



Department
for Education

Skills Bootcamps process evaluation

Research report

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Executive summary

The Skills Bootcamps (employer-led training initiatives) were announced in September 2020 and aimed to test approaches for roll-out to other industries and skillsets. The aim of bootcamps was to help individuals adjust to the changing economy through training to upskill or reskill so to enable transition from work in declining sectors and occupations into new career directions. Outcome measures set by the Department for Education (DfE) concerned entry into work or a different job and whether this represented any form of progression.

The bootcamps – which also involved a small number of technical skills courses – comprised intensive, short training programmes (around 2-to-3 month) designed to meet employers' skills needs. There was an additional focus on equality, diversity and inclusion (EDI) given the digital and technical workforces are white, male dominated.

In Wave 1 – the subject of this process evaluation, the West Midlands Combined Authority (WMCA), Greater Manchester Combined Authority (GMCA), Liverpool City Region (LCR), West Yorkshire Combined Authority (WYCA) implemented via Leeds City Region, the South West local enterprise partnership (LEP) – Heart of the South West (HotSW) and the Derbyshire/Nottinghamshire LEP (D2N2) were involved. These areas received grant funding from the Department to develop bootcamps provision for delivery from autumn 2020. In spring 2021, the Department set about commissioning a second wave of bootcamps that would cover all regions of England (Wave 2).

A process evaluation was commissioned to commence in early 2021 and to track the implementation of the Wave 1 bootcamps through qualitative interviews with a range of stakeholders, a survey of learners and analysis of the management information (MI) that was available and of suitable quality at the time of reporting. These data did not cover all of the bootcamps and more problematically did not consistently cover all of the geographic areas involved. They therefore cannot be viewed as an accurate picture of all bootcamp provision. Instead, they offer an illustrative overview of the bootcamps that submitted full data.

Alongside the process evaluation, a feasibility study considered the potential and optimal approach to a counterfactual impact assessment of Wave 2 bootcamps. This is being used by the Department to assist its considerations in taking forward a robust evaluation approach to future waves of bootcamps.

The process evaluation of Wave 1 is the subject of this report.

Courses and intake

Across the six areas, some 89 courses were offered ranging predominantly from Level 3 to Level 5 with some Level 6 and 7 courses. Digital provision operated in all areas, and covered topics ranging from digital marketing, women in software engineering, cloud services engineer, computer aided design (CAD), coding, cybersecurity, IT, social media

and digital leadership. HotSW introduced some technical skills courses including energy and marine design, welding, and electrical and mechanical skills.

Over 350 employers were recorded as being involved, however as no data on this were reported in some areas, the actual number was likely to be higher. DfE set a target for 60% of employers to be SMEs; the management information (MI) indicated that bootcamps outperformed this target, with 76% of employers involved having no more than 249 employees.

The MI data from those providers submitting data of suitable quality to analyse, suggested that over 2,500 people were recorded having applied to bootcamps courses. Of these, around 820 gained a place on a bootcamp. While the proportion of women enrolled was slightly less than the proportion of men, at 48%, this still represented a much higher proportion of women than seen in the digital workforce (which is reported to have been just under 20% for some considerable time). The biggest age group of learners taking part was 26-35 years (44%), with 36-45 year olds forming the second largest age group. Around a third of learners were from minority ethnic groups with the Asian / Asian British and other ethnic groups¹ showing the largest proportions beyond the white / white British group. A tenth of the learners were disabled. Just under a quarter had caring responsibilities.

Over a third of learners recorded in the analysable MI were already qualified to Level 6 and a quarter were qualified to Level 3. Sixteen per cent were at or below Level 2. Two-thirds were working on joining their courses – either full-time, part-time or self-employed and the majority of these intended to continue working alongside training. The largest occupational group of learners taking part was associate professional occupations², representing around a third of the cohort.

Implementation

The regional leads indicated that the bootcamps were a good fit for local priorities, which were identified in local industrial strategies and local inclusive growth strategies. The pandemic had hastened longer term trends in some industries, which meant the bootcamps were well timed to support individuals to make career transitions; it had also increased employers' needs for basic digital skills as well as higher level digital skills.

The bootcamps offer was developed at speed. Some areas built on existing consortia and partnerships for prior pilot bootcamps, and all drew on existing relationships in some way. A key constraint was the limited time to engage employers in co-design. This was mitigated through building on prior provision that had been co-designed with employers

¹ Covering those who were not captured by All other white; Mixed/ multiple ethnic groups; Black/ African/ Caribbean/ Black British or Preferred not to say.

² See Table 2.10 in the main body of the report for a full occupational breakdown

and working with employers already in providers' and regional leads' networks. Where they had been involved, employers valued the opportunity to input into the content of bootcamps as it meant they felt confident that the skills learners acquired would mean they would be productive staff after training. Notably, technical skills bootcamps were all located with specific employers, which indicated close involvement at the design stage.

Level of demand and recruitment processes

For the most part, social media platforms and other advertising were used to market digital and technical bootcamps, including Instagram, TikTok, Facebook and LinkedIn although for technical bootcamps, working with employers was common. Learners typically indicated that they had referred themselves to training, though in some areas, Jobcentre Plus referred unemployed people as did some third parties such as employment support services.

The MI data indicated that there were more than 2 learners applying for each place available, although this varied considerably by area and given the very different rate in WMCA (4:1) may have indicated recording differences. Some areas had a waiting list from their prior, pilot bootcamps whereas others were generating demand from scratch.

In terms of selecting learners to take part, providers participating in this evaluation did not rely particularly on prior education level or qualifications. These providers instead tended to focus on capability and motivation to work in the industry which might be judged by having done some prior self-directed relevant learning discussed during recruitment interviews or expressing a passion and motivation to work in the industry. Some focused further to identify those learners, who despite their passion, were facing obstacles in gaining work in the digital industry. As noted, DfE wished to actively pursue equality, diversity and inclusion in recruitment for bootcamps. Accordingly, some courses were specialised (e.g., women in software engineering) or providers took care to ensure a range of learners were included. Learners taking part in the qualitative research reported the selection processes had been straightforward.

Most commonly learners joined their courses in order 'to gain new skills' (88% of survey respondents), followed by 'to gain new qualifications' (55%), 'to gain employment in another industry' (51%) and 'to find out about a different career' (43%). The potential for contact with employers and industry experts, as well as experience and exposure in the field was important to all learners taking part in the qualitative interviews.

Delivery and course experiences

The delivery of courses was affected by COVID-19. This meant a rapid move to pure, online learning for the digital courses i.e. with no face-to-face elements. Broadly, this transition went well with providers and regional leads working to overcome digital inclusion issues and providers setting in place group chat opportunities to replace learner networking that would be established as part of classroom learning. In contrast, technical

skills bootcamps had to be delayed until guidance allowed face-to-face delivery with social distancing. As these latter courses were being delivered for specific employers and their employees, this made the process easier to manage.

The shift to fully online provision for digital bootcamps mostly increased flexibility in delivery with providers offering the training input and tutorial sessions at various times of the day including evenings and weekends. Despite fears that the increased burdens on parents, particularly mothers, from home-schooling would increase rates of drop-out, the MI indicated no gender or caring dimensions to this, and an early exit rate of around 10% which is broadly in line with retention rates seen for adult Level 3 provision³.

Overall, flexibility in the delivery of training was shown to be a critical success factor for the digital bootcamps and enabled large numbers of learners to continue working while training.

Learning support was also important, both in terms of tutorials and wider support. The support related to the curriculum included recording virtual classroom sessions so that learners could go over content again, or catch up easily if they missed a session, and embedding peer support through using group chat apps. Some providers also described wrap-around support covering: technical assistance, additional 'stretch' learning activity for capable learners; support to build confidence, on career plans as well as welfare and personal issues.

Three-quarters of the respondents to the learner survey believed that their training met or was meeting their needs. Nearly all of these learners agreed that their course was helping or had helped them to develop new skills.

Understanding quality

Providers participating in this evaluation identified a few factors that indicated the quality of the provision. The first was that it was employer-led and met employers' skills needs. A second factor was the quality of teaching and learning, and particularly of teaching staff who were people with industry experience and often high profiles in the industry.

Providers also highlighted the role for learner feedback in determining quality.

The learner survey indicated that just under three-quarters of respondents agreed that they were satisfied with the *quality of the teaching they received*, and just over three-quarters (76%) of respondents agreed that they were satisfied with the *quality of the content of their training*. Moreover, nearly four-in-five (79%) were *satisfied with their course* overall. Where learners reported positive experiences of their courses, it was

3

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874731/NARTs_statistical_release_201819.pdf

often related to the teaching style, or an individual trainer. This was particularly true when trainers went the 'extra mile' in the service that they provided.

Reported outcomes

Data sets were incomplete and therefore cannot be considered a comprehensive source on outcomes however, the MI that could be analysed for this process evaluation suggested that 84% of learners completed all their assessments and assignments and 81% passed their assessments. The average attendance rate was close to 65%. The analysis of these data (covering only those providers and course for which there was suitable quality data) suggested that women had much higher attendance rates than men, were more likely to complete all the assignments and assessments than men, and also, they were much more likely to pass all the assessments than their male counterparts. There were no substantial differences in rates of completion or passing assessment by ethnic group, so BAME learners got on as well as white / white British learners in their courses. Being a carer did not have a negative impact on these outcomes.

As noted earlier, large numbers of learners started their course while working. At the time of survey fieldwork, results indicated very little change in working status for respondents. However, while white learners were more likely to be employed on starting their courses (66% compared to the overall rate of 63%) and BAME learners were more likely to be unemployed (33% compared to the total of 31% unemployed). Data suggested that the proportion of BAME learners who were unemployed at the time of the survey was lower than seen immediately prior to course (43% were unemployed prior to their course).

Just under three-in-five (59%) of all respondents to the learner survey agreed that their bootcamps training would give or had given them a certificate, portfolio or accreditation that is valued by employers. Learners in the qualitative research cited the value of applied experience and demonstrable skills to themselves and employers. Some saw their portfolio as a substitute for a formal qualification and highlighted the tangible examples of their skills this meant that they had to offer employers.

A little over two-in-five (44%) survey respondents agreed that their training and provision would be sufficient for them to apply for a job in their industry, which was a strong finding given that most had yet to complete their courses (19% of the respondents reported that they had completed their courses) and many were training from a position of employment, potentially in relation to their current role.

Learners taking part in the qualitative research were generally positive about their outcomes at the end of their courses. While many had not yet finished their training at the time of interview, they believed the bootcamps would add to their repertoire of skills and allow for future success. Where learners favoured self-employment or further education over getting a job, they reported the learning as improving the opportunities of their self-employment or opening the door for further educational pathways.

Conclusions

The bootcamps were well received by all stakeholders engaged in the evaluation. The supplied management information (MI) – while providing an incomplete picture - suggested high rates of completion alongside learners passing the planned assessments and assignments. It was notable that women participants saw high rates of success in courses, and despite the impacts of the pandemic on carers (including those looking after dependent children) this did not appear to have a substantial effect on outcomes. There was overwhelming support for bootcamps to continue to be offered amongst those involved in the evaluation.

This evaluation suggests that critical success factors in delivering the bootcamps included flexible and responsive provision which supported learners to train around their existing employment and personal commitments. Second, highly skilled training courses and the close alignment of provision to employers needs were highlighted. Finally, employer involvement in bootcamp training delivery – through learner talks, project briefs and wider networking meant that learners felt well briefed on industry needs.

1 Introduction

Increasing productivity in the UK economy is a longstanding ambition – to achieve a high-skills economy and avoid the productivity loss seen in low-skilled work. Several factors are creating urgent impetus for this agenda: the ‘megatrends’, specifically, *automation* particularly in entry-level jobs; and an *ageing society* bringing longer working lives and upskilling and retraining needs; macroeconomic factors including *Brexit*; and the recessionary effect of COVID-19 with its uneven impacts on industries, communities, and regions. Connecting individuals to growth sectors and preparing them to fill high skills vacancies where employers struggle to recruit is a critical way to achieve better social equity, shared prosperity as well as increasing productivity.

The pandemic has caused a drastic effect on the economy, creating a rise in unemployment with particular risks for younger and older workers. It accelerated longer-term decline in some industries and has caused shorter term shocks in others. Although it has acted as a catalyst for the digitalisation of business models, its overall impact has been to constrain employment opportunities. It has had a higher impact on the Midlands and North where economies were already challenged by the decline in hard industries. Consequently the ‘levelling up’ agenda was at forefront of the skills bootcamps policy which could be particularly discerned in the selection of areas to take part in early trials.

The National Skills Fund - this government’s flagship skills provision, building on the National Retraining Scheme (NRS), is exploring how best to respond to employer demands for skills, plug skills shortages at the high skills level and address demand from individuals for retraining as a protective measure for sustained employment. Putting employers at the heart of training specification, understanding their varied needs and responding to local contexts, is intended to ensure the training pipeline provides skills employers value. In the causal pathway, this should mean individuals can access high quality jobs in sectors that are sustainable.

The Digital Bootcamps (employer-led training initiatives) were announced in September 2020 and are testing approaches for roll-out to other industries and skillsets. The aim is to help individuals adjust to the changing economy through training to upskill or reskill so that they can transition from work in declining sectors and occupations that offer limited progression and achieve new career directions. Outcome measures therefore set by the Department concerned entry into work (or a different job) and whether this represented any form of progression; and salary level of this job, again focused on whether this represented a progression for individuals.

The bootcamps – which also cover technical skills in some cases – comprise intensive, short (8 to 12 week) training programmes that are designed to meet employers’ needs and to lead to a guaranteed job interview. The provision is designed to meet employers’ needs and there is a focus on equality, diversity and inclusion (EDI) given the digital and technical workforce is white, male dominated. A screening process ensures that learners have the prior skill level and knowledge they need to succeed in training.

In Wave 1 – the subject of this process evaluation, the West Midlands Combined Authority (WMCA), Greater Manchester Combined Authority (GMCA), Liverpool City Region (LCR), West Yorkshire Combined Authority (WYCA) implemented via Leeds City Region, the South West local enterprise partnership – Heart of the South West (HotSW) and the Derbyshire/Nottinghamshire local enterprise partnership (D2N2) were involved. These areas received grant funding from the Department for Education (DfE) to develop bootcamps provision for delivery from autumn 2020.

In some of these areas, bootcamps had already been operating under different funding provided by the DfE, and separately the Department for Culture, Media and Sport (DCMS). In relation to the current research, the areas offered bootcamps between autumn 2020 and spring 2021 and due to the implications of the pandemic shifted from plans to deliver in person to fully remote delivery (except for technical skills bootcamps, which could only start much later in the period due to the COVID-19 restrictions).

In winter 2021, the Department began the process of commissioning a second wave of bootcamps. This covered extending funding to the existing bootcamps in the six existing areas and inviting new tenders to enable a scale-up to all regions of England. The Wave 2 bootcamps also expand the provision more consistently to cover technical and construction skills – the latter potentially providing a progression when compared to the Construction Skills Fund which has focused on sector entry.

1.1 Aims and objectives

The Department set out a number of high-level questions for the process evaluation to consider. These were:

- How the Wave 1 bootcamps were being implemented, whether delivery varied across areas / providers, whether the implementation of some bootcamps more successful than others and why?
- What challenges were encountered during delivery? What lessons could be learned for the Wave 2 roll-out?
- What the monitoring data (which covered participant rates, drop-out rates, completion rates) suggests about the success of the Wave 1 bootcamps and their suitability for Wave 2 roll-out?
- Whether and how employers engage with the bootcamps e.g., are employers willing to guarantee interviews, are they confident in the training content and delivery model, including the co-investment element?

Additionally, the Department wished to understand the impact – or perceived effects on outcomes, hence a final research question concerned:

- How participants' employment and wage outcomes compare to their baseline data collected before participating in the bootcamps?

1.2 About the process evaluation

A multi-stranded process evaluation was designed and implemented to address these research questions and engaged the full range of stakeholders in the evaluation. Alongside this, a feasibility study considered how a robust evaluation of impact could be taken forward in the Wave 2 bootcamps.

The research involved the following 5 evaluation activities:

Analysis of the management information (MI) collected by providers

The MI was designed to cover employers and learners, and for learners was intended to track individuals from application through enrolment and then outcomes in respect of course completion, movement into employment and salary level achieved. The MI covered information on courses and target group, and also equality, diversity and inclusion characteristics of those applying for and/or enrolled on courses. The quality of the MI varied between areas and providers. For example, while the MI should have captured consent for learners and employers to be contacted for primary research as part of the evaluation, all WMCA providers, and some others in other areas, had not included this information in their returns meaning the research team could not use the contact information.

Planned coverage of the MI

MI was supplied by DfE at four points, with the two latter points intended to overcome issues with quality (these issues are elaborated below): in September 2020 which focused on areas and course options; and then December 2020 to feed into interim reporting; in March 2021 for GMCA to cover gaps in the earlier release; and in April 2021 to cover all bootcamps and outcomes available in the evaluation period. The latter three MI transfers covered employers, applicants and participants in the bootcamps.

The first wave Management Information (MI) data were collected by the Digital Bootcamp providers using a form provided to them by the Department for Education. This data covered the period between December 2020 – March 2021. The form had four sections:

- Employer engagement
- Applicant information
- Participant information
- Course participation rates

The employer engagement section collected information on the employers participating in the bootcamps by offering vacancies. Information was collected on employers such as company name, the number of vacancies offered for bootcamp participants, the size of the employer (i.e., number of employees), main industry, type and extend of co-

investment committed by the employer, and finally contact details. Each employer was also asked if they consent to being contacted for research and evaluation purposes.

The applicant information section collected data on educational level, employment status, occupation, carer status, and demographic characteristics such as age, gender, disability status, marital status, and ethnicity. National Insurance number was also collected.

Not everyone who applied for a course was eligible, and the participant information section collected data on the individuals who were judged to be eligible and went on to register for a course. The data included course title, whether the learner planned to work alongside the bootcamp, and contact details along with consent to being contacted for research and evaluation purposes. The applicant and participant data could be linked using first name and surname of the individuals, however in some cases where this information had not been stored correctly this did not prove possible.

The course participation section collected information on the attendance of each participant, average number of hours participated in classes weekly, average number of hours the learner has engaged in additional activities, and whether they completed all the necessary assessments and assignments. Where learners dropped out, this was also recorded and further information on the reason was collected. Where learners continued in their training, information was captured on whether they have completed the course or if it was ongoing.

Finally, some questions focussed on the employment outcomes; whether the learner had a successful interview, a job offer, and if they had a job offer what wage was offered. This information was not collected by some of the providers. This section could be linked to the participant information using the National Insurance number, however in some cases where this information had not been stored correctly this was not possible.

