of innovation from the providers survey. Among providers, most responding to the survey said there had been innovative approaches or techniques used as part of their Multiply courses that they had not used before elsewhere (69% in Year 1, 85% in Year 2). The most common forms of innovation reported were different types of support offered to learners (67% of those who reported seeing some innovation in Year 1, 69% in Year 2), different types of outreach and course marketing (65% in Year 1, 56% in Year 2), different types of learners reached (62% in Year 1, 71% in Year 2), and new course materials (61% in Year 1, 68% in Year 2). Innovation in engagement with employers was less commonly mentioned, especially in the first year of the programme (17% in Year 1, 28% in Year 2).

Figure 86: Types of innovation reported by learning providers



Which of the following areas have you seen innovation in?

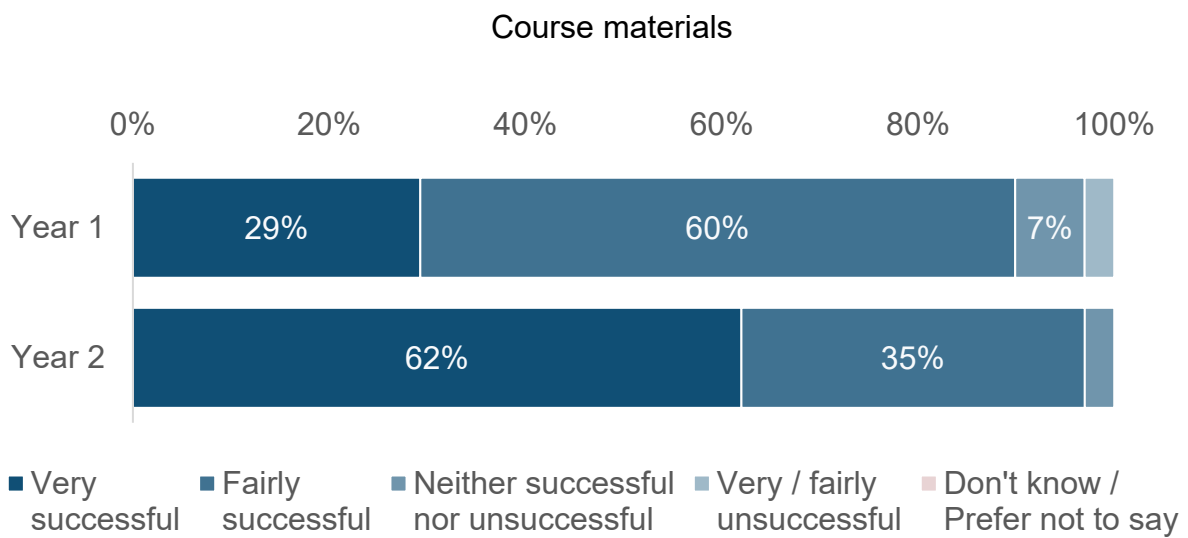
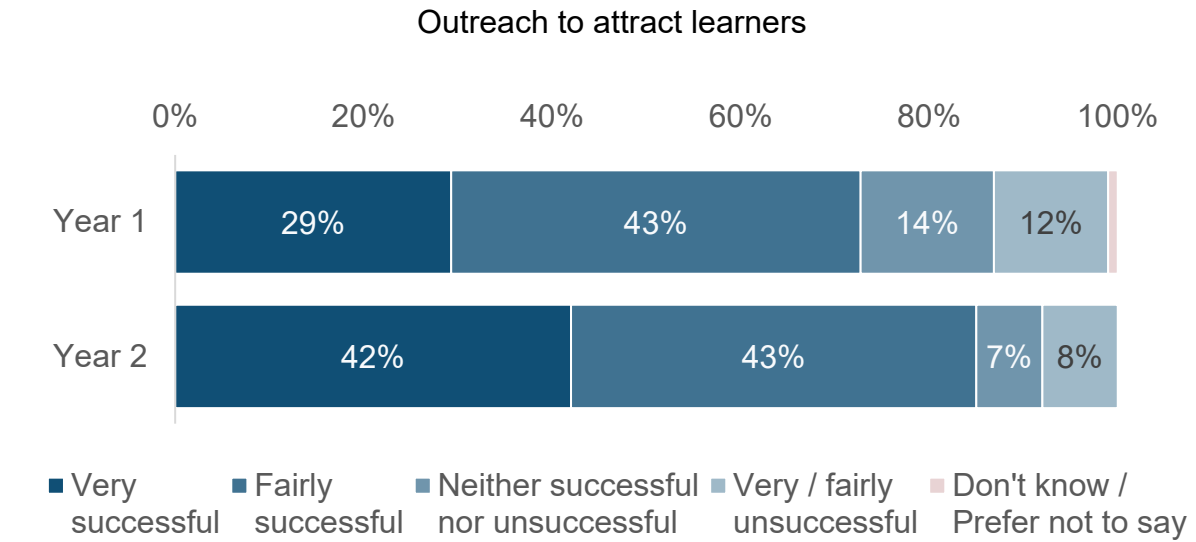
Source: Learning providers survey. Base (Providers who said they had seen some innovation): Year 1 (107); Year 2 (132)

In the survey of providers, respondents were encouraged to give further description about innovative approaches and techniques. Respondents described bespoke approaches for those with learning difficulties, applying learning to everyday contexts including employment, and outreach to engage hard-to-reach groups.

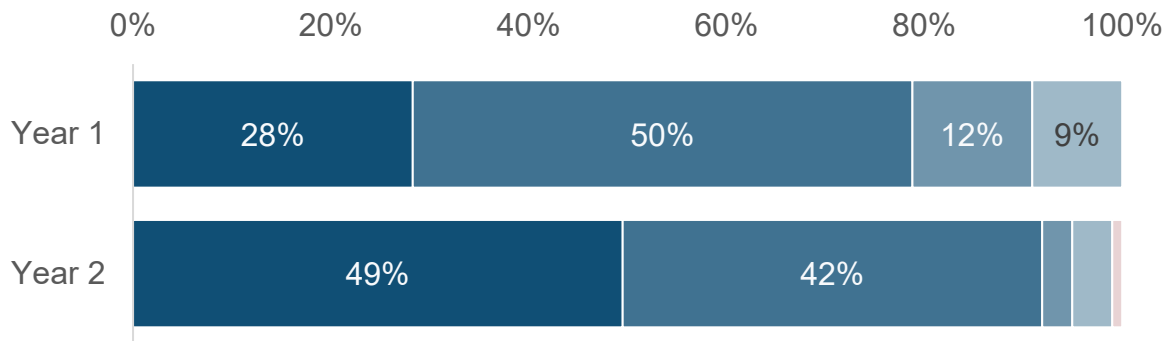
Providers were asked to provide information on the types of tailoring they attempted for outreach, course materials communications to learners, teaching technique and course content. Across these elements, respondents most commonly reported tailoring provision to attract learners without formal numeracy qualifications, those unemployed or not working, those who need assistance in managing their money, and parents.

Of the respondents who reported tailoring support in these areas, the vast majority considered these efforts to successful, especially in Year 2 (Figure 87).

Figure 87: Provider perceptions of the success of tailored support

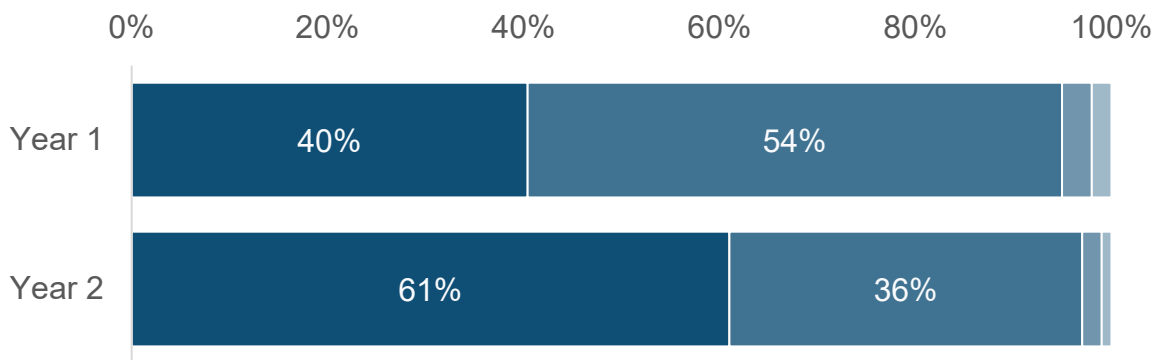


Communication to learners

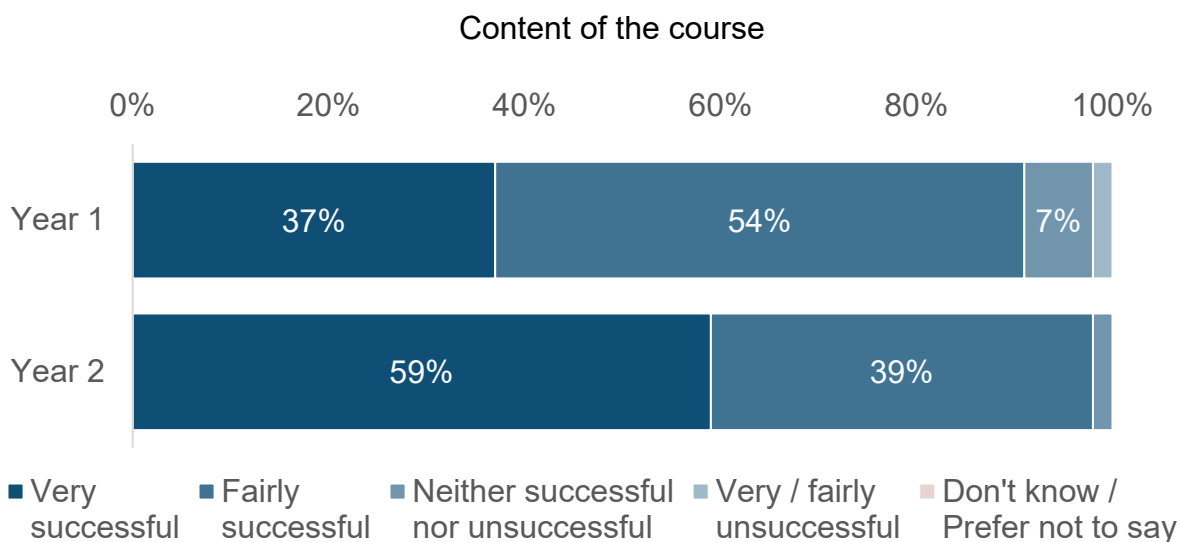


■ Very successful
 ■ Fairly successful
 ■ Neither successful nor unsuccessful
 ■ Very / fairly unsuccessful
 ■ Don't know / Prefer not to say

Types of teaching technique used



■ Very successful
 ■ Fairly successful
 ■ Neither successful nor unsuccessful
 ■ Very / fairly unsuccessful
 ■ Don't know / Prefer not to say



How successful or unsuccessful do you think these efforts to tailor Multiply to different groups of learners have been between [April 2022 and March 2023 / April 2023 and March 2024]?

Source: Learning providers survey. Base (Providers who said each method had been tailored to a specific group): Year 1 (144/149/148/147/148); Year 2 (153/152/150/149/150)

From the local area case studies, local stakeholders reported that Multiply enabled experimentation and innovation, both in terms of content and format of delivery. For example, some areas trialled drop-in models, digital first approaches, or co-delivery with health and wellbeing services. Innovations included:

- community-based, informal and practical delivery
- embedding numeracy in everyday activities
- peer-led models of delivery
- the use of incentives (including vouchers, refreshment, and childcare)
- piloting new commissioning models (such as micro-grants to grassroots organisations)

The use of incentives was cited as a key enabler of engagement, particularly for learners facing financial or logistical barriers.

Some local areas used Multiply to pilot new commissioning models, including micro-grants to grassroots organisations and co-design with community partners. This helped to build delivery capacity in areas with limited adult learning infrastructure.

Tailoring content to individual or group needs was repeatedly cited as innovative. Examples including adapting delivery for learners with disabilities, language barriers or specific anxieties, and using pre-assessment or ongoing feedback to adjust courses.

The scale of Multiply funding meant that some providers were able to offer some one-to-one support. This kind of support was considered an innovation as it would not usually be feasible on AEB funding. It was thought to be very effective for people with anxiety about numeracy or with complex needs.

Areas also cited barriers to innovation. Specifically, administrative requirements, short funding cycles, and the inability to roll over underspend were thought to have been barriers to further innovation. Other barriers referenced in specific areas included:

- lack of funding and staff capacity, meaning that some interested schools could not take part in a programme because of tutor shortages
- difficulty engaging certain communities, especially during busy periods or where trust needed to be built
- challenges reaching learners with disabilities due to limited accessible outreach channels

It must also be noted that local areas, practitioners and providers may have had different views of what constitutes 'innovation'. Practices that one local area, practitioner or provider regarded as innovative may not have been described as such by others, depending on what previous experiences individuals or organisations may have had.

5.2.1 Examples of innovation

In the last year of Multiply, local areas, practitioners, and providers were invited to submit examples of practice, delivered as part of Multiply, which they considered to be particularly innovative or impactful. The purpose of this was to support shared learning across the sector. This bank of practice is available through the Association of Colleges website ([Promising practices data bank: Adult... | Association of Colleges](#)).

Examples of innovation: Embedding numeracy in non-traditional settings

In “Sports with Numbers” (Hertfordshire County Council), numeracy was integrated into sports and physical activities, embedding maths into scoring systems and games. This approach drew in learners who were anxious about maths, making learning accessible and enjoyable. The initiative was delivered in diverse venues (classrooms, sports halls, fire station yards) and tailored to different groups, including those with disabilities and asylum seekers. The adaptability and bespoke nature of delivery were seen as crucial aspects of innovation.

Examples of innovation: Targeted, community-based and partnership approaches

In “Unlock your Potential” (Central Bedfordshire Council), a 6-week course was developed in partnership with the charity Emmaus, focusing on people who were homeless or at risk of homelessness. The course combined money management, employability skills, and numeracy, tailored weekly to learner needs. Building trust with a hard-to-reach community and co-designing content based on learner feedback were seen as innovative practices.

“Summer Spectacular” (Norfolk County Council) was a summer programme for families in socio-economically disadvantaged areas, embedding maths into themed activities, cooking, and games. The use of “soft maths” in engaging, non-formal settings and strong school partnerships were key innovations.

Examples of innovation: Upskilling the workforce and peer support

In Hampshire County Council, a course was developed focused on Teaching Assistant (TA) training. This course involved delivering maths upskilling to TAs on INSET days, using ex-primary teachers as tutors. The initiative addressed a gap in TA training, focused on building confidence, and provided practical resources. Flexibility in delivery (e.g., twilight sessions), co-design with schools, and peer learning among TAs were highlighted as innovative.

The Grace Eyre Foundation, a charity supporting people with learning disabilities and autism, developed a training initiative for staff to become “numeracy champions”, supporting learners with disabilities in everyday maths. This peer-support model was seen as a way to sustain impact beyond the course itself.

5.3 Implementation of Multiply

This section describe how Multiply was implemented from the perspectives of local areas, providers and employers. The evidence in this section comes from a combination of the local area case studies, and the surveys of LAs, employers and providers.

5.3.1 Ease of implementation

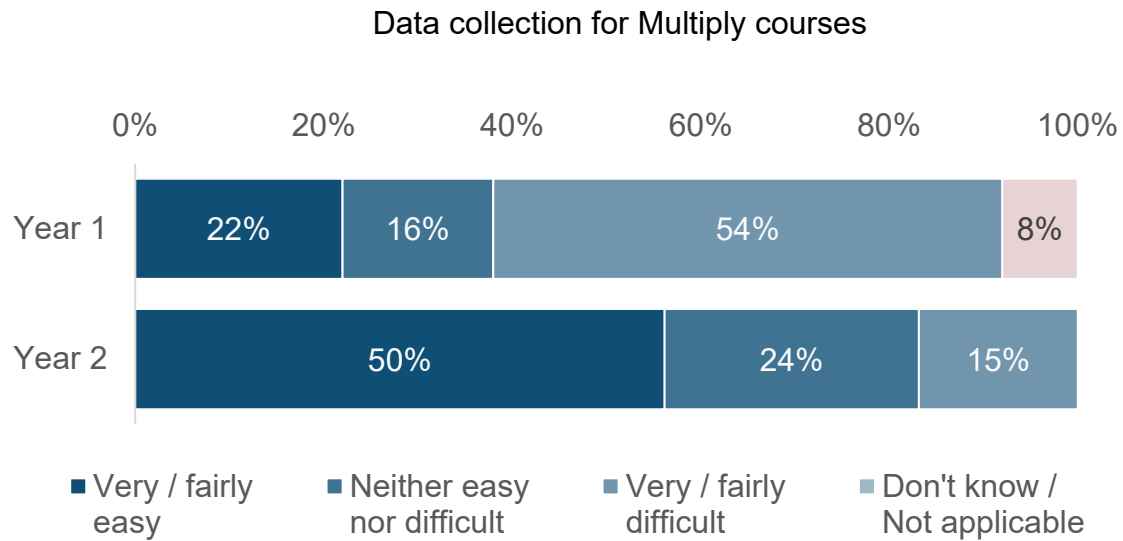
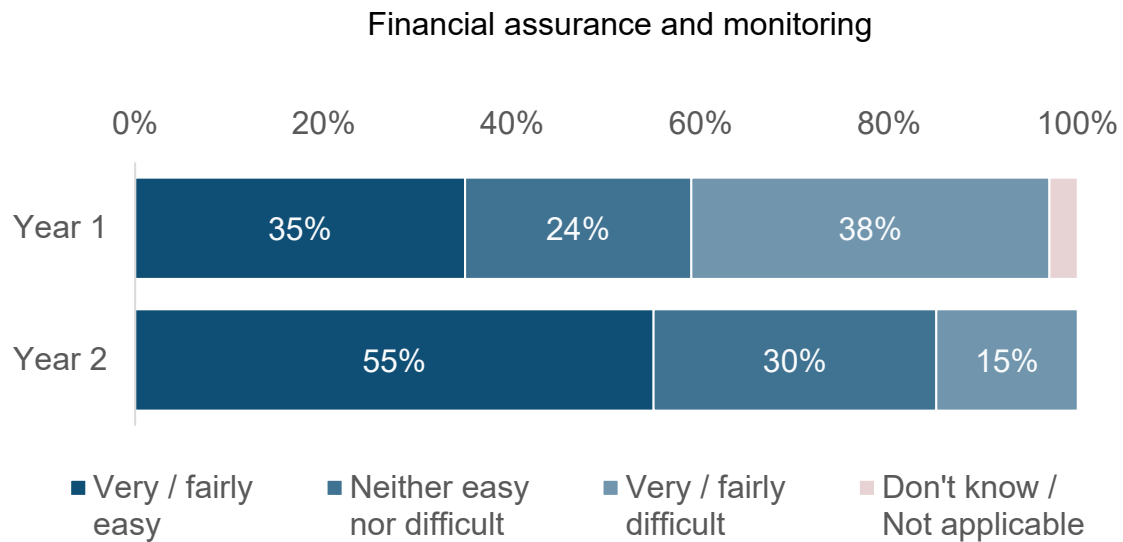
Many local areas responding to the survey initially reported difficulties in financial assurance, data collection and sub-commissioning in Year 1. However, as shown in Figure 88, there is some evidence of an improvement in experiences by Year 2, especially regarding data collection, with a higher proportion of responding LAs saying they found these elements easy.

In Year 1, around a third of local areas responding to the survey (35%) said they found financial assurance and monitoring (such as monitoring compliance with funding rules) easy and a similar proportion (38%) said they found it difficult. By Year 2, the proportion of respondents saying they found financial assurance and monitoring easy had risen to 55%, with the proportion saying they found it difficult falling to 15%.

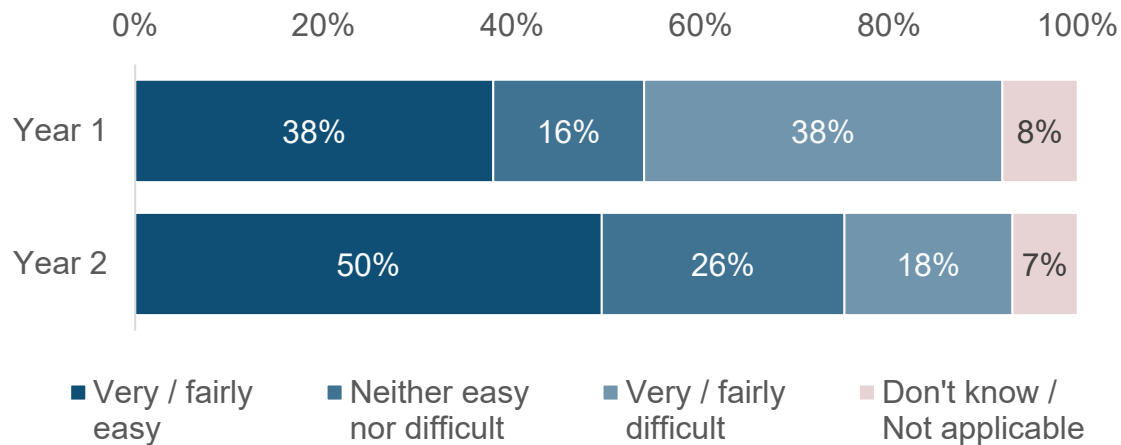
In Year 1, around a fifth (22%) of responding local areas said they found data collection for Multiply courses (such as submitting data to the ILR and tracking KPIs) easy and over half (54%) said they found it difficult. By Year 2, the proportion of respondents saying they found data collection easy had risen to 50%, with the proportion saying they found it difficult falling to 25%.

In Year 1, around a third (38%) of responding local areas said they found commissioning organisations to deliver work easy, with the same proportion (38%) saying they found it difficult. By Year 2, the proportion of respondents saying they found data collection easy had risen to 50%, with the proportion saying they found it difficult falling to 18%.

Figure 88: Local area perceptions of ease in different aspects of delivering Multiply



Commissioning organisations to deliver work



How easy or difficult did you find the following aspects of delivering Multiply in the first/second financial year of the programme?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

On the whole, the quantitative data from the local area surveys indicated that local areas found that implementation got easier as the programme was more established.

The case studies provided further evidence about experiences in implementing Multiply, described in the rest of this section.

Financial assurance

Case study areas said they tended to carry out monitoring activities on a monthly or quarterly basis. This involved collecting reports and invoices from learning providers to monitor financial spend and conducted audits to check that expense claims constituted eligible expenditure.

In some cases, areas requested detailed breakdowns of the costs for delivering each intervention. For example, one area requested cost broken down by:

- Teaching staff
- Support staff
- Awarding body set up costs
- Internal and external verification
- Qualification registration costs

- Continual professional development costs
- Venue hire
- Teaching resources
- Travel
- Marketing and publications
- Staff recruitment
- Digital equipment

Data collection

Local areas and delivery partners widely reported that data collection requirements were burdensome.

For local areas, some found the data requirements confusing (such as the difference between outputs and outcomes) and felt it lacked clarity as they were not sure of the purpose of the data. There was a sense that, if they knew that data would lead to valuable insight to improve future activity, the administrative burden would be more palatable.

“Given the level and volume that we’re looking at, it just feels like people are asking for data because they don’t really know what data they really want.” – *Local area case study interview*

Additionally, there was a perception that the amount of administrative work required was not proportionate for some of the shorter courses and risked taking the focus away from the impact on participants.

“One of the challenges has been, this is quite a short, sharp intervention, but actually the paperwork can take longer to fill out than almost the whole course.” – *Local area case study interview*

Learning providers generally did not seem to consider the process of collecting data too challenging as they already had experience of collecting data for other contracts. In fact, there was a perception that other funding streams (such as European Union funding) were more cumbersome in the evidence required. However, local authority stakeholders and learning providers themselves reported that providers struggled with meeting deadlines.

Local area stakeholders reported that their data requirements may be a barrier for providers, especially the smaller ones. Since the ILR is set up for learning providers to directly submit their data to central government, rather than going via the local authority, they worried that some learning providers might not be used to uploading ILR data on a frequent basis, or that their focus on recruiting learners might take time away from tasks like uploading data.

To help learning providers, local authorities had created templates and guidance documents, or met learning providers to offer support. It was felt that smaller learning providers struggled more than larger ones due to less internal capacity, creating some tension between the fact that these smaller (often voluntary) organisations were best placed to engage the hardest to reach learners but required extra support.

“It’s a bit of a double-edged sword...because if we really want to get into communities, and we really want to get to the most vulnerable people in certain cases, as well as having the universal offer, we do need to be prepared to work with some of the smaller recipients. But [with that comes] the support needs that we need to manage.” – *Local area case study interview*

One provider felt that the amount of data and the length of time required from learners was a barrier to learner engagement. They highlighted that for someone who is unemployed and not used to administrative work (and for whom it might be a huge step just to turn up), it is daunting to be asked for that amount of information and was the main thing that put them off. Some learners, for example, did not have the appropriate information to hand (for example they had various addresses and did not know their postcodes).