Problems with quality of MI data

As illustrated by the description above, there were a number of problems with the completeness of the MI data sheets returned to DfE and these had implications for monitoring and research. The following data issues should be noted when referring to findings from this research report.

- **Mis-categorised data:** Each course for each provider had a particular course name which was used to identify which type of provision the learner applied for and was attending. Some providers in two areas used a mix of course names and course identifiers such as course A or course B making it unclear which course the learner was linked to.
- **Inconsistent consent recording:** There was systematic missing data that meant the research team could not contact learners and employers, which impacted on the samples that could be accessed for the learner survey, and qualitative interviews. The risk was bias in the sample available to participate in research as

for some providers the entire cohort was marked as opted-out, some were missing indications either way – with the effect that they could not be contacted, or contact details were missing meaning that individuals could not be approached.

- **Duplicate records:** While applicants could appear linked to different courses, for some of the participants there were duplicate records linked to the same or different courses. This occurred for multiple providers in different areas. It was unclear which record would be the correct record to retain.
- **Incomplete data:** Linkage of data from application to participation was sometimes not possible due to errors in categories of data that identified individuals i.e., National Insurance Numbers, full names or unique identifying numbers, in some cases this was missing or stored differently between the applicant and participant data sheet.

As part of the process evaluation, the research team worked to address these inconsistencies so far as possible, working with DfE and providers to improve data quality, or to find alternative strategies for reaching out to learners for the survey research. However, this did not overcome all the issues encountered. As this was a process evaluation – which is intentionally focuses on implementation issues rather than seeking to reach a robust assessment of outcomes, the research team was able to produce data analyses of those courses that provided suitable data to DfE to provide a descriptive account.

Due to the data issues and inconsistencies, data should not be viewed as a complete accurate picture of all bootcamp provision; instead, it provides an overview of those bootcamps that submitted full data. Lessons for providers and DfE for collecting such data in the future are included in section 7.2 of this report.

Qualitative case studies

Case studies were conducted in each of the six areas involved in delivery covering the perspectives of: representatives of the regional lead body (i.e. combined authority or LEP), a range of providers, other stakeholders involved in referral or support, and employers. Each case study aimed to engage between eight to 12 stakeholders in each area with a sub-target for one-to-two employers in each (see Table 1.1). In total, 58 individuals took part in case study interviews. All interviews were conducted by phone or video-conference and recorded/transcribed with the permission of interviewees.

The Department made introductions to the lead contact for each area, then the lead assisted the evaluation to engage providers. Employers were either recommended by providers or sampled through the MI – the latter approach taken mainly in WMCA as consent status was not recorded for learners or employers in the MI.

Table 1.1: Case study interviewees by area

Type of interviewee	D2N2	GMCA	HotSW	LCR	WMCA	WYCA
Regional leads	2	2	1	1	2	2
Providers	6	6	5	4	4	5
Employers	(1)	6		5	1	3
Other stakeholders		1				2

Source: research team monitoring data

Survey of learners

An online survey of learners in all areas was also undertaken. All learners who consented to take part in primary research were invited to take part in the online survey. The survey was designed to take around 10 minutes to complete, and covered application and enrolment, satisfaction with the experience and quality of training and outcomes. The survey was conducted between 18th February and 25th March 2021. All respondents were identified as currently undertaking or having previously completed an employer-led digital or technical training course in one of the five pilot areas. A mixed-methods approach was used for data collection, incorporating self-completion online surveys and telephone interviewing.

In five of the six pilot areas the contact details of learners were shared with the evaluation team and each learner was sent an initial email invite asking them to complete the survey. Reminder emails were sent at weekly intervals to those who had not completed the survey. Any learners who had not completed the survey after three weeks were then contacted over the telephone, where telephone numbers were included in the contact databases, and asked to either complete the survey over the phone or were re-sent their online invite. In total, 317 learners completed the survey from these five pilot areas; 207 learners completed the survey online, and 110 completed the survey over the phone. In total, 815 valid contacts were received, meaning the response rate for these five areas is 39 per cent.

In WMCA personal data for the learners was not available due to the lack of information on consent. Here, survey links were shared with the providers, who in turn shared them with learners through their own internal systems. From this, 37 learners in WMCA completed the online survey. It is not possible to calculate the response rate for these

learners as we do not know how many learners in WMCA were invited to participate by the providers.

In total, 354 responses were received from learners. This is split by pilot area as:

- 87 in Heart of the South West (HotSW)
- 48 in West Yorkshire City Region (WYCA)
- 96 in Derby, Derbyshire, Nottingham and Nottinghamshire (D2N2)
- 41 in Greater Manchester Combined Authority (GMCA)
- 45 in Liverpool City Region (LCR)
- 37 in West Midlands Combined Authority (WMCA).

Qualitative interviews with learners

These aimed to provide material that would enrich and explain the survey findings. A target was set for five learners in each of the six areas. In five areas, learners who had given consent were contacted by the research team to invite them to participate in telephone interviews. In WMCA, providers facilitated the research team’s contact with a small number of learners. Overall, 29 interviews were achieved with learners; while fewer were achieved in WMCA, attempts were made to compensate for this number in the other areas (see Table 1.2).

Table 1.2: Case study interviewees by area

Type of interviewee	D2N2	GMCA	HotSW	LCR	WMCA	WYCA
Learners	3 (+1)	6	7	5	1	6

Source: research team monitoring data

Feasibility study

As noted above, a final strand of work sought to assess the **feasibility to conduct robust impact evaluation** of the bootcamps, and specifically to test the viability of implementing a randomised controlled trial (RCT) in Wave 2. This involved desk research and culminated in a feasibility report intended for in-house use by the Department. The report found that it would be possible to implement an RCT, with randomisation occurring at the individual level.

1.3 About this report

This report covers the process evaluation of Wave 1 bootcamps. Chapter 2 uses the management information (MI) to describe the bootcamps – from the courses to employers involved and learners applying taking part.

Chapter 3 covers the approach to implementation in each area, how this was linked to demand in local labour markets and how the offer was commissioned and developed including how employers were involved and contractual arrangements with providers.

The report then turns to how demand amongst learners was generated (Chapter 4) including approaches to recruitment and selection, groups targeted for training, marketing and referral routes.

Delivery is explored in Chapter 5 including how COVID-19 impacted on plans. This section covers views on the quality of provision as well as support offered by providers and employers during and on completion of training.

Chapter 6 throws a spotlight on outcomes, including course completion, satisfaction and challenges, accreditation and certification, and employment and employability following training. It includes employers' views on the value of bootcamps as well as their thoughts on the future funding model.

The report concludes in Chapter 7 with a summary of successes and challenges and lessons for future delivery.

2 Courses, employers, applicants and take-up

This chapter uses the management information (MI) to report on the characteristics of applicants to the bootcamps as well as learners taking part in the training. The MI is based on December 2020. It should be noted that the majority of learners reported in the MI were taking part in digital courses. As described in the introduction to this report, the analysis presented here reflects those providers who submitted data that was of a suitable quality to analyse – therefore is illustrative of the provision and cannot be considered comprehensive. Please refer to ‘Problems with quality of MI data’ in 1.2 when utilising these findings.

2.1 Bootcamp set-up

Each of the regional leads led the commissioning process for their local bootcamps and established the delivery model that would be taken forward with providers. The models varied from building a relatively small consortia of providers to deliver the bootcamps, to operating a pool of providers that would be commissioned on a call-off basis. The areas with prior experience of offering bootcamps under different funding regimes, tended to build on these prior partnerships in the commissioning approach. Table 2.1 provides an overview of providers and courses in each of the regional areas.

Table 2.1: Areas, providers and courses

Area	Number of providers and coverage	Number of courses
D2N2	10 providers Digital skills	34 courses from Level 3 to 6
GMCA	10 providers Digital skills	10 courses from Level 3 to 6
HotSW	9 providers Digital and technical skills	7 digital courses from Level 3 to 5 6 technical courses at Levels 3 to 4
LCR	10 providers Digital skills	18 digital courses at Levels 3 to 4
WMCA	4 providers Digital skills	4 digital courses at Levels 3 and 4
WYCA	4 providers Digital skills	10 courses all at Level 3

Source: October Management information

Digital provision operated in all six areas, and covered topics ranging from digital marketing, women in software engineering, Cloud services engineer, computer aided design (CAD), coding, cybersecurity, IT, social media and digital leadership. There were many more course titles, and some were designed for particular employment settings.

HotSW introduced some courses focused on technical skills. These included energy and marine design, welding, and electrical and mechanical skills, amongst others. Each was designed and delivered in collaboration with an employer, whose workforce then used the training.

2.2 Employers

Over 350 employers were recorded as involved in the bootcamps in this evaluation. Almost two-fifths of these were recorded, in D2N2 and one-fifth in GMCA which shows inconsistent approaches to recording these data between areas. It should be noted that in all the areas at least one provider recorded that no employers were involved.

Table 2.2: Number of employers by area

	Number	%
D2N2	149	39.5
GMCA	70	18.6
HoTSW	37	9.8
WYCA	37	9.8
LCR	44	11.7
WMCA	40	10.6

Source: Bootcamps MI 2021

2.3 Bootcamp applicants and learners

Gender

The bootcamps policy had ambitions to increase equality, diversity and inclusion (EDI) in the workforce and some providers prioritised women’s access to the digital industry. While males represented over 50% of applicants and learners, representation of women is high in relation to the proportion of females employed in the relevant sectors, which has been around 17% over the course of a decade⁴. Furthermore, the number of women

⁴ <https://unu.edu/media-relations/releases/new-equals-research-group-report-unveils-persistent-digital-gaps-and-the-complexity-of-gender-equality-in-ict-access-skills-and-leadership.html#:~:text=Explore-,EQUALS%20Research%20Group%20Report%20Unveils%20Persistent%20Digital%20Gaps%20and%20the,ICT%20Access%2C%20Skills%2C%20and%20Leadership&text=New%20York%2C%2015%20March%202019,today%20under%20the%20EQUALS%20Partnership.>

taking part in bootcamps increased on the amount who had applied for a place (see Table 2.3).

Table 2.3: Gender of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Female	1,116	43.6	394	47.9
Male	1,411	55.1	418	50.9
Other	9	0.4	4	0.5
Prefer not to say	26	1.0	6	0.7

Source: Bootcamps MI 2021

Age

Learners applying and enrolled on bootcamps were spread across age groups. Data collected as part of this evaluation suggests that those age 25 to 30 were the largest group in the applicant pool and their representation increased in the participant pool to just over a quarter. Data suggests that the largest group of participants were aged between 31 and 40 (27%) although this age group was slightly smaller in the applicant pool. Broadly, the representation of other age groups did not change particularly between application and enrolment, with the exception of 41-50 year olds, whose proportion was slightly smaller (see Table 2.4).

Table 2.4: Age of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
16-25	546	26.9	144	22.0
26-35	880	43.4	286	43.6
36-45	503	24.8	186	28.4
56-65	88	4.3	37	5.6
65+	13	0.6	3	0.5

Source: Bootcamps MI 2021

Ethnicity

Addressing diversity in the digital workforce was an aim for some bootcamp providers and the data suggests that a higher proportion of black and minority ethnic groups were attracted to the offer. Data analysed and collected as part of this evaluation suggests that just over 30% of applicants were from other ethnic groups rather than white (compared to just over 20% in the general population, based on [ONS data](#)). Again, this is high when considered in the context of these white dominated sectors – the British Computer Society estimates that only 1 to 2% of the digital workforce are drawn from BAME communities⁵. However, any effect or signs of positive discrimination were hard to discern in the trends between applying and being accepted for a place. The proportion of white learners increased between application and enrolment from two-thirds to just under three-quarters. All other ethnic groups formed proportionately less of the participant pool than they had the applicant pool (see Table 2.5).

Table 2.5: Ethnicity of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
White British	1,323	56.7	542	66.5
All other white	1	0.0	1	0.1
Mixed / multiple ethnic groups	82	3.5	28	3.4
Asian / Asian British	379	16.2	100	12.3
Black/African / Caribbean / Black British	176	7.5	31	3.8
Other ethnic group	288	12.3	87	10.7
Prefer not to say	86	3.7	26	3.2

Source: Bootcamps MI 2021

Disability

Table 2.6 shows self-declared disability for applicants and participants. There was a small decrease in the rate of inclusion of disabled people in training and commensurate increase for people who said they were not disabled.

⁵ <https://www.diversityintech.co.uk/the-lack-of-bame-in-tech>

Table 2.6: Disability amongst bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Disabled	259	11.3	82	10.4
Not disabled	1,941	84.4	671	85.3
Prefer not to say	99	4.3	34	4.3

Source: Bootcamps MI 2021

Caring responsibility

Data collected through this evaluation suggests that over a quarter of applicants said they were a carer when they applied for a bootcamp; their proportion however reduced a little in the participant pool (see Table 2.7).

Table 2.7: Carers amongst bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Not a carer	1,681	73.9	606	76.8
Carer	594	26.1	183	23.2

Source: Bootcamps MI 2021

Prior qualification

Table 2.8 shows the prior qualification of bootcamp learners. While data suggest that there are some increases and decreases in the proportion of learners with different levels between application and enrolment, this data is harder to interpret because some bootcamps operated at high level, and required higher level prior skills than others. Additionally, people who are retraining may opt for provision at a lower level than existing qualifications in order to secure a new career.

Table 2.8: Prior qualifications of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Entry	67	2.7	11	1.3
Level 1	73	2.9	12	1.5
Level 2	343	13.7	110	13.4
Level 3	549	21.9	207	25.2
Level 4	122	4.9	35	4.3
Level 5	139	5.6	39	4.8
Level 6	822	32.8	288	35.1
Level 7	345	13.8	109	13.3
Level 8	43	1.7	10	1.2

Source: Bootcamps MI 2021

Employment status

From data analysed as part of this evaluation, a large proportion of applicants and participants were employed on applying to join the bootcamps (46% full-time and 11% part-time; see Table 2.9). Their representation increased in the participant pool. The self-employed group decreased slightly in representation between application and participation.

This data suggests that the representation of people unemployed for less than 12 months also decreased a little between application and enrolment although those unemployed for more than 12 months increased slightly between the two phases.

Table 2.9: Employment status of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Employed - Full Time	1,141	46.3	824	47.1
Employed - Part Time	274	11.1	243	13.9
Self Employed	152	6.2	98	5.6
Unemployed For Less Than 12 Months	726	29.4	466	26.6
Unemployed For More Than 12 Months	122	5.0	94	5.4
In Training /Education	39	1.6	19	1.1
Retired	4	0.2	2	0.1
Long Term Sickness	8	0.3	3	0.2

Source: Bootcamps MI 2021

Occupation

Of the data collected and analysed, a large proportion of applicants and participants were drawn from professional and associate professional occupations (See Table 2.10). While this might indicate a high degree of people wishing to retrain rather than upskill, it is unclear how occupational level was established in the MI, which might mean there are inaccuracies.

Table 2.10: Occupations of bootcamp applicants and learners

	Applicants		Participants	
	No.	%	No.	%
Managers, Directors and Senior Official	35	4.5	23	4.2
Professional Occupations	161	20.8	122	22
Associate Professional Occupations	252	32.5	182	32.9
Administrative and Secretarial Occupation	71	9.2	44	7.9
Skilled Trades Occupations	46	5.9	34	6.1
Caring, Leisure and Other Service Occupation	27	3.5	22	4
Sales and Customer Service Occupations	57	7.4	38	6.9
Process, Plant and Machine Operatives	19	2.5	12	2.2
Elementary Occupations	108	13.9	77	13.9

Source: December 2020 MI for 5 areas and March 2020 MI for GMCA

Intention to work alongside training

It appeared that for the large part, from the data collected and analyses, those learners who were employed on recruitment to their bootcamps, intended to continue working alongside training (see Table 2.11). Some of these employees may have been on furlough, and those in self-employment were likely to wish to maintain their businesses.

Table 2.11: Intentions to work while training amongst bootcamp learners

	Participants	
	No.	%
Yes - in Full-time Employment	686	41.9
Yes – in Part Time Employment	262	16.0
Yes - as Self Employed	101	6.2
Not working	589	36.0

Source: Bootcamps MI 2021

3 Implementation

This section focuses on implementation of the Wave 1 bootcamps and considers their fit in the local labour market and how the offer was developed and contracted.

3.1 Fit of bootcamps within local labour markets

Regional leads reported a close fit between the national decision to take forward a new form of training focused predominantly on digital skills and needs in local areas. Local industrial and inclusive growth strategies identify these alongside some technical skills as key to growth.

Digital skills gaps were highlighted in the local industrial strategies and skills plans. The Combined Authorities and Local Enterprise Partnership (LEP) (i.e., the regional lead organisations) reported a clear rationale for the focus on digital skills that cut across a range of sectors as well as the digital sector itself.

The need for digital skills was further accelerated by the impact of the COVID-19 pandemic and the move to working from home, and learning from home, for many people. This has led to an upsurge in online consumerism, with a dramatic increase in digital consumerism alongside a shift to accessing services online. New processes being implemented to enable a continued trading relationship with the EU following Brexit, and global issues centred on cybersecurity also highlighted the on-going need for digital skills.

In respect of the influence this had on shaping provision, the known skills needs were passed on by the leads to potential delivery providers to respond with appropriate provision. In addition, some delivery providers had good awareness of local skills gaps and employer demand for skills that they were using to develop their offer, particularly those who had been offering pilot bootcamps under the prior funding schemes.

3.2 Developing the offer

It was notable that providers often already had a working relationship with the regional lead and that it was through these existing relationships they had first found out about the plans to initiate bootcamp programmes based on new DfE funding; for example, some providers said the regional lead had suggested they could be part of the programme during the period when the tendering process was being set up.

The tendering process offered providers the opportunity to propose new courses or show how they would adapt an existing programme to meet the requirements of the digital and technical skills bootcamps.

In order to lead design, some providers also consulted with employers. Those with prior experience of bootcamps delivery and/or employer-responsive training, typically had

existing relevant training offers and established networks of employers with whom they could consult about current skills needs and shortages. As a result of their longer-term engagement with employers and often prior work histories in the industry, many of the providers had detailed insights into longer-term recruitment and development needs, including forecasts of new and changing skill needs. Employers responded well to this engagement with trusted providers, as they were building from a previous base of what they could offer. Regional leads noted the value of this, as well as the constraints on employer engagement in the available timeline.

When we set this up for the very first time, to get employers engaged and link them up with providers ... we did absolutely loads [the prior bootcamps] had to be co-designed, but there just wasn't the time for that sort of things this time.

Regional lead

Some employers during interviews gave examples of informing the content of the digital and technical Bootcamp training. These employers were mostly drawn from the areas where the prior pilot bootcamps had taken place, and employers discussing this in interviews had been invited to meet with the regional lead and providers to explore their skills needs.

As an employer, I was very pleased. The consortium was very receptive to our needs as a business, so I was very pleased with the consultation, with the number of opportunities, the blue sky approach to meeting the needs of the businesses around the table. They were good at finding common ground for the organisations.

Employer

However, some employers felt the needs of their sector had been overlooked in the development process, which may indicate an opportunity for future development. This was raised by some charitable-sector organisations, which can be a substantial employment sector in some local economies and where employers share common issues and specific digital skills needs. As bootcamps roll-out, leading further consultations with employers is likely to be important to their success.

Where they had been involved, employers valued the opportunity to input into the content of bootcamps as it meant they felt confident that the skills learners acquired would mean they would be productive staff after the training. Notably, some employers had agreed to be involved in elements of training delivery as part of this development process, through offering practical sessions and site visits. Unfortunately, due to lockdown restrictions they had not been able to take this forward (though would in the future) and some still supported with sessions delivered online.

Beyond provision that was responsive to particular employers, some providers developed a modular suite of skills-based learning that could be readily tailored to the needs of specific employers. For example, a large provider described how they could map their

'menu of provision' to a particular employer's needs to deliver a learning pathway that would meet the need of that specific employers (and others) as well as those of learners.

3.3 Contracting

The regional leads reported that the contracting for the Wave 1 bootcamps took place over a very tight timescale. They stressed the importance of the good relationship established with DfE during this process which built upon pre-existing lines of communication in those areas that had already been involved in DfE-funded bootcamps delivered during the prior pilot phase.

The leads reported that this short-contracting period had a number of implications: it limited the involvement of employers not already in providers' networks due to the time needed to build new employer engagement, which represented a risk in respect of the development of the training suited to their needs. It also affected the way in which the bootcamps were advertised, which focused more on social media campaigns and networking rather than large-scale marketing campaigns.

Some of the regional leads said they would have preferred a contracting and payments model that was more flexible: they had passed on some of the contracting requirements from DfE regarding payments for starts and outcomes, however they would have liked more flexibility to allow providers more flexibility in payment schedules to take into account high upfront costs and agility needed for this new programme. Some believed that the approach they had pragmatically taken forward could have inflated overall price and thereby might not reflect best value for money. Some regional leads located in combined authorities reported that they had introduced greater flexibility at least for some of their providers over payment schedules. This included splitting the outcome-weighted 50% on completion payment into two, with one payment focused on progress towards completion (25%) and the second on completion (25%).

Providers also said that contracting had happened at high speed, which some thought had impacted negatively on the quality of what they were contracted to deliver. These believed that given the short time available they were not able to develop their programme and course materials to the degree they would have liked nor recruit as many people for the first cohorts as they would have wished. This was compounded by the move into a third national lockdown in January 2021 which necessitated a shift to 100% pure online delivery rather than face-to-face or blended provision. While some providers were delivering one course under the bootcamps umbrella, others were delivering multiple courses, which increased the additional work involved in being ready for delivery in the short timescale. Many interviewees highlighted this timescale as a key challenge in the implementation but one that was amply met by providers, which was seen as a success by many including employers.

The speed that the bootcamp came out and was delivered is incredible.

Employer

Other providers highlighted that disadvantages could have stemmed from their different starting points and related this to the commissioning process. This especially concerned where they not being involved in the prior pilot bootcamps or commissioning activities in the region they worked in. These believed that organisations who had prior involvement were also familiar with the regional leads' procurement processes whereas those who were not had found that the negotiating the procurement and contracting process was a steep learning curve. These believed that smaller providers new to this type of contracting would have faced barriers that were disproportionate.

Following the commissioning process, close collaboration between providers and the regional leads was striking and appeared to be a critical success factor for delivery. Through this relationship, collaboration between the providers in each region could also be established. The providers also established their own networks with the other local providers. In some areas, the collaborations between providers helped to mitigate against overlaps in provision and competition in recruitment practices.

As noted in Chapter 2, areas took different approaches in respect of the number of providers they engaged, and how they worked with them. The example from Liverpool below was unique and demonstrated how connections were made with key partners from the point of commissioning.

Case study: Liverpool City Region

Rather than allocate all of the Bootcamps funding at the beginning of the process, the Liverpool City Region engaged a pool of providers and ran mini-competitions once demand was identified for a particular type of course. Providers submitted course proposals before being approved to participate. Once sufficient demand was identified among employers (including 15 employers engaged via the Jobcentre Plus large employer recruitment team) and the target learner groups, the relevant providers were mobilised to deliver. This approach meant that, although some providers were not given the go ahead, others ran multiple courses. For example, several digital marketing courses were delivered to meet an upsurge in demand for skills in this field (from web design and data analysis through to delivering social media campaigns).

4 Recruitment

Recruitment was said to have gone well for all of the areas overall, and regional leads reported that some providers had more than twice the number of applicants to places available.

The courses were hugely oversubscribed, in terms of the number of people who wanted to go onto them. There's no end of demand for this re-training and the number of people that we have got getting in touch asking for support is significant.

Lead

The MI data collected as part of this evaluation suggested the level of subscription for bootcamps in each area (Table 4.1). The highest level of demand was seen in WMCA, followed by GMCA and then HoTSW and WYCA. The other two regions, D2N2 and LCR had a lower ratio. However, regional leads reported that waiting lists were in operation. It is not possible to judge how far areas varied in recording rates of applications, specifically whether all applications were included in the MI or whether only applications from those deemed eligible for a place were entered in the data. Caution should also be noted due to the analysis being able to report only on those providers that submitted data that was of a suitable quality to analyse.

Table 4.1: Demand for Wave 1 bootcamp courses

Area	Applicants	Participants	Demand ratio
D2N2	427	323	1.3
GMCA	1,027	396	2.6
HoTSW	699	435	1.6
WYCA	247	153	1.6
Liverpool	337	258	1.3
WMCA	1,368	290	4.7
Total	4,105	1,855	2.2

Source: Bootcamps MI 2021

An example of the approach in local areas is shown in the box below.

Case study: HotSW

Despite the contracting process condensing the recruitment period and a national lockdown complicating the Bootcamp training offer in so many ways, providers we spoke to in the Heart of the South West LEP area successfully filled their Bootcamp places. Indeed, places for some courses were oversubscribed. Networking through existing partners was critical to the providers' success. Examples included building on established relationships with employers – particularly important to the delivery of the technical bootcamps, to identify applicants and cascading information through previous learner cohorts or referral partners, such as recruitment agencies. Social media campaigning played an important role in reaching out to potential applicants.

The data suggest that while unemployed people formed a minority of learners overall, rates of unemployment put the level of demand into some context. The two areas with the highest demand ratio (WMCA and GMCA) were the ones with the highest unemployment rates across the group, being about 1 percentage point above the England average in 2019-2020

(Table 4.2). However, there was not a clear pattern for the rest of the areas matching the unemployment rate rating to the demand ratio rating.

Table 4.2: Unemployment rate by LEP, region, and county

	Unemployment rate
GMCA	5.3
WMCA	5.3
D2N2	4.8
England	4.4
WYCA	4.3
HoTSW	4.0
LCR	3.7

Source: NOMIS, Oct 2019 – Sep 2020

4.1 Planned selection processes

Many providers described that they acted on the eligibility requirements for the course that were set by the regional leads. Most commonly, providers reported that targeting and eligibility for their programmes was firstly based on postcode (since bootcamps operated within subregional administrative boundaries) and then a requirement that learners could not be unemployed for more than 12 months. Other eligibility requirements were

described by some providers as 'loose' targets and others described operating eligibility criteria such as having a National Insurance number and the right to work in the UK.

As noted, many providers were over-subscribed for their provision and so put in place selection processes to fill the courses. Providers handled these processes in different ways, including interviews with applicants and checking on previous qualifications held, and methods to assess motivation for a career in the sector e.g., demonstrated by taking part in prior self-directed learning. One provider specifically mentioned giving some careers support at the selection stage and as part of their wrap around support. However, others did not mention whether they provided careers advice to aid individuals' decision-making on which course might be most suitable for their ambitions, with transferable learning goals or with the labour market in mind. For some this was brought it at a later stage when learners were already progressed part way through the training. Some sought to identify through the discussions, those people for whom they could achieve the greatest impact i.e., those whom, despite their passion for the industry, were experiencing obstacles to securing a job. The overall aim of the checks was to ensure that learners who most needed the support of bootcamps could secure a place.

A number of providers included tests to check prior knowledge: specific knowledge such as the Python programming language; and knowledge – critical thinking, problem solving, psychometric tests for verbal and numerical reasoning, and English – with minimum scores that had to be achieved. Some providers did not ask for prior experience or particular levels of qualifications and aimed instead to support those furthest away from the digital labour market. Others included taster sessions as a way of assessing motivation and commitment. The aim of these approaches and criteria was to ensure that learners would be retained more likely to achieve the positive outcomes. Providers also reported over-recruiting to counteract anticipated withdrawals and drop-outs or separating the courses into modules with completion of modules enabling progress through the whole course.

4.2 Planned target groups

Diversity was built into the aims of the programme to help address diversity issues within the digital and technical sector workforces. It was common for providers to report the drive for greater gender equality in the digital sector and particular roles and the importance of gender balance in training to help drive equality in the future through the pipeline of future recruits. Likewise, many providers highlighted the lack of ethnic diversity in much of the digital sector and need to ensure diversity in the bootcamps training group in order to have an impact on the workforce.

Given the number of providers involved in delivering the bootcamps, there were also a number of programmes that had specific target groups and these included people with specific learning disabilities such as Autism, by age group, for employed people, and people whose jobs had been affected by COVID-19.

These targets sometimes came from the regional leads as each region had set key priorities. An example was where a provider described how the regional lead had asked that bootcamp intakes align with the local industrial strategy and particular under-represented groups noted therein.

However, the diversity of the groups targeted for training also reflected existing priorities amongst the providers. These aimed to build on what they were already successfully doing to try and tackle diversity and inclusion in the industry. For example, some had female trainers, mentors and coaches in place and staff from a range of backgrounds and cultures, and some linked with organisations that were aimed at supporting neuro-diversity in the workplace.

Not all providers had prior experience of outreach and support for the groups they were targeting and this could lead to some difficulties in recruiting the anticipated number of training participants. This included providers who were aiming to attract young people who were not in education, employment or training (NEET), some who intended to work with employed learners who were seeking a career change, and others that had intended to recruit unemployed learners. In this latter example, the issue could concern barriers with undertaking intensive training courses while claiming unemployment benefits, However, for the most part, providers were not sure why they had been unsuccessful with certain groups; although some believed that the limited time to forge new contacts for different target groups had been a constraint.

4.3 Advertising bootcamps

The data suggested that the digital bootcamps mainly used digital methods to advertise the provision including targeted social media campaigns to advertise specifically to women and people from black, Asian and minority ethnic (BAME) groups. The social media platforms used included Instagram, TikTok, Facebook and LinkedIn. Some providers used job search sites such as Indeed, however it was not possible to target adverts to specific demographics. One provider described how they had used a marketing agency on a payment-by-results basis, whereby the agency would be paid once a learner met the eligibility criteria and had started on the course.

The technical bootcamps also used social media, radio, and links with employers for training their new recruits.

4.4 Referral routes

Self-referral was a key route in the bootcamps in response to marketing and social media campaigns, according to regional leads and providers. Accordingly, some delivery providers did not report working with any referral organisations, but successfully recruited through their own networks and marketing methods, targeting previous customers and existing waiting lists.

However, other providers discussed fostering local relationships to build referral routes to their training and worked with organisations such as Jobcentre Plus, mental health charities, housing associations, and universities – depending on the level of skill and the particular target groups they were seeking to recruit. Some of these providers had existing relationships related to other provision they offered and these were able to mobilise these quickly to start getting referrals on to their provision. Absent from providers accounts of referral routes were links with local National Careers Service (NCS) provision who could potentially support the Bootcamps by referring people that have identified through a careers conversation that this could be a viable routeway for them. At the time of reporting, the department was strengthening links with NCS for the next phase of bootcamps.

Experience in a range of settings indicates that it can take time to foster and develop new referral relationships, for the referring organisation to understand the provision on offer and the suitability of referrals. There was therefore some concern amongst regional leads and providers about how referral routes would work given the limited timescales involved. To try and ensure that Jobcentre Plus Work Coaches were aware of their provision and the opportunities for retraining and upskilling, some providers met with the Work Coaches to explain the bootcamps and who these could support. Some providers were successful in setting their bootcamp course as an ‘opportunity’ on the Jobcentre Plus computer systems, while others indicated that the computer system referred only to the regional lead for onward referral to the most appropriate bootcamp provider.

There were however issues working with Jobcentre Plus to identify suitable candidates, particularly where individuals received out-of-work benefits, as work coaches could advise that the number of hours involved in the bootcamps training would make them ineligible for benefits as they would not be available for and actively seeking work. This could mean that to take part, learners had to fund their living costs for the duration of training and until they gained a job. The picture varied between areas and potentially between work coaches. In a positive example, a bootcamps learner taking part in the qualitative research reported how she was recommended to the course by her Jobcentre Plus work coach, who acknowledged and authorised it as work-related activity in the jobseeker’s agreement.

In contrast to the organisations that the digital bootcamps were working with, the technical bootcamps were more often working with employers directly who referred their employees to the programme.

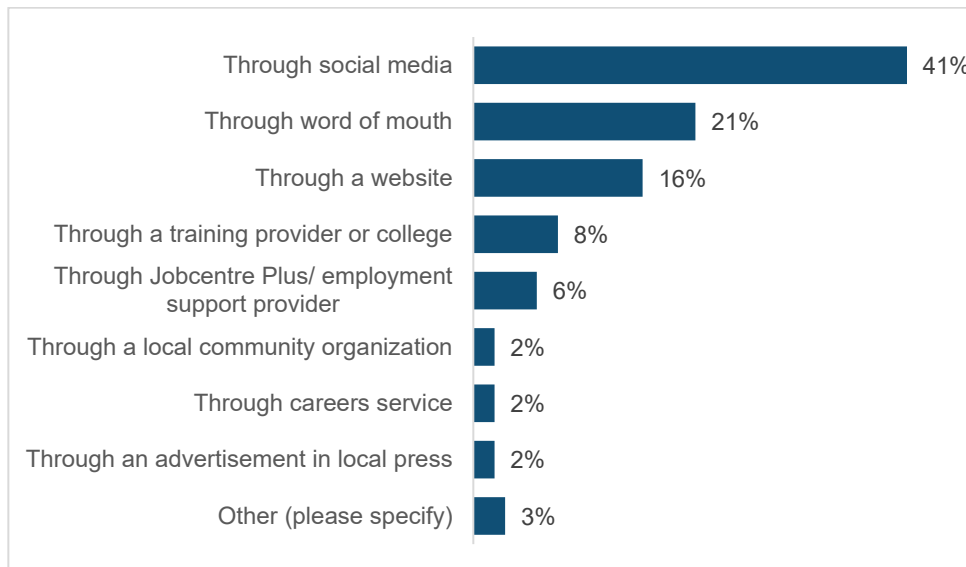
4.5 Routes in noted by learners

Confirming the perspectives of regional leads and providers, the most common way for learners to hear about the Bootcamps reported in the survey was through social media (41% of learners heard about the courses this way). This was followed by word of mouth (21%) and through a website (16%). Although only 6% overall heard about the

bootcamps through Jobcentre Plus or an employment support provider, among those who were unemployed before they started their Bootcamp this proportion was 16% which demonstrates how Jobcentre Plus was actively engaged in some areas.

Learners in WMCA were more likely to have heard about the bootcamps via social media (73%). Learners in HotSW were more likely to have heard about the bootcamps through Jobcentre Plus or an employment support organisation (13%), while learners in Leeds were more likely to have heard through a website (42%).

Figure 1: How learners heard about Bootcamps



Source: Learner survey. Base: All respondents (354)

Learners taking part in the qualitative interviews also indicated that they had seen the bootcamps advertised online primarily via social media including Instagram, Facebook and Reddit. The adverts were posted by the training provider, or their representatives, or the regional lead and highlighted key information about the bootcamp length and funding, sometimes referring to the types of skills learners would gain and the jobs the course would prepare them for. Adverts also referred to the target demographic (e.g., women, black, Asian and minority ethnic people, disabled people/those with long-term health conditions, or people who are neuro-diverse) where relevant. Other online sources included job listing site Indeed and a University Careers service, which given that participants included unemployed and underemployed graduates could be further explored by providers as a referral route. Employed learners were recommended the course by colleagues or their employer.

4.6 What learners were doing prior to bootcamps

Over three-in-five of the survey respondents were working immediately before starting their course, including 42% who were working full time⁶. It is possible that some of these learners could have been furloughed but still employed. Just over a quarter (27%) were unemployed, which was made up of 20% unemployed for less than 12 months and 7% unemployed for more than 12 months.

White learners were more likely to be working immediately before they began their course (65%), while BAME learners were more likely to be unemployed (43%).

Unlike the survey respondents, the majority of learners taking in part in the qualitative research interviews were unemployed and looking for work prior to the bootcamps. This included people who were made redundant or were put on furlough due to COVID-19, as well as recent University graduates. Those who had been employed recently were looking for career changes. They often had little to no previous experience in the digital or technical skills but typically were teaching themselves and/or developing their interest. For example, a learner had taken up a voluntary role in digital marketing, and other learners had recently undertaken other similar digital bootcamps or shorter training courses such as coding in a day. A few learners were actively employed in fields requiring some digital skill.

Unemployed learners and those looking for a career change reported it very difficult to find jobs, especially during the pandemic. With many people looking to change careers, recruitment for entry level jobs was very competitive, demanding the right mix of skills and experience. However, a number of learners reported that there seemed to be more vacancies in IT and digital compared to other fields, especially in big cities like Leeds, Liverpool and Manchester. They also believed that vacancies were increasing in digital marketing and social media especially since the pandemic. Careers advice during the selection process could serve to confirm or disprove these beliefs,

4.7 How learners were assessed for their place

The qualitative interviews with learners explored the process of being accepted onto bootcamps. This was overwhelmingly simple and straightforward according to their accounts. Learners answered selection questions through online registration forms and/or via informal phone interviews. Confirming the approach indicated by providers (see section 4.2) questions were primarily aimed to assess their likelihood of completing the bootcamp, focussing on their soft skills, motivations, and interest in the training and relevant careers. This was sometimes, but not always, accompanied by a requirement to supply a CV or information about existing experience. Telephone interviews were a

⁶ The MI records that 67% of learners were in work (see Chapter 2)

chance for providers to explain more about the course and give learners assistance in the application process, rather than an assessment.

Technical knowledge was directly assessed for a few courses, in some instances to decide which course to place learners on. For example, learners applying for a developers course were asked to complete multiple-choice tests to assess their existing knowledge of programming. Following this they were asked to complete a pre-training course, although it did not appear that completion of this was mandatory as some of the learners believed their course colleagues had not completed it.