“With the amount of data we require, I think it’s the number one thing that puts people off, and I can’t see a way around it, because we need that information, and we won’t be paid unless we’ve got it...Some tolerate it and get through it, others haven’t got the resilience.” – *Local area case study interview*

For employers, they tended to collect feedback for employees after delivering Multiply courses, but data collection was rarely mentioned. In contrast to insights from local areas, where data collection was discussed, it was not mentioned as something onerous.

Sub-commissioning

There was some direct delivery of courses from local authorities among the case study areas but most areas commissioned partners to deliver Multiply. Existing relationships were seen as helpful in delivery because an understanding of organisations had already been established. For example, one case study area described splitting delivery evenly between the local area and delivery partners during the first 2 years of Multiply, before moving to a 60:40 split for year 3 after they were able to refine their in-house offering and established a clear internal process flow for delivery. Another case study area also spoke about direct delivery in the context of them being a combined authority and giving agency to their local authorities to decide how to approach delivery:

“So they're [interventions] being delivered by our local authorities and they're either doing direct delivery or they've commissioned out to their delivery partners because they are best placed in their local area to understand the areas of need. [...] That's for the local authority to decide how they deliver it. [...] Once the delivery plans have been agreed with the local authorities, it was then up to them to decide if they were going to do direct delivery or if they were going to commission that out to their delivery partners in their local areas.” – *Local area case study interview*

Stakeholders suggested that resources and capacity issues were key factors influencing delivery of commissioned partners. One stakeholder felt that Community Learning providers were key to success as they are often in the best position to engage with learners:

“We find they're [sub-contractors] best placed within their own communities to engage with people who look like them, sound like them, and understand them, in terms of being able to deliver any programme.” – *Combined Authority case study interview*

In some local authorities, funding was allocated to delivery partners who in turn subcontracted out the actual delivery. For example, one County Council allocated funding to 4 organisations, 2 of which sub-contracted out to other organisations and were responsible for monitoring them and reporting to the local authority. This council reported that it was helpful to only deal with 4 learning providers because it made it easier to communicate, and limited the amount of administration required.

Similarly, another local area highlighted some learning around the number of providers engaged: they had 11 providers and had seen that some were dropping interventions

because they were competing with other providers picking learners from the same pool, and so could not get the uptake they needed.

Some stakeholders highlighted that local areas were having challenges around the provider selection process. The tension between timelines and the time and effort it took to make decisions around procurement methods was highlighted as problematic, as well as delays caused by contract processing and management.

Where employers commissioned Multiply programmes from learning providers, there was mixed success. Out of the small number of interviews with employers, one felt that the provider had not understood the context, needs and numeracy level of their workforce and had delivered a course that was not suitable. Another was very positive about commissioning an external provider after having done this using Multiply funding for the first time.

Knowledge sharing

Local areas held meetings to share knowledge among stakeholders. They varied in regularity, with some holding one-off workshops while others held bi-monthly ones. Having all learning providers attend these and sharing experiences of what works was seen as valuable for delivery. Some also discussed sharing newsletters including case studies and information from DfE.

While there were processes in place for sharing knowledge within areas, knowledge sharing between areas appeared to be lacking. However, there was an appetite for this: in the first year of the programme, one area mentioned that another area had sent an invite to all areas about sharing best practice for Multiply and was very positive about this idea, while another area expressed wanting to see sharing of good practice between areas, in particular in regard to communications.

“It feels like, from comms and Multiply, everywhere is struggling, but nobody is necessarily sharing their best practice.” – *Local area case study interview*

5.3.2 Unintended consequences and wider benefits

Across the qualitative workstreams, unintended consequences were identified as a result of the activities of Multiply.

In some areas, several providers targeted the same learner groups with their courses and communications. This led to unexpected competition between providers, with

efforts being duplicated. This not only caused inefficiencies, but also confusion for learners. This occurred mostly in the earlier stages of the programme, when providers did not have full understanding of other providers' offers. The provision of peer learning opportunities between providers to share their offer mitigated this. One local area instigated a 'community education network' for key stakeholders and partners to ensure addressing education gaps was done collaboratively.

Across the first year of Multiply, there were strict eligibility rules on which learners qualified for courses (up to a Level 1 qualification in maths). After 1 year of delivery a qualifier was included to allow learners with L2 qualifications in maths to take Multiply courses. Whilst this was seen to be a positive development by local area stakeholders, allowing more potential learners to benefit from Multiply, the initial eligibility rules caused frustration for ineligible learners and lead to missed opportunities. Motivated learners were turned away across the first year of Multiply due to having L2 maths qualifications, when in later years of the programme they would have been eligible.

A range of positive unintended consequences were wider benefits that learners felt from taking part in Multiply courses. Multiply led to increased community engagement, improved social skills and reduced isolation. Some learners progressed to volunteering, community roles, or further learning beyond the intent of improving levels of numeracy.

5.3.3 Delivery successes and areas for improvement

The local area case study interviews suggest there was considerable variation in whether learning providers had met targets in uptake. Some stakeholders praised Multiply's ability to reach hard-to-engage learners and work alongside existing AEB provision, while others reported that maths had been a hard sell initially and the programme was a slow burner. However, there were consistent themes around what worked well and less well.

Linking learning with practical, real-life situations was considered important. A key learning was around the effectiveness of delivering maths in a way that did not seem like maths and could be applied to real-life situations. Using Multiply to fund "bolt on courses" where they could embed a mathematics component into an existing vocational course was thought to be effective because it hid the fact that it was maths, was bite sized and often prepared learners for later working life (for example helping them to complete self-assessment tax returns if becoming self-employed). Courses that were relevant to daily life and addressed common concerns (such as budgeting courses, which seen as particularly relevant during a cost-of-living crisis) were seen as being very popular.

“With construction, they do pre courses and might bolt a small numeracy course on, which is great...it’s that bite size and building up to the numeracy by stealth element. That’s worked really well in the colleges.” – *Local area case study interview*

Further, learning providers reported that the ability to put on ‘taster’ courses or short courses were seen as effective in overcoming barriers to learner participation. Short courses were also seen as a good starting point to build up to further learning.

“If you asked people to come for 7 hours on their first day, and continue, they probably wouldn’t.” – *Local area case study interview*

On the other hand, the biggest challenges were related to delivering to employers (discussed further in section 5.1 of this report) and some learner groups.

For example, some learning providers had struggled with engaging parents. They felt that that some parents find it difficult to admit they do not currently have the skills to help their children or feel that it is not their role to help their children with homework but rather the teacher’s job. Some of the interviews with learners who did not complete their course conducted in Year 1 were parents who lacked childcare support and so found it more difficult to find the time to engage with Multiply courses. Learning providers also felt that delivery to this group was challenging because of operational difficulties, including the fact that several meetings with schools were required to get started. Additionally, bespoke training was needed as provision had to cater to specific year groups. For example, one school’s parents might need help with year 6 SATs while another school wanted year 2 parents involved. These challenges were further compounded by the fact that Multiply provision was often being launched near the end of the academic year.

Delivery to care leavers was also identified as a challenge for some learning providers, as there was a gap between individuals leaving care (at 18) and being eligible for a Multiply course (at age 19+).

For some employers, engaging their employees was challenging because in addition to the stigma around adult learning and possible feelings of anxiety around learning, some employers felt that there was an additional layer of vulnerability for employees to admit skills gaps to their employer. In practice this often had to be countered by personally approaching employees and asking them whether they would like to take part. There were also challenges around logistics and timing as working adults often had other

commitments related to childcare or additional jobs which made it more difficult to commit to an additional learning programme.

Employers incentivised employees in various ways: some were offered to do the course during working hours, essentially being paid to attend; some offered free food at the sessions; and, others were told about the benefits that taking part could have. It is not clear whether these costs were borne by the employer or whether they were reimbursed via Multiply funds.

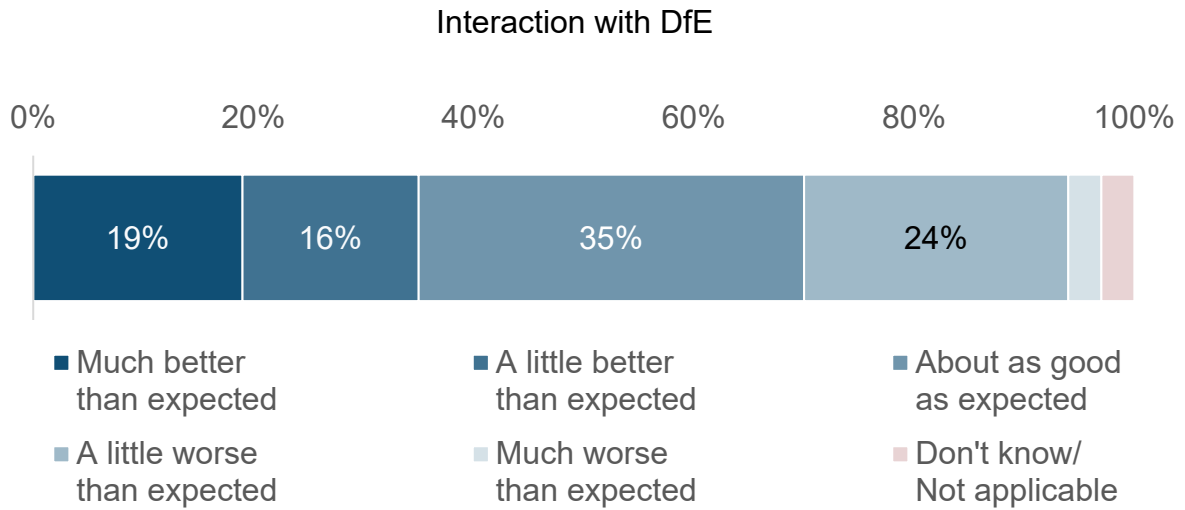
“To start with, some of them weren’t keen on doing the course, because it was like to them, being back at school or college, and that is not what they like doing. [...] If they don’t have to do something, they won’t do it, unless they really want to”. – *Employer interview*

5.3.4 Interactions with central government

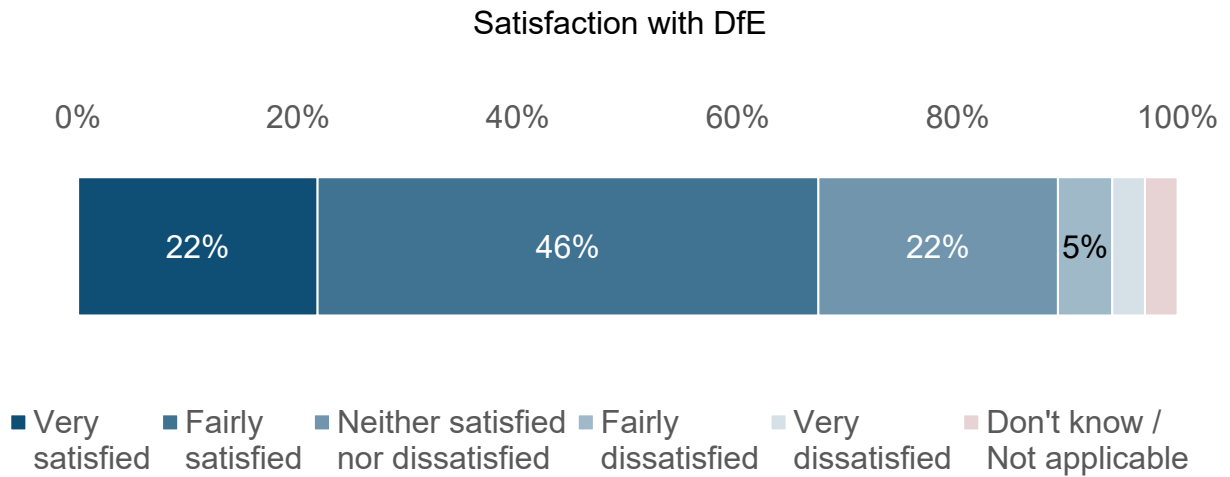
As shown in Figure 89, in Year 1, a third of local areas responding to the survey (35%) said that interacting with DfE was better than expected, while 27% said it was worse than expected. The majority of LAs (68%) also reported being satisfied with their interactions with DfE.

There was some improvement in interactions with DfE. As shown in Figure 90, in Year 1, around half of surveyed LAs (54%) agreed they had received timely support or guidance from DfE when needed, while 16% disagreed. By Year 2, this had increased to almost all surveyed local areas (94%), with no responding local area disagreeing.

Figure 89: Local area expectations and satisfaction with DfE



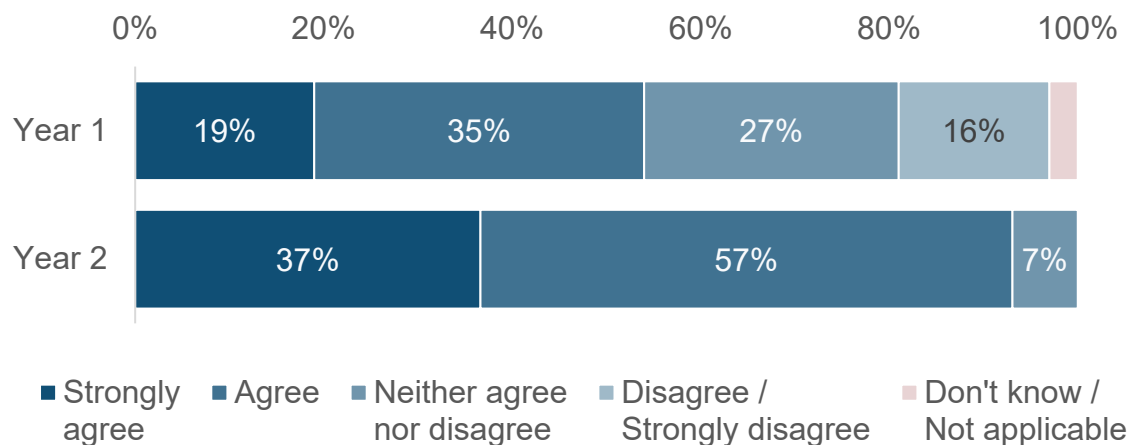
Thinking about each of the following, how did these compare with your expectations before Multiply began? Interacting with DfE



How satisfied or dissatisfied are you with the following aspects of Multiply? Interacting with DfE

Source: Local area survey, Year 1. Base (local areas participating in Multiply): 37. Notes: Question not asked in Year 2

Figure 90: Local area perceptions of support and guidance provided by DfE

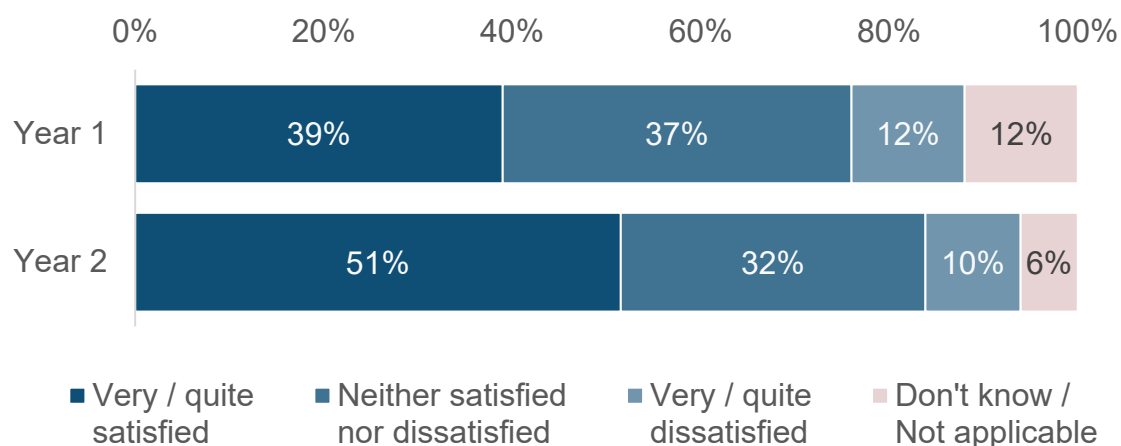


To what extent do you agree or disagree with the following statements regarding support for delivering and funding Multiply? I have received timely support or guidance from the DfE when I needed it

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

As shown in Figure 91, among providers responding to the survey, views on communication with DfE were mixed. In Year 1, around 2 in 5 (39%) of responding providers said they were satisfied with the communication from DfE about Multiply, and about 1 in 10 (12%) said they were dissatisfied. In Year 2, these figures were 51% and 10% respectively.

Figure 91: Learning provider perceptions of communication with DfE



How satisfied or dissatisfied were you with the following aspects of Multiply between [April 2022 and March 2023 / April 2023 and March 2024]? Communication from DfE about Multiply

Source: Learning providers survey. Base (Learning providers participating in Multiply): Year 1 (149); Year 2 (156)

In case study interviews, stakeholders generally felt that DfE were open and responsive in their communication. Stakeholders cited the responsiveness, flexibility and collaborative problem-solving of their DfE contacts as key features of this engagement. Several felt that DfE showed an interest in learning for local areas and working with them to problem solve. For example, the one case study lead mentioned that they had approached DfE with their problem with procurement and that DfE had challenged them to think creatively and helped to lead them to a solution of using waivers. This case study lead had worked on programmes with other government departments and compared the experience to Multiply, reporting that this relationship with DfE had been much more trusting and collaborative. Another area also expressed that DfE had been supportive and interested in allowing off-menu interventions.

“They really challenged us to think more creatively in a constructive way, because we presented to them our predicament with regard to procurement in the first year, and they came back with a solution.” –
Local area case study interview

However, several felt that although DfE were responsive, interactions were marred by a lack of certainty. It was reported that DfE staff often did not have the required information to answer local authority queries, thus hindering progression and sometimes leading to underspend. There was a perception at the start of the programme that DfE were learning about Multiply at the same time as case study areas and lacked a clear strategy.

Additionally, there was a perception among case study areas during the first year of the programme that DfE did not fully understand or cater to their local structure. One combined authority said they felt that DfE did not understand the distinction between combined and local authorities and treated them as if they were a provider of learning themselves, while another area felt it should be treated differently to other areas because of its devolution with AEB.

There were also suggestions that DfE could have helped more with creating certainty around budgets and quality expectations, for example, whether Ofsted would be involved.

“Without being completely negative, it’s been really hard, although the individual people have been very supportive...they keep changing the goalposts, but I think in fairness to them, it’s been a complete and utter learning curve for them as well.” – *Local authority case study interview*

A similar point was made by a combined authority, who felt that the lack of guidance was difficult, but in some ways had given more flexibility and autonomy for local authorities to provide provision that is tailored to local need.

“You could argue the lack of strategy has been beneficial because it’s supported localism, and therefore a really open relationship. Or you could argue that the lack of strategy has meant that actually our relationship with our DfE lead could only have been loose, because they’ve not received the necessary guidance to manage us in any other way.” – *Combined authority case study interview*

There were recurring frustrations throughout the programme around missed opportunities for national promotion and guidance. Several areas highlighted the absence of a national communication campaign or best practice resources at the start of the programme. These were considered barriers to engaging effectively with learners.

Finally, a major concern across areas towards the end of the Multiply programme was the lack of clarity on funding beyond March 2025, which was seen to have hindered long-term planning and created uncertainty for staff retention and programme continuity. Stakeholders in both local areas and delivery partners expressed worry about the sustainability of Multiply-style provision without continued investment. Many feared losing staff and momentum, particularly in smaller organisations that had come to rely on Multiply funding. There was a strong consensus that the need for community-based numeracy support remains high, and that future funding should build on Multiply’s successes rather than allow them to dissipate.

5.4 Alignment with broader policy priorities

This section considers how the Multiply programme aligned with other policy priorities, especially the role of employers and workplace support, and the relationship between Multiply and AEB. The evidence comes from a combination of the qualitative case studies and the surveys with providers, practitioners and employers.

5.4.1 The relationship between Multiply and AEB

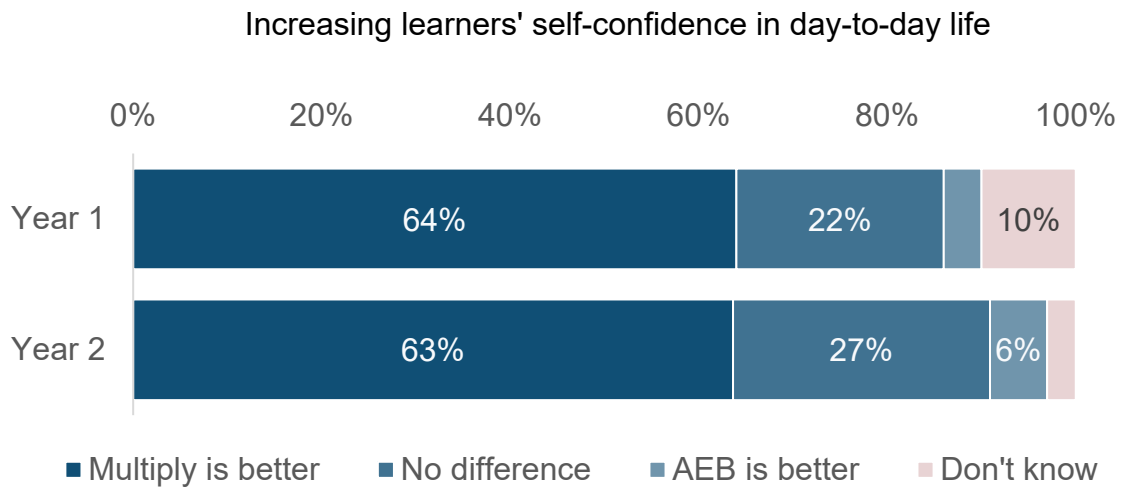
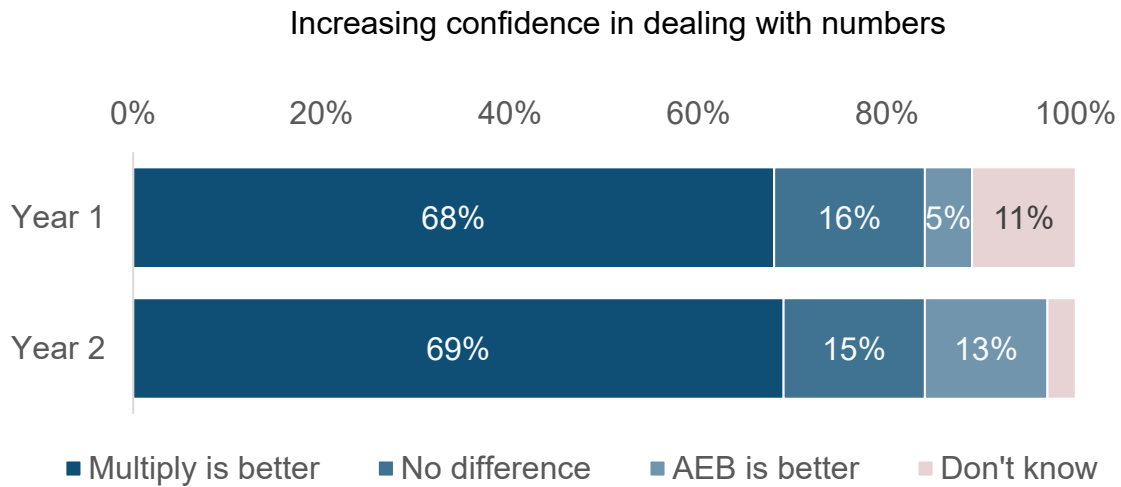
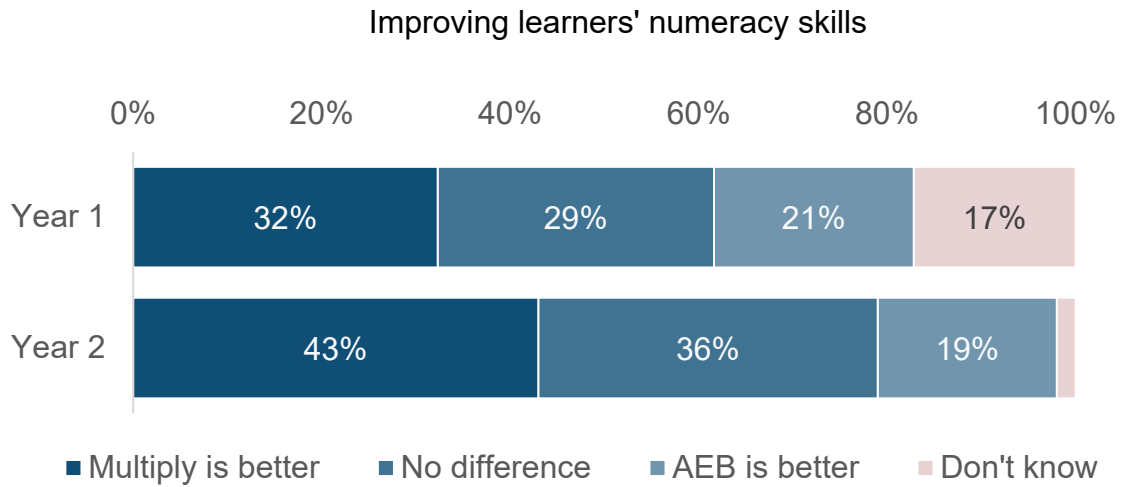
As presented in Section 2, there were key differences across Multiply and AEB numeracy courses. Multiply courses were often shorter in length, and very few were accredited, compared to AEB numeracy courses that were longer, and were almost always accredited and ended in a qualification. To reflect this difference, and the fact that Community Learning was also funded through the AEB, these courses are referred to as AEB (qualification) numeracy courses in this report. In the survey questions discussed in this section, 'AEB' is used as a shorthand.

Providers responding to the survey generally said that Multiply was better than AEB²⁷ for increasing learners' confidence with numbers (68% compared with 5% who said AEB was better in Year 1, and 69% compared with 13% who said AEB was better in Year 2) and for increasing learners' self-confidence in day-to-day life (64% compared with 4% who said AEB was better in Year 1, and 63% compared with 6% who said AEB was better in Year 2). (Figure 92). This may reflect a perception that the flexibility in the design of Multiply courses meant these courses were more tailored to the needs of the learners local areas were targeting.

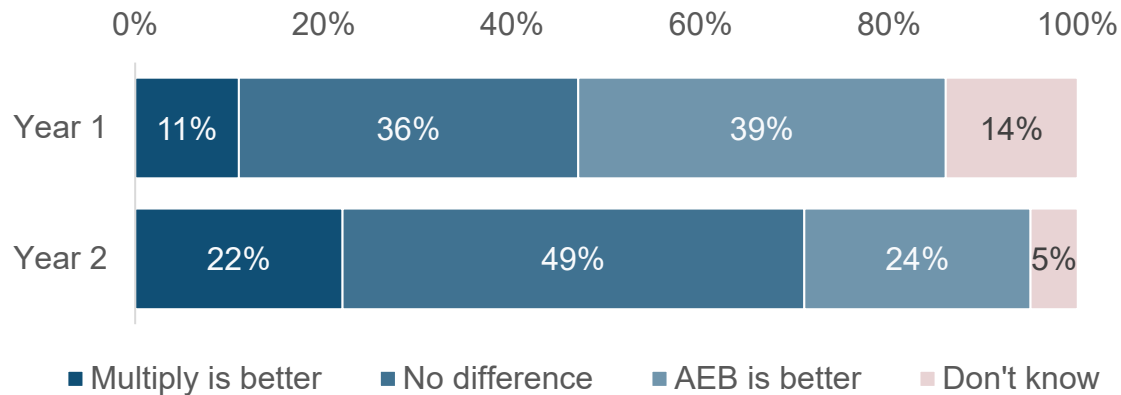
However, in Year 1, providers said that AEB was better for improving the quality of maths teaching at Further Education level (36%, compared with 11% who said Multiply was better). Multiply and AEB were more evenly considered in Year 2, with 22% of responding providers saying Multiply was better for improving the quality of maths teaching in Further Education, compared with 24% saying AEB was better.

²⁷ As highlighted previously, the ASF replaced the AEB in the third year of Multiply, however all quantitative surveys with local areas, providers and practitioners only covered the first two years of the Multiply programme.

Figure 92: Learning provider comparisons of Multiply and AEB



Improving the quality of maths teaching at FE level



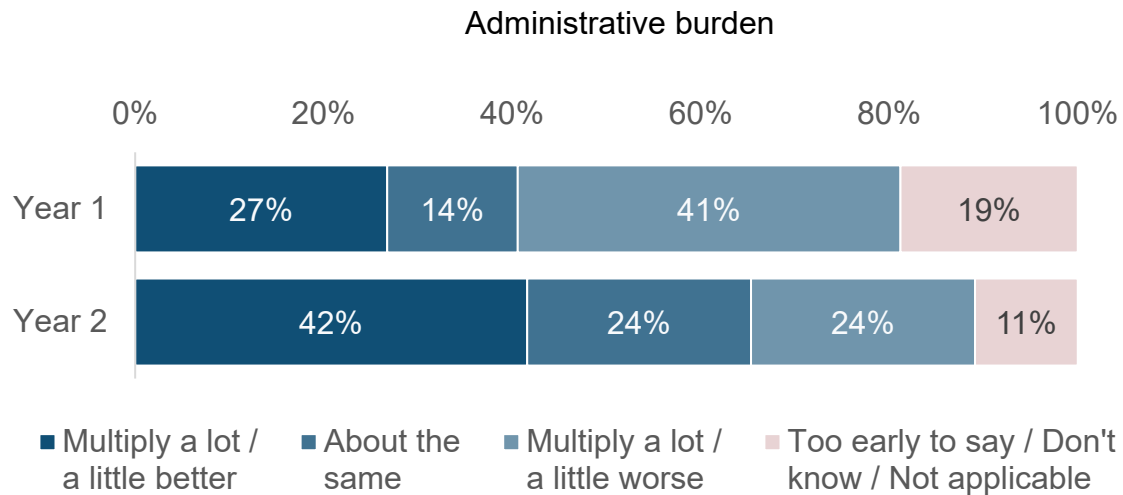
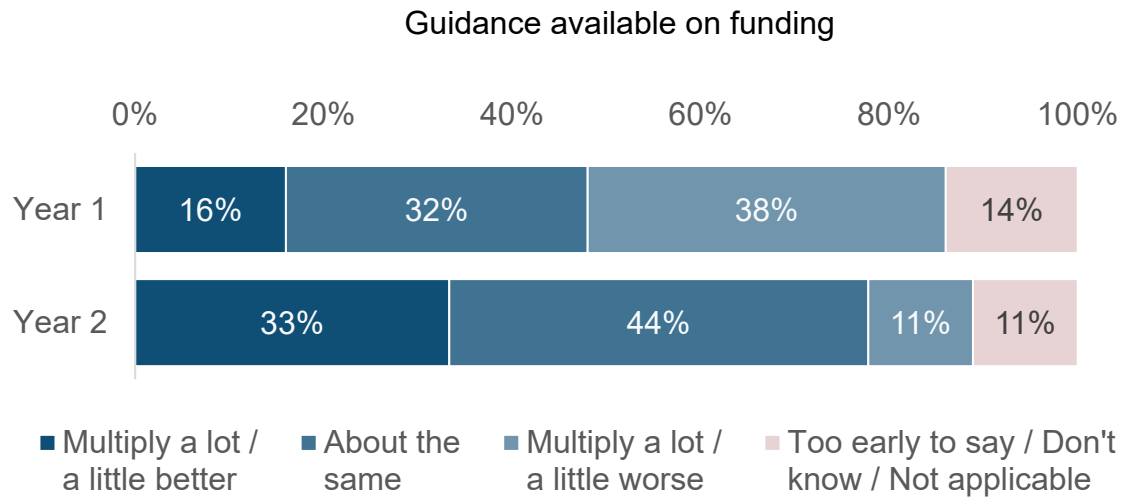
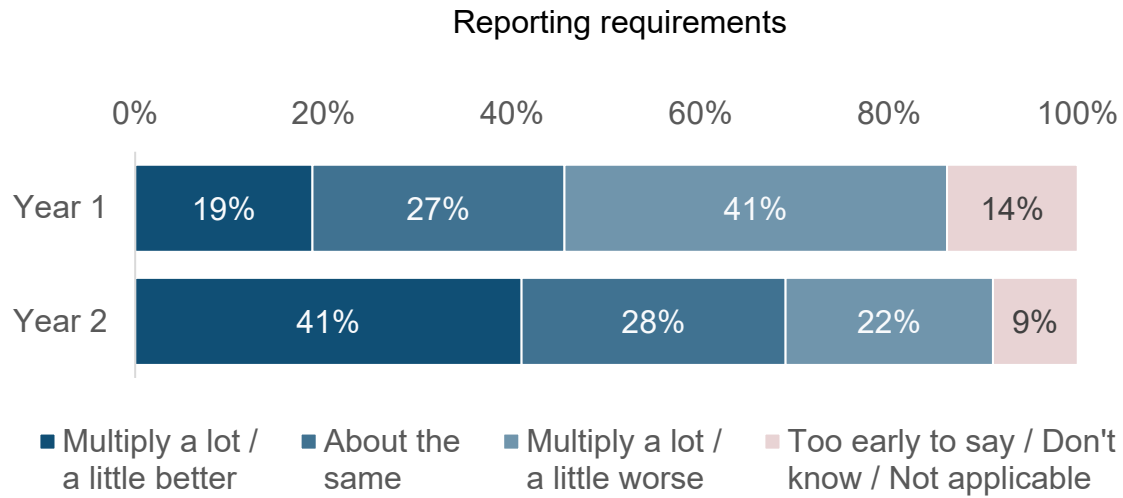
Thinking about the maths and numeracy courses funded by Multiply and the AEB (Adult Education Budget) between [April 2022 and March 2023 / April 2023 and March 2024], which would you say were better at....

Source: Learning providers survey. Base (Learning providers who delivered both Multiply and AEB): Year 1 (89); Year 2 (62)

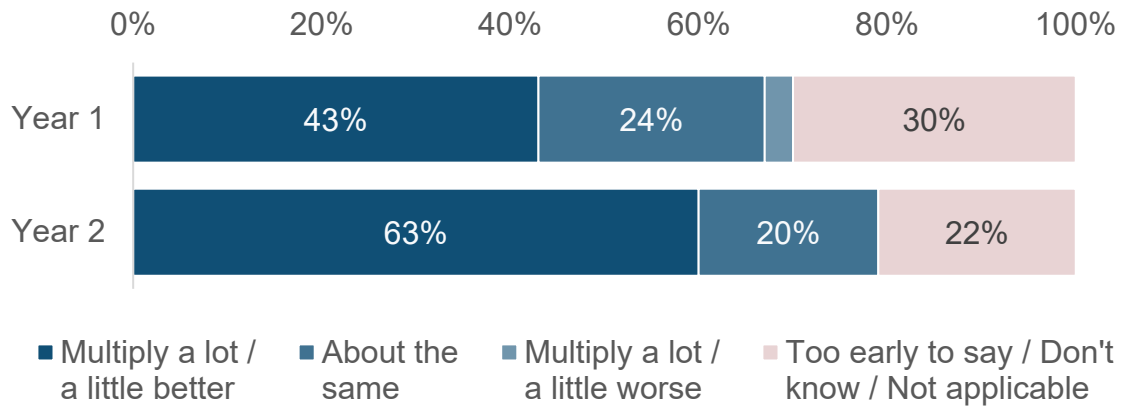
Among local areas responding to the survey, Multiply was considered better than AEB in terms of innovation in delivery (81% saying Multiply was better in Year 1, and 87% in Year 2), impact on learners (43% in year 1, and 63% in Year 2), and lack of duplication with other funding streams (43% in Year 1, and 52% in Year 2). These findings point to the perceived value of Multiply in offering new and effective methods of learning. (Figure 93).

Multiply was generally considered worse than AEB in terms of reporting requirements and administrative burden. However, the proportion saying Multiply was worse decreased between Years 1 and 2 (from 41% to 22% for reporting requirements, and 41% to 24% for administrative burden).

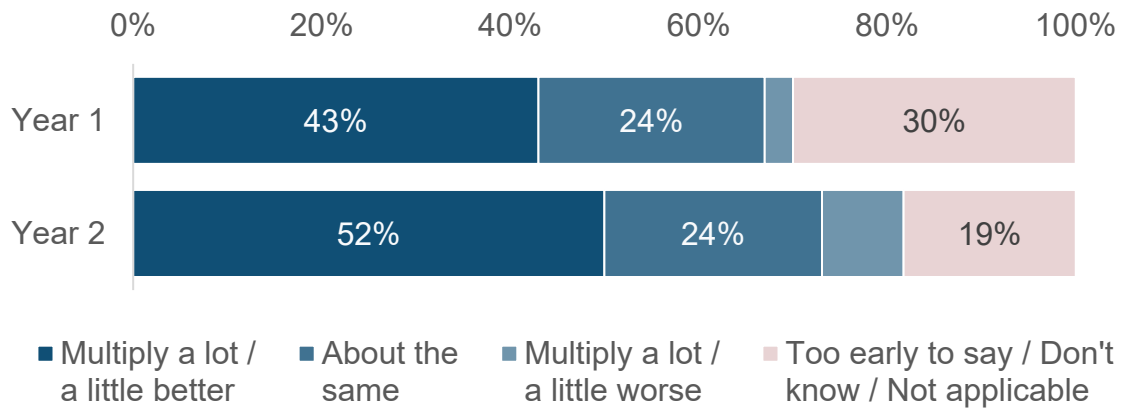
Figure 93: Local area comparisons of Multiply against AEB



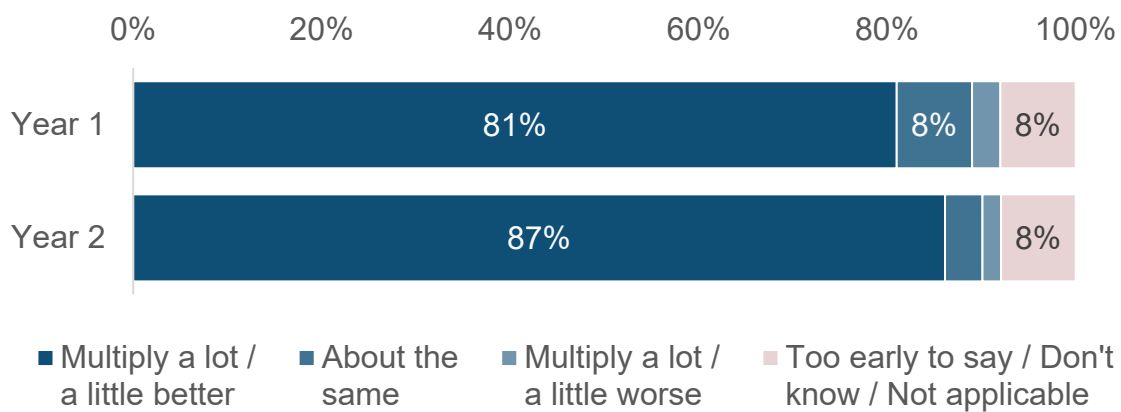
Impact on learners



Lack of duplication between other funding streams



Innovation in delivery



Compared to your experience of working with AEB funding, would you say your experience with delivering Multiply in [year 1, between April 2022 and March 2023 / year 2, between April 2023 and March 2024], has been better, worse or the same for the following areas?

Source: Local area survey. Base (local areas participating in Multiply): Year 1 (37); Year 2 (46)

5.4.2 The role of employers

Employers who engaged with the evaluation generally said they thought the programme aligned with national priorities by improving numeracy and workforce skills, and supporting wider policy goals such as economic growth, social mobility and lifelong learning. These employers observed that Multiply's focus on numeracy addressed skills gaps highlighted in government policy, acted as a stepping stone to further AEB-funded courses, and provided flexible, workplace-specific training opportunities. By offering accessible and relevant numeracy education, Multiply supported employee upskilling, encouraged progression into additional learning, and fostered employer engagement-contributing to broader policy aims in the process.

However, employer engagement was inconsistent and often difficult to sustain. LAs emphasised that employers could not always release groups of their workforce for courses. They also stated that, as part of Multiply, front-line delivery staff were often the most in need of classes but were also the least likely to be released by employers. In some cases, resources were redirected away from employers given the challenges engaging employers in delivery.

Success required the active engagement of employers. Where employer relationships are strong, co-designing bespoke numeracy courses to the role of employees was effective. In one example, a local area worked with a construction engineering company to develop a course to improve the numeracy skills of highway workers. This was identified as a need by the company, and they reached a joint agreement with the local area to trial ways in which Multiply could be delivered in local depots to upskill the workforce. Stakeholders described a positive experience of setting up this course. The company held a meeting where staff could contribute to the curriculum design, which helped ensure the course was designed to meet learners' needs. In addition, clear roles were established early on; the local area delivery team would manage the curriculum design and course delivery, and the employer would identify staff via internal advertising and by directly approaching staff. Leads from the local area and the employer met regularly during this set up period.

6. How efficiently were resources used?

This section presents information about the funding for and spending on the Multiply programme, based on management information provided by the DfE. It then details findings related to the perceived sustainability of the benefits of Multiply following the end of funding in March 2025.

The aim of this section is to document aggregate funding and spending over time, to provide context for the programme and for the impact evaluation. This report does not provide an assessment of value for money or compare the returns to the impacts found in earlier chapters of the report against the costs presented here. This mostly reflects the fact that data was not available at the time of writing to examine the impact of Multiply on labour market outcomes.

These findings are most relevant for the Efficiency (how well did Multiply utilise resources to achieve results?), and Sustainability (will the benefits last?) criteria.

Chapter Summary

The Multiply programme had a total budget of £560 million over 3 years. As Multiply was a UK-wide programme, this total included allocations for Scotland, Wales and Northern Ireland.

Local areas in England were given £82 million in 2022-23 and £94 million in each of 2023-24 and 2024-25 in funding to support flexible and locally tailored Multiply provision. With 288,604 Multiply enrolments over the 3 year period, this implies average spend of about £785 per enrolment. For those who would otherwise have done AEB-funded or Community Learning courses, spending through Multiply would be offset by lower spending on numeracy courses through these other funding streams. For the vast majority of Multiply learners who would not otherwise have undertaken funded learning, the average cost per enrolment provides a good indication of the additional spending that the government undertook.

Patterns of spend changed over time. In the first year of delivery, many local areas underspent against their allocations, potentially reflecting the challenges associated with programme set-up and commissioning. There was large variation in the underspend between different areas in the first year of the programme. On average, this underspend was higher in upper tier local authorities (56% of allocated funding being used) than in mayoral combined authorities (62%) or unitary authorities (72%). It should be noted that local areas had less time to use their funding in the first year of the programme

compared to later years, given funding only went out from October in the 2022-23 financial year.

By the final year of the programme; three-quarters of areas were spending nearly all of their allocated funding (95% or more) in the third year of Multiply, and there was little variation across types of local areas.

In relation to sustainability, many providers and practitioners were keen to continue delivering Multiply-style provision, or to apply learning from Multiply, in future courses to support adult learning for people with low levels of numeracy and other skill areas. Providers and practitioners generally thought there remains a clear need to support adult learning for those with low levels of numeracy. Moreover, some said that they thought there would also be strong demand for similar programmes to increase engagement in adult learning in other areas such as literacy and digital skills.

However, there was widespread recognition that the scale and intensity of this activity would be difficult to maintain without dedicated funding. At the same time, a notable proportion of providers reported that Multiply funding had enabled potential longer-term benefits, such as more evidence-based and responsive provision, strengthened partnerships, and shifts towards more learner-centred ways of working.

The chapter concludes by discussing what could come next, and how the learnings from the evaluation can inform actions and investments that could be made to sustain and build on the experience of Multiply.

6.1 Cost effectiveness

The Multiply programme was announced in the Autumn 2021 Budget and Spending Review, with allocated funding of £270m to local areas in England, of which £226m was spent over the 3 years of the programme.²⁸ The breakdown of the costs of the Multiply programme in England are set out in Appendix F, including the programme of research and evaluation.

With 288,604 Multiply enrolments over the 3-year period, this implies average funding per enrolment of about £785. Of course, learners varied considerably in the duration of their course (from a few hours to many months), and so the actual cost per enrolment will have varied considerably. For those who would otherwise have done AEB-funded or

²⁸ <https://www.gov.uk/government/publications/autumn-budget-and-spending-review-2021-documents/autumn-budget-and-spending-review-2021-html#policy-decisions>

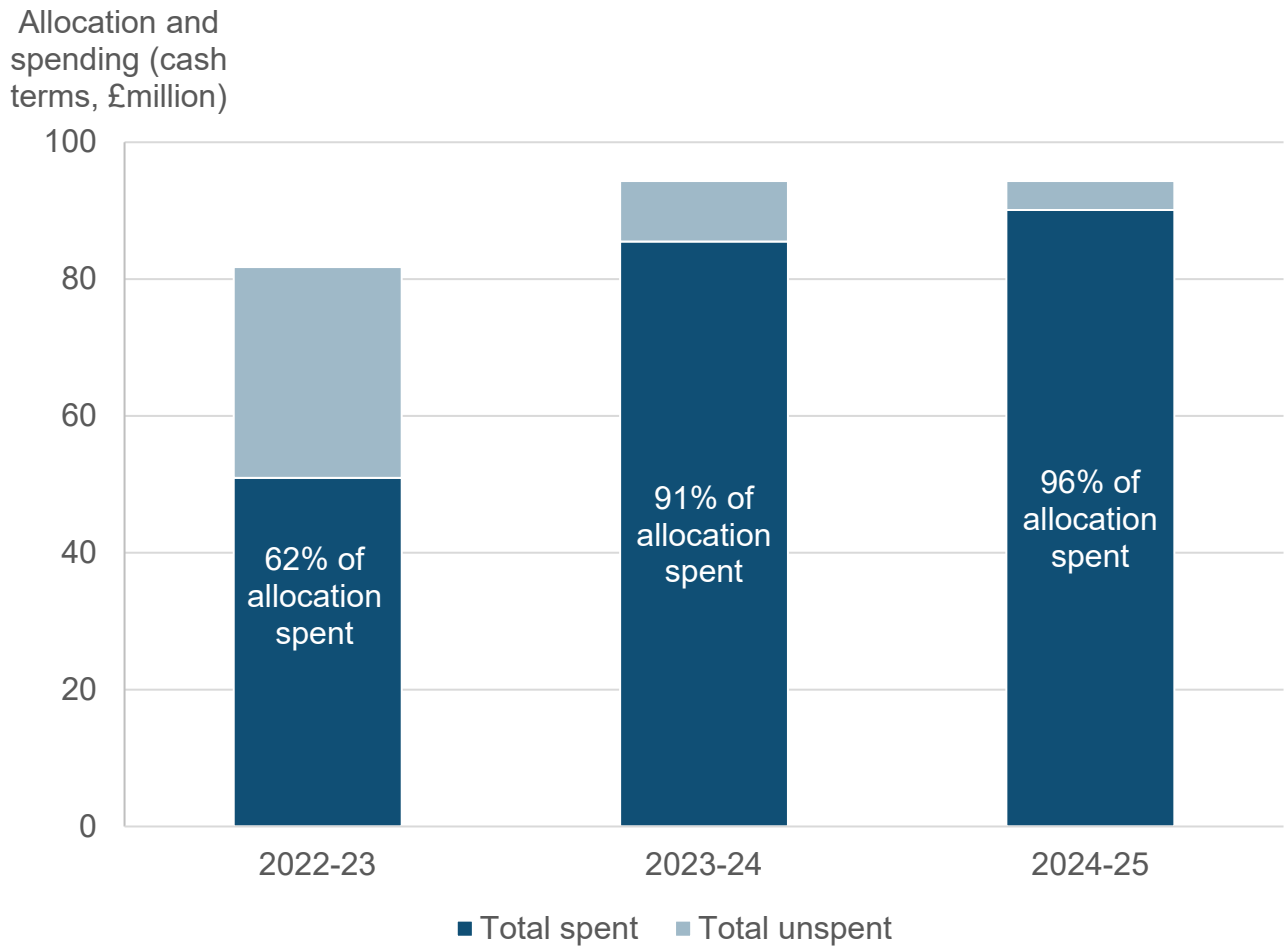
Community Learning courses, spending through Multiply would have been offset by lower spending on numeracy courses through these other funding streams. For the vast majority of Multiply learners who would not otherwise have undertaken funded learning, the average cost per enrolment provides a good indication of the additional spending that the government undertook. It is worth noting that this only includes substantive provision recorded in the ILR. Some funding was also spent on non-substantive provision and outreach activities, suggesting the average cost per enrolment may have been lower.

In England, Multiply was allocated funding of £82 million in the 2022/23 financial year and £94 million in each of the next 2 financial years. Funding was delivered through the UK Shared Prosperity Fund, as a ring-fenced grant to 81 English “Multiply Investment Areas” (which consisted of Mayoral Strategic Authorities, upper-tier local authorities and unitary authorities²⁹). Each Investment Area received a constant share of the available funding over the 3 years of the programme.

As Figure 94 shows, the share of allocated funding that was spent rose over time, from 62% in 2022-23 (the first financial year of the programme) to 91% and then 96%. This growth in spending as a share of allocation is likely to reflect a number of factors. First, the funding in the initial year of the programme was not available to Local Areas until October 2022, halfway through the financial year. This meant there was less time to spend this funding. Second, it took some time to design and set up Multiply provision. For example, as described in section 5.1, some areas reported that the implementation timetables meant that some providers did not have enough time to participate in year 1. Third, ongoing central delivery-management and support from DfE is likely to have helped some areas make greater use of the funding available to them.