Generally, unless they had been involved in some form of test, learners believed the bootcamps had no technical prerequisites beyond demonstrating a basic understanding of the bootcamp topic and none reported finding the application process difficult.

4.8 Recruiting existing employees for bootcamps

The short time-period between Bootcamps being contracted and starting (in some cases it seems that delivery may have started before contracts were in place) was a barrier for some employers to put their staff onto the training, particularly as this fell over the Christmas holiday period. Employers and providers both reported that a normal lead-in time to training for employees would be 4-6 weeks, rather than a matter of days. This was compounded by the intensity and duration of the bootcamps which in some cases, required several hours learning each day over an eight to 12-week period. This meant that employers needed to cover the time staff spent on training which caused a need to back-fill or reallocate work. To do this at the same time as being in lockdown was not seen as realistic. However, the upskilling value of the training offer was such that many employers overcame these hurdles and released staff to participate.

There were some examples where employers indicated that they did not have a full understanding on bootcamp content prior to signing up staff and these said that, in some cases, provision was not well matched to staff capabilities or their needs. This was likely to have resulted from the limited time to implement the bootcamps; in light of the very positive feedback where employers were involved in co-designing training, it suggests that more time in the design and development period of bootcamps would overcome this issue. Accordingly, providers said they wanted more time to work with employers to ensure that the employers felt confident in the provision, could identify the right people for the training and could make time for them to attend.

4.9 Motivations amongst learners

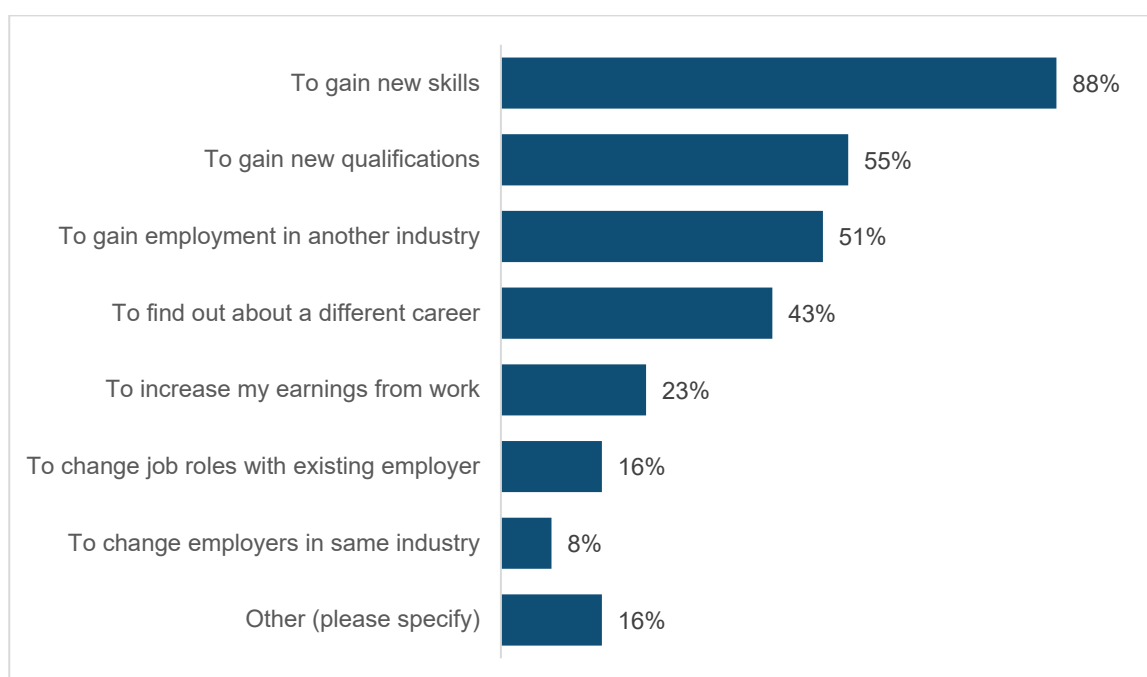
In the survey, learners were asked to select, from a list, their motivations for enrolling on the bootcamps. They could select multiple options. The most commonly mentioned motivation was 'to gain new skills' (selected by 88% of respondents), followed by 'to gain

new qualifications' (55%), 'to gain employment in another industry' (51%) and 'to find out about a different career' (43%).

Learners who were unemployed when they started their course were more likely to select 'to gain employment in another industry' (68%), which aligns with bootcamps providing a reskilling pathway, although 'to gain new skills' was still the most commonly selected (87%).

'To gain new skills' was the most commonly selected motivation in all areas except WMCA, where it was a close second to 'to gain employment in another industry' (62% and 68% respectively). All learners surveyed in GMCA selected 'to gain new skills'. Learners in D2N2 were more likely to select 'to gain new qualifications' (66%) and those in WYCA were more likely to select 'to find out about a different career' (65%).

Figure 2: Motivations for enrolling



Source: Learner survey. Base: All respondents (354)

These views were reflected in the qualitative interviews with learners. The bootcamps were seen as an opportunity to gain skills to increase employability, especially for unemployed learners looking to enter the digital sector. They noted that fields such as digital marketing and cybersecurity were growing and had high demand, offering more job opportunities. Many learners were seeking a career change, either prompted or accelerated by unemployment and furloughing resulting from the pandemic. These learners in particular highlighted that entering a digital occupation would lead to a more stable and future-proof career with clear progression opportunities. Another attractive feature of jobs in this field was they were more likely to be offered with flexibility, including remote-working, which was seen as an increasingly important factor since the pandemic. Since entry level tech jobs are increasingly competitive and require some

existing skill and experience, bootcamp training is desirable. Employed learners were interested in upskilling to gain promotion or new job opportunities, and other learners were seeking upskilling to help start a business or engage in freelance opportunities.

The potential for contact with employers and industry experts, as well as experience and exposure in the field was important across learners. For some learners in the qualitative research, the guaranteed interview was the main reason for taking part. Many approached the bootcamp seeking to increase their understanding of the sector including the jobs available.

Financial considerations played a large part in learners' decisions to take part. The courses being fully funded courses was hugely attractive. Some learners said would have paid for another training course if the digital bootcamp was not available, whereas those who could not have afforded training otherwise would have relied on self-teaching only, job seeking in a different field or trying to find an apprenticeship.

Learners considered the outcomes from the training when reaching decisions to apply. For example, some saw that the accreditation they would gain at the end of the bootcamp was necessary for the job they were interested in. For others, the shorter, focused skills training provided a cheaper and rapid-return alternative to a computer science related degree.

5 Delivery

This section explores the delivery of bootcamps and specifically how learning and support were configured and how bootcamp provision addressed employability. It first covers the impacts of the pandemic on the training experience.

5.1 Impact of Covid

All bootcamps were initially designed predominantly for face-to-face delivery. The COVID-19 containment strategies pre-Christmas and the third national lockdown in late December 2020 meant that bootcamps had to shift rapidly into remote delivery modes or change tack and delay delivery. It proved to be more possible for the digital bootcamps to be delivered in remote mode, whereas technical bootcamps had to be paused until government advice made it possible for delivery to commence.

The digital bootcamps were suitable for online delivery due to the computer-based nature of the course work. Some providers already had experience by this point of re-designing courses to be delivered online due to previous lockdowns in 2020. Where they did not have this experience, there could be some concerns about how courses could be delivered online only. These providers were more likely to say that they would prefer face-to-face delivery in future.

The third lockdown included school closures, which meant that some learners unexpectedly had children at home while they were supposed to be engaged in training. Where bootcamps were being delivered in a couple hours a day, in the evening or at weekends this was less of an issue. However, some Bootcamps had an expectation that learners would be undertaking fuller days of online learning. Overall providers worked hard to increase the flexibility of delivery and learners could access lessons later point.

The COVID-19 pandemic also had an impact on teaching staff, leading to some staff absences, increased stress levels and negative effects on mental health and wellbeing. Therefore, in addition to the support measures and adaptations that the delivery providers had put in place for the learners, they also had to consider how they were supporting their staff.

Alongside these challenges, the move to pure online delivery had some positive effects: providers were able to attract learners at a greater distance from learning centres because concerns about travel/commuting time in addition to training time were minimised. Online delivery also helped to cement the basic digital skills that employers would be looking for in the workplace, and allowed employers from other areas (and countries) to be involved in learning delivery that would not have been possible in face-to-face delivery. Some providers could increase the number of learners they had on their courses as being online there were no physical restrictions to the number of people they could have in a classroom and no need for social distancing. However, a few providers

cautioned against increasing class sizes too far due to quality factors concerned with individualised inputs with learners and the increased burden for staff providing support and feedback to more learners.

The case study below illustrates how provision responded and the benefits this could derive for learners.

Case study: D2N2

The national lockdown necessitated a move to fully online learning for the delivery of the Bootcamps. However, providers and learners we spoke to in the Derby, Derbyshire, Nottingham and Nottinghamshire LEP area were very positive about this move. For learners, it reduced travel costs and time and meant that they could have more flexibility around other commitments, such as childcare or work. Providers felt that they were able to deliver high quality online content and supplement this tailored one-to-one support. Employers were engaged as tutors, delivering content, as well as providing feedback on industry use of skills being learned based on their needs as an employer.

5.2 Revised delivery models

Digital bootcamps provision was generally being delivered by tutors using synchronous technologies to lead **group classes** supplemented by additional one-to-one meetings and self-guided learning. As noted, in some cases there were bigger than anticipated class sizes (due to over-recruitment in response to fears of increased attrition due to the pandemic as well as more positively, the ability to offer more places in pure online mode), and more flexibility than might have evolved under original plans meaning that classes and tutorial support were delivered at different times of the day, including evenings and at the weekends.

Group messaging apps such as Slack and WhatsApp could be used to simulate the **group chat and networking** that would happen as part of classroom-based teaching. The changes to delivery could also affect course duration. In some cases, it had been possible to increase intensity and reduce course duration to around six weeks, which some providers indicated better suited their learners and helped to sustain their engagement.

[There has been]... some really high-quality outputs from the students. That's a result of the intensive tuition they've had, both in the 3-hour sessions and the wrap around.

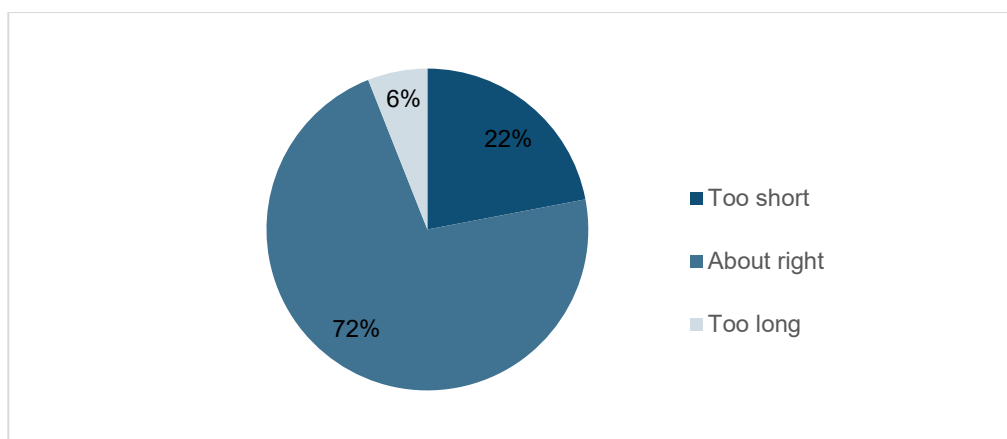
Provider

Probing **satisfaction with the duration of training**, the learner survey showed that just under three-quarters (72%) of learners perceived the length of their course to be 'about right'; a little over one-in-five (22%) thought it was too short, while the remaining 6% thought it was too long. Notably, male learners were more likely to think their course was too short (27%, compared to 17% of female learners) as did learners aged 41-50 (32%).

Learners who were working were a little more likely to think their course was too long (8%). There were few area differences in these views, although learners in HotSW are less likely to think their course is 'about right' (47%), and are both more likely to think it is too short (42%) and too long (12%).

This chimed with some findings from the qualitative research around working alongside training. There were two dimensions to this. Firstly, where learners were training for a career change and undertaking a job that had some degree of flexibility (including zero hours contracts), the increased flexibility resulting from the pure online training model meant they could study around their working hours – and this could work well. Similarly, where training shifted to evening and/or weekend delivery that worked well for those learners with 9am to 5pm type jobs. A contrasting view was held by an employer using bootcamps to train existing employees and concerned the intensive training models used by some providers. Here, the amount of time required off-the-job meant that the employer would have preferred longer duration, less intense training, and options to involve staff over waves of training rather than all at once.

Figure 3: Perceptions of course length



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

Alongside the provider-led inputs (classes, tutorials and mentoring sessions), learners were required to engage in **self-directed study** which often increased in extent as the course developed, starting with a few hours week at the beginning of the course), and to undertake assignments, group work and presentations. This was supplemented with employer-led projects, the outputs from which could be used by learners to form the basis of portfolios to use in employment applications. Some providers also included options for additional 'modules' as part of the bootcamp for those learners with capability to be stretched; these typically focused on industry standards and high demand skills that were well-regarded by the sector.

Providers also described that they incorporated **employability support**, often towards the end of bootcamps courses – this covered information about networking with employers and how to find work in the sector, CV writing support and preparation for

interviews, as well as mock interviews with employers. Support for job searching by most of the providers, in some case light-touch jobs postings on virtual message boards and in other cases employability support incorporated throughout the bootcamp training. However, in a few cases this was not incorporated and learners were referred to other organisations to get support with looking for a job – employability services or recruitment agencies, this could also include professional careers support for impartial advice and guidance. Where learners were self-employed or sole traders, mock interviews could be focused on winning work from a new client rather than getting a permanent job. Some providers continued this employability support beyond course completion engaging with learners through the Slack and WhatsApp groups that were created as part of courses, circulating new vacancies and continuing to focus on industry needs and how learners' new skills addressed these.

Finally **pastoral support** was configured through the tutorial and mentoring elements. In some cases, providers reported learners with higher needs than they themselves could support (such as experiences of domestic abuse) and in these instances, they referred or signposted learners to local services and charities.

Providers had initially feared courses would be subject to higher levels of drop-out due to lack of engagement with a solely online format. The problems cited included digital poverty including problems with data connectivity, lack of access to devices, and wider factors including the difficulties of juggling childcare and home schooling with their own learning, not enough support for people without English as a first language, and the difficulty of sustaining motivation to learn online for the whole 12 weeks. Providers' support for learners to access devices and data, flexibility in delivery models, plus increased pastoral support, were instrumental in managing this. In some cases, learners had been able to access equipment to carry on their learning remotely, either from the provider or other local schemes. The MI data available suggested that fears about drop-out were not borne out in the course experience with around 10% of learners leaving courses early (see Table 6.4)

The challenges brought about by the pandemic were greater for the technical bootcamps. The third lockdown in January 2021 meant that face-to-face delivery could not happen, and the courses did not lend themselves to be delivered online. Some technical bootcamps were able to commence in spring, where they engaged with learners considered 'critical workers' or with social distancing in place and a reduced number of learners per class. These classroom-based courses were all different depending on the technical skills that they are focussed on. Some were delivering training to enable learners to pass tests for particular 'tickets' or licences to practice, health and safety provision, and specialist skills course such a working on overhead lines in the rail industry or fibre optics.

5.3 Importance of flexibility in delivery

The flexibility offered to learners when undertaking their courses was important. The qualitative interviews with learners suggested that those afforded flexibility in when they were able to learn reported finding the courses more manageable in terms of workload, and that their courses were successfully meeting their needs. This also was supportive where learners were working alongside training, as noted above. When a course did not offer flexibility, this could lead to learners feeling less able to stick with their programmes, particularly those with unexpected responsibilities for childcare and home-schooling due to the requirements of lockdown 3.

Learners appreciated being able to access to the materials required to prepare for each class in advance, and with time to allow them to build study time into their other commitments. They also appreciated task deadlines that offered enough time for them to be able to complete them around their other commitments. The availability of recordings of the taught sessions was an important aspect of learning the course content, enabling learners to go back to it, replay it and absorb it fully.

Overall, few of the learners in the interviews reported any IT challenges although some did. Sometimes this related to the app used for classes updating and then no longer connecting. These technical problems were frustrating and were problematic particularly to those learners who felt short on time to dedicate to training.

5.4 The role of learner support

Many providers believed that the support they had made available to learners was what had made their Bootcamp provision a success.

I think it's because of the extra pastoral support. I have a relationship with every one of those participants.

Provider

Some providers described wrap-around support delivered by non-teaching staff that covered a variety of needs: technical assistance with getting online, or with course content, additional learning; building confidence, career plans and checking on plans for progression; welfare and personal issues, for example issues with childcare mental health and welfare benefits.

The example below shows how one area was configuring employment support to help support the best outcomes for learners.

Case study: WMCA

Providers we spoke to in the West Midlands area had developed a range of supplementary approaches to increase the chances of employment for their participants. Several providers

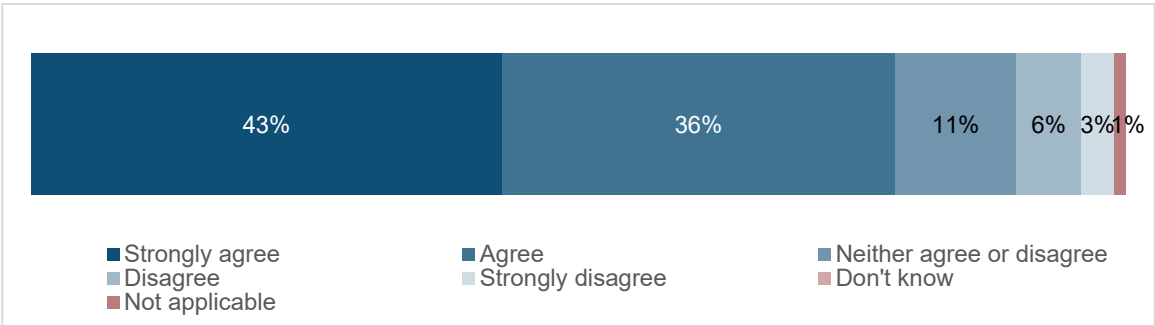
spoke of the importance of employer connections and the need to ‘pester’ these contacts during the programme to keep them engaged and ensure that employment opportunities were monitored in real-time. One provider established a mentoring service to support their learners to secure work. Another sought to equip learners with entrepreneurial skills that they could utilise to develop their own businesses e.g., website building. There were also examples of providers utilising referral partners and initiatives, such as the Princes Trust and the Restart scheme to provide ongoing support for learners following their completion of the Bootcamp training.

Other support included recording virtual classroom sessions so that if learners were unable to attend, they could catch up at a later point. One provider explained that they had in place extra one-to-one support for participants with learning disabilities. Providers also encouraged peer support through using group chat apps including WhatsApp groups or Slack. They reported that these had been very successful as a way for learners to ask questions and get answers from peers or the bootcamps staff.

Over three-quarters (78%) of learners responding to the survey were satisfied with the level of support available to them from their bootcamp provider. This included 43% who strongly agreed and a further 36% who agreed. Only 9% disagreed with this statement.

Learners who had stopped attending their course before it was completed were more likely to disagree (30%) as were learners whose highest level of education attainment was level 4 or above, although to a lesser degree (12%). There were no statistically significant differences in satisfaction with support by whether the learners identified as having a disability or caring responsibilities. In respect of area differences, learners in WYCA were more likely to agree with the statement (94%), while those in HotSW were a little more likely to disagree (16%).

Figure 4: Perceptions of provider support



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

5.5 Whether learners’ needs were met

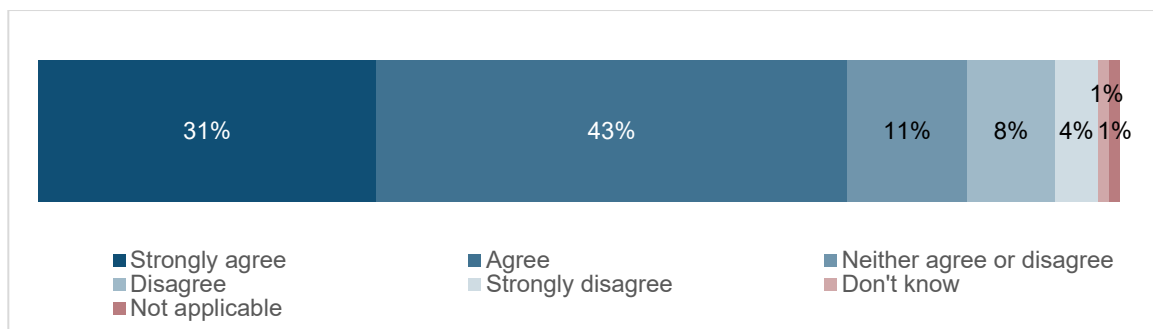
Three-quarters of the respondents to the learners survey believed that their training met or was meeting their needs. This included 31% who strongly agreed and a further 43%

who agreed. Less positive views were expressed by 12% of respondents who disagreed or strongly disagreed with this question.

Learners who had completed their course at the time of the survey were more likely to say that it met their needs (84% either agree or strongly agree), as were those who were still on their course (78%). Perhaps unsurprisingly, those who had stopped attending their course were less likely to agree it was meeting their needs (27%).

There were some variations by area. Learners in WYCA were more likely to agree that their course has met or is meeting their needs (88%), whereas those in HotSW were less likely to agree (60%) and more likely to disagree (23%).

Figure 5: Perceptions of training meeting needs



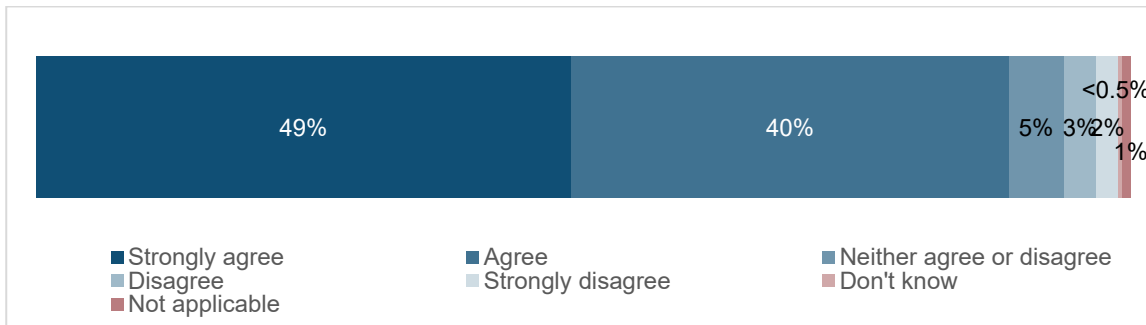
Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

5.6 Learners' acquisition of new skills

Nearly all learners agreed that their course was helping or had helped them to develop new skills. Just under half (49%) agreed strongly with this statement, while a further 40% agreed. Only 5% disagreed. Perhaps unsurprisingly, those who stopped attending their course before completion were less likely to agree it helped them to develop new skills (45%). Learners whose highest level of education attainment was Level 2 were also a little less likely to agree that their training had helped them to develop new skills (78%), but they were no more likely to disagree with this statement.

All learners in GMCA agreed with the statement, whereas learners in HotSW were a little more likely to disagree (10%).

Figure 6: Perceptions of training helping to develop skills



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

5.7 Understanding the quality of provision

The providers were generally confident about the quality of their provision, as it was **employer-led and met employers' needs** – which was a quality indicated they prioritised. Some had built on existing provision that they had developed in collaboration with employers and others developed new course content based on employer needs. As noted, many did not have time to involve employers in co-designing course content in Wave 1 however amongst these were some that had previously engaged with employers during the prior pilot bootcamps and delivering employer-responsive training, which helped to overcome this.

The **profile of the delivery staff** was another indicator of quality for the providers. They had staff delivering the training who had substantial industry experience, many also holding teaching qualifications. Some providers had specialists working as trainers supported by other tutors that had less of the specialist knowledge but who were qualified and experienced in supporting learners – this provided the mix that they believed learners required. Some providers reported that specialist trainers brought prestige to the bootcamp and were additional signs of quality for employers looking at recruiting from the courses. Learners were also able to use these trainers as referees when applying for jobs or as part of their portfolios, which again gave credibility to their training.

We are the best people to be teaching you how to do it

Provider

Learners were given opportunities to **feedback** at the end of their sessions and give their views on the quality, suggest improvements, and ask questions. This was through apps such as Survey Monkey and Jamboard. There were also plans for end-of-course evaluation questionnaires.

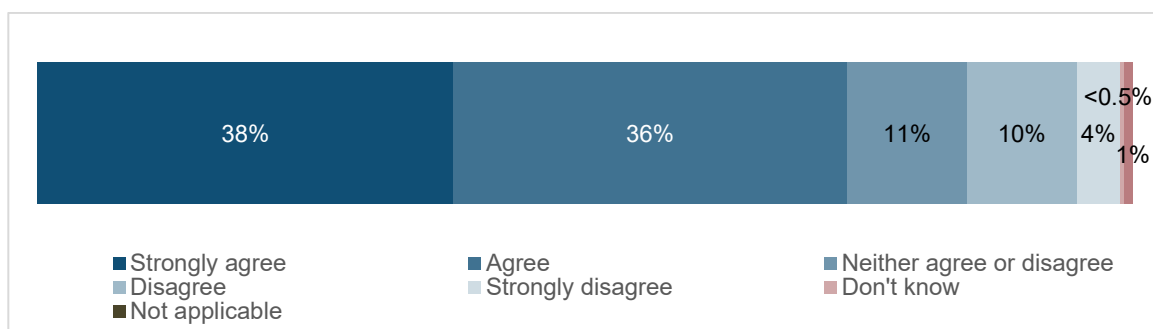
Learners' feedback was reviewed by staff and acted on where necessary and providers reported that the feedback would be taken into account in the design of courses for future bootcamps. Some providers that also delivered adult education budget provision or

Apprenticeships had established processes for quality improvement and lesson observations, since their other provision was under the remit of Ofsted.

Where learners were referred to bootcamps by their employer, providers also gave their employers opportunity to give feedback on the quality of the provision through regular phone catch-ups.

Learners responding to the survey indicated satisfaction with the quality of training. Just under three-quarters (74%) agreed that they were satisfied with the *quality of the teaching they received*, 14% disagreed and unsurprisingly, those who did not complete their course were more likely to disagree (45%). Learners aged 41-50 were more likely to disagree that they were satisfied with the quality of teaching (26%), as were those whose highest level of educational attainment is level 4 or above (17%). Learners in HotSW were the most likely to disagree they were satisfied with the quality of teaching (35%), followed by learners in GMCA (24%). No learners in WYCA disagreed with the statement, and only a small minority did in LCR and D2N2 (2% and 5% respectively).

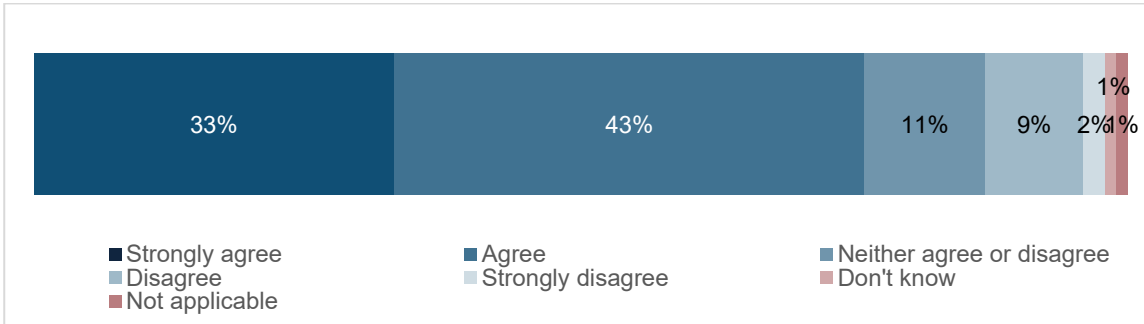
Figure 7: Perceptions of quality of teaching



Source: Learner survey. Qexpqual1. Base: Completed training, still training, or dropped out (353)

Just over three-quarters (76%) of respondents agreed that they were satisfied with the *quality of the content of their training*. This included a third (33%) who strongly agreed, while 12% disagreed and 11% selected neither agree nor disagree. Learners who did not complete their course were again less likely to agree with this statement (36%), and more likely to disagree (39%). Finally, learners in HotSW were less likely to agree that they were satisfied with the quality of the content of their training (60%), and more likely to disagree (26%) whereas learners in GMCA were more likely to agree (93%), with just under half (49%) strongly agreeing.

Figure 8: Perceptions of quality of training content



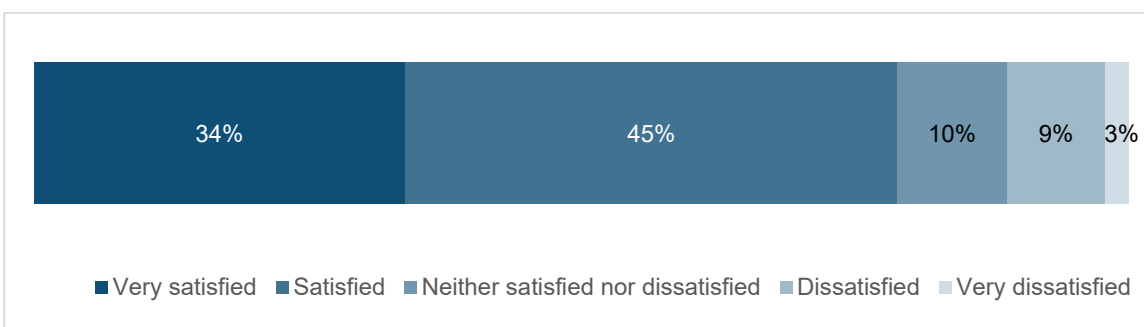
Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

Learner satisfaction with their training is another marker of quality. The survey showed that nearly four-in-five (79%) were *satisfied with their course* overall. This included over a third (34%) who were very satisfied, and 45% who were satisfied, while 12% were dissatisfied, including 3% who were very dissatisfied.

Those who had completed their courses were more likely to be satisfied (90%, compared to 82% for those who were still on their course). Unsurprisingly, those who stopped attending their course are less likely to be satisfied (27%), and more likely to be dissatisfied (55%). Learners aged 41-50 were more likely to be dissatisfied (19%), but BAME learners were more likely to be satisfied (87%).

Learners in WMCA and WYCA were the most likely to be satisfied (92% and 90% respectively) whereas learners in HotSW were the least likely to be satisfied (58%), and more likely to be dissatisfied (29%).

Figure 9: Satisfaction with course



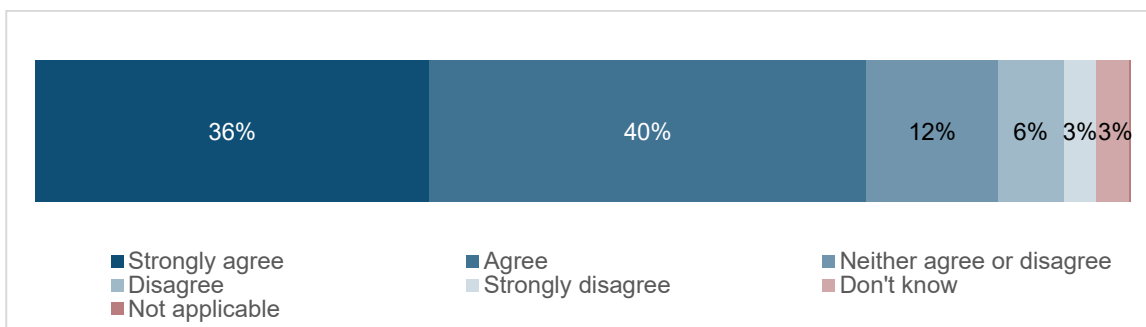
Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

A final quality factor is whether learners would recommend bootcamps training to others. Just over three-quarters (76%) of learners in the survey would *recommend their course to others aiming to find employment in the industry*. This consisted of 36% who strongly agreed and 40% who agreed. Fewer than one-in-ten (9%) disagreed with this statement.

Unsurprisingly, those who stopped attending their training before completing their course were less likely to agree (39%), and more likely to disagree (30%). Learners aged 41-50 were a little more likely to disagree (16%), but were no less likely to agree. BAME learners were more likely to agree (85%).

Learners in D2N2 were more likely to agree overall (86%), and learners in GMCA and LCR were more likely to strongly agree (51% and 53% respectively). Nearly a quarter of learners in HotSW (24%) disagreed, including 10% who strongly disagreed. Consequently, learners in HotSW were less likely to agree with the statement (53%).

Figure 10: Whether would recommend course



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

The qualitative interviews demonstrated that the quality of the teaching available as part of bootcamps was key to understanding how they experienced the course. Where learners reported positive experiences of their courses, it was often related to the teaching style, or an individual trainer. This was particularly true when trainers went the ‘extra mile’ in the service that they provided.

He would call me if there was a problem, and we could go through it together in our time.

Learner

Where learners were dissatisfied with their courses, teaching was often mentioned as a cause. This appeared to relate to whether the learners felt a rapport with their trainers and whether the training approach was well-matched to the individual’s learning style.

The focus on quality is illustrated in the case study below.

Case study: WYCA

In West Yorkshire and Leeds, the Project Manager encouraged providers to seek regular feedback from their learner cohorts, to monitor satisfaction and quality of their training. One provider set up an interactive whiteboard at the end of every training session, gathering real-time feedback from participants. Trainers at another provider actively supported one another in delivery sessions and regularly met up online to share issues and consider potential areas for improvement to delivery. There was also an example of a provider liaising with a specialist

referral partner throughout delivery to gain a better understanding of the perspectives of a specific learner cohort and ensure that the programme was fully accessible to them.

5.8 Spotlight on employer involvement

This section looks at the MI data submitted by providers (i.e., those data that were of sufficient quality to analyse), please refer to 'Problems with quality of MI data' in 1.2 when utilising these findings. Of the data collected and analysed, just over three-quarters of the involved employers were small or medium sized (Table 5.1), which exceeded the target of 60% set by employers. Just under a third had fewer than nine employees; 19 per cent had more than 750 employees.

Table 5.1: Employer size

	Number	%
1-9 employees	105	31.5
10-149 employees	115	34.5
150-249 employees	33	9.9
250-749 employees	19	5.7
750 or more employees	61	18.3

Source: Bootcamps MI 2021

The employer size explained the number of vacancies offered by each employer. Almost 300 vacancies were potentially on offer to the digital bootcamps learners (Table 5.2). Most employers (60%) offered one vacancy, followed by 20% who offered 2 or 3 vacancies. A small proportion of employers offered more than 10 vacancies while almost 10% did not offer any vacancies. While not recorded in the data, this might indicate other forms of involvement in the bootcamps (see later).

Table 5.2: Number of vacancies on offer by employer

	Number	%
No vacancies	27	9.1
1 vacancy	184	61.7
2-3 vacancies	59	19.8
4-10 vacancies	16	5.4
10+ vacancies	12	4.0

Source: Bootcamps MI 2021

Data suggest that the sectors with the largest numbers of employers were information and communication (17%), professional/ scientific/ technical (17%), production (10%), education (10%), and retail (11%) (Table 5.3)

Table 5.3: Main industries involved employers are operating in

	Number	%
Accommodation and Food Services	19	5.7
Art	11	3.3
Business Admin	5	1.5
Construction	19	5.7
Education	34	10.1
Finance/Insurance	9	2.7
Health	22	6.6
Information and Communication	57	17.0
Legal	2	0.6
Motor Trades	5	1.5
Production	35	10.4
Professional/Scientific/Technical	56	16.7
Property	9	2.7
Retail	38	11.3
Tech	2	0.6
Transport and Storage	8	2.4
Wholesale	5	1.5

Source: Bootcamps MI 2021

Employers were engaged informally through the professional networks of the provider staff – for example, trainers who were still working in industry or had good industry links and employer networks. More formally, some providers created ‘memorandums of understanding’ with employers to establish what commitment they would give to the Bootcamps courses such as number of job interviews they would be prepared to offer.

There was engagement with SMEs, start-ups and larger businesses. While large employers were more likely to have longer term training and recruitment plans, smaller businesses and start-ups were described by providers as looking to recruit smaller numbers, but more quickly.

Sometimes smaller employers can work much quicker than larger employers. They can be more agile and take people on and move more quickly.

Provider

Some providers that were new to the geographies that they were delivering in spent more time developing their employer networks from scratch.

Employers were described by providers as investing time rather than financially in the Bootcamps, this took many forms:

- **supporting delivery:** presenting talks to learners, delivering masterclasses, setting project briefs, expert insights for curriculum development, referring their staff to the programme, financial contributions
- **supporting learners:** mentoring individual learners
- **recruitment and employability support:** attending jobs fairs, advice on CVs, guaranteed job interviews, advice on job interviews and conducting mock interviews, work placements, job offers, referrals to their networks for jobs.

Live project briefs set by employers were a regular feature of many of the digital bootcamps. These gave learners an opportunity to develop their skills and portfolio and for employers to see how they would respond in a more formal work environment. Additionally, in some cases, employers were said to be involved in mentoring bootcamp learners, and supporting them one-to-one with discussions about what it is like to work in the digital sector

One provider described employers making a financial contribution for course delivery but overall this appeared rare.