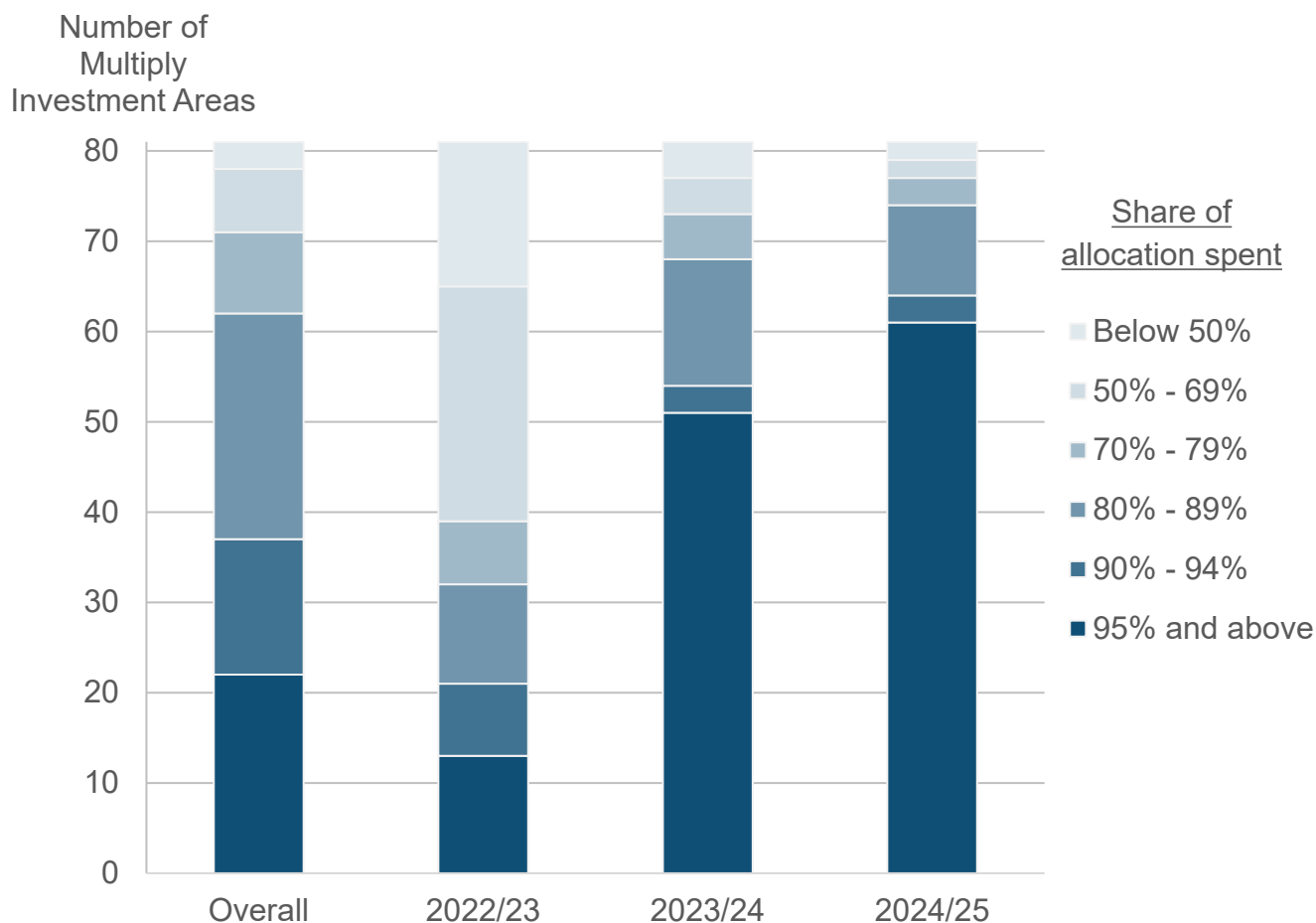
²⁹ There was a transition from Mayoral Combined Authorities to MSAs as part of the 2025 Devolution Bill, reflecting a broader shift in UK devolution, moving from bespoke arrangements to a uniformed statutory framework.

Figure 94: Allocated and spent funding for Multiply in England, by financial year (cash terms)



Source: Department for Education management information on programme allocations and spending.

Figure 95: Number of Multiply Investment Areas spending different shares of their allocation, by financial year and overall



Note: Multiply Investment Areas include 10 Mayoral Combined Strategic (including the Greater London Authority); 23 upper-tier local authorities; and 48 unitary authorities.

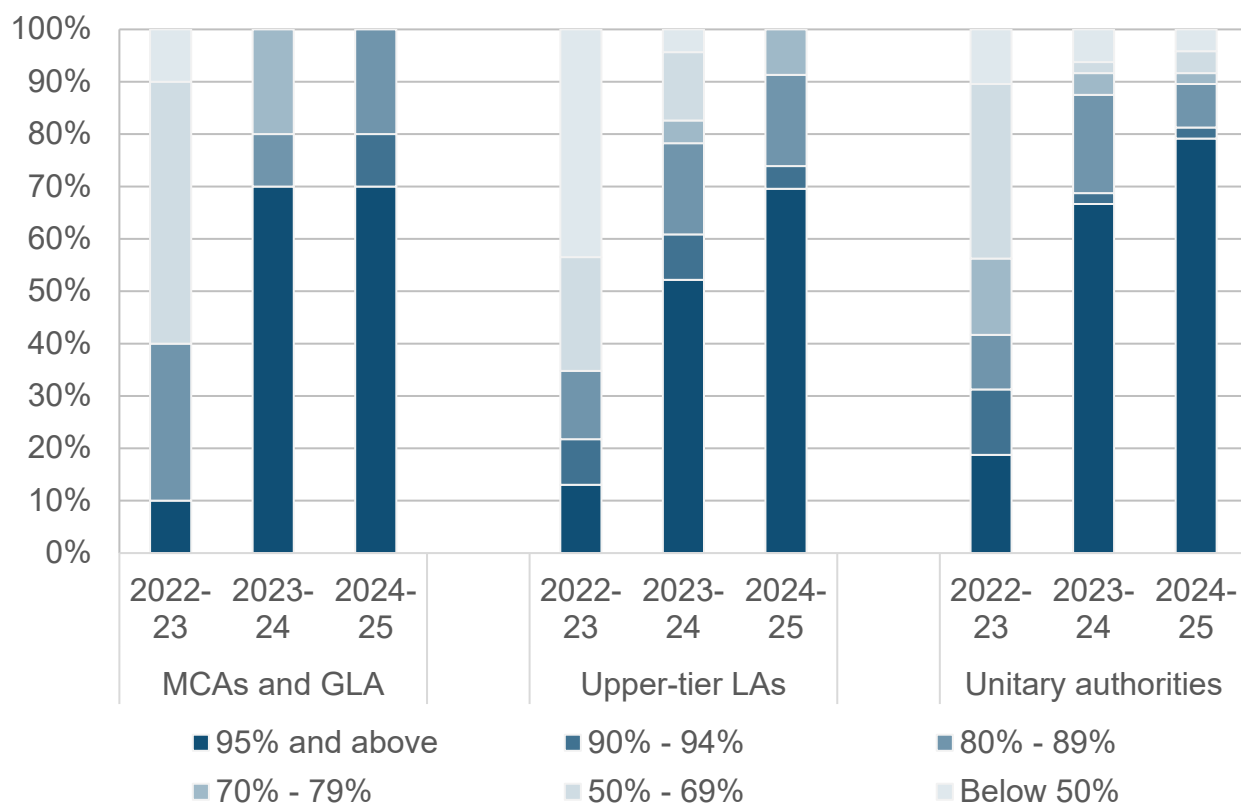
Source: Department for Education management information on programme allocations and spending.

Figure 95 shows the number of Multiply Investment Areas spending different proportions their allocated budget, both overall and in each year of the programme. Over the course of the programme, nearly half of Multiply Investment Areas (37 of 81 areas) spent 90% or more of their allocated budget, while 3 areas (4% of the 81 areas) spent less than half of their allocation. These proportions changed substantially over time. Initially, there were more Multiply Investment Areas spending less than half of their allocation (16) than spending greater than 95% of the allocated funding (13 Investment Areas). These differences could reflect different strategies, with some areas prioritising work with existing local authority employees to deliver quickly while others spent more time planning their offer. By the final financial year of the programme, three-quarters of

Multiply Investment Areas were spending nearly all of their allocated funding (95% or more).

As Figure 96 shows, there were some differences in the share of allocated funding spent across different types of authorities. Initially, upper-tier local authorities on average spent a lower share of their allocated funding (56% of funding allocated to this group of authorities) than either Mayoral Strategic Authorities and the GLA (62% on average) or unitary authorities (72% on average). But this masks significant variation across individual Investment Areas within the same type – for example, while one upper-tier local authority spent less than 10% of its allocated budget in 2022-23, 2 other upper-tier authorities spent 100% of allocated funds. By the final year, the proportions were similar across all types of authorities (94%, 97% and 95% of allocated budget spent, respectively).

Figure 96: Share of allocated funding spent, by type of authority and financial year



Note: Multiply Investment Areas include 10 Mayoral Strategic Authorities (including the Greater London Authority); 23 upper-tier local authorities; and 48 unitary authorities.

Source: Department for Education management information on programme allocations and spending.

6.2 Sustainability and implications for future policy

As described in section 3.5, the majority of practitioners and providers reported that they plan to either run more courses similar to Multiply in the future and/or to embed the many learnings from Multiply into other future courses. They also noted that Multiply had positive benefits amongst practitioners on both motivations for, and satisfaction from, teaching adult numeracy. At the same time, providers stated that without continued funding they would not be able to deliver to the same level once Multiply ended. This was generally felt to be a shame, given the perceived successes of the programme in bringing in new learners, raising their confidence and ability with numeracy, as well as the wider personal, social and economic benefits that Multiply is associated with by stakeholders.

“These programs have made a significant difference in improving adult numeracy and boosting learners’ confidence enhancing their problem-solving skills and achieving better outcomes in their personal and professional life.” – *Practitioner*

“Disappointed in lack of additional funding past March 2025. We still have people waiting to join and cohorts starting in January; there is a clearly identified need to support around maths skills. However, the project will now be ending.” – *Practitioner*

Providers and practitioners felt there remained a clear identified need to support adult learners to raise levels of functional numeracy, as well as latent demand to extend Multiply-style forms of learning to other areas of adult education provision such as literacy and digital skills.

In support of their perspectives, practitioners and providers highlighted the innovation Multiply engendered due to the agency they were granted under the programme’s flexible design. This included enabling new commissioning models and funding for grassroots organisations, alongside co-design with community partners. Stakeholders felt this led to more evidence-based and responsive provision, especially in areas with limited adult learning infrastructure. Multiply was seen as particularly effective at engaging learners from deprived areas and hard-to-reach groups.

"Multiply has been a very good programme and allowed us to reach out to learners who would previously have shied away from enrolling on to formal learning such as Functional Skills Maths." – *Practitioner*

The agency to innovate resulted in many practitioners feeling reinvigorated and more motivated regarding adult numeracy provision, while providers noted how Multiply facilitated investments to improve the quality and diversity of their provision. Close to half (47% in year 2) of all providers surveyed stated that they had been able to use Multiply funding to invest in areas that will continue after the funding has ended, including in building and developing partnerships to expand their reach and delivery capacity. These findings underpin the stated endeavour of many areas to embed the approaches developed under Multiply into future provision (e.g. through AEB or other funding streams), though most indicated that this would necessarily be on a smaller scale in the absence of Multiply funding.

The question for government is thus what should come next? The design and delivery of Multiply was well-aligned with the current government's focus on place-based approaches to policy and the 'test and learn' agenda. That it also appeared to produce positive effects in terms of energising and motivating adult education practitioners in the context of persistent recruitment and retention pressures in education was a welcome unanticipated benefit. Should the innovations and benefits of Multiply be sustained and even expanded into new areas such as literacy and digital skills?

The outputs of this evaluation provide a number of insights to inform consideration of these questions, not only through the identification and measurement of benefits, but by indicating the system-building efforts that would be needed to support optimal integration of Multiply-style provision within the broader adult education landscape. Actions and investments to sustain and build on the experience of Multiply include:

Supporting local areas and learning providers to strengthen partnerships with community organisations and employers in order to build networks for outreach and facilitate and improve co-design.

Local areas collaborated with a range of stakeholders to develop their local investment plans and to identify numeracy needs in their area, including learning providers, voluntary and community organisations, local employers, and agencies such as Jobcentre Plus. This process was considered critical to engage hard-to-reach groups and develop effectively tailored courses. Employers were identified as especially important to identify skills gaps, develop course materials to better meet the needs of the labour market, and assist with learning provision. However, many areas found this stakeholder group one of the most difficult to engage, often due to employers' lack of awareness of Multiply, their reluctance to release staff for training, and uncertainty about the business benefits of non-accredited courses. Similarly, there was a perception from some that Multiply was not a sufficiently high priority for partners such as

Jobcentre Plus, the National Careers Service, and DWP, resulting in fewer referrals than hoped for from these organisations.

Building and sustaining these crucial relationships and networks takes time and effort. This could be supported by Government and LAs via funding for engagement activities, facilitating outreach to and engagement with employers and other government organisations, and provision of information and awareness campaigns that spotlight the benefits for both employees and the employer beyond just skills gaps or recruitment challenges.

Increasing national visibility through enhanced information campaigns, including to potential referral and partnership organisations such as Jobcentre Plus and large-scale employers.

Promoting Multiply more broadly at both the national and local levels could have increased learner enrolment amongst first-time learners as well as engagement by key stakeholders such as employers and Jobcentre Plus. While Multiply was promoted as part of the national Skills for Life campaign, some stakeholders would have welcomed more Multiply specific promotion. Stakeholders recommended highlighting the 'functional maths' and practical day-to-day benefits of Multiply over, or in addition to, the advantages of improving numeracy skills specifically. Whilst local areas did engage in Multiply-specific marketing and promotions, dedicated national-level advertising through both traditional (TV, radio, national newspapers) and social media could have all played a greater role. In addition, DfE and LAs could have promoted Multiply more systematically both nationally and locally by providing more information to key service providers such as Jobcentre Work Coaches, careers advisors, social care providers, counsellors, prison support services, schools and libraries.

Strengthening local information and guidance to learners on progression pathways, alongside support for learners to progress into more formalised essential skills and accredited learning, leveraging Multiply's proven ability to address initial barriers to learning.

A high proportion of Multiply learners who went on to further study or training did so at further education or adult education providers. To strengthen progression pathways, outreach could have been conducted by those colleges to better connect Multiply learners with the course options available and suited to them, e.g. Essential Skills courses. Such outreach needs to be sensitive to one of the key barriers that Multiply learners faced when engaging in numeracy courses in the first place – lack of confidence – to ensure it does not disincentivise them prematurely with the demands of

regulated learning. That half (50%) of Multiply learners said they had either not received any information on courses they could do after Multiply (30%), or did not know if they have received any information (20%), points to the need for information on progression pathways and options to be provided more systematically and at the right time. Education providers and practitioners are best placed to decide how such information and encouragement should be provided, though MSAs and LAs may have funds or capacity to support this endeavour (e.g. support financing or other services for particular groups).

Information sessions at a further education provider on ways to improve your maths skills, and confidence-building sessions to help people feel more confident in learning maths, as well as speaking to someone who had recently done a Multiply course, were 3 of the most cited outreach activities Multiply learners had engaged in. Providing more of these, and increasing the advertising or information about them to widen their reach, could have been an effective way to increase both the numbers of learners enrolling in Multiply and the number of Multiply learners progressing to further study. Using previous Multiply learners as ambassadors, perhaps by providing small incentives, either within and/or alongside these sessions, could have helped in this regard. Evidence suggests that formal outreach activities were effective in attracting hard-to-reach groups to Multiply (see section 2.4), with local stakeholders again stating that peer-led outreach sessions had been especially important for building trust and encouraging participation among these learners.

Strengthening the types and amount of available support to Multiply learners to sustain their progression plans, including linkages between Multiply and other kinds of support services such as debt support, financial management support, and mental and physical health support. Multiply learners faced different kinds of challenges or barriers when it came to accessing and getting the most out of their course. Predominantly these tended to be idiosyncratic challenges such as ill health, domestic problems, or difficulty juggling care responsibilities or other commitments. Concerns around cost and lack of confidence were also commonly mentioned in connection to the reasons for not having taken up a course prior to Multiply. Lack of support from an employer or family was another cited challenge. The evidence thus shows that a combination of confidence and practical constraints constitute the key barriers to accessing and sustaining courses, suggesting that such challenges will likely also impact Multiply learners' ability to pursue and maintain further study or training in the future. Furthermore, some challenges affected certain groups more than others, with cost concerns more prevalent amongst learners struggling with debt; difficulty juggling other commitments more prevalent amongst those with parenting or caring

responsibilities; and personal, domestic or ill-health problems amongst those with disabilities. Given that around a third (31%) of all Multiply learners faced some kind of challenge, there is strong reason to improve the support available to similar types of provision to mitigate these kinds of challenges. This could be done by strengthening linkages between Multiply-type provision and relevant support services such as debt support, financial management support, and mental and physical health support. The use of incentives (including vouchers, refreshment, and childcare) was cited as a key enabler of engagement, particularly for learners facing financial or logistical barriers.

Maintaining and building on innovation to encourage and support learning and dissemination of best practice. Multiply prompted the development of learnings, innovations and promising practices by delivery stakeholders. This experience is of value to other delivery stakeholders to develop and improve their own learning offers. An example of a key learning was outreach and target learner identification, including the development of appropriate communications and marketing information to better signal to prospective learners the nature of the provision and the types of learners it is ideally suited for. Other examples included course design and tailoring of learning materials, teaching models and partnership approaches, provision of support and incentives to enable learners to complete and progress, and upskilling the workforce.

The outputs of this evaluation, most notably the bank of promising practices, enabled these learnings and experiences to be captured and disseminated, demonstrating that evaluation and learning capability add significant value to continued policy development and delivery. Accordingly, moving forward, the sector could maintain investment in these capabilities to support future adult learning.

Ensuring the design of any future programmes takes full account of existing provision and funding streams. The nature of Community Learning initiatives suggested there may be significant overlap with any future Multiply-type programme, as both focused on short numeracy courses for learners for whom qualification-based provision is not necessarily the most appropriate next step. Any future programmes should therefore be designed to build synergies, exploit economies of scale and maintain a clear focus on their intended aims and outcomes, including through considering whether to mainstream or ringfence funding and the advantages and disadvantages of this.

Appendices

Appendix A: Qualitative workstreams

This appendix provides further detail of the methodological approach to qualitative research, covering

1. Case studies
2. Stakeholder interviews
3. Interviews to understand provision in Prisons
4. Interviews with learners who did not complete their course
5. Employee interviews
6. Capturing promising practices³⁰

1. Case studies

1.1 Methods

A case study approach was used to explore the delivery of the Multiply programme within each local area. In total, Verian carried out 2 waves of case study research with 20 Multiply local delivery areas.

Wave 1: Verian conducted 6 local area case studies in the first year of the Multiply evaluation, with up to 10 hours of interviews at each local area, covering a range of stakeholders involved in delivering the programme, including providers.

Wave 2: As programme delivery became established, and the end of the 3-year funding period for the Multiply programme approached, Verian and the Department for Education (DfE) purposively selected a further 14 case study areas. These included a mix of various agreed-upon characteristics (e.g., size, Multiply budget, MSA/LA). Each case study involved 2 elements:

- **Individual or group semi-structured interviews:** Individual or group semi-structured interviews were conducted via Microsoft Teams or in person, lasting between 45 and 90 minutes. Interviews were conducted between June 2022 and February 2025, with each local area having up to 10 hours of interview time

³⁰ Research instruments (interview topic guides) are available on request from DfE.

allocated. Larger areas, such as Mayoral Strategic Authorities, tended to have more interviews given the range of staff involved in delivering the programme.

Two topic guides were designed for these individual or group sessions. One was designed for the strategic lead and another for the delivery team. The strategic lead guide captured the strategic objectives of the programme in the local context, the experience of the design and set-up phases of the programme. It also explored programme delivery at an overarching level to identify any learnings and insights for future rounds as well as any additional support needs required in the future.

The delivery team guide captured the experience of the design and set-up phases of the programme. It also explored programme delivery from different roles and perspectives to identify any learnings and insights for future rounds as well as any additional support needs required in the future. The guide was designed to be used flexibly with indications of which questions apply to participants' roles and responsibilities.

- **Review of background documents and programme materials:** During these interviews, researchers also collected key documents from local areas, particularly those related to Value for Money (VfM), financial assurance, and communications and outreach. These documents are referenced where relevant within specific case study chapters throughout the report, and in the separate case study report. The review included documents such as the Multiply Investment Plan, communication and marketing materials, and any relevant policy documents provided by the different Local areas.

1.2 Sampling

Verian collaborated with DfE to select local areas based on a method of purposive sampling using a range of criteria to ensure a spread of different types of local areas. This included: the level of administration (i.e. combined authority, local authority); size of funding allocation; geographic region; intervention target audiences; whether they deliver Adult Education Budget (AEB) provision. A detailed breakdown of these criteria is set out in Table 1.

Table 1: Selection criteria for local area case studies

Criteria	Criteria breakdown
Level of administration	LA / MSA
Intervention innovation	Innovation / Limited innovation
Delivery progress / performance	Good / Poor
Geographic region	North East / North West / South East / South West / East Midlands / West Midlands
Community type	Rural / Urban
Allocation size	Small (£1m-£5m) / Medium (£5m-£10m) / Large (£10m+)
New learner spread	Range
Whether deliver AEB	Delivers AEB / Does not deliver AEB

Over the first and second waves of fieldwork, Verian carried out case study research with 20 local areas. These are listed in Table 2 below.

Table 2: Local areas included in in the wave 1 and wave 2 fieldwork

Wave 1 fieldwork (June 2023 to Nov 2023)	Wave 2 fieldwork (Aug 2024 to Feb 2025)
<ul style="list-style-type: none"> • Greater Manchester Combined Authority • Lancashire • Staffordshire • West Midlands Combined Authority • West Yorkshire Combined Authority 	<ul style="list-style-type: none"> • Blackpool • Cambridgeshire & Peterborough Combined Authority • Cheshire West • Cornwall • Derby • Greater London Authority • Gloucestershire • Lincolnshire • Liverpool City Region Combined Authority • Luton • North East Combined Authority (North East CA) • Oxfordshire • Somerset • West of England Combined Authority (WECA)

1.3 Participant recruitment

Once the case study areas were selected, DfE contacted Multiply leads within each local area to invite them to take part in the case study research. They then provided leads' names and contact details to Verian. The research team liaised with the leads directly to arrange interviews and collated the contact details of other participants for the case study area, snowballing recruitment. To allow for flexibility across different local contexts, there was no fixed requirement regarding the number of participants per case study area or specific individuals to engage with.

Participants included those involved in the local areas Multiply programme, covering areas such as strategy, project management, marketing and outreach, communications and learner engagement, commercial and contract management, data and analysis, and finance and assurance. Additionally, Verian spoke to individuals from practitioners and providers who were commissioned to deliver the Multiply courses, including those responsible for business development, college provision, community grants provision, and training and teaching. There was no incentive offered for participation.

1.4 Outputs

As part of this workstream, a detailed case study report has been published that synthesises the qualitative findings across the case study areas.

2. Stakeholder interviews

2.1 Fieldwork approach and aims

The stakeholder strand of the Multiply evaluation consisted of interviews with central government stakeholders, FE sector representatives and the main contractors delivering the Multiply Randomised Controlled Trials (RCTs). This strand looked to understand stakeholders' experiences with Multiply and their perceptions of its effectiveness.

The interviews in Year 1 aimed to understand central government stakeholder perceptions of Multiply, how effective it is and their experience of the design, set-up and delivery phases, with a view to drawing out learnings for the future delivery of Multiply and other government programmes. DfE selected individuals who had been involved in Multiply across a range of areas and responsibilities which resulted in recruitment across 12 defined stakeholder groups. DfE contacted individuals to invite them to take part before passing names and contact details to Verian. There was no incentive offered for participation.

The interviews in Year 2 captured insights from stakeholders within central government, FE sector representative bodies and the main contractors delivering the Randomised Controlled Trials (RCTs) about their experiences with Multiply, including how effective it had been. The interviews explored the strengths and weaknesses of the programme, lessons learned for future delivery, and implications for other government initiatives. Key areas of focus included the delivery and monitoring of Multiply.

2.2 Sampling

Semi structured interviews were conducted online via Microsoft Teams. Each interview lasted between 45-60 minutes. Year 1 interviews took place between March and July 2023. Verian conducted both individual and paired interviews depending on participant preference. 8 of the 11 interviews were individual interviews, and 3 were paired interviews, meaning that 14 stakeholders contributed to this strand of work. Year 2 interviews took place between March and April 2025, where 5 out of 13 were paired interviews, and 8 were individual interviews meaning that 20 stakeholders contributed to this strand of work.

Sample for the first year included government stakeholders from the Department of Education (DfE), Ministry of Housing, Communities and Local Government (MHCLG)³¹, HM Treasury (HMT), Department of Work and Pensions (DWP), the Multiply Delivery Board and the Evaluation Taskforce (ETF). The second-year sample included all stakeholders we spoke to in the first year, but we also interviewed FE sector representative bodies (Holex, Association of Colleges), the RCT evaluation supplier (Ipsos) and the managed service supplier (Etio).