Employers were often reported as engaged with the bootcamps as a pipeline for recruitment and some were specifically looking to recruit to their apprenticeship schemes. In either case, this led to providers acting like recruitment agencies, identifying suitable candidates and charging a recruitment fee where employers took on learners, which in turn could be re-invested into the training. Providers reported that this model worked well with large employers that had predictable business models and existing skills development plans, and where training was designed to meet common entry level skill criteria for work in sectors – which could overcome challenges for small employers anticipating the vacancies they might have in a few months.

This was reflected in the employer MI (Table 5.4), which revealed that over three-quarters of the employers involved had given their time to the bootcamp – which could cover inputs to the design and delivery of bootcamp, and potentially in respect of interviewing learners. Notably, fewer than 2% of employers had paid a fee for successful recruitment of bootcamp learners. The caveats about these data being illustrative only should be borne in mind.

Table 5.4: Type of co-investment

	Number	%
Other*	50	17.7
Payment in kind: Time given	219	77.4
Payment in kind: Venue or Equipment	9	3.2
Recruitment Fee on successful recruitment	5	1.8

* there was no additional information about what this covered

Source: Bootcamps MI 2021

There was only one example in the provider interviews of the bootcamp not involving employers in some way, and this was attributed to the commissioning process not specifying this. This meant the provider was not guaranteeing job interviews for their learners. However, this did not appear to be a systematic issue as other providers in the same area reported good levels of employer engagement by referring staff to training and delivering expert sessions.

In respect of **guaranteeing job interviews** there were different approaches, and the speed at which employers needed to recruit could mean vacancies were not lined up when courses commenced. Instead, some providers focused on making sure learners had the skills digital employers required for entry level jobs – which meant providers needed to have excellent industry links and insights to understand this. Once learners were nearing the end of the courses, providers might then hold presentation days and invite multiple employers to meet learners. This could lead to bootcamps being seen as the preferred route to recruitment by employers.

To guarantee interviews as part of provision, some providers lined up mock interviews in order that learners would be well prepared for live vacancies, and as noted earlier, some lined up mock ‘pitches’ for self-employed learners and sole-traders to help them prepare to win new lines of work from clients – which was viewed as more appropriate to their needs.

Providers described how COVID-19 had predominantly affected the recruitment activities that employers were intended to be involved in; specifically, guaranteed job interviews and having roles available for bootcamp graduates. Some providers had operated similar models before and in comparison to those earlier programmes, said the level of employers engagement was much reduced.

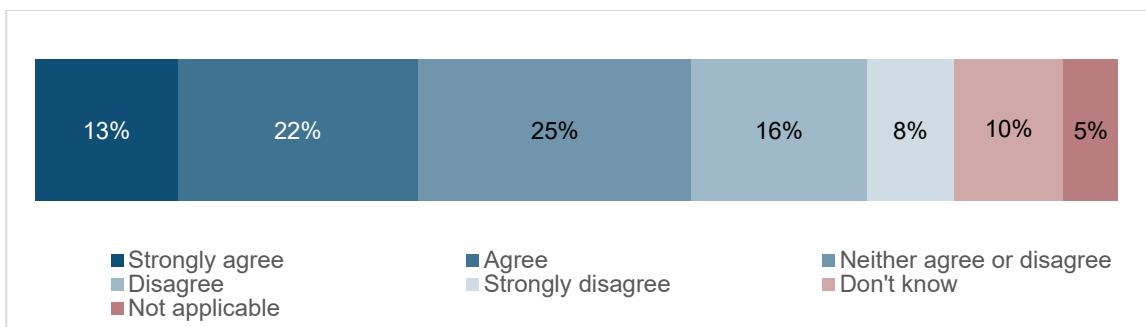
Moreover, some providers described employers as being nervous about recruiting during the pandemic and not having time available to support the bootcamps since they had to dedicate time to ‘fire-fighting’ in their own businesses, which particularly affected smaller employers.

Over time and different cohorts, providers said employers became more engaged and where recruitment had been put on hold at the beginning of 2021, this was now picking up. One provider, reflecting on experiences in the prior pilot phase, described how employers had rapidly withdrawn entry level roles (which were suitable for bootcamp learners) in lockdown 1, and it had taken the best part of the year for these roles to re-emerge but that now over 75% of their bootcamps graduates had gained work.

Learners' views of employer involvement were explored in the survey and responses were quite varied – although the majority of learners were either positive or neutral on this point. Just over a third (35%) agreed that their training had enough involvement from employers. Just under a quarter (24%) disagreed and a similar proportion (25%) neither agreed or disagreed, 10% answered 'don't know' and 5% said this statement was not applicable to their course. This could reflect a number of things including limited involvement of employers in training, or training being part of existing employment, or not relevant to self-employment.

The results on this question did not differ between those who had completed their courses and those who were still undertaking training. However, those who stopped attending their course before it was completed were less likely to agree with this statement (18%), but were no more likely to disagree. Learners in LCR were the most likely to agree (62%), while those in HotSW were less likely to agree and more likely to disagree (20% agree, 33% disagree).

Figure 11: Perceptions of involvement from employers



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

6 Progression and job outcomes

This section covers the available data on learners' outcomes, including progression in work, new jobs and gains such as in confidence and feelings of capability to take on work in a new industry. While the MI should have provided quantitative information on job and salary outcomes, it seemed likely that these data had not been completed consistently (if at all) by providers, since there was no data on starting salaries and three learners were recorded as gaining a job. Equally, employment outcomes could be reported up to six months following the start of training so this may have represented outcomes not yet being achieved, or providers not yet being able to evidence them.

6.1 Measuring and reporting planned outcomes

The outcome reporting process set in place for the bootcamps allows for positive outcomes to be recorded up to 90 days after course completion and this was thought by providers to be reasonable to account for the longer time it was taking for learners to get into work in the COVID-19 context, alongside the ever-present difficulties of getting the evidence for job outcomes. The outcomes that the Department specified should be captured were job entry and salary increase.

Many interviewees described positive outcomes that were wider than the measures identified by the Department. This included moving into self-employment in a digital role or improving skills for an existing self-employed business. Providers reported that job interviews and job outcomes were not the right indicator for these groups. Similarly, a few providers raised questions about how appropriate guaranteed interviews were for digital bootcamp learners, as all had slightly different career preferences that could not be anticipated fully at the start of training. Similarly improved pay was not seen as the right outcome for all bootcamp graduates, and particularly career changes and those moving from declining sectors. Providers noted that bootcamp graduates could move into new jobs which attracted a lower pay rate than their existing or most recent job, but that would lead to better careers prospects in the longer term.

Some providers of digital bootcamps saw demand for progression to apprenticeships from their learners – and where providers were also apprenticeship providers they could use their existing teams to support learners to find and secure apprenticeships.

Perhaps due to the challenges for the labour market stemming from the pandemic, some digital bootcamp providers described how they were not yet meeting their targets for job outcomes but they expected that they would be able to get closer to these as the jobs market was expected to pick up as lockdown restrictions eased. Most thought it was unlikely that they would reach their full job outcome targets, given the impacts of the pandemic. A final point related to outcomes was the suitability of the measures for learners already in employment and particularly where the skills acquired would be

applied in their existing role. Some providers feared they would not be able to claim outcome payments for this group.

Providers involved in delivering the technical bootcamps were more positive about the possibility of meeting their outcome targets because of the tight association between the accreditations that they offered that are required to work in the roles and because of the level of employer engagement they had secured.

In both the digital and technical Bootcamps, providers noted that some 'employees' referred to bootcamps were freelance or self-employed which also increased the challenges of gathering evidence on positive outcomes as defined, in the same ways as the other self-employed groups.

In a couple of bootcamps, and related to some providers building continuing relationships with learners who had graduated, some providers offered learners the opportunity to undertake life briefs following course completion. This meant that learners had opportunities to practice the skills they had required and add industry experience to their CV and portfolios to further enhance their job applications.

6.2 Other planned outcomes from bootcamp training

There was no requirement for digital or technical bootcamps to include formal accreditation as part of courses. As such, many bootcamps courses, particularly those offered at Level 3 led to a course completion certificate supplied by the provider. Providers reported the reason for not including accreditation related to being agile and adapting to employers' needs rather than being tied to a specific curriculum for a specific qualification or accreditation. One employer described the difficulties for national qualification schemes to remain aligned to the fast pace of change in skills demands in the digital industry. The time needed to validate and accredit new training standards and qualifications led to a lag in respect of employers' needs; as such, graduates needed on the job training when recruited before they could be fully productive for employers. Accordingly, providers reported that they did not have time to get their courses accredited before delivery, although some intended to consider this for future cohorts.

However, some digital bootcamp providers were offering accreditations as part of their courses based on what would be attractive to employers. These accreditations covered examples such as the Python Institute, British Computer Society (BCS), Microsoft engineer accreditation, Azure, Cloud practitioner certificate, NetAcad, and digital marketing. One partner organisation working with bootcamp providers expressed a preference to see such qualifications attached to courses as this was a good indicator of learner progress although a provider pointed to the additional costs of embedding accreditations, which increased the price of bootcamps.

Another output from the digital bootcamps was for learners to develop a portfolio of work that they could use either when applying for jobs or for freelancing opportunities. Working

on live client briefs from the employers during bootcamps and other project work helped to build this portfolio. Depending in the type of provision, some learners had uploaded their work to Instagram, others had WordPress blogs to record their work.

6.3 Course completions

The providers collected **MI on course participation indicators**, such as whether learners dropped-out early or completed the course, completed all their assessments and assignments, and passed all their assessments (Table 6.1). As noted throughout, these data need to be treated with some caution given the quality issues encountered, please refer to ‘Problems with quality of MI data’ in 1.2 when utilising these findings.

Data collected and analysed as part of this evaluation suggests that the average attendance rate was close to 65%. Nonetheless, 84% of the learners successfully completed all their assessments and assignments and 81% successfully passed their assessments, meaning that even though attendance did not appear very high, a large proportion of learners still managed to successfully complete their courses and meet the planned learning outcomes. Even though most learners were actively engaging with the assignments and passing their assessments, 10% dropped out of their courses before completion which was similar to the rate seen in adult Level 3 courses⁷.

Table 6.1: Course participation indicators

	%	N
Average attendance rate	63.5	725
Completed all assessments/assignments	84.1	555
Passed all assessments	80.9	429
Exited course before completion	10.5	437

Source: Bootcamps MI 2021

It should be noted that the course participation indicators were recorded consistently in GMCA; LCR; and WMCA with data being more variably in terms of completion in the other three areas. HoTSW collected some information but not enough to report reliably, and WYCA and D2N2 did not provide any figures on this.

Exploring the course participation indicators by area, there was great variation of in attendance rates. Even though LCR showed the lowest attendance rate, it had the

⁷

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874731/NARTs_statistical_release_201819.pdf

highest rate of assessment and assignment completion and the highest rate of assessments being passed. However, this needs to be treated with caution as different levels of courses would in likelihood show different rates of completion and assessments being passed. While bootcamps in GMCA and LCR had early exit rates around 10%, the rate was higher in bootcamps in WMCA had a 17% early exit rate.

Table 6.2: Course participation indicators by area

	Attendance rate		Completed all assessments		Passed all assessments		Exited course before completion	
	%	N	%	N	%	N	%	N
GMCA	68.0	350	81.8	291	79.5	259	9.3	236
LCR	50.2	200	98.4	128	98.5	66	9.9	71
WMCA	63.4	145	68.9	106	62.2	74	17.0	100

Source: Bootcamps MI 2021

The MI captured very limited information on reasons for dropping out that was not very informative. However, examining the characteristics of those individuals shed some light on the learners who were most at risk of dropping out early or of falling behind with on the other course indicators.

Where consistent data were available course participation rates were matched with course participants (this led to a smaller sample than seen above). The analysis suggested that women had much higher attendance rates than men, were more likely to complete all the assignments and assessments, and were much more likely to pass all the assessments (Table 6.3). Differences in these three participation indicators by gender were substantial and may indicate how bootcamps can ‘pump prime’ greater representation of women in digital industries and high skills occupations through widening the talent pool for employers to recruit from. There was no difference in early leaving by gender, as both men and women were equally likely to drop out.

Table 6.3: Course participation indicators by gender

	Attendance rate		Completed all assessments		Passed all assessments		Exited course before completion	
	%	N	%	N	%	N	%	N
Female	70.0	158	93.7	158	92.5	133	6.7	104
Male	54.6	133	73.7	133	56.4	78	6.4	63

Source: Bootcamps MI 2021

Learners aged 36-45 were more likely to attend all sessions compared to younger age groups. All groups had a high rate of completion of assignments and assessments, while the youngest group (16-25 years old) and relatively older cohort (36-45 years old) were almost 6 times more likely, than 26-35 year olds, to drop-out.

Table 6.4: Course participation indicators by age group

	Attendance rate		Completed all assessments		Passed all assessments		Exited course before completion	
	%	N	%	N	%	N	%	N
16-25 years old	64.5	57	84.2	57	80.4	46	9.8	41
26-35 years old	62.3	106	81.1	106	72.9	70	1.7	58
36-45 years old	70.8	63	85.7	63	79.6	44	10.8	37

Notes: 45+ year olds are excluded due to small sample size restrictions.

Source: Bootcamps MI 2021

The analysis of MI data (which may only be considered illustrative due to quality issues please refer to 'Problems with quality of MI data' in 1.2 when utilising these findings) suggested substantial variation in terms of attendance rates by ethnic group. Asian/Asian British learners had almost 1.5 times higher attendance rates compared to White British learners. The other ethnic groups had similarly low attendance rates, although sample sizes were quite small. There did not appear to be any substantial differences in rates of completion or passing assessment by ethnic group.

Table 6.5: Course participation indicators by ethnic group

	Attendance rate		Completed all assessments		Passed all assessments	
	%	N	%	N	%	N
White British	57.2	142	84.5	142	77.6	98
Mixed / multiple ethnic groups	53.9	15	86.7	15	83.3	12
Asian / Asian British	82.1	64	81.3	64	78.9	52
Black / African / Car	45.4	21	81.0	21	75.0	16
Other ethnic group	57.2	37	91.9	37	88.5	26

Notes: The exit rates are excluded due to small sample size restrictions.

Source: Bootcamps MI 2021

Carers (including people with dependent children at home) had higher attendance rates than non-carers. They were also almost half as likely as non-carers to drop out early from the courses.

Notably, data suggests that 66% of the carers in the sample were women compared to 48% of non-carers, and 58% of the carers are between the ages 36-45 compared to 16% of the non-carers. Both of these groups had the highest ratings in the course participation indicators although the limitations of this sample (the skew created by inconsistencies in data completeness between areas) means these findings may not be fully reliable.

Table 6.6: Course participation indicators by carer status

	Attendance rate		Completed all assessments		Passed all assessments		Exited course before completion	
	%	N	%	N	%	N	%	N
Not a carer	58.5	203	81.8	203	74.7	142	7.0	114
Carer	71.6	90	88.9	90	86.1	72	3.7	54

Source: Bootcamps MI 2021

Data collected and analysed suggests that the bootcamp course attendance rate was 51% for learners who were working full-time; 55% for learners who are working part-time; and 70% for self-employed learners and unemployed learners (Table 6.7). This suggests that work responsibilities might be creating constraints when it comes to participating at the courses. Nine in ten (90%) of unemployed learners completed all assessments and this group was more likely than the other groups to pass all their assessments. However, together with part-time workers, they were much more likely than full-time and self-employed workers to exit the course before completion.

Unfortunately the data sample is too small to look at the participation rates by educational level and disability status.

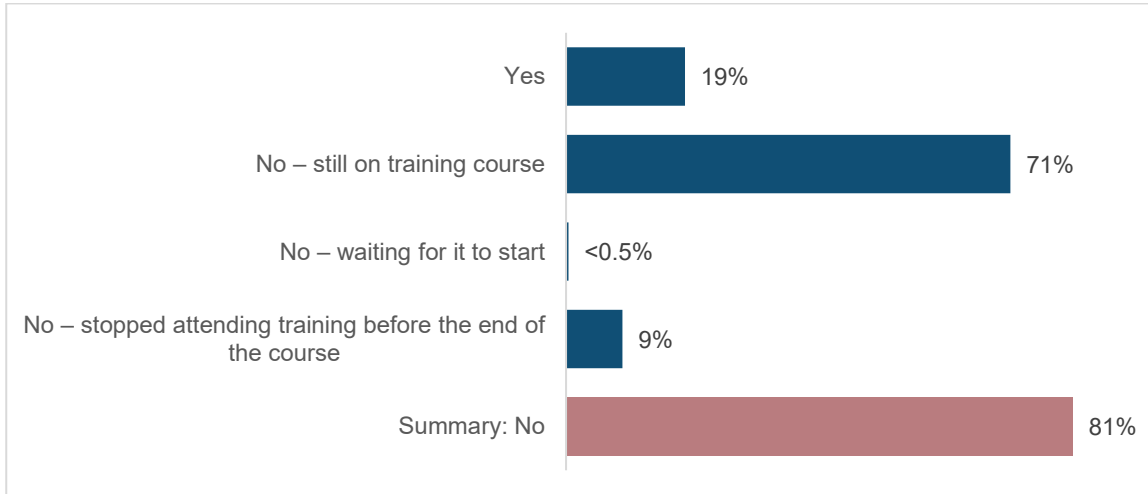
Table 6.7: Course participation indicators by employment status

	Attendance rate		Completed all assessments		Passed all assessments		Exited course before completion	
	%	N	%	N	%	N	%	N
Employed, full-time	50.6	191	87.1	170	83.2	131	1.7	118
Employed, part-time	54.7	74	89.1	55	86.1	43	12.5	32
Self-employed	69.9	47	87.2	39	84.4	32	4	25
Not employed/ not working	70.0	240	91.7	169	88.6	114	10.7	140

Source: Bootcamps MI 2021

Over **two-thirds of the learners surveyed (71%) had not completed their course** at the time of survey. As such, evaluation of learner outcomes based on these data was somewhat constrained. Just under one in five (19%) had completed their course, while a little under one in ten (9%) had stopped attending their training before the end of their course. Less than half a per cent indicated their training had not yet begun. Learners in WMCA were more likely to have completed their course (49%). Learners in HotSW were the most likely to say they had stopped attending before the end of their course (18%).

Figure 12: Whether completed course

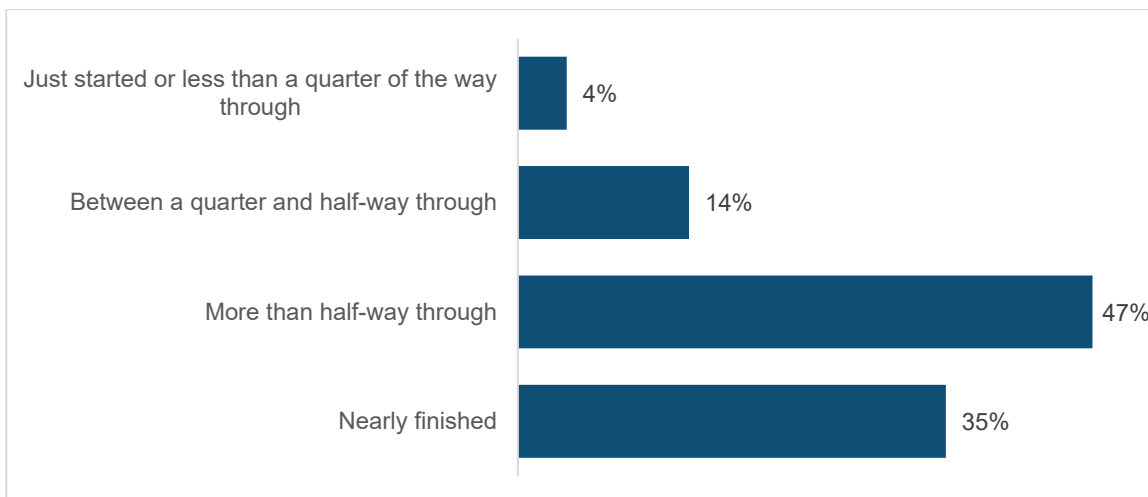


Source: Learner survey. Base: All respondents (354)

Learners who had not yet completed their course were asked to give an estimation of how far through their course they were at the time of interview. The majority indicated they were at least half-way through, including just under half (47%) who said they were more than half way through and 35% who were nearly finished. Only 4% had just started or were less than a quarter of the way through.

Learners in HotSW were more likely to be less than half way through their course, with 11% having just started or being less than a quarter of the way through, and a further 30% being between a quarter and half-way through their course.

Figure 13: Progress on course



Source: Learner survey. Base: Where still on course (251)

Providers generally reported being content with the levels of attendance and completion rates, and said there had been relatively few withdrawals in the context; a view that was necessarily affected by the pandemic and its effects on individuals and the economy. As

such, providers noted that some learners who had dropped out were those who had been on furlough when they signed up to the course and who had been called back to their jobs. Moreover, schools closing at short notice when lockdown 3 was introduced meant that parents had responsibilities for childcare and home-schooling they had not anticipated when they signed up for training. However, despite this being more likely to affect mothers than fathers according to other commentary on the impacts of the pandemic, this was not borne out in survey findings where rates of non-completion were very similar by gender. Other reasons for non-completion included ill-health, people starting new jobs having been unemployed and so no longer being able to commit the time to the course, and current work or jobs becoming busier.

Some providers were able to offer flexibility in when the courses were delivered or accessed online so to support completion around working hours, which had enabled some learners to continue on their courses. The tutor led-approach rather than relying on self-guided online learning was also seen by providers to be a key to reducing withdrawals as this approach mirrored most closely the classroom based training that many learners were used to. A lack of flexibility resulted in some learners dropping out of their respective courses. Women, particularly in the middle-aged demographic were reported to have struggled according to those taking part in interviews due to external caring responsibilities and therefore were not able to keep up with the reading materials.

6.4 Challenges experienced by learners

In the qualitative interviews, learners discussed factors that had led to difficulties in the training experience. It was relative common for learners to discuss missing the sociability and face-to-face interaction offered from in-person education. However, some learners reported positive experiences when offered the opportunity to interact with other learners on their courses through apps and social media platforms such as Slack, WhatsApps groups or LinkedIn. When these services were not offered, learners referenced a lack of interaction or opportunity for group discussion as a downside to their respective courses.

Online classes by their nature meant that a lot of learners missed out on practical experiences and on additional resources and facilities could be provided as part of classroom based training. Perhaps related to this, there was a strong preference for trainers who had practical experiences, and who could talk learners through the practical application of the new skills they were acquiring, rather than those who focused more on general theory. Learners really appreciated hearing from trainers who were experienced in the industry and employers. Trainers and employers helped make the skills real and practical which was particularly appreciated.

It was good to meet people that've actually done [the job] as opposed to talking about the theory of writing a script, we've got the script writer there's who's scripted a movie that's on TV now.

Learner

I think the content worked well, the teacher was really good, the group work was really good, you learnt a lot practically working with others even if it was remote [...] obviously I think it would be a lot better if it was in person

Learner

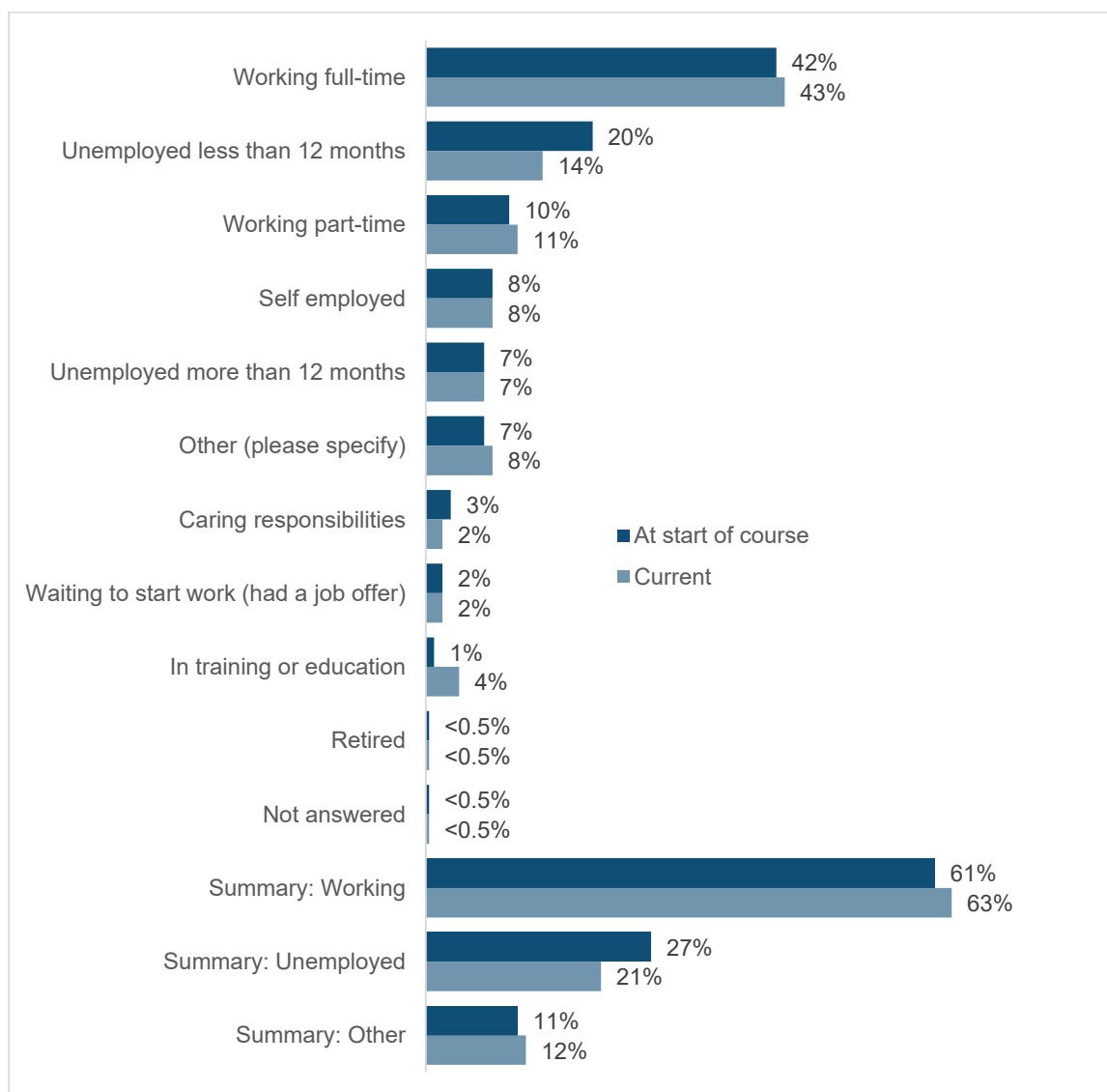
There could be frustrations in respect of the resources used in some courses where learners did not understand they would need to purchase licenses and free trials were of too short duration to support their full course experience.

6.5 Changes in work status since getting involved in training

There had been very little change in working status for survey respondents. At the point of the fieldwork, 63% were employed, including 43% who were employed full-time, and 21% were unemployed. However, as the majority of learners had not yet completed their course it was possible that the working status of some learners could have changed in the period following the survey and course completion.

The ethnicity split replicated that seen for current working status, with white learners more likely to be employed (66%) and BAME learners more likely to be unemployed (33%), although notably the proportion for BAME learners who were unemployed was lower than seen immediately prior to course start (43%).

Figure 14: Change in working status



Source: Learner survey. Base: All respondents (354)

Table 6.8 summarises working status immediately prior to learners beginning their course and at the point of being surveyed split by pilot area. The area with the most notable change in working status in WYCA. Half of learners were working immediately prior to beginning their course, and this rose to 60% at the time of fieldwork. Conversely, while 40% in WYCA were unemployed immediately prior to beginning their course, this had fallen to 23% at the time of the survey. Changes in other areas were less notable, although a small reduction in the proportion of learners that were unemployed could be seen across the board.

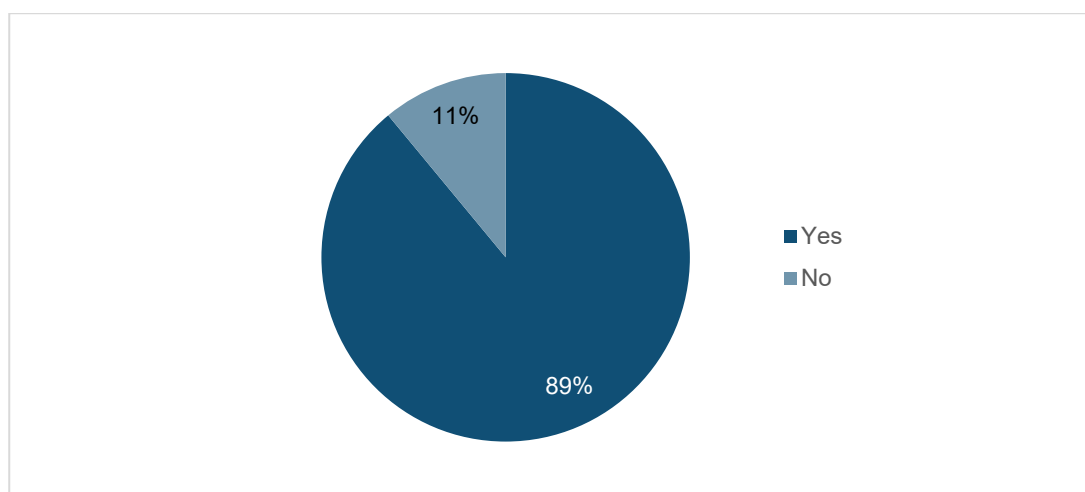
Table 6.8: Change in working status by pilot area

	D2N2	GM	HotSW	LCR	WMCA	Leeds
	%	%	%	%	%	%
Working – pre	77	37	67	59	49	50
Working – current	77	41	72	51	46	60
Unemployed – pre	11	44	24	30	32	40
Unemployed - current	8	41	17	27	27	23
Other – pre	9	17	8	11	16	10
Other - current	11	10	8	16	22	15

Source: Learner survey. Base: All respondents (354), HotSW (87), WYCA (47), D2N2 (96), GMCA (41), LCR (45), WMCA (37)

Where learners indicated they were employed immediately prior to beginning their course and at the time of being surveyed, they were asked to confirm if their current job was the same as the one they had when they started the course. The vast majority (89%) indicated that this was the case. Those who were still on their course were more likely to say they had the same job as when they started (92%), although of those who had completed their course the proportion in the same job was still high (76%).

Figure 15: Whether in same job



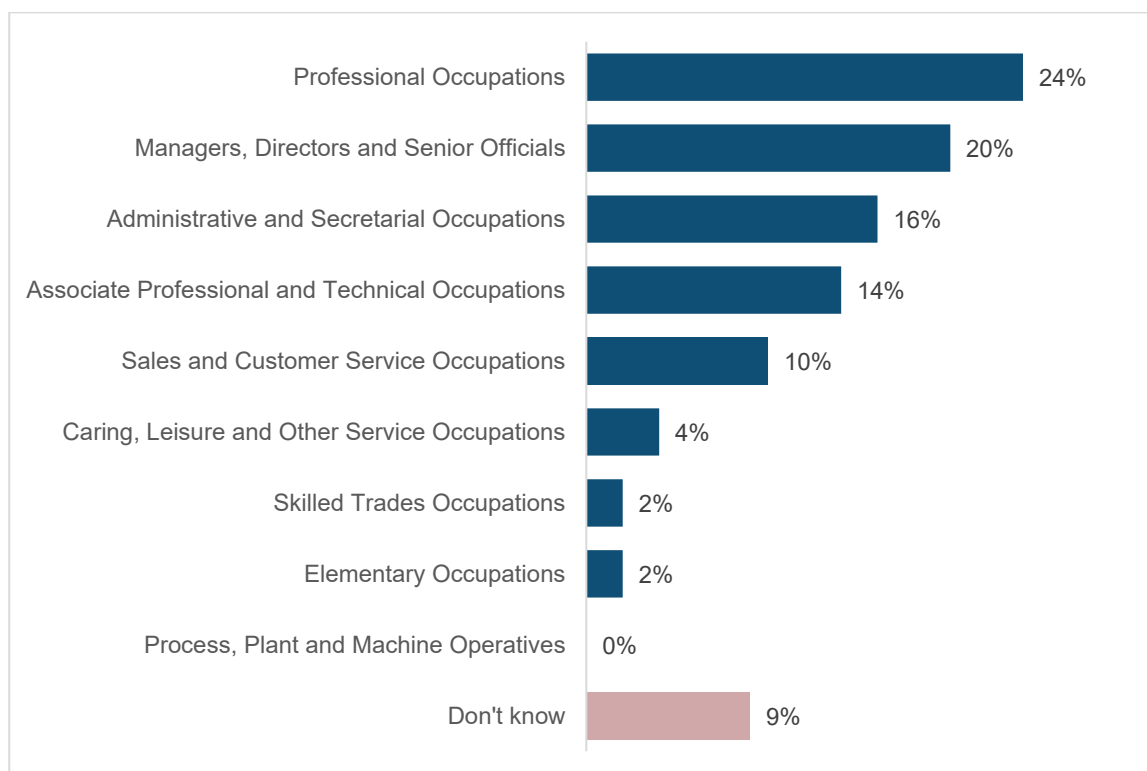
Source: Learner survey. Base: All working before and at time of interview (195)

Learners who were working or waiting to start work were asked to classify their occupation into the Standard Occupational Classification major groups. The most commonly selected were professional occupations (24%) and managers, directors and senior officials (20%), followed by administrative and secretarial occupations (16%) and

associate professional and technical occupations (14%). It is important to note that respondents entered these classifications themselves and so not all roles may have been correctly classified by the learners.

Learners in D2N2 were more likely to classify themselves as manager, directors and senior officials (29%).

Figure 16: Current occupational classification



Source: Learner survey. Qcursoc. Which of these best describes your current occupation? Base: Where currently working or waiting to start work (219)

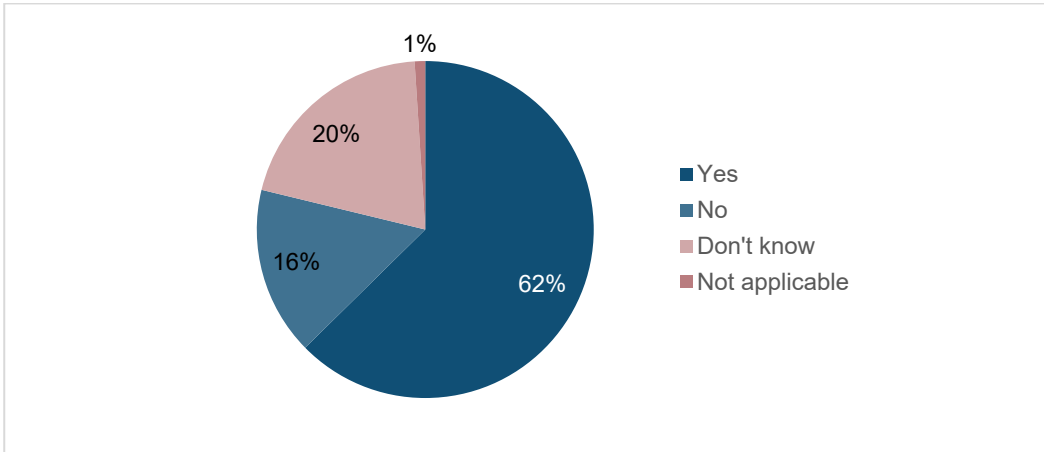
6.6 Learners' self-reported outcomes

The survey also captured employability outcomes amongst learners including achievement of accreditations and whether they had been involved in job interviews. It also explored entry into new jobs.

Certificates and accreditations

Nearly two-thirds (62%) of the small number of respondents who had completed their course at the time of the survey (n=69) said they obtained a certificate or qualification from the training. Those who were working immediately prior to commencing the training were more likely to have gained a qualification or certificate (74%) although there was no indication in the other data why this should be.

Figure 17: Whether gained a qualification or certificate

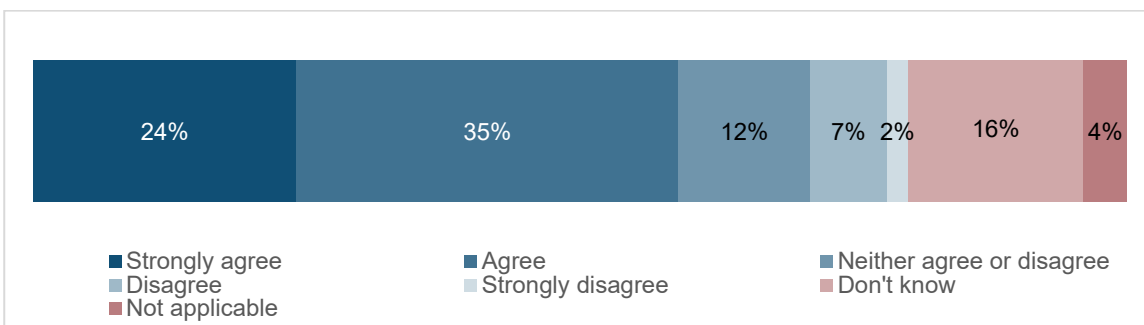


Source: Learner survey. Base: Where completed training (69)

Additionally, just under three-in-five (59%) of all respondents agreed that their bootcamps training would give or had given them a certificate, portfolio or accreditation that is valued by employers. This consisted of 24% who strongly agreed and 35% who agreed. Fewer than one-in-ten (9%) disagreed. One-in-six (16%) however did not know if completing and passing the training would give them a certificate, portfolio or accreditation that is valued by employers, and a further 4% thought this question was not applicable to them.