³¹ Department for Levelling up, Housing and Communities (DLUHC) at the time of interview.

Table 3: Achieved sample for first round of stakeholder interviews (February-June 2023)

Stakeholder group	Description
A	DfE Skills Directors DfE Skills Directors
B	DfE Local allocations
C	DfE What Works policy
D	DfE Commercial
E	DfE Government Digital Service/Digital Platform
F	DfE Research and analysis
G	DfE Finance
H	DfE Education and Skills Funding Agency (ESFA)
I	DLUHC
J	No.10 delivery unit/HMT
K	Cabinet Office ETF/What Works Centres/specialist advice
L	Multiply Delivery Board

Table 4: Achieved sample for second round of stakeholder interviews (April-May 2025)

Stakeholder group	Stakeholder type	Description
A	Central Government stakeholder	DfE Policy
B	Central Government stakeholder	DfE Research and Analysis
C	Central Government stakeholder	DfE Evaluation Lead
D	Central Government stakeholder	DfE Finance
E	Central Government stakeholder	DfE Procurement
F	Central Government stakeholder	Cabinet Evaluation Task Force
G	Central Government stakeholder	HMT Multiply Delivery Board
H	Central Government stakeholder	MHCLG Multiply Delivery Board
I	Central Government stakeholder	DWP Multiply Delivery Board
J	Sector stakeholder	Association of Colleges
K	Sector stakeholder	Association of Colleges
L	RCT stakeholder	Ipsos
M	RCT stakeholder	Etio

3. Interviews to understand provision in prisons

3.1 Fieldwork approach

Multiply provision in some local areas included numeracy courses for those in prisons, to enhance their skills and employability on release. This workstream focused on

exploring, with delivery teams, the experience of setting up and delivering these courses.

3.2 Aims and research questions

The aim of this set of interviews was to explore with relevant Multiply stakeholders the provision for those in prison, and with ex-offenders in the community if this was also offered. The interviews sought to understand the types of provision available for these cohorts, how it was being delivered, what was working well, what challenges were faced and how they were addressed. Verian also discussed programme tracking and monitoring, outcomes and impacts, programme sustainability and future plans.

3.3 Sampling

Verian completed 19 interviews with stakeholders leading or delivering on Multiply provision for those in prison and ex-offenders. The interviews were designed to be flexible, and were conducted as either individual interviews, paired interviews, or small group interviews (as requested by participants). Each interview lasted up to 60 minutes and was conducted via Microsoft Teams video call. All interviews took place in March 2025. Across 19 interviews, Verian spoke to 26 participants in total. Participants included:

- 10 stakeholders from delivery partner organisations who had been contracted by local areas to set up and deliver Multiply provision in prisons and/or for ex-offenders.³²
- 13 LA strategic stakeholders who had been involved in the set up and management of Multiply-funded provision.³³
- 3 independent practitioners who had delivered the Multiply provision to those in prison and/or ex-offenders.³⁴

³² Many of these interviews were with stakeholders in strategic roles, but 4 of these participants were also classed as practitioners as they had personally delivered Multiply sessions in prisons.

³³ This includes stakeholders from LAs who were using a direct delivery model or using contracted delivery partner organisations.

³⁴ This only includes practitioners who were directly employed by LAs to do delivery.

4. Interviews with learners who did not complete their course

4.1 Aims

This workstream focused on exploring experiences of learners who started but did not complete their Multiply course. It provides an in-depth view of the reasons given for not continuing the course, and suggestions for how these could be addressed.

4.2 Approach and sampling

Verian undertook 28 interviews with learners who had commenced but chosen not to complete their Multiply course between November 2023 and August 2024. Each interview lasted up to 30 minutes and was conducted either over the phone or via video call.

Verian spoke to a range of participants from across England who had stopped attending their Multiply courses. This range covered retired, unemployed and employed individuals; individuals for whom English was not their first language as well as native speakers; those who had attended online, in person or hybrid courses; people who had attended only one session; and those who attended all lessons but chose not to sit the final exam.

Within this sample some attributes were more prevalent than others since a decision was taken with DfE to avoid setting pre-agreed quotas and instead take a 'mix and monitor' approach to recruitment. Most of the respondents included in this report stopped attending either before or around the middle of the course, and most were of working age.

5. Employer interviews

5.1 Aims

The interviews aimed to understand in what ways employers that have engaged with Multiply have been involved with the programme, what employers think of Multiply, as well as exploring what is working well and what could be improved. Interviews covered several key areas such as employers' perceptions of Multiply, their reasons for engaging with the initiative, the ways in which they participated, barriers faced in encouraging employee involvement, strategies used to foster participation, overall satisfaction with the programme, expectations from Multiply, the role employers played, their experiences during delivery, and suggestions for areas of improvement. This

strand provided insights into employer engagement and feedback relating to the Multiply programme.

5.2 Approach and sampling

Verian conducted 7 semi structured interviews online via Microsoft Teams. Each interview lasted between 45-60 minutes. Initially Verian had planned to conduct 20 employer interviews in year 1 but due to the availability of sample this was not possible. DfE spoke with local authorities and collected names and details of employers who had been involved in Multiply. These were validated by DfE before being passed to Verian. In practice, opportunistic sampling was used in this phase of the research as there was a small sample of employers to choose from.

6. Capturing promising practices

6.1 Methods

The Promising Practices workstream of the Multiply evaluation was designed to identify and showcase innovative approaches to adult numeracy provision across the UK. The research began with a scoping phase in November 2024, during which Verian responded to the Department for Education's (DfE) brief on how best to present a bank of promising practices. This laid the groundwork for a structured methodology combining broad stakeholder engagement with targeted qualitative exploration.

6.2 Online proforma

The first major data collection activity involved an open proforma, which ran on Microsoft Forms from November 2024 to April 2025. This proforma invited submissions from stakeholders across England and the SWNI nations and yielded a total of 93 responses. These were distributed across 3 categories: 44 from Local Authorities (LAs), 40 from providers and practitioners, and 9 from other contributors.

6.3 In-depth interviews

The aim was to gather a wide range of examples of promising practice in Multiply delivery. Following the proforma phase, Verian undertook a selection process to identify a shortlist of 10 promising practices. This shortlist was shared with DfE, who then selected 5 examples for further exploration through qualitative interviews. To support this next phase, Verian developed a topic guide and accompanying communications materials, which were reviewed and refined in collaboration with DfE.

Recruitment for interviews took place in March 2025, targeting stakeholders from the selected areas. Between 14th and 28th March, Verian conducted 5 30-minute depth interviews with a total of 12 stakeholders. Each area was represented by 2 participants, except apart from one area, which had 4 attendees (one from a delivery partner and 3 from the local authority). These interviews were designed to delve deeper into the context, implementation, and impact of the selected practices.

6.4 Outputs

The submissions from the online proforma are housed in a searchable database, managed by the Association of Colleges.

Appendix B: Quantitative workstreams

This appendix provides further detail of the methodological approach to quantitative research, covering

- Survey of Multiply learners
- Survey of Adult Education Budget (ABE) learners
- Survey of non-learners without level 2 maths
- Survey of learning providers
- Survey of practitioners
- Survey of local areas
- Survey of employers³⁵

1. Survey of Multiply learners

Verian contacted 120,475 adults who participated in Multiply-funded numeracy courses with 6,439 responding.

Fieldwork was continuous from August 2023 to July 2025 with new waves of invitations being issued at regular intervals.

1.1 Sampling

The sample was drawn from the Department for Education's Individualised Learner Record (ILR) database. The database was filtered to include learners identified as on a Multiply funded numeracy course. DfE provided files on a regular basis. Verian processed these files, excluding records where a Unique Learner Number (ULN) could not be identified and removing duplicate records.

Only learners with a definite completion code (i.e., completed or withdrawn) were eligible to be sampled. Where learners were recorded on multiple Multiply courses, the following selection process was applied to determine which course details to use when sampling the learner:

- If a learner had completed one course, and withdrawn from another, the completed course was prioritised.

³⁵ Multiply learner survey tables are published alongside this report. Other research instruments (survey questionnaires) are available on request from DfE.

- If a learner had withdrawn from one course, but was still continuing on another Multiply course, we did not sample them. Instead, we waited for them to complete the other course.
- If a learner had completed one Multiply course and was continuing another, we prioritised the course they had completed.
- If a learner had completed multiple Multiply courses, the most recent course details were used.

To prevent overburdening learners who may have undertaken multiple Multiply courses by repeatedly sampling them across several waves, we excluded learners who were sampled in the previous 6 months and became eligible later on from being sampled again. All cases that were eligible for the survey were sampled. DfE provided contact information including names, addresses and emails for eligible records.

Learners were contacted using a ‘push-to-web’ approach whereby they were sent a combination of email and letter invites dependent on the information held about them in the Individualised Learner Record (ILR), directing them to the online survey. Three further email reminders were sent to each new batch of invitations with a small number of telephone interviews conducted after each wave amongst those who did not complete online, in an effort to contact harder-to-reach populations.

Verian carried out a range of QA checks on the data outputs that included identifying respondents who had ‘flat-lined’ through the survey by consistently selecting ‘don’t know’ or ‘prefer not to say’ answer codes and removing them from final outputs.

Table 5: Multiply learners survey waves

Wave	Date	Invited	Completes	Complete (%)
Wave 1 (soft launch)	August '23	2,000	203	10%
Wave 1 (full launch)	August '23	10,333	727	7%
Wave 2	September '23	16,340	1,147	7%
Wave 3	November '23	9,610	572	6%
Wave 4	March '24	9,489	517	6%
Wave 5	August '24	36,277	1,853	5%
Wave 6	October '24	9,477	536	6%

Wave	Date	Invited	Completes	Complete (%)
Wave 7	May '25	26,949	884	3%
Total		120,475	6,439	5%

1.2 Weighting

Weighting was required to compensate for systematic non-response to the survey. As all eligible learners were issued, it was not necessary to compensate for varying sampling fractions.

The ILR contained comprehensive and consistent information for the whole Multiply learner population (including non-respondents). A non-response weight was calculated using a regression model, using the following variables as predictors:

- Age
- Gender
- Ethnicity
- Whether learner has any health problems
- Learner employment status
- Learner prior level of educational attainment
- Whether learner has withdrawn from a Multiply course
- Whether a learner has completed multiple courses
- Number of Multiply courses completed
- Number planned hours of Multiply course
- Course start month
- Length of course
- Region
- Urban/Rural classification
- Index of Multiple Deprivation Quintiles.

Each wave was weighted separately, and weights were scaled relative to the population size of each wave.

The table below shows the population profile of Multiply learners and the weighted Multiply learner profile. The weighted profile closely matches the population profile of Multiply learners:

Table 6: Multiply learners survey weighting

Variable	Value	Population profile	Weighted profile	Difference
Age	16-24	12.0%	12.3%	0.3%
	25-34	22.1%	22.7%	0.7%
	35-44	30.4%	28.3%	-2.0%
	45-54	17.5%	18.2%	0.7%
	55-64	11.6%	12.1%	0.5%
	65+	6.5%	6.4%	-0.2%
Sex	Female	67.2%	67.7%	0.5%
	Male	32.8%	32.3%	-0.5%
Ethnicity	White	55.7%	53.9%	-1.8%
	Asian	15.9%	16.3%	0.4%
	Black	11.4%	11.7%	0.3%
	Mixed/Arab/Other/Not provided	17.1%	18.2%	1.1%
Health	Learner has learning/health difficulty	26.3%	27.0%	0.7%
	Learner does not have learning/health difficulty/No information provided	73.7%	73.0%	-0.7%
Employment	In paid employment	30.7%	29.9%	-0.9%
	Not in paid employment - available to start	37.8%	39.5%	1.7%
	Not in paid employment - not available to start/not known	31.5%	30.6%	-0.8%
Prior education level	No qualifications/Not known/Other	42.9%	42.6%	-0.3%
	Entry level	16.3%	17.6%	1.3%
	Level 1	11.5%	11.3%	-0.2%
	Level 2/Full level 2	13.4%	12.9%	-0.5%
	Level 3 or higher	15.9%	15.6%	-0.3%

Variable	Value	Population profile	Weighted profile	Difference
Number of Multiply courses	Learner recorded on one multiply course	85.2%	84.9%	-0.4%
	Learner recorded on two multiple courses	11.3%	11.8%	0.4%
	Learner recorded on three multiple courses or more	3.5%	3.4%	-0.1%
Course length	Less than a day	38.9%	38.0%	-0.9%
	1 to 7 days	14.6%	14.6%	0.1%
	8 to 14 days	8.1%	8.0%	-0.1%
	15 to 29 days	12.8%	13.1%	0.3%
	30 to 49 days	9.4%	9.6%	0.1%
	More than 50 days	16.2%	16.6%	0.5%
Region	North (NE, NW, YH)	30.7%	30.6%	-0.1%
	Midlands (EM, WM, EE)	30.7%	29.1%	-1.6%
	South (LDN, SE, SW)	38.6%	40.3%	1.7%
Urban/Rural	Urban	90.4%	90.8%	0.4%
	Rural	9.6%	9.2%	-0.4%
IMD Quintile	1 Most deprived	36.4%	37.3%	0.9%
	2	26.3%	26.4%	0.1%
	3	17.3%	17.0%	-0.3%
	4	11.9%	11.5%	-0.4%
	5 Least deprived	8.1%	7.8%	-0.3%

The design effect of this weight was calculated to be 1.39.³⁶

2. Survey of adult education budget (AEB) learners

Verian contacted 10,590 adults who enrolled in numeracy courses funded through the Adult Education Budget (AEB) without at least a Level 2 maths qualification with 1,700 responding.

Fieldwork took place between 29 January 2024 and 1 April 2024.

2.2 Sampling

A counterfactual sample was drawn from the 2023/24 SN13 ILR extract, this file was filtered to include learners who were recorded at a course funded by the Adult Education Budget (AEB). The files were processed in a similar manner to the Multiply ILR sample, including applying exclusions, restructuring files and recoding variables.

The population profile of AEB and Multiply learners was compared and substantial differences were identified. In particular, there were significant differences in terms of courses:

- 82% of AEB (qualification) learners were on courses which were due to last more than 50 days, compared to only 17% of Multiply learners.
- 65% of AEB (qualification) learners were on courses with more than 100 planned learning hours, compared to only 26.5% of Multiply learners.

There were additional differences identified in the characteristics of the learners in each population:

- AEB (qualification) learners were more likely to be in paid employment (43%), compared to Multiply learners (27%).
- Multiply learners were more likely to be white (55%), compared to AEB (qualification) learners (45%).

There were also large differences identified across age, health status, qualifications and delivery region.

The counterfactual sample was intended to comprise of learners on other similar courses to Multiply. Given the large difference identified, particularly around course length, it was clear there were fundamental differences between the 2 populations.

³⁶ Where the design effect from weighting = $1 + \text{cov}(W)^2$ – where $\text{cov}(W)$ is the coefficient of variation of the weights.

To create a more comparable sample, a sample selection of c.15,000 AEB (qualification) learners that were most similar to the Multiply learners was drawn. This sample selection took all eligible AEB (qualification) learners who were on a ‘short’ course (under 49 hours). Additional cases were selected in proportion to the Multiply population by course length. Finally, an exclusion was applied to remove learners who had completed their course more than 6 months prior to the delivery of the ILR extract. Over 10,000 AEB (qualification) learners were invited to take the survey.

2.3 Fieldwork

Respondents were contacted using a ‘push-to-web’ approach whereby they were sent a combination of email and letter invites on 29 January 2024 dependent on the information held about them in the ILR, directing them to the online survey. Three further email reminders were sent to each new batch of invitations throughout February 2024, with a small number of telephone interviews conducted amongst those who did not complete online, in an effort to contact harder to reach populations.

Verian carried out a range of QA checks on the data outputs that included identifying respondents who had ‘flat-lined’ through the survey by consistently selecting ‘don’t know’ or ‘prefer not to say’ answer codes and removing them from final outputs.

Table 7: AEB (qualification) learners survey response rate

Wave	Invited	Completes	Complete %
Wave 1	10,590	1,700	16%

2.4 Weighting

The data outputs were weighted in an effort to account for the differential response among the AEB sample, and to attempt to make the AEB profile more similar to the Multiply population profile across a number of key variables.

To compensate for differential response among the AEB sample, a non-response weight was calculated using the data available on the sample frame. Similar to the Multiply learner weighting, a logistic regression model was used to predict the estimated probability of any given sampled AEB learner taking part in the survey. The non-response weight was then calculated by inverting the estimated response probabilities.

The second stage of weighting weighted the AEB profile to match the Multiply population profile at the time of sampling.

While the non-response weight ensures that the AEB profile matches the profile of the selected AEB sample, there were notable differences between non-response weighted AEB profile and the Multiply population. These differences were mainly across the following variables:

- Course length (days)
- Planned learning hours
- Learner employment
- Learner prior attainment
- Learner age

Given the large differences between the 2 populations, it was necessary to condense categories in the weighting matrix and excluded the variable 'course length (days)'. We excluded course length because of the very large differences in course length between the AEB and Multiply profiles. If we were to weight the profiles to match this would lead to some very large and some very small weights. This would greatly reduce the precision of the survey estimates.

The non-response weight was used as an input weight, and rake weighting³⁷ was used to weight the AEB data to match the Multiply population profile at the time of weighting (August 2024).

Table 13 shows that the rake weighted AEB profile is a good match for the Multiply population profile at most variables.

There remains a very large difference at course length (days). This illustrates that the 2 populations are not equivalent as even after weighting to a wide range of variables there remain significant differences at this variable. It must be noted even with this notable difference in course length, the final weighted profile of the AEB sample still looks fairly similar to the Multiply population in terms of planned learning hours.

³⁷ A weighting technique that iteratively adjusts sample weights to match the sample's demographic profile to the population demographic profile.

Table 8: Multiply population profile compared to the rake weighted profile.

Variable	Value	Multiply Population Profile (as of August 2024)	Rake weighted AEB Profile
Age	16-34	35.0%	35.0%
	35-54	46.9%	46.9%
	55+	18.1%	18.1%
Sex	Female	69.0%	69.0%
	Male	31.0%	31.0%
Ethnicity	White	53.9%	53.9%
	Non-white	46.1%	46.1%
Health	Learner has learning/health difficulty	27.1%	27.1%
	Learner does not have learning/health difficulty/No information provided	72.9%	72.9%
Employment	In paid employment	27.2%	27.2%
	Not in paid employment - available to start	40.6%	40.6%
	Not in paid employment - not available to start/not known	32.2%	32.2%
Qualifications	No qualifications/Not known/Other	43.8%	43.8%
	Entry level/L1/L2	42.7%	42.7%
	Level 3 or higher	13.4%	13.4%
Number of ILR records	Learner recorded on one course	85.7%	85.7%
	Learner recorded on multiple courses	14.3%	14.3%

Variable	Value	Multiply Population Profile (as of August 2024)	Rake weighted AEB Profile
Planned hours	0 to 2 hours/missing	12.6%	12.6%
	3 to 19 hours	33.2%	33.2%
	20 to 99	27.2%	27.2%
	More than 100 hours	26.9%	26.9%
Course length	Less than 50 days	82.6%	18.0%
	More than 50 days	17.4%	82.0%
Region	North (NE, NW, YH)	29.5%	29.5%
	Midlands (EM, WM, EE)	26.9%	26.9%
	South (LDN, SE, SW)	43.6%	43.6%
Urban/ Rural	Urban	91.9%	91.9%
	Rural	8.1%	8.1%
IMD Quintile	1 Most deprived	37.7%	37.7%
	2	27.0%	27.0%
	3	17.1%	17.1%
	4	11.0%	11.0%
	5 Least deprived	7.2%	7.2%

Although the rake weighted AEB profile was a good match to the Multiply population profile, there was a large variance in the weights which reduces the effective sample size and precision of the weighted survey estimates.

The design effect was estimated to be 3.49 (an effective sample size of 487). This was caused by very large weights which were required to significantly weight up records where there were large differences between the AEB and Multiply population.

To reduce the variance of weights, increase the effective sample size and improve the precision of survey estimates, we recommended trimming the weights. Weights were trimmed at the 98th percentile. This reduced the design effect to 2.41 (an effective sample size of 706).

As shown in Table 14, the trimmed weighted AEB profile was a reasonable match to the Multiply profile.

Table 9: Multiply population profile compared to the trimmed rake weighted profile

Variable	Value	Multiply Population Profile	Trimmed rake weighted AEB Profile
Age	16-34	35.0%	35.7%
	35-54	46.9%	48.7%
	55+	18.1%	15.6%
Gender	Female	69.0%	68.9%
	Male	31.0%	31.1%
Ethnicity	White	53.9%	53.4%
	Non-white	46.1%	46.6%
Health	Learner has learning/health difficulty	27.1%	26.3%
	Learner does not have learning/health difficulty/No information provided	72.9%	73.7%
Employment	In paid employment	27.2%	29.0%
	Not in paid employment - available to start	40.6%	39.6%
	Not in paid employment - not available to start/not known	32.2%	31.4%

Variable	Value	Multiply Population Profile	Trimmed rake weighted AEB Profile
Qualifications	No qualifications/Not known/Other	43.8%	41.1%
	Entry level/L1/L2	42.7%	44.7%
	Level 3 or higher	13.4%	14.2%
Number of ILR records	Learner recorded on one course	85.7%	85.0%
	Learner recorded on multiple courses	14.3%	15.0%
Planned hours	0 to 2 hours/missing	12.6%	13.6%
	3 to 19 hours	33.2%	28.9%
	20 to 99	27.2%	28.7%
	More than 100 hours	26.9%	28.8%
Course length	Less than 50 days	82.6%	18.0%
	More than 50 days	17.4%	82.0%
Region	North (NE, NW, YH)	29.5%	31.0%
	Midlands (EM, WM, EE)	26.9%	27.2%
	South (LDN, SE, SW)	43.6%	41.8%
Urban/Rural	Urban	91.9%	93.0%
	Rural	8.1%	7.0%

Variable	Value	Multiply Population Profile	Trimmed rake weighted AEB Profile
IMD Quintile	1 Most deprived	37.7%	38.6%
	2	27.0%	26.7%
	3	17.1%	15.9%
	4	11.0%	11.0%
	5 Least deprived	7.2%	7.8%

3. Survey of non-learners without level 2 maths

Fieldwork for the non-learner survey was conducted using Verian’s random probability panel Public Voice, designed for high-quality social research. It enables representative sampling including hard-to-reach groups.

Verian contacted a total of 14,968 adults, with the original sample drawn from c.7,900 adults who were non-degree holders, based on the assumption that those holding a degree (or higher) level of qualification would likely have at least a Level 2 maths qualification and would thus not qualify for the survey.

To further boost the achieved number of completes, additional sample of c.7,100 panellists (consisting of graduates) was then drawn part way through fieldwork. Whilst the overall eligibility rate was lower amongst graduates, inclusion of this group resulted in the target number of completed interviews being increased.

A screening question was included at the start of the survey, to ensure that only eligible respondents (i.e. a Level 1 or lower maths qualification) qualified to answer the survey. The issued sample was designed to be demographically- and numeracy-level matched to the Multiply learners, to improve comparability.

In total, 1,856 respondents successfully completed the survey.

Fieldwork took place over a 6-week period between 8 July 2024 and 19 August 2024.

As part of the QA process, any respondents deemed to be ‘speeders’³⁸ were removed from the data.

Table 10: Non-learners survey response rate

Wave	Invited	Completes	Complete %
Wave 1	14,968	1,856	12%

3.1 Weighting

The respondent sample was weighted in 2 stages:

1. For every respondent, a base weight was calculated that was equal to his/her panel weight divided by the probability of being sampled for the survey (which varied substantially).
2. For every respondent, a propensity score weight was estimated, designed to make the screened respondent profile match the eligible subset of the Public Voice panel (itself weighted to population parameters). The majority of the panel profile variables were used to generate the weight, covering a wide range of dimensions (demographics, education, work, personality, political opinion, online activity, media consumptions etc.). The base and propensity score weights were multiplied together to form the final respondent weight and then the dataset reduced to screened-in respondents.

Based on the standard set of 348 category-level proportions across 100 panel profile variables, the median difference between the weighted respondent dataset (before removing screen-outs) and the fully-weighted panel dataset was only 0.5 percentage points. 96% of differences were less than or equal to 2 percentage points.

4. Survey of learning providers

4.1 Year 1

Verian contacted 587 training providers involved in year 1 of Multiply (between April 2022 and March 2023) with 2 surveys for 2 different groups of respondents. The providers survey was targeted towards senior decision makers at providers of Multiply

³⁸ Survey respondents who were deemed to have completed the survey in a time that indicated they did not properly answer the questions.

courses, asking about their experience. The practitioners survey was targeted towards practitioners (e.g. teachers). For the providers survey, 149 providers responded representing a 25% response rate.

Fieldwork took place between 5 September 2023 and 3 November 2023.

The sample was provided by DfE.

Provider contacts were invited by email, with 3 email reminders sent throughout the course of fieldwork. A letter invite was sent on 6 September 2023 and a reminder letter was sent 4 October 2023. Telephone fieldwork was undertaken to boost response rates by either reminding senior decision makers to complete the survey (with an invite email sent out) or completing the survey over the phone.

Table 11: Learning providers year 1 survey response rate

Wave	Invited	Completes	Complete %
Y1	587	149	25%

4.1.1 Weighting

The data outputs were weighted to compensate for systematic differences in response rate between population subgroups.

The sample provided by DfE contained information for the population, including non-respondents. We calculated a non-response weight using the data available on the sample frame. A logistic regression model was fitted to predict the estimated probability of any given sampled provider taking part in the survey. The non-response weight was then calculated by inverting the estimated response probabilities.

Providers that were estimated to be less likely to take part were given larger weights, so that they were not under-represented. The weighting was limited to variables that were included in the sample frame. The non-response model included:

- Provider region
- Number of Multiply learners
- % of female learners
- % of learners over 40
- % of minority learners
- % of learners with a LLDD

The tables below show the population profile compared to the unweighted profile and weighted profile for the year 1 providers survey:

Table 12: Population count vs. unweighted profile of completes

Variable	Value	Population count %	Unweighted profile of completes %
Region	Missing	29%	18%
	North East	8%	9%
	North West	12%	6%
	Yorkshire and The Humber	6%	7%
	East of England	4%	10%
	East Midlands	8%	6%
	West Midlands	5%	5%
	South East	11%	16%
	South West	8%	11%
	London	10%	11%
Number of Multiply learners	Missing	39%	26%
	0-19	13%	11%
	20-49	14%	13%
	50-74	7%	9%
	75-149	12%	18%
	150+	15%	22%
% of Female learners	Missing	39%	26%
	0-25%	3%	3%
	25-50%	7%	11%
	50-75%	24%	30%
	75-100%	27%	30%

Variable	Value	Population count %	Unweighted profile of completes %
% of learners over 40	Missing	39%	26%
	0-50%	26%	35%
	50-100%	35%	39%
% of minority learners	Missing	39%	26%
	0-25%	24%	33%
	25-50%	10%	11%
	50-75%	10%	13%
	75-100%	16%	17%
% of learners with a LLDD	Missing	39%	26%
	0-25%	29%	37%
	25-50%	16%	19%
	50-100%	9%	10%
	75-100%	6%	8%

Table 13: Weighted profile vs population profile

Variable	Value	Population count %	Weighted profile %
Region	Missing	29%	27%
	North East	8%	7%
	North West	12%	14%
	Yorkshire and The Humber	6%	6%
	East of England	4%	4%
	East Midlands	8%	9%
	West Midlands	5%	4%
	South East	11%	11%
	South West	8%	8%
	London	10%	9%

Variable	Value	Population count %	Weighted profile %
Number of Multiply learners	Missing	39%	41%
	0-19	13%	12%
	20-49	14%	14%
	50-74	7%	7%
	75-149	12%	12%
	150+	15%	14%
% of Female learners	Missing	39%	41%
	0-25%	3%	3%
	25-50%	7%	6%
	50-75%	24%	24%
	75-100%	27%	25%
% of learners over 40	Missing	39%	41%
	0-50%	26%	25%
	50-100%	35%	34%
% of minority learners	Missing	39%	41%
	0-25%	24%	23%
	25-50%	10%	9%
	50-75%	10%	9%
	75-100%	16%	17%
% of learners with a LLDD	Missing	39%	41%
	0-25%	29%	28%
	25-50%	16%	17%
	50-75%	9%	9%
	75-100%	6%	5%

4.2 Year 2

Verian contacted 727 training providers involved in Multiply year 2 (between April 2023 and March 2024) with a survey about their experience. Overall, 156 providers responded representing a 21% response rate.

Fieldwork took place between 19th November 2024 and 4th February 2025.

The sample was provided by DfE.

Providers were sent an initial invite via letter or email. Up to 3 email reminders were sent as needed. Telephone follow ups were undertaken to speak to providers who had not initially responded to the survey.

Table 14: Learning providers year 2 survey response rate

Wave	Invited	Completes	Complete %
Y2	727	156	21%

4.2.1 Weighting

The data outputs were weighted to compensate for systematic differences in response rate between population subgroups.

We calculated a non-response weight using the data available on the sample frame. A logistic regression model was fitted to predict the estimated probability of any given sampled provider taking part in the survey. The non-response weight was then calculated by inverting the estimated response probabilities.

Providers that were estimated to be less likely to take part were given larger weights, so that they were not under-represented. The weighting was limited to variables that were included in the sample frame. The non-response model included:

- Provider region.
- Number of Multiply learners.
- % of Female learners.
- % of learners over 40.
- % of minority learners.
- % of learners with a LLDD.

The table below show the population counts, unweighted profile and weighted profile of the year 2 providers survey. There was a relatively high proportion of missing variables in the sample for Year 2.

Table 15: Population count vs. unweighted profile of completes

Variable	Value	Population count %	Weighted profile %
Region	Missing	41%	31%
	North East	4%	4%
	North West	9%	7%
	Yorkshire and The Humber	8%	9%
	East of England	7%	11%
	East Midlands	5%	4%
	West Midlands	7%	7%
	South East	7%	9%
	South West	6%	8%
	London	6%	9%
Number of Multiply learners	Missing	52%	39%
	0-19	5%	4%
	20-49	6%	6%
	50-74	5%	6%
	75-149	9%	11%
	150+	22%	33%
% of Female learners	Missing	52%	39%
	0-25%	3%	4%
	25-50%	7%	9%
	50-75%	20%	25%
	75-100%	18%	23%

Variable	Value	Population count %	Weighted profile %
% of learners over 40	Missing	52%	39%
	0-50%	29%	38%
	50-100%	19%	24%
% of minority learners	Missing	52%	39%
	0-25%	19%	24%
	25-50%	9%	11%
	50-75%	9%	14%
	75-100%	11%	13%
% of learners with a LLDD	Missing	76%	74%
	0-25%	9%	10%
	25-50%	7%	6%
	50-100%	8%	10%

Table 16: Weighted profile vs population profile

Variable	Value	Population count %	Weighted profile %
Region	Missing	41%	41%
	North East	4%	4%
	North West	9%	10%
	Yorkshire and The Humber	8%	8%
	East of England	7%	7%
	East Midlands	5%	6%
	West Midlands	7%	6%
	South East	7%	6%
	South West	6%	6%
	London	6%	6%

Variable	Value	Population count %	Weighted profile %
Number of Multiply learners	Missing	52%	53%
	0-19	5%	5%
	20-49	6%	6%
	50-74	5%	5%
	75-149	9%	9%
	150+	22%	22%
% of Female learners	Missing	52%	53%
	0-25%	3%	2%
	25-50%	7%	7%
	50-75%	20%	20%
	75-100%	18%	17%
% of learners over 40	Missing	52%	53%
	0-50%	29%	29%
	50-100%	19%	18%
% of minority learners	Missing	52%	53%
	0-25%	19%	18%
	25-50%	9%	9%
	50-75%	9%	10%
	75-100%	11%	10%
% of learners with a LLDD	Missing	76%	77%
	0-25%	9%	9%
	25-50%	7%	6%
	50-100%	8%	8%

5. Survey of practitioners

5.1 Year 1

Verian contacted 587 training providers involved in Multiply year one (between April 2022 and March 2023) with a survey targeted towards practitioners. 73 practitioners responded from 54 providers. At least one practitioner completed the survey from 9% of providers.

Fieldwork took place between 5 September 2023 and 3 November 2023.

The sample was provided by DfE.

Providers were sent an email invite with a link to pass on to practitioners, along with 3 email reminders. Providers that had completed the survey themselves but had no practitioner completes were also sent a separate email encouraging them to forward the invite to practitioners in the organisation. A letter invite was sent on 6 September 2023 with details on how practitioners could log in through a website, and a reminder letter was sent 4 October 2023.

Telephone fieldwork was undertaken to speak to providers, as part of this, providers were reminded to forward on the practitioners survey link to relevant people within the organisation.

Table 17: Practitioners year 1 survey response rate

Wave	Invited	Completes	Complete %
Y1	587	73	12%

Due to the relatively small sample size and the limited population-level data for practitioners, it was not possible to produce meaningful weights. As a result, no weighting was applied to the survey data outputs. The findings should therefore be interpreted as indicative of the views of respondents rather than statistically representative of the wider practitioner population.

5.2 Year 2

Verian contacted training providers involved in Multiply year 2 (between April 2023 and March 2024) – with a survey for practitioners. 98 practitioners responded from 63

providers – including councils, colleges, universities, and independent training providers.

Fieldwork took place between 19 November 2024 and 4 February 2025.

The sample was provided by DfE.

Providers were sent an initial invite via letter or email, which included instructions for passing on the survey to practitioners – respectively, with log-in details or a live link. Up to 3 email reminders were sent as needed. Telephone fieldwork was undertaken to speak to providers, and as part of this, providers were reminded to forward on the practitioners survey link to relevant people within the organisation.

As per the year 1 survey, no weighting was applied to the data outputs due to the small number of completes and absence of suitable population benchmarks.

Table 18: Practitioners year 2 survey response rate

Wave	Invited	Completes	Complete %
Y2	727	98	13%

6. Survey of local areas

6.1 Year 1

Verian contacted all 82 Local Areas involved in Multiply. The collective term ‘Local areas’ covers the authorities that commission and coordinate Multiply programme delivery in their area. These are the Greater London Authority (GLA), Mayoral Strategic Authorities (MSAs) and upper tier and unitary local authorities outside of these areas. Local areas were asked to complete an online survey about their experiences of being involved in the Multiply programme. Overall, 37 local areas responded representing a 45% response rate.

Fieldwork took place between 18 July 2023 and 7 September 2023.

The sample was provided by DfE.

Contacts at Local Areas were invited by email, with 3 email reminders sent as necessary.

No weighting was applied to the data outputs due to the number of completes being too small to reliably weight.

Table 19: Local areas year 1 survey response rate

Wave	Invited	Completes	Complete %
Y1	82	37	45%

6.2 Year 2

Verian contacted the 82 Local Areas involved in Multiply year 2 funding by asking them to complete an online survey about their experiences being involved in the Multiply programme. Overall, 46 Local Areas responded representing a 56% response rate.

Fieldwork took place between 7th October 2024 and 2nd December 2024.

The sample was provided by DfE.

Contacts at Local Areas were invited by email, with email reminders sent on 16th October 2024 and 23rd October 2024. In addition, the Department for Education contacted Local Areas to boost response rates.

No weighting was applied to the data outputs due to the number of completes being too small to reliably weight.

Table 20: Local areas year 2 survey response rate

Wave	Invited	Completes	Complete %
Y2	82	46	56%

7. Survey of employers

Verian contacted 651 Employers involved in Multiply (between October 2024 and November 2024) with a survey about their experience. Overall, 29 employers responded representing a 4.5% response rate. This survey was run for the second year of Multiply. A year one survey was not conducted due to insufficient sample size. For year one, qualitative fieldwork with employers replaced a quantitative survey.

Fieldwork took place between 3rd October and 19th November 2024.

The sample was provided by DfE and consisted of businesses or employees of businesses who had been involved in Multiply funded training.

Contacts at employers were invited by email, with email reminders sent on 18th October and 30th October.

No weighting was applied to the data outputs due to the number of completes being too small to reliably weight.

Table 21: Employers survey response rate

Wave	Invited	Completes	Complete %
Y2	651	29	4.5%

Appendix C: Impact analysis methods

1. Overview

This section sets out the approach used to estimate differences associated with participation in Multiply on learner outcomes using linked administrative and survey data. It complements the qualitative and descriptive evidence presented elsewhere in the report. The impact analysis focuses on 2 main areas:

- The impact of Multiply on course completion and progression into further study using linked NPD-ILR data
- The impact of Multiply on confidence in everyday numeracy and other self-reported outcomes using linked survey and ILR data.

The analysis estimates differences in outcomes associated with Multiply by comparing the outcomes of learners with those of appropriate comparison groups, while accounting for observable differences between the groups.

This approach improves comparability between groups but cannot fully eliminate the possibility that unobserved factors influence both participation and subsequent outcomes. The findings from this analysis should therefore be interpreted as associations between Multiply and comparison learners, rather than definitive causal effects.

2. Analysis of administrative data: Educational participation and attainment

The analysis of educational participation and attainment outcomes uses linked NPD-ILR data to compare outcomes for Multiply learners with the outcomes of learners undertaking numeracy courses within Community/Tailored learning. From within the broad group of Community/Tailored Learning learners, matching methods were used to identify learners who are most comparable to Multiply learners. This matching effectively selected a subset of individuals who are similar to Multiply learners across a range of observed characteristics, including prior attainment, demographic factors, and support for Special Educational Needs and Disabilities, as well as course length in certain specifications. This approach ensures that the analysis focuses on comparisons between learners who are similar on key observable dimensions, rather than relying on comparisons with the full population of learners taking Community Learning courses in numeracy. After constructing the matched comparison group, the analysis compares

outcomes for Multiply learners with the outcomes of matched learners taking Community Learning. The analysis examines outcomes including measures of participation in further learning and course completion. Differences in the outcomes show how the outcomes of Multiply learners compare to the outcomes of learners taking Community Learning courses, after accounting for the observable differences between groups. The matching approach improves comparability between groups but relies on the availability and quality of observed characteristics in the administrative data. If unobserved factors differ systematically between Multiply learners and matched comparison learners, estimated impacts may still be subject to bias.

While using solely the ILR data would provide more complete coverage of learners in both groups, the use of linked NPD-ILR data allows the analysis to control for prior attainment and a broader set of background characteristics, which are not captured, or are measured less consistently, in the ILR alone. These factors are important for ensuring comparability between Multiply and Community learners. Including prior attainment from the NPD, in particular, has a noticeable effect on the estimated impacts, indicating that differences in learners' prior attainment are an important determinant of outcomes. On balance, the linked NPD-ILR data is therefore used, as it supports more robust comparisons.

Appendix D: Data limitations

Our analysis of educational outcomes relies on the linkage between the NPD and ILR datasets, which we use to obtain both outcomes (from the ILR) and key background characteristics such as prior attainment (from the NPD). These 2 separate administrative datasets can be linked based on the Pupil Matching Reference (PMR), a unique individual identifier used throughout education.

A key limitation of the linked dataset relates to the rate at which learners recorded in the ILR can be successfully matched to their earlier school records in the NPD. The proportion of learners who can be successfully linked across the data available for this evaluation is relatively low. As a result, our main analysis is conducted on the subset of Multiply learners for whom a valid link between the ILR and NPD can be established.

To better understand the extent of this issue, learners in the ILR can be grouped according to whether they are in scope for linkage and whether a successful match to the NPD can be achieved. The charts below show the share of Multiply and Community Learning learners that fall into each of these categories, and therefore the proportion of learners available for inclusion in the analytical sample used in the educational outcomes analysis. The 4 groups are as follows:

1. **Learners not in scope for the NPD.** These individuals were born before 1986 and therefore fall outside the birth cohorts covered by the NPD. As a result, they cannot be linked to school records and are excluded from the analysis.
2. **Learners with a missing Pupil Matching Reference (PMR).** These individuals fall within the relevant birth cohorts but do not have a PMR recorded in the ILR. One possible reason is that they did not attend school in England and therefore were never assigned a PMR. These learners also cannot be linked to school records.
3. **Learners with a PMR recorded but not successfully linked to the NPD.** In principle, these individuals should be linkable via their PMR. In practice, however, there is no record in the NPD school census (from any year) with a matching PMR.
4. **Learners with a PMR recorded and successfully linked to the NPD.** These individuals can be matched across the ILR and NPD datasets and therefore form the analytical sample used in the educational outcomes analysis.

Table 22 presents the distribution of learners across the 4 linkage categories described above for the treatment and comparison groups. This table illustrates the proportion of

learners who fall outside the scope of the NPD, those with missing or non-linking PMRs, and those who can be successfully linked across the ILR and NPD and therefore included in the analytical sample.

Table 22: Data matching rates for Multiply and Community learners

Match	Multiply learners	Community Learning learners
Not in scope for NPD	51.6%	43.8%
PMR missing (unmatched)	15.3%	25.2%
PMR present (unmatched)	21.8%	19.7%
PMR present (matched)	11.3%	11.3%

The largest group of learners fall outside the scope of the NPD because they were born before 1986. This accounts for 52% of Multiply learners and 44% of Community Learning learners – these individuals cannot be linked to school records by construction.

Among learners who fall within the relevant birth cohorts, a further group cannot be linked because a PMR is not recorded in the ILR. Without this identifier it is not possible to attempt a linkage to the NPD. This applies to 15% of Multiply learners and 25% of Community Learning learners (32% and 35% respectively of Multiply and Community Learning learners born after 1986). In some cases, learners will not have a PMR recorded because they did not attend school in England.

A further group of learners have a PMR recorded, but their PMR does not correspond to a record in the NPD. This accounts for 22% of Multiply learners and 20% of Community Learning learners. As a share of learners with a PMR, the share that do not successfully match to the NPD is quite high: 66% of Multiply and 70% of Community Learning learners with a PMR in their ILR record still cannot be matched to the NPD. The precise reasons for this are not fully understood. One possible explanation is that some learners may have been assigned a new PMR when entering further education if their details did not exactly match earlier records.

Taken together, these factors mean that around 11% of learners in both groups can be successfully linked across the ILR and NPD datasets and are therefore included in the

analytical sample used in the educational outcomes analysis. The reasons for the low match rate between the ILR and NPD are not fully understood, which makes it difficult to assess whether learners who can be successfully linked differ systematically from those who cannot.

Figure 97: Data matching rate for Multiply learners

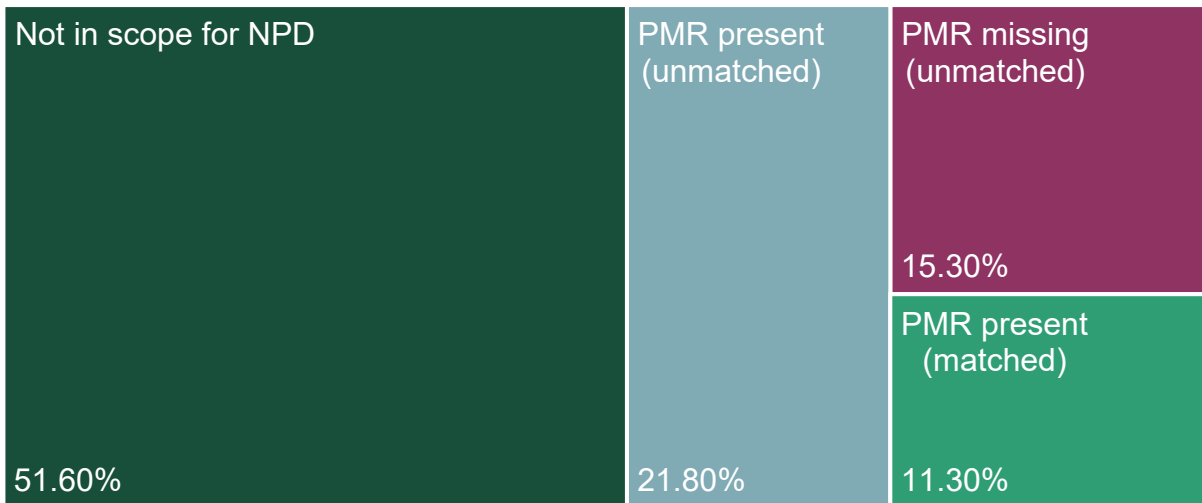
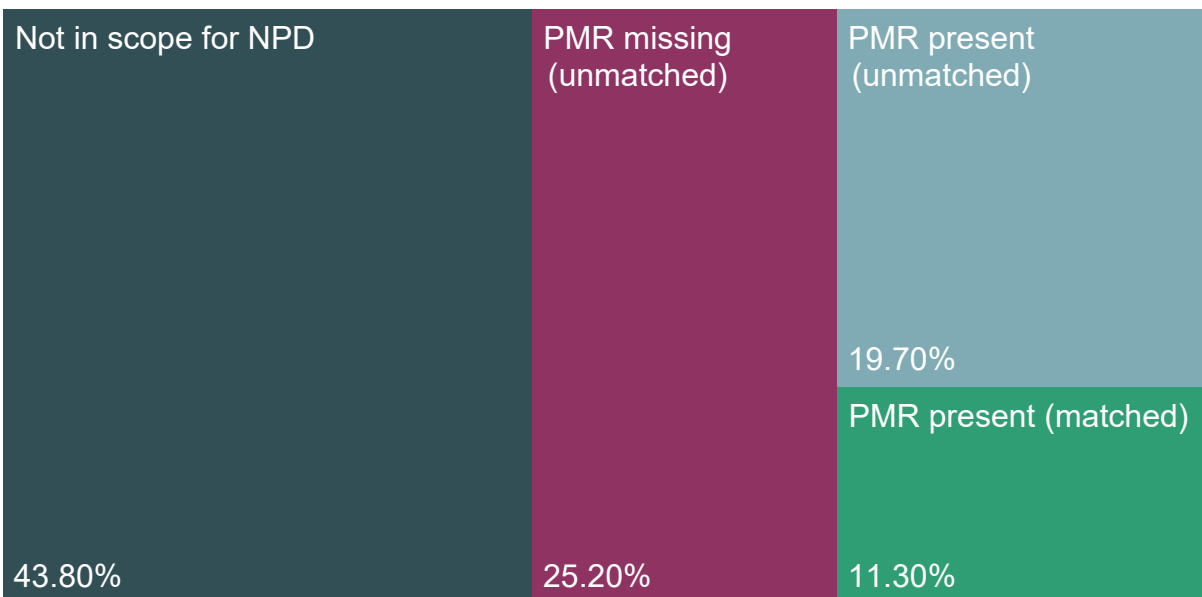


Figure 98: Data matching rate for Community Learning learners



To examine whether the learners who can be linked across the ILR and NPD datasets differ systematically from the wider population of learners, Table 23 and Table 24

present summary statistics for Multiply and Community Learning learners across several progressively restricted samples. For each group of learners, we report characteristics for the full ILR sample, those born within the NPD birth cohorts (and therefore in scope for linkage), those with a PMR recorded in the ILR, and those whose PMR can be successfully matched to a record in the NPD. We also present outcomes data for the samples with a PMR present. Comparing these samples provides an indication of how the characteristics and outcomes of learners change as the sample becomes restricted to those for whom linkage is possible.

Table 23: Summary statistics across different samples of Multiply learners

Demographic characteristics recorded in the ILR	Full ILR sample	In scope for NPD	PMR present	PMR present and matched
Male (%)	33.3	38.6	35.4	43.4
White British (%)	48.6	48.6	40.3	77.4
Average age at course start	39.8	27.3	29.1	27.0
Achieved Level 2 (%)	1.0	1.8	1.0	1.4
Achieved Level 3 (%)	0.3	0.6	0.6	0.8
Learner has learning difficulty or disability (%)	33.9	35.3	28.8	49.5
Employed prior to course (%)	31.0	30.2	29.4	33.3

Table 24: Summary statistics across different samples of Community Learning learners

Demographic characteristics recorded in the ILR	Full ILR sample	In scope for NPD	PMR present	PMR present and matched
Male (%)	27.6	31.8	26.4	30.1
White British (%)	46.0	42.9	38.6	76.4
Average age at course start	37.1	27.2	29.3	27.6
Achieved Level 2 (%)	1.4	2.4	1.4	2.0
Achieved Level 3 (%)	0.3	0.6	0.5	0.4
Learner has learning difficulty or disability (%)	37.4	39.7	30.9	52.5
Employed prior to course (%)	34.8	32.7	32.8	40.5

There is variation in characteristics across the different samples. Restricting the sample to learners born within the birth cohorts covered by the NPD primarily affects the age composition of the sample. In both the Multiply and Community Learning learner groups, limiting the sample to learners born after 1986 reduces the average age from around 40 to 27 among Multiply learners and from around 37 to 27 among Community Learning learners, reflecting the exclusion of older learners who fall outside the scope of the NPD. Restricting the sample further to learners with a PMR recorded results in additional compositional changes. In both groups, the share of White British learners falls when moving from the sample in scope for the NPD to the sample with a PMR recorded, and the share of learners recorded as having a learning difficulty or disability also decreases.

In both the Multiply and Community Learning learner groups, the final matched samples contain a substantially higher share of White British learners (around 77% in both groups) and a higher share of learners recorded as having a learning difficulty or disability. Measures of prior attainment and employment prior to the course remain similar across these samples. These patterns indicate that the subset of learners whose records can be successfully matched to the NPD differs from the broader ILR population. In particular, match rates appear to be substantially lower for learners from minority ethnic backgrounds. This may reflect challenges in linking records for these individuals, who may be more likely to have inconsistencies in identifiers (such as PMRs) between school and further education records.

This has implications for how the results should be interpreted. The matched sample is not fully representative of the wider ILR population, and instead reflects the group of learners for whom prior attainment and school records are observed in the administrative data. As a result, the estimated effects should be understood as applying to this subset of learners, rather than to all participants. While our statistical analysis controls for observable differences, unobserved differences between the matched sample and the full ILR cohort may still affect the generalisability of the findings.

Construction of comparison group using propensity score matching

In our analysis of educational outcomes, we construct a comparison group for Multiply learners from the sample of individuals taking Community Learning courses in numeracy. We do this using propensity score matching (PSM), which matches individuals based on their observable characteristics prior to participation. The matching procedure uses pre-treatment variables that are likely to influence participation in Multiply and/or predict the outcomes we study. The aim is to create a comparison group that is as similar as possible to Multiply learners in terms of these observable characteristics before the course begins. By balancing the 2 groups in this way, the matched Community Learning learners provide a more credible estimate of the counterfactual outcomes for Multiply learners.

In the matching procedure, we first match learners on a set of background characteristics observed in the administrative data: sex, ethnicity, eligibility for free school meals at age 16, and special educational needs status at age 16. Our descriptive analysis shows that Multiply learners differ from the population of Community Learning learners along these dimensions. These characteristics may influence both participation in adult learning and subsequent outcomes. Matching on these demographic variables therefore helps ensure that Multiply learners are compared with Community Learning learners who have similar backgrounds prior to participation.

We then include measures of prior attainment from the NPD data. Multiply courses are targeted at adults with lower levels of numeracy, making prior academic attainment an important factor to account for when constructing a comparison group. We therefore match learners on attainment at both Key Stage 2³⁹ and Key Stage 4, including

³⁹ Around 20 % of learners are recorded as working below the level of the Key Stage 2 test and therefore do not have a reported score. In our main specification, we impute a value for the missing score and create an indicator for missing Key Stage 2 attainment, which we use as variables in the matching analysis. As a robustness check, we instead group learners into quintiles based on their Key Stage 2 scores, assigning those with missing scores to the lowest quintile. The results are very similar under both approaches.

indicators for achieving the expected level in English and maths at Key Stage 2; standardised Key Stage 2 test scores in English and maths; and standardised GCSE English and maths scores at Key Stage 4. Including these variables helps ensure that Multiply learners are compared with Community Learning learners who have similar prior academic attainment and underlying skill levels prior to participation.

In addition, we match learners on expected course length. Multiply courses tend to be shorter in duration than other adult learning courses, and course length may therefore capture differences in the structure and intensity of provision that are also associated with the types of learners who enrol. At the same time, the shorter courses offered by Multiply can also be part of Multiply’s own treatment effect: shorter courses can be a deliberate design course to encourage additional learners to engage in study. For this reason, we also report results from specifications that exclude this variable to capture the full effect of Multiply provision as opposed to Community Learning provision (rather than comparing learners taking similar types of provision).

Table 25 presents summary statistics for the variables used in the matching process. For each variable, the table reports the mean values for the participant and comparison groups before matching, as well as for the matched participant and comparison groups after matching. The table also reports the percentage bias between the 2 groups.⁴⁰ Smaller values indicate greater similarity between the participant and comparison groups, suggesting better balance after matching.

Table 25: Balance in matching variables for Multiply and Community Learning learner groups before and after matching

Variable	Unmatched Community	Unmatched Multiply	Unmatched percent bias	Matched Community	Matched Multiply	Matched percent bias
Male	0.28	0.44	34%	0.44	0.42	5%
White British	0.75	0.76	3%	0.77	0.76	3%
Free school meals	0.30	0.28	5%	0.28	0.26	4%

⁴⁰ Percentage bias refers to the standardised difference in the mean of a variable between the participant and comparison groups, calculated as the difference in means relative to the square root of the average of the two group variances.

Variable	Unmatched Community	Unmatched Multiply	Unmatched percent bias	Matched Community	Matched Multiply	Matched percent bias
SEN statement	0.17	0.20	8%	0.10	0.08	4%
Age at start of course	27	27	9%	27	27	5%
Prior attainment – KS2 English expected level	0.52	0.54	4%	0.63	0.63	0%
Prior attainment – KS2 maths expected level	0.40	0.50	19%	0.58	0.57	3%
Prior attainment – KS2 maths score (std.)	-0.81	-0.57	24%	-0.48	-0.54	6%
Prior attainment – KS2 maths score missing	0.19	0.20	3%	0.11	0.10	4%
Prior attainment – KS4 English score (std.)	-0.83	-0.72	11%	-0.66	-0.65	1%
Prior attainment – KS4 maths score (std.)	-1.15	-0.84	31%	-0.77	-0.76	1%
Expected course duration	65	37	37%	42	35	10%

Prior to matching, the Multiply and Community Learning learner groups differ across a number of characteristics. For example, Multiply learners are substantially more likely to be male. They also tend to have higher prior attainment. For instance, the average standardised KS4 maths score is –0.84 for Multiply learners compared with –1.15 for

Community Learning learners in the unmatched sample.⁴¹ Both groups therefore have relatively low prior attainment, but Multiply learners have somewhat stronger maths attainment at age 16. There are also large differences in expected course duration, with Multiply courses averaging 37 days compared with 65 days among Community Learning courses. These differences indicate that the 2 groups are not well balanced prior to matching.

After applying propensity score matching, the characteristics of the 2 groups become much more similar. Differences in the mean values of most variables are substantially reduced, and the percentage bias falls to relatively small values across the set of matching variables. For example, the difference in KS4 maths attainment falls considerably and the gap in demographic characteristics such as sex is also reduced. This indicates that the matching procedure successfully constructs a comparison group of Community Learning learners who are similar to Multiply participants across the observed characteristics used in the matching process.

To estimate programme impacts using the matched samples described above, we apply propensity score matching estimators that compare outcomes for Multiply participants with outcomes for similar Community Learning learners. Our preferred specification used kernel matching. Under this approach, outcomes for Multiply participants are compared with a weighted average of outcomes for Community Learning learners, where the weights depend on the distance between their estimated propensity scores. Greater weight is given to learners with propensity scores closer to those of the participant being evaluated. As a robustness check, we also use nearest neighbour matching, which instead pairs each participant with the most similar individuals from the comparison group based on their propensity scores. The estimated impacts are very similar across the 2 approaches, indicating that the results are not sensitive to the choice of matching estimator.

Analysis of survey-based outcomes: Self-reported confidence, wellbeing and employment outcomes

The impact analysis also examines differences in confidence levels and other self-reported outcomes using linked survey and ILR data. This strand of analysis compares Multiply learners with learners undertaking AEB numeracy courses. The learner survey data were collected only for Multiply and AEB learners, meaning that Community Learning learners are not observed on these outcomes. As a result, AEB (qualification)

⁴¹ These scores are standardised to have a mean of zero in the wider population and so negative values simply indicate attainment below the population average.

learners provide the only feasible comparison group for this analysis. While AEB (qualification) learners differ from Multiply learners in some respects, they represent an appropriate benchmark as they are engaged in adult numeracy learning.

The analysis uses regression models to control for differences between AEB and Multiply learners observed in the ILR and survey data. In contrast to the analysis of educational attainment and participation, the linked ILR-survey sample is more limited in size and incorporates survey weights to ensure representativeness. It was possible to match over 99% of survey data respondents to their ILR records, but given the smaller initial sizes of the treatment and control group, regression analysis provides a more suitable way to control for observable differences than matching, which would further reduce the effective sample size. The analysis includes a range of variables, such as demographic factors, course-related information and reasons for taking the course, which attempt to account for observable differences between learners and the provision they undertake.

As with the analysis of educational outcomes, there are limitations to this analysis. Survey-based outcomes are self-reported rather than based on objective measures of outcomes. In addition, the measures of confidence and other outcomes are reported retrospectively (after learners have already completed the course) rather than as true baseline measures. Regression analysis was used to control for characteristics that are observed in the data, but unobserved differences between learners may remain. As a result, the estimates are best interpreted as conditional differences between Multiply and AEB (qualification) learners rather than the causal effect of the programme.

Appendix E: Learning aims

Table 26: Learning aims for AEB courses

Qualification Name	Qualification Number
Ascentis Entry Level 1 Extended Award in Mathematics (Stepping Stones to Functional Skills)	61004212
Ascentis Entry Level 1 Certificate in Mathematics (Stepping Stones to Functional Skills)	61004224
Ascentis Entry Level 2 Extended Award in Mathematics (Stepping Stones to Functional Skills)	61004388
Ascentis Entry Level 3 Extended Award in Mathematics (Stepping Stones to Functional Skills)	61004546
Ascentis Entry Level 1 Functional Skills Mathematics	61044258
Ascentis Entry Level 3 Functional Skills Mathematics	61044271
Ascentis Entry Level 2 Certificate in Mathematics (Stepping Stones to Functional Skills)	6100439X
Ascentis Entry Level 3 Certificate in Mathematics (Stepping Stones to Functional Skills)	6100456X
Ascentis Entry Level 2 Functional Skills Mathematics	6104426X
City & Guilds Entry Level Award in Mathematics Skills (Measure, Shape and Space) (Entry 1)	60074929
City & Guilds Entry Level Award In Mathematics Skills - Number (Entry 2)	60074942
City & Guilds Entry Level Award In Mathematics Skills - Measure, Shape and Space (Entry 2)	60074954
City & Guilds Entry Level Award In Mathematics Skills - Number (Entry 3)	60074978

Qualification Name	Qualification Number
City & Guilds Entry Level Certificate in Mathematics Skills (Entry 3)	60075120
City & Guilds Entry Level Certificate In Mathematics Skills (Entry 2)	60075156
City & Guilds Entry Level Certificate in Mathematics Skills (Entry 1)	60075235
City & Guilds Entry Level Award in Mathematics Skills - Number (Entry 1)	60075247
City & Guilds Entry Level Certificate in the Principles of Using Mathematical Techniques (Entry 3)	60112888
City & Guilds Functional Skills Qualification in Mathematics at Entry Level 2	60349165
City & Guilds Functional Skills Qualification in Mathematics at Entry Level 3	60349177
City & Guilds Functional Skills Qualifications in Mathematics at Entry Level 1	60349189
Gateway Qualifications Entry Level Certificate In Mathematics (Entry 1)	60107078
Gateway Qualifications Entry Level Certificate In Mathematics (Entry 3)	60107091
Gateway Qualifications Entry Level Certificate In Mathematics (Entry 2)	6010708X
Highfield Functional Skills Qualification in Mathematics at Entry Level 3	61053041
NCFE Entry Level 2 Functional Skills Qualification in Mathematics	60350532

Qualification Name	Qualification Number
NCFE Entry Level 3 Functional Skills Qualification in Mathematics	60350611
NCFE Entry Level 1 Functional Skills Qualification in Mathematics	6035057X
NOCN Functional Skills Qualification in mathematics at Entry 3	60352656
NOCN Functional Skills Qualification in mathematics at Entry 2	60352711
NOCN Functional Skills Qualification in mathematics at Entry 1	60352735
NOCN Entry Level Award in Mathematics Skills (Entry 1)	60356753
NOCN Entry Level Award in Mathematics Skills (Entry 2)	60356765
NOCN Entry Level Award in Mathematics Skills (Entry 3)	60356789
Open Awards Entry Level Functional Skills Qualification in Mathematics (Entry 1)	60349566
Open Awards Entry Level Functional Skills Qualification in Mathematics (Entry 3)	60349591
Open Awards Entry Level Functional Skills Qualification in Mathematics (Entry 2)	6034961X
Pearson Edexcel Functional Skills Qualification in Mathematics at Entry Level 2	60342651
Pearson Edexcel Functional Skills Qualification in Mathematics at Entry Level 3	60342663
Pearson Edexcel Functional Skills Qualification in Mathematics at Entry Level 1	60342699
Ascentis Level 1 Certificate in Mathematics (Stepping Stones to Functional Skills)	60347491
Ascentis Level 1 Functional Skills Mathematics	61044283

Qualification Name	Qualification Number
Ascentis Level 1 Extended Award in Mathematics (Stepping Stones to Functional Skills)	6034748X
City & Guilds Level 1 Certificate In Mathematics Skills	60075144
City & Guilds Level 1 Certificate in The Principles of Using Mathematical Techniques	60076550
City & Guilds Functional Skills Qualification in Mathematics at Level 1	60346486
FAQ Level 1 Functional Skills Qualification in Mathematics	60348033
Highfield Functional Skills Qualification in Mathematics at Level 1	60349967
NCFE Level 1 Functional Skills Qualification in Mathematics	60350556
NCFE Level 1 Certificate in Essential Maths in Everyday Life	61006488
NOCN Functional Skills Qualification in mathematics at Level 1	60352693
NOCN Level 1 Award in Mathematics Skills	60356704
Open Awards Level 1 Functional Skills Qualification in Mathematics	60348057
Pearson Edexcel Functional Skills Qualification in Mathematics at Level 1	60342675
TQUK Functional Skills Qualification in Maths at Level 1 (RQF)	61026232
VTCT Skills Level 1 Functional Skills Qualification in Mathematics	60348070
Ascentis Level 2 Functional Skills Mathematics	61044295
City & Guilds Functional Skills Qualification in Mathematics at Level 2	60346498
FAQ Level 2 Functional Skills Qualification in Mathematics	60348045

Qualification Name	Qualification Number
Highfield Functional Skills Qualification in Mathematics at Level 2	6034992X
NCFE Level 2 Functional Skills Qualification in Mathematics	6035060X
NOCN Functional Skills Qualification in mathematics at Level 2	6035267X
Open Awards Level 2 Functional Skills Qualification in Mathematics	60348069
Pearson Edexcel Functional Skills Qualification in Mathematics Level 2	60342687
TQUK Functional Skills Qualification in Maths at Level 2 (RQF)	61026244
VTCT Skills Level 2 Functional Skills Qualification in Mathematics	60348082
Pearson Edexcel Level 1 Award in Number and Measure	60022413
AQA Level 1/Level 2 GCSE (9-1) in Mathematics	60146084
OCR Level 1/Level 2 GCSE (9-1) in Mathematics	60146060
Pearson Edexcel Level 1/Level 2 GCSE (9-1) in Mathematics	60147003
WJEC Eduqas Level 1/Level 2 GCSE (9-1) in Mathematics	60155036

Table 27: Learning aims for Community Learning courses

LearnAimRefTitle	LearnAimRef
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 581 to 1060 hrs, PW A	Z0000225
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 389 to 580 hrs, PW A	Z0000226
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 1061 + hrs, PW A	Z0000227
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 101 to 196 hrs, PW A	Z0000228
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 293 to 388 hrs, PW A	Z0000229
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 37 to 100 hrs, PW A	Z0000230
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, Up to 36 hrs, PW A	Z0000231
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 197 to 292 hrs, PW A	Z0000232
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 389 to 580 hrs, PW A	Z0000233
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 581 to 1060 hrs, PW A	Z0000234
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 1061 + hrs, PW A	Z0000235
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 293 to 388 hrs, PW A	Z0000236

LearnAimRefTitle	LearnAimRef
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 37 to 100 hrs, PW A	Z0000237
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, Up to 36 hrs, PW A	Z0000238
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 197 to 292 hrs, PW A	Z0000239
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 101 to 196 hrs, PW A	Z0000240
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 389 to 580 hrs, PW A	Z0000241
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 293 to 388 hrs, PW A	Z0000242
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 581 to 1060 hrs, PW A	Z0000243
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 1061 + hrs, PW A	Z0000244
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, Up to 36 hrs, PW A	Z0000245
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 37 to 100 hrs, PW A	Z0000246
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 197 to 292 hrs, PW A	Z0000247
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 101 to 196 hrs, PW A	Z0000248
Non regulated provision, Entry Level, Mathematics and Statistics	Z0001735
Non regulated provision, Level 1, Mathematics and Statistics	Z0001785

LearnAimRefTitle	LearnAimRef
Non regulated provision, Level 2, Mathematics and Statistics	Z0001835
Non regulated Community Learning provision, Mathematics and Statistics	Z0002085
Non regulated provision, Pre-Entry Level, Maths	Z0002137
Non regulated provision, Entry Level, Maths	Z0002138
Non regulated provision, Level 1, Maths	Z0002139
Non regulated provision, Level 2, Maths	Z0002140
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, Up to 12 hrs, PW A	Z0002518
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 13 to 20 hrs, PW A	Z0002519
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 21 to 44 hrs, PW A	Z0002520
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 45 to 68 hrs, PW A	Z0002521
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 69 to 92 hrs, PW A	Z0002522
Non regulated SFA formula funded provision, Entry Level, Mathematics and Statistics, 93 to 100 hrs, PW A	Z0002523
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, Up to 12 hrs, PW A	Z0002524
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 13 to 20 hrs, PW A	Z0002525
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 21 to 44 hrs, PW A	Z0002526

LearnAimRefTitle	LearnAimRef
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 45 to 68 hrs, PW A	Z0002527
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 69 to 92 hrs, PW A	Z0002528
Non regulated SFA formula funded provision, Level 1, Mathematics and Statistics, 93 to 100 hrs, PW A	Z0002529
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, Up to 12 hrs, PW A	Z0002530
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 13 to 20 hrs, PW A	Z0002531
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 21 to 44 hrs, PW A	Z0002532
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 45 to 68 hrs, PW A	Z0002533
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 69 to 92 hrs, PW A	Z0002534
Non regulated SFA formula funded provision, Level 2, Mathematics and Statistics, 93 to 100 hrs, PW A	Z0002535
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, Up to 12 hrs	Z0004390
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 13 to 20 hrs	Z0004391
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 21 to 44 hrs	Z0004392
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 45 to 68 hrs	Z0004393

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 69 to 92 hrs	Z0004394
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 93 to 100 hrs	Z0004395
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 101 to 196 hrs	Z0004396
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 197 to 292 hrs	Z0004397
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 293 to 388 hrs	Z0004398
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 389 to 580 hrs	Z0004399
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 581 to 1060 hrs	Z0004400
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 1061 + hrs	Z0004401
Non regulated Adult skills formula funded provision, Entry Level, Maths, Up to 12 hrs	Z0004402
Non regulated Adult skills formula funded provision, Entry Level, Maths, 13 to 20 hrs	Z0004403
Non regulated Adult skills formula funded provision, Entry Level, Maths, 21 to 44 hrs	Z0004404
Non regulated Adult skills formula funded provision, Entry Level, Maths, 45 to 68 hrs	Z0004405
Non regulated Adult skills formula funded provision, Entry Level, Maths, 69 to 92 hrs	Z0004406

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Entry Level, Maths, 93 to 100 hrs	Z0004407
Non regulated Adult skills formula funded provision, Entry Level, Maths, 101 to 196 hrs	Z0004408
Non regulated Adult skills formula funded provision, Entry Level, Maths, 197 to 292 hrs	Z0004409
Non regulated Adult skills formula funded provision, Entry Level, Maths, 293 to 388 hrs	Z0004410
Non regulated Adult skills formula funded provision, Entry Level, Maths, 389 to 580 hrs	Z0004411
Non regulated Adult skills formula funded provision, Entry Level, Maths, 581 to 1060 hrs	Z0004412
Non regulated Adult skills formula funded provision, Entry Level, Maths, 1061 + hrs	Z0004413
Non regulated Adult skills formula funded provision, Level 1, Maths, Up to 12 hrs	Z0004414
Non regulated Adult skills formula funded provision, Level 1, Maths, 13 to 20 hrs	Z0004415
Non regulated Adult skills formula funded provision, Level 1, Maths, 21 to 44 hrs	Z0004416
Non regulated Adult skills formula funded provision, Level 1, Maths, 45 to 68 hrs	Z0004417
Non regulated Adult skills formula funded provision, Level 1, Maths, 69 to 92 hrs	Z0004418
Non regulated Adult skills formula funded provision, Level 1, Maths, 93 to 100 hrs	Z0004419

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Level 1, Maths, 101 to 196 hrs	Z0004420
Non regulated Adult skills formula funded provision, Level 1, Maths, 197 to 292 hrs	Z0004421
Non regulated Adult skills formula funded provision, Level 1, Maths, 293 to 388 hrs	Z0004422
Non regulated Adult skills formula funded provision, Level 1, Maths, 389 to 580 hrs	Z0004423
Non regulated Adult skills formula funded provision, Level 1, Maths, 581 to 1060 hrs	Z0004424
Non regulated Adult skills formula funded provision, Level 1, Maths, 1061 + hrs	Z0004425
Non regulated Adult skills formula funded provision, Level 2, Maths, Up to 12 hrs	Z0004426
Non regulated Adult skills formula funded provision, Level 2, Maths, 13 to 20 hrs	Z0004427
Non regulated Adult skills formula funded provision, Level 2, Maths, 21 to 44 hrs	Z0004428
Non regulated Adult skills formula funded provision, Level 2, Maths, 45 to 68 hrs	Z0004429
Non regulated Adult skills formula funded provision, Level 2, Maths, 69 to 92 hrs	Z0004430
Non regulated Adult skills formula funded provision, Level 2, Maths, 93 to 100 hrs	Z0004431
Non regulated Adult skills formula funded provision, Level 2, Maths, 101 to 196 hrs	Z0004432

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Level 2, Maths, 197 to 292 hrs	Z0004433
Non regulated Adult skills formula funded provision, Level 2, Maths, 293 to 388 hrs	Z0004434
Non regulated Adult skills formula funded provision, Level 2, Maths, 389 to 580 hrs	Z0004435
Non regulated Adult skills formula funded provision, Level 2, Maths, 581 to 1060 hrs	Z0004436
Non regulated Adult skills formula funded provision, Level 2, Maths, 1061 + hrs	Z0004437
Non regulated Adult skills formula funded provision, Entry Level, Mathematics and Statistics, Up to 2 hrs, PW A	Z0008067
Non regulated Adult skills formula funded provision, Entry Level, Mathematics and Statistics, 3 to 4 hrs, PW A	Z0008068
Non regulated Adult skills formula funded provision, Entry Level, Mathematics and Statistics, 5 to 6 hrs, PW A	Z0008069
Non regulated Adult skills formula funded provision, Entry Level, Mathematics and Statistics, 7 to 12 hrs, PW A	Z0008070
Non regulated Adult skills formula funded provision, Level 1, Mathematics and Statistics, Up to 2 hrs, PW A	Z0008071
Non regulated Adult skills formula funded provision, Level 1, Mathematics and Statistics, 3 to 4 hrs, PW A	Z0008072
Non regulated Adult skills formula funded provision, Level 1, Mathematics and Statistics, 5 to 6 hrs, PW A	Z0008073
Non regulated Adult skills formula funded provision, Level 1, Mathematics and Statistics, 7 to 12 hrs, PW A	Z0008074

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Level 2, Mathematics and Statistics, Up to 2 hrs, PW A	Z0008075
Non regulated Adult skills formula funded provision, Level 2, Mathematics and Statistics, 3 to 4 hrs, PW A	Z0008076
Non regulated Adult skills formula funded provision, Level 2, Mathematics and Statistics, 5 to 6 hrs, PW A	Z0008077
Non regulated Adult skills formula funded provision, Level 2, Mathematics and Statistics, 7 to 12 hrs, PW A	Z0008078
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, Up to 2 hrs	Z0009023
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 3 to 4 hrs	Z0009024
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 5 to 6 hrs	Z0009025
Non regulated Adult skills formula funded provision, Pre-Entry Level, Maths, 7 to 12 hrs	Z0009026
Non regulated Adult skills formula funded provision, Entry Level, Maths, Up to 2 hrs	Z0009027
Non regulated Adult skills formula funded provision, Entry Level, Maths, 3 to 4 hrs	Z0009028
Non regulated Adult skills formula funded provision, Entry Level, Maths, 5 to 6 hrs	Z0009029
Non regulated Adult skills formula funded provision, Entry Level, Maths, 7 to 12 hrs	Z0009030
Non regulated Adult skills formula funded provision, Level 1, Maths, Up to 2 hrs	Z0009039

LearnAimRefTitle	LearnAimRef
Non regulated Adult skills formula funded provision, Level 1, Maths, 3 to 4 hrs	Z0009040
Non regulated Adult skills formula funded provision, Level 1, Maths, 5 to 6 hrs	Z0009041
Non regulated Adult skills formula funded provision, Level 1, Maths, 7 to 12 hrs	Z0009042
Non regulated Adult skills formula funded provision, Level 2, Maths, Up to 2 hrs	Z0009051
Non regulated Adult skills formula funded provision, Level 2, Maths, 3 to 4 hrs	Z0009052
Non regulated Adult skills formula funded provision, Level 2, Maths, 5 to 6 hrs	Z0009053
Non regulated Adult skills formula funded provision, Level 2, Maths, 7 to 12 hrs	Z0009054
Non regulated Community Learning, Essential Skills, Pre-Entry Level, Maths	Z0060025
Non regulated Community Learning, Essential Skills, Entry Level, Maths	Z0060026
Non regulated Community Learning, Essential Skills, Level 1, Maths	Z0060027
Non regulated Community Learning, Essential Skills, Level 2, Maths	Z0060028
Non regulated Tailored Learning, Essential Skills, Pre-Entry Level, Maths	Z0060103
Non regulated Tailored Learning, Essential Skills, Entry Level, Maths (Entry 1)	Z0060104

LearnAimRefTitle	LearnAimRef
Non regulated Tailored Learning, Essential Skills, Entry Level, Maths (Entry 2)	Z0060105
Non regulated Tailored Learning, Essential Skills, Entry Level, Maths (Entry 3)	Z0060106
Non regulated Tailored Learning, Essential Skills, Level 1, Maths	Z0060107
Non regulated Tailored Learning, Essential Skills, Level 2, Maths	Z0060108
Non-regulated Tailored Learning, Employer Facing Provision, Mathematics and Statistics	Z0060168

Appendix F: Multiply programme costs in England

The Multiply Programme in England funded several strands of activity: allocations to local areas, Multiply digital platform, research and evaluation including a programme of Adult Numeracy Randomised Controlled Trials, and communications. Figures are provided by financial year.

Table 28: Local allocations (grants to local areas)

2022-23 Allocation	2022-23 Spend	2023-24 Allocation	2023-24 Spend	2024-25 Allocation	2024-25 Spend
£81,759,273	£50,949,998	£94,337,622	£85,500,561	£94,337,622	£90,110,851

Local areas were allocated their total Multiply Year 1 funding in September and October 2022. Local areas had between 6 – 7 months to commission and mobilise Year 1 provision before the end of the financial year. The reduced timeframe for delivery meant most local areas did not spend all of their Year 1 funding allocation. The financial data provided only presents spend in relation to Multiply allocation and does not include any expenditure self-funded by areas for over delivery.

Table 29: Remaining activity strands

Activity strand/spend	2022-23	2023-24	2024-25	2025-26
Multiply Digital Platform	£292,755	£0	£0	£0
Multiply Programme Research and Evaluation and Adult Numeracy Randomised Controlled Trials Delivery and Research	£376,093	£1,567,658	£3,428,904	£1,727,898
Communications, contributions to Skills for Life campaign	£106,125	£1,083,426	£1,074,475	£0

Multiply digital platform

In December 2023 the DfE confirmed that the standalone UK-wide Multiply digital service would not progress. The remaining centrally retained funding for the standalone Multiply digital service were used to support UK priorities in England, Scotland, Wales and Northern Ireland.

Research and evaluation⁴²

To improve the evidence base in this area, this funded:

- a [systematic review of the evidence](#) (£122,400)
- the Multiply programme evaluation (£1,296,360) and
- delivery, research and evaluation costs for the programme of Adult Numeracy Randomised Controlled Trials (RCTs) (£5,702,220)

The RCT costs included:

- the product development of the interventions to be tested (£330,290)

⁴² Figures rounded to the nearest £10

- the funding allocation to support delivery (£693,320).⁴³ This included support for adult education providers and schools taking part in each RCT and to product developers to support testing and tutor training to deliver the trials
- the managed service supplier (£1,293,710) and
- the evaluation of the trials (£3,384,900).

As is usual practice, any underspends in overall departmental budgets by the end of the financial year are returned to HMT as per the Consolidated Budgeting Guidance.

Education is a devolved matter. The Ministry of Housing, Communities and Local Government were responsible for overseeing Multiply in Scotland, Wales and Northern Ireland.

⁴³ Please see individual trial reports for individual trial grant funding spend

Appendix G: Research questions

Overview of the Multiply programme

- What number of additional numeracy courses were provided via Multiply? What percentage of all adult numeracy basic skills supply did Multiply account for? How does this breakdown by level of course, type of learner and type of intervention?
- How many learners were involved in the Multiply programme? Of these, how many a) started a course; b) dropped out; c) completed a course; d) gained a Multiply certificate and e) gained a qualification?
- How many, and what type of, learners undertook more than one Multiply course? Of these, how many, and what type of, learner progressed through different competency levels during the 3 years of the Multiply programme?
- How did learner participation and achievement vary by different groups? To include a) level of intervention (Entry Level 1, 2, 3 and Level 1, 2); b) learner demographics, including equality characteristics; c) specific learner groups, different desired outcomes and provision delivered in specific ways; d) learner prior adult learning experience; learner prior education attainment; economic situation; household situation, geography; learner attitudes and behaviour
- How does the Multiply learner profile compare to the control group (e.g. AEB (qualification) learners over the same timeframe) for the same level of numeracy provision? Which differences are statistically significant, once other factors have been accounted for e.g. age, sex, gender, socio-economic status?
- What (perceived) barriers to learning did learners face and how did this vary by different types of learner? Which were the biggest? How were these mitigated and how effective do learners, practitioners, providers and employers think this mitigation was?
- How did learners find out about the Multiply course? To include national comms campaigns, Multiply website, local engagement activity, referral from another provider, employer, recommendation from a friend or family member. How did routes differ by type of course and type of learner?
- Were learner communication, engagement and outreach activities effective? Which were the most highly rated? Which were the most effective? Why? How does this differ, if at all, by type of learner, level of provision and different parts of the programme e.g. digital and classroom provision?

What effects did Multiply have on learners, employers, practitioners and providers?

- What were the Multiply learner outcomes and how did these compare to those in the control group? To include course completions, achievement and positive progression (all programme benefit measures)
- How many, and what type, of learners made positive progression (employment, education and training) [within x months] after completing a Multiply course? What motivated this decision and what role, if any, do learners say that Multiply funded outreach, communications and other support played in enabling this progression?
- Were there any approaches that were more successful than others? Why? How did this break down by level of course, type of learner and provider type?
- What benefits, if any, did those involved in Multiply report as a result of the programme? To include increased confidence, increased job satisfaction, increased job productivity, earnings uplift etc.
- How, if at all, did learner's self-reported confidence levels change over the Multiply course? Specifically, how confident did learners feel about a) numbers overall and b) using numbers and the number system c) using common measures, shape and size and d) handling information and data. Were any changes statistically significant? If so, which and by how much? Was there variation by type of course and/or type of learner?
- How, if at all, did learners' self-reported numeracy skills change from the start to the end of a Multiply course? Were any changes seen statistically significant? If so, which and by how much? Was there variation by type of course and/or type of learner? How accurate was the learner perception of their skills, both pre and post the course, compared to the assessed skill level?
- What were learners' attitudes towards a) learning; b) maths GCSE and c) 'understanding and using numbers' at the start of their Multiply course? Did these change after a learner undertook a Multiply course? If so, by how much? Was there variation by type of course and/or type of learner?
- Did Multiply make a positive contribution to reducing employer reported skills shortages? Was it more successful in some sectors over others? Or in some local areas more than others? Why?
- Has Multiply had a positive effect on adult numeracy practice? I.e. pedagogy, CPD, commissioning moving to more evidence-based approaches etc. Which

parts of the programme have had the biggest impact? Why? Was it more successful in some sectors over others? Or in some local areas more than others? Why? Is this impact sustainable after Multiply concludes?

- Has the availability of Multiply funding enabled providers to undertake work that otherwise would not have been possible? If so, what?

How did learners and other stakeholders experience Multiply?

- What did those involved in Multiply expect from the programme? Were these expectations not met/met/exceeded? How did expectations vary by different types of course and different type of involvement (learner, practitioner, provider, employer)
- How satisfied were those involved in Multiply with a) the Multiply course overall and b) different aspects of Multiply delivery? To include: communications; referrals; outreach; engagement throughout the course; location (inc. digital); timing of the course; content; teaching etc. How did satisfaction levels vary by different types of course and different type of involvement (learner, practitioner, provider, employer)
- How valuable was Multiply to those involved in it, compared to experiences of similar initiatives such as those funded via the Adult Education Budget? How did this differ by type of involvement (learner, practitioner, provider, employer)?
- Would those involved in Multiply recommend it? How does likelihood of recommendation differ by type of course and different type of involvement (learner, practitioner, provider, employer)?
- Number of drop-outs. How many, and what type, of learners a) dropped out of a Multiply course and b) did not progress after a Multiply course? How, if at all, did this vary by region or type of provider?
- Reasons for dropping out. What reasons did learners give for dropping out of a Multiply course (identification of barriers)? What, if anything, could have made the learner change their mind (identification of enablers)? How many of the learners who dropped out of a course enrolled on another Multiply course during the 3 years of the Multiply programme?
- What were the unintended consequences of Multiply? To include at a policy and local level, for different types of learners

How was Multiply designed and delivered?

- How did MSAs/LAs/UAs develop their Multiply Local Investment Plan? Who did they engage with to do this? Why?
- How did MSAs/LAs/UAs identify local adult numeracy skills needs? What sources of information and evidence did they draw upon? Did they engage with employers, employer groups, LEPs, SAPs etc to identify and validate key unmet and future adult numeracy needs?
- What proportion of Multiply courses were developed in collaboration with employers? How did this vary by level of course, type of learner and provider? Why?
- How if at all, do employers assess numeracy skills in the workplace? How effective do they think this approach to identification is? How do they think it could be improved?
- How, if at all, are identified numeracy skills issues supported or rectified in the workplace? How effective do they think each approach is? How do they think it could be improved? Do views vary by type of employer or sector?
- How did MSAs/LAs/UAs engage with other stakeholders to understand barriers/gaps to learning and to build partnerships to improve the development and impact of Multiply? What challenges have areas faced when building partnerships locally? What helped to identify and address any barriers and disincentives within the existing system?
- Were any innovative or new approaches developed and undertaken with Multiply funding? Where? Who by? If not, why not?
- How easy did providers and employers find the following aspects of implementation: producing Local Investment Plans? Financial assurance? Data collection? Sub-commissioning? Knowledge sharing? Interacting with DfE? Engaging with each other? Etc How did views vary by different type of provider and employer?
- How satisfied were providers with the following aspects of implementation: producing Local Investment Plans? Financial assurance? Data collection? Sub-commissioning? Knowledge sharing? Interacting with DfE? Engaging with employers etc. How did satisfaction levels vary by different types of provider and employer? What could be improved and what is perceived as best practice?

- What worked well when interacting with central government (including DfE and MHCLG)? What worked well? Were there any challenges? If so, how effectively were these resolved? Were there differences between Devolved Administrations, MSAs and upper-tier local authorities?
- What are the different views on what role employers should have in addressing employee numeracy skill gaps? Is there a difference in view between providers, employers, learners and practitioners? Why? Do views vary by type of employer or sector and/or type of provider or learner?
- What are the different views on which workplace numeracy support and interventions are the most effective in improving adult numeracy skills? Include collaboration on course design, delivery and assessment Is there a difference in view between providers, employers, learners and practitioners? Why? Do views vary by type of employer or sector and/or type of provider or learner?
- How effectively did Multiply align with the UKSPF, the Levelling Up missions and DfE priority outcomes? To include alignment with aims, processes, communications

How efficiently were resources used?

- Was any match funding (or similar) secured as a result of the Multiply funding? If so, how much and who from? Was it public, private or charitable funding?
- Did Multiply funding duplicate other funding provision e.g. AEB? If so, by how much and in what ways? How did this vary by level of course, type of learner and provider? Why?
- How much of the Multiply budget was spent on learning / engagement / programme support activity? How does this compare to AEB? What were the reasons for any differences identified?
- How many other staff worked on the Multiply programme? What roles did they have? What was the average cost of each role?
- Apart from additional staff, what was the Multiply administration budget spend on in local areas? Did this vary by type of provider?
- What is the Benefit:Cost Ratio for the Multiply programme? How does this differ, if at all, by type of learner, level of provision and different parts of the programme e.g. digital and classroom provision? How does this compare to AEB funded provision?

- What is the Net Present Value for the programme? How does this compare to AEB funded provision?
- What will happen to Multiply provision once the programme concludes (March 2025)? Are there plans to embed any of the Multiply approaches into business as usual? If so, which ones

Appendix H: Theory of change

Table 30: Programme evaluation theory of change

<p>Situation</p>	<p>Participation in adult maths courses relative to the eligible population had fallen over the decade prior to Multiply. Achievement levels had dropped in parallel.</p> <p>Low numeracy limits individuals' employment prospects, wages and wellbeing. Maths qualifications unlock the door to more training and skilled jobs, and provide businesses with productive employees, increasing profits and improving workforce retention. Improving adult numeracy is therefore critical to driving economic growth and is a core Levelling Up mission and DfE priority.</p>	<p>Aims</p>	<p>Multiply was a UK-wide adult numeracy programme, delivered as part of the UK Shared Prosperity Fund. Multiply aimed to improve functional adult numeracy across the population and, in turn, help secure positive labour market outcomes such as boosted employment and earnings prospects for individuals, and enabling more people to progress into the Government's Level 2 and above skills offer.</p>
-------------------------	---	--------------------	---

Inputs and activities	Outputs	Change mechanism	Outcomes	Impacts
<p>Inputs</p> <ul style="list-style-type: none"> • Programme Budget c. £311m • Local area time and resource in Investment Plans, provider commissioning, project management and monitoring • New teachers/additional hours for existing teachers, plus any additional SEND or similar support, to deliver the programme • Provider time and resource in developing, delivering, managing & monitoring new programmes 	<p>Learners</p> <ul style="list-style-type: none"> • Engagement: number of adults engaged with Multiply by local providers through outreach work • Starts: number of eligible adults (19+) participating in Multiply funded courses • Unique learners: number of separate adults (19+) participating in Multiply funded courses across all years • Completions: number of eligible adults (19+) completing Multiply funded courses 	<p>Short term</p> <ul style="list-style-type: none"> • Creative communication and outreach activities result in hard-to-reach learners engaging with relevant, well-designed taster sessions. • Positive experiences at taster sessions increase motivation for more learning, build confidence in their ability to undertake courses, use maths in everyday life, and increase the likelihood that learners recommend courses to others. 	<p>Short term</p> <p><i>Learners</i></p> <ul style="list-style-type: none"> • Increase in the proportion of Multiply learners who say they are satisfied with their course (combined 'very' and 'quite' score) • Increase in the proportion of Multiply learners who say they 'have already' or are 'likely' or 'very likely' to recommend Multiply to others, year on year • Satisfaction: increase in the proportion of Multiply learners who say they are 'very confident' or 'confident' using maths in their everyday lives after their course 	<p>Learners</p> <ul style="list-style-type: none"> • Increase in functional numeracy skills across the population: increased number of adults gaining numeracy qualifications⁴⁴ • Positive labour market outcomes: increased earning prospects for L2 learners within 6 years⁴⁵ <p>Local Areas</p> <ul style="list-style-type: none"> • Improvement in the effectiveness of adult numeracy interventions

⁴⁴This contributed to the Levelling Up Mission 6 which was a strategic priority set out in the UK Government's Levelling Up White Paper (2022). It aimed to ensure that by 2030, the number of people successfully completing high-quality skills training significantly increased in every area of the United Kingdom. This was the relevant policy context at the time the programme was designed.

⁴⁵ This contributed to the DfE's Priority Outcome of Driving Economy Growth through improving the skills pipeline, levelling up productivity and supporting people to work

Inputs and activities	Outputs	Change mechanism	Outcomes	Impacts
<ul style="list-style-type: none"> • Funding to improve evidence base & evaluate programmes • DfE and ESFA time and resource to set up, run, monitor and oversee the programme <p>Activities</p> <p>Local Allocations</p> <ul style="list-style-type: none"> • Local area led outreach and engagement activities, e.g. taster sessions • Face to face Multiply courses, provided either locally or via employers 	<ul style="list-style-type: none"> • Qualifications: number of Multiply learners gaining maths qualifications a) funded by Multiply and b) within 3 years of starting their first Multiply course • Numeracy: number of Multiply learners on courses of 10 or more Guided Learning Hours who show numeracy improvement <p>Local Areas</p> <ul style="list-style-type: none"> • Collaboration: number of courses designed in collaboration with community groups 	<ul style="list-style-type: none"> • Collaboration with community groups and employers ensures courses are locally relevant and introduces innovation into design and delivery, motivating local areas and employers to participate. <p>Medium term</p> <ul style="list-style-type: none"> • Perceived improvement in using maths and social benefits (e.g. improvements in mental health and wellbeing and feeling part of a community) reinforce motivation, leading to learners progressing onto more challenging courses. 	<p><i>Local areas</i></p> <ul style="list-style-type: none"> • Increased provision of Multiply activity year on year <p><i>Employers</i></p> <ul style="list-style-type: none"> • Increase in the proportion of Multiply employers who rate their overall satisfaction with the programme as 'good' or 'excellent', year on year <p>Medium term</p> <p><i>Learners</i></p> <ul style="list-style-type: none"> • Increased proportion of Multiply learners who complete their course over the programme • Increased proportion of learners on a Multiply course who show a sustained improvement in numeracy levels over the programme • Increased proportion of Multiply learners who report at least one positive impact in their lives as a result of Multiply 	<p>Employers</p> <ul style="list-style-type: none"> • Better skilled workforce

Inputs and activities	Outputs	Change mechanism	Outcomes	Impacts
<p><i>Comms</i></p> <ul style="list-style-type: none"> • Social media, digital advertising, PR partnerships, influencer and audio advertising, employers <p><i>Research & Evaluation</i></p> <ul style="list-style-type: none"> • Research and trials exploring what works in improving adult numeracy • Process and impact evaluation of Multiply • Systematic Review of what works in adult numeracy 	<p>Employers</p> <ul style="list-style-type: none"> • Engagement: number of employers engaged by local areas • Collaboration: number of courses designed in collaboration with employers 	<ul style="list-style-type: none"> • Feedback on learner progress and employer engagement encourages local areas to expand successful provision and improve delivery. • Employers observe direct benefits in terms of workforce skills, reinforcing satisfaction and continued involvement. <p>Long term</p> <ul style="list-style-type: none"> • Quantifiable benefits (Entry level and Level 1 qualifications, employment opportunities) sustain motivation, leading learners to progress onto Level 2 qualifications, training or sustained employment. 	<ul style="list-style-type: none"> • Increased proportion of in-work Multiply learners who report at least one positive employment related impact of Multiply <p><i>Local Areas</i></p> <ul style="list-style-type: none"> • Increase in the proportion of local areas who say they are satisfied with Multiply (combined 'very' and 'quite' satisfied score) <p><i>Employers</i></p> <ul style="list-style-type: none"> • Increase in the number of Multiply courses developed in collaboration with employers <p>Long term</p> <p><i>Learners</i></p> <ul style="list-style-type: none"> • Progression: increased proportion of Multiply learners who progress from Multiply non-regulated courses into other education, training or sustained employment over the programme 	

Inputs and activities	Outputs	Change mechanism	Outcomes	Impacts
		<ul style="list-style-type: none"> • Successful delivery and positive feedback lead to local areas integrating Multiply principles into their broader adult numeracy strategies. • Improvements in workforce capability and productivity strengthen employer satisfaction and commitment to supporting adult numeracy initiatives and encourage ongoing collaboration with local areas. 	<ul style="list-style-type: none"> • Progression: increased proportion of Multiply learners who progress from Multiply non-regulated courses to start any qualification bearing course within one year of taking their first Multiply course, over the programme • Progression: increased numbers of Multiply learners moving into further education, training or employment after taking at least one Multiply course. <p><i>Local Areas</i></p> <ul style="list-style-type: none"> • Local areas agree that Multiply has had a positive impact on their approach to adult numeracy <p><i>Employers</i></p> <p>Satisfaction: increased proportion of employers who report at least one positive impact in their business from Multiply</p>	

Evidence assessment

At the start of the Multiply programme in 2022, evidence showed that:

- 9 million working-age adults in England and Northern Ireland had low basic skills, placing them in the lower half of OECD numeracy rankings, behind comparator countries such as Japan, Germany and Canada (OECD, 2013)⁴⁶
- One in 4 people would be deterred from applying for a job if it listed using numbers and data as a requirement (National Numeracy, KCL, Ipsos Mori, 2019)
- More than 5 million adults with low levels of English and maths were in work, potentially creating challenges in the workplace (Kuczera, 2016)
- 68% of workplaces with a basic skills gap did not provide basic skills training (Tu, 2016)
- High numeracy is linked to a range of positive financial capable behaviours (Money Advice Service, 2018), with low confidence in numeracy associated with increased debt and money problems (Financial Conduct Authority, 2021)
- Economic loss from poor numeracy was equivalent to an average of £1,600 p.a. for an individual in the UK (Pro Bono Economics, 2021)
- For the UK as a whole poor numeracy equated to an estimated £25bn of economic loss, in lost wages (Pro Bono Economics, 2021)
- Improvements in skills were estimated to directly account for 20% of UK productivity in recent decades (NIESR, 2015)
- Learners were found to be more likely to sign up for classes that are flexible and when framed as “essential skills”, covering multiple components, rather than “basic skills classes” only (Alma Economics, 2023)

⁴⁶Updated data from the Programme for the International Assessment of Adult Competencies (PIACC) published in 2023 (fieldwork took place between September 2022 and June 2023) found an estimated 8.5 million working age adults in England with low proficiency in literacy, or numeracy, or both. The same report found that England ranked above average in basic skills, but behind Finland, Japan, Sweden, Norway, Netherlands, Estonia, Flemish Community (Belgium), Denmark, Switzerland, Singapore and Germany. [Survey of Adult Skills 2023 Technical Report | OECD](#)

<p>Assumptions</p>	<p>Learner Engagement & Participation</p> <ul style="list-style-type: none"> • Outreach activity will reach target groups, including hard-to-reach learners • Adults with low numeracy will perceive Multiply courses as relevant and accessible • Learners will have sufficient time, motivation and support to attend and complete courses • Employers will recognise the value of staff participation and encourage engagement <p>Delivery Capacity</p> <ul style="list-style-type: none"> • Local authorities, providers have the capability and resource to design and deliver high-quality courses • Sufficient teaching staff (including for SEND support) will be available to meet demand • Employers, community groups and other service providers are willing to collaborate on course design and promotion • Local areas will use a mix of line and in person methods to engage potential learners, to not disadvantage those without digital access/skills. • Local areas embed Multiply-style learning activity once the Multiply funding concludes, sustaining learning and success from the programme <p>Progression</p> <ul style="list-style-type: none"> • Learners will be motivated by course completion, improved confidence in maths and, over time, the achievement of Entry Level and Level 1 qualifications to pursue more education (including taking Level 2 maths qualifications), training, or employment opportunities 	<p>Possible unintended consequences</p>	<ul style="list-style-type: none"> • Learners shift from taking AEB/ASF funded courses to Multiply courses, reducing ('displacing') participation in other essential skills programmes • Learners use the benefits gained from taking part in an initial Multiply course, such as improved confidence and willingness to engage in education, to progress onto non-maths courses. This could be because of increased awareness of the FE sector offering once they are part of it (through posters, information, cross-marketing etc), because they feel these are more relevant to their individual circumstances or through some other preference • Providers prioritise easier-to-engage learners in outreach and marketing activities, leaving hard-to-reach groups underserved • Providers prioritise learners they feel have more potential to progress onto qualification bearing courses, leaving some hard-to-reach groups underserved • Employers perceive engagement in Multiply as burdensome, reducing willingness to collaborate in future
---------------------------	--	--	---

Appendix I: References

Alma Economics. (2023). *Numeracy skills interventions for adults (19+): A systematic review of the evidence*. London: Department for Education.

Financial Conduct Authority. (2021, February 22). *Financial Lives 2020 survey: the impact of coronavirus*. Retrieved from www.fca.org.uk:
<https://www.fca.org.uk/publication/research/financial-lives-survey-2020.pdf>

Kuczera, M. F. (2016). *Building Skills for All: A Review of England. Policy Insights from the Survey of Adult Skills*. Paris: OECD.

Money Advice Service. (2018). *Adult numeracy and financial capability*. Retrieved from www.nationalnumeracy.org.uk:
https://www.nationalnumeracy.org.uk/sites/default/files/images/news-and-media/mas0026_num_report_a5_online_aw1.pdf

National Numeracy, KCL, Ipsos Mori. (2019). *Numerate nation? What the UK thinks about numbers*. Retrieved from www.kcl.ac.uk: <https://www.kcl.ac.uk/policy-institute/assets/national-numeracy-day-2019.pdf>

NIESR. (2015). *UK skills and productivity in an international context*. London: Department for Business Innovation & Skills.

OECD. (2013). *OECD Skills Outlook 2013: First results from the Survey of Adult Skills*. Paris: OECD Publishing.

Pro Bono Economics. (2021, April). *Counting on the recovery, The role for numeracy skills in 'levelling up' the UK*. Retrieved from www.nationalnumeracy.org.uk:
[https://www.nationalnumeracy.org.uk/sites/default/files/2021-04/Counting%20on%20the%20Recovery%20\(compressed\)%20FINAL.pdf](https://www.nationalnumeracy.org.uk/sites/default/files/2021-04/Counting%20on%20the%20Recovery%20(compressed)%20FINAL.pdf)

Tu, T. C. (2016). *Impact of Poor Basic Literacy and Numeracy on Employers*. London: Department for Business, Innovation and Skills.



Department
for Education

© Department for Education copyright 2026

This publication is licensed under the terms of the Open Government Licence v3.0, except where otherwise stated. To view this licence, visit

nationalarchives.gov.uk/doc/open-government-licence/version/3.

Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

Reference: RR1629/1

ISBN: 978-1-83870-797-2

For any enquiries regarding this publication, contact www.gov.uk/contact-dfe.

This document is available for download at www.gov.uk/government/publications.