Learners who had completed their course were more likely to agree with this statement (74%), suggesting that the value of qualifications and accreditations obtained may not be as evident while the training is still ongoing. Learners in D2N2 were more likely to agree with this statement (69%), while those in HotSW were less likely to agree (47%), and more likely to disagree (15%).

Figure 18: Perceptions of training credibility



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

It was common for learners in the qualitative interviews to seem somewhat indifferent to the opportunity to earn a recognised accreditation. Instead, they cited the value of applied experience and demonstrable skills to themselves and employers. Learners

appeared to have a good understanding that their intensive courses were quite different from educational qualification courses and therefore did not have particular expectations in respect of gaining qualifications.

Not super important because it seems like employers mostly look for skills and experience and not so much specific qualifications. Just having completed a bootcamp is enough to get some interviews for junior roles.

Learner

Nonetheless, learners were satisfied when a formal accreditation was offered, particularly those undertaking advanced IT courses. For the advanced training courses, the possibility of leaving with a world-recognised accreditation was a primary motivation for learners.

Some learners discussed creating a portfolio as a substitute to a formal qualification and the tangible examples this meant that they had to offer employers of their skills. These portfolios were valuable to learners beyond the course, and some hoped to continue producing work for their portfolios to build up a recorded work history in the area.

That's my qualification as far as I'm concerned.

Learner

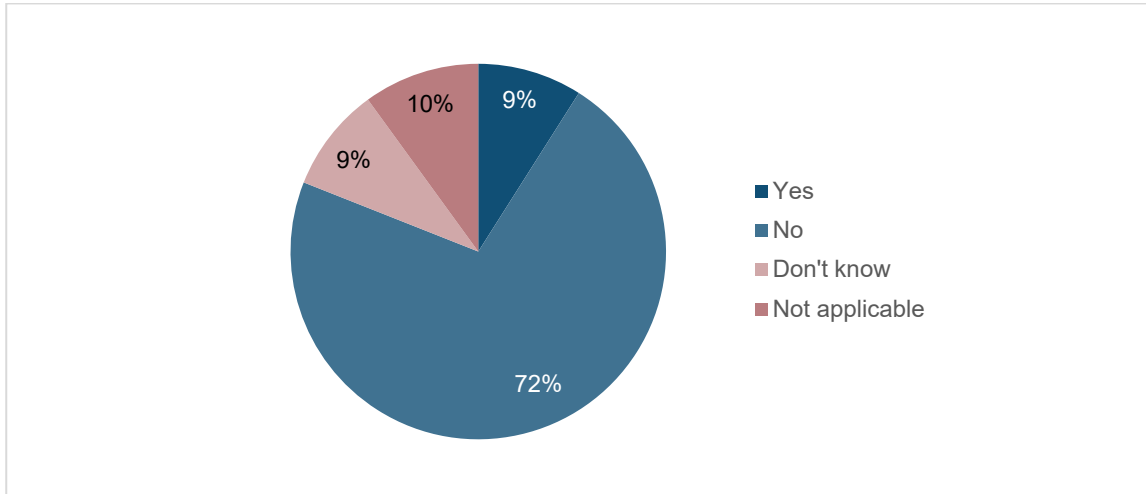
Next for me from this course I aim to do a few more UX portfolio projects and then really take the step to change my career and apply for a UX job or continue freelancing.

Learner

Offer of job interviews

Survey respondents who had completed their course – which was a small number given the timing of the survey and the response rate relative to the overall intake to bootcamps - were asked if they were offered an interview with an employer at the end of the training and 9% said they had, while 81% said they had not. The remaining 10% did not know. Of the 6 learners who said they were offered an interview, 3 were offered a job from that interview; 1 was not offered a job and the remaining 2 were waiting to hear the outcome of their interview. Information from providers indicated that they did not book interviews and recruitment events until the end of training so this may have affected this result, furthermore some providers did not use the guaranteed interview model.

Figure 19: Whether offered an interview with an employer

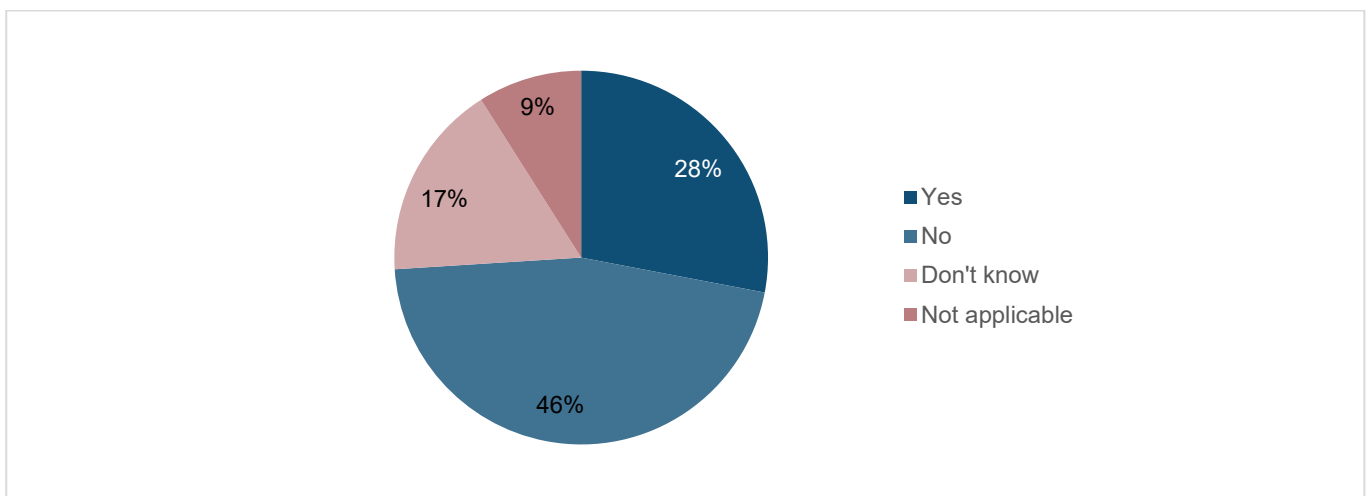


Source: Learner survey. Base: Where completed training (69)

Learners who had yet to complete their course at the time of survey were asked if they had been told there would be a job interview with an employer at the end of the training. A little over a quarter (28%) said that they had been told this, while a little under a half (46%) said they had not. A relatively high proportion did not know (17%) or thought this was not applicable to them (9%).

Learners who were working immediately prior to the commencement of their training were more likely to say the offer of a job interview was not applicable to them (13%) – possible due to training being for their existing employer or related to their self-employment. Similarly, those aged 51-60 were also more likely to say a job interview was not applicable to them (23%); as were learners in D2N2 (18%).

Figure 20: Whether expecting an interview with an employer



Source: Learner survey. Base: Where still training (251)

At the time of the qualitative interviews, learners were typically reaching the end of training, but few had completed it. As a result, they were often unsure about the prospect of interviews or ongoing job search support. Some were optimistic about ongoing support from their providers. However, there was a very mixed picture on whether job interviews happened within the timeframe of courses, and some learners felt that more than one opportunity for each learner was necessary.

Nonetheless, learners in the interviews reported that providers sent out their CVs to recruiters, or put learners in touch with recruiters, which had led to job interviews in some cases. Additionally, some learners had been offered support to gain an apprenticeship which they welcomed.

Learners who aimed to use their skills for self-employment were not interested in formal interviews. For some bootcamps which were advertised as suitable for start-up businesses, learners said job interviews would have been inappropriate. Instead, the potential freelance opportunities for learners through employer engagement during the training, were more valuable.

Other job searching support varied according to the learners who took part in interviews. Where trainers offered learners guidance, references and curated lists of vacancies this was very much appreciated. Careers advice in training sessions throughout the bootcamp and workshops focused on CV building or developing a LinkedIn network, could be very helpful for job seekers. These sessions helped to clarify for learners what type of jobs or extra training they should apply for. Some who were seeking to set themselves up as self-employed appreciated other forms of support where relevant such as information on how to get funding to support business start-up; where this was not delivered it was reported as a gap in the training that should be plugged. Employability support therefore needed to be tailored from the learners' perspectives so that those seeking to be employed would receive something different from those setting up their own businesses.

Some learners reported how the content of their training had prepared for employment, including one that noted recruiters in their industry had hired from bootcamps before. For other learners, the realisation emerged that they would need further training to secure the job they were aiming for. Nonetheless, they recognised the value of the bootcamp as a starting point.

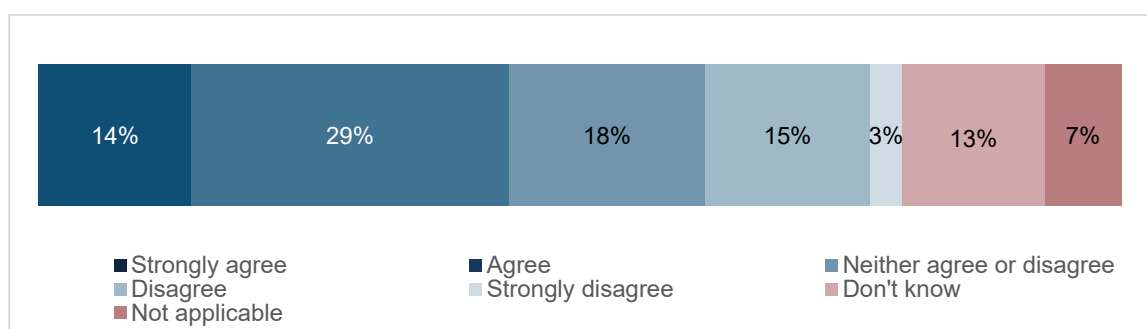
Is training sufficient to find work

A little over two-in-five (44%) survey respondents agreed that their training and provision would be sufficient for them to apply for a job in their industry. This included 14% who strongly agreed and just under one-in-five (18%) disagreed with this statement. A fifth (20%) said either that they did not know or that this statement was not applicable to them, perhaps reflecting the relatively large proportion who had not changed roles and may not be looking to change role in the near future.

Those who did not complete their course were less likely to agree with this statement (12%) and were more likely to either strongly disagree (18%) or say it was not applicable to them (30%).

Learners aged 21-24 were more likely to agree with the statement (59%), as were those whose highest educational attainment is level 3 (55%) and those with a disability (57%). Lastly, learners in D2N2 were more likely to agree the training and provision would be sufficient for them to apply for a job in their industry, while those in HotSW were more likely to disagree (28%).

Figure 21: Perceptions of how qualified they are/will be to apply for a job



Source: Learner survey. Base: Where completed training, still training, or dropped out (353)

Views and satisfaction with outcomes

Learners taking part in the qualitative research were generally positive about their outcomes at the end of their courses. While many had not yet finished their training at the time of interview, they believed the bootcamps would add to their repertoire of skills and allow for future success. Where learners favoured self-employment or further education over getting a job, they reported the learning as improving the opportunities of their self-employment or opening the door for further educational pathways.

Those undertaking bootcamps programs to upskill in their existing role reported generally feeling positive about their positions, including improved competency for their existing role, or a better understanding of their co-workers' roles who were perhaps more involved in technology.

I've been doing things differently. I understand now how to use things like Excel and databases to make things easier and quicker for me.

Learner

Interest in apprenticeships

Attitudes towards possibly committing to a shortened apprenticeship if the opportunity arose were a little more varied. Those less interested in this pathway generally reported the possibility of low earnings and having to undergo further education and training as

reasons for preferring a different pathway. Conversely, others cited the ability to learn practical skills and be more 'hands-on', if the duration of the apprenticeship could be shortened in recognition of their training.

Having gone through University you get quite a few transferable skills but on the other hand you get very few practical skills, and no matter what role you want you are still very much learning on the job.

Learner

Yes, I think it would [take up a shortened apprenticeship]. The reason I say that is because I've already done an A-level equivalent, so I've already got the Level 3, but I have to do a Level 3 apprenticeship to move onto the Level 4 and then move onto a degree. Shortening the length would be very helpful.

Learner

Furthermore, those who felt that an apprenticeship would not be beneficial for them personally often saw it as a good idea for others.

It would be absolutely perfect for apprentices in any career in any field to be able to meet people who are actually doing the job that they are doing and having the opportunity to learn all aspects of the job and how it is.

Learner

The example below draws on the experience of learners in one of the delivery areas.

Case study: GMCA and Lancashire LEP

Although it was a little early to fully assess progression and job outcomes, with learners yet to complete their courses, several we spoke to in the Greater Manchester and Lancashire area felt that they had gained new confidence, valuable skills and, in some cases, accreditations. Some of the courses provided skills that enabled learners to follow self-employment or freelancing routes, with one course involving a pitch to several potential customers (employers). Learners were particularly positive about courses which led to recognised qualifications, giving them increased confidence about potential job outcomes.

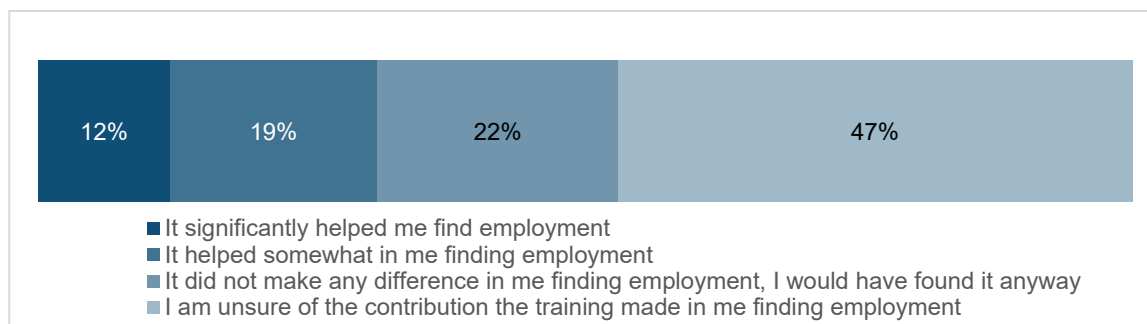
Whether course helped learners to find work

Three-in-ten learners (30%) who were currently working or waiting to start work said their course had contributed to them finding employment. This included 12% who said it had significantly helped and 19% who said it had helped somewhat. A little under a quarter (22%) said it did not make any difference in them finding employment, while nearly half (47%) said they were unsure of the contribution.

Where learners had completed their course, a greater proportion said it had contributed to finding employment (25% significantly and 18% somewhat) suggesting that completing the course gives the full sightline to the benefits, although a similar proportion said it has not made any difference (25%). Notably, BAME learners were more likely to say their

course has contributed to them finding employment (53%). This group was more likely to be unemployed on joining training which suggests a substantial difference made by the training.

Figure 22: Contribution of course to finding employment

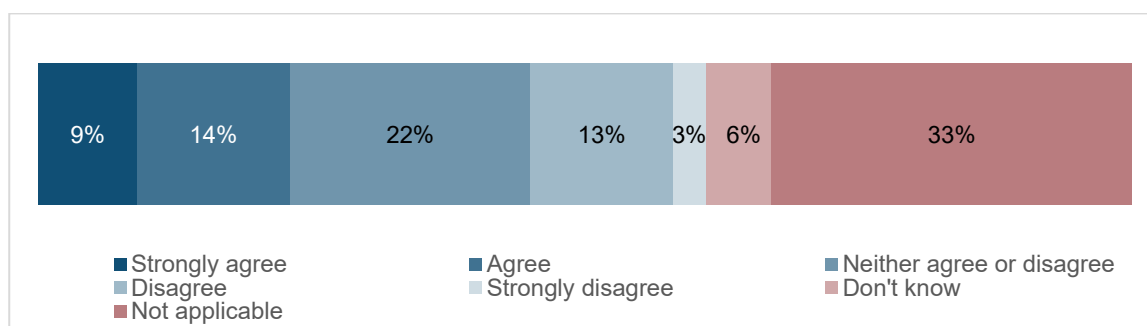


Source: Learner survey. Base: Where currently working or waiting to start work (227)

Just under a quarter (23%) of learners who were currently working or waiting to start work agreed that the training and support helped them to find a new job. A third (33%) said this statement was not applicable to them and a further 6% said they did not know. 15% disagreed with this statement. Unsurprisingly, none of the learners who did not complete their course agreed with this statement.

BAME learners were more likely to agree with this statement (43%, including 28% who strongly agree).

Figure 23: Perceptions of whether the training helped them find a job



Source: Learner survey. Base: Where currently working or waiting to start work (227)

6.7 Post-training recruitment of bootcamp learners

As noted earlier, some employers were involved in the bootcamps primarily as a source of new recruits. While this may have been lessened due to the pandemic limiting recruitment, there was genuine interest and intent among some employers interviewed to recruit bootcamp learners. While some employers were no longer able to recruit at the end of the bootcamps due to the pandemic shrinking their organisations and preventing

recruitment at that time, other employers remained hopeful of doing so. For example, a digital agency employer had short-listed four bootcamp learners for interview and was confident they would be able to appoint from these. They felt there was no other provider in their area that trained learners in the practical skills and commercial awareness they required in junior staff to have.

6.8 Value of bootcamps for employers

There were a few key aspects of the bootcamps that served as attractors to employers. In IT and digital, the technology can develop at a pace faster than traditional training providers and colleges are able to keep up with. For some employers, bootcamps could respond better and were considered to be at the cutting edge of training.

[Provider] is great because they're the only apprentice training provider company we've ever come across that have a sufficient level of ability for apprentices in terms of coding. And the Bootcamps provide that rigour and that up-to-date, cutting edge development work for what's needed in a commercial arena.

Employer

Another attraction was the reputation of the training providers, both in terms of employers wanting to recruit learners from the bootcamps due to the training provider's professional reputation, as well as encouraging employers to work with the training provider in delivering the bootcamps.

Leeds, outside of London, is the place to go for what we do, digital, so for us having a company that has got a big presence here is incredibly handy

Employer

For some employers the ability to get to know learners, which might open-up recruitment opportunities, was limited due to the online delivery instead of planned face-to-face delivery although other evaluation data suggested providers had found strategies to provide these opportunities. Other employers felt that networking opportunities with other organisations involved in the bootcamps were gained and would be utilised in the future.

It's opened quite a few doors for us as a charity, which I'm hoping to fully utilise once we get some of our civil liberties back!

Employer

As discussed, some bootcamps provided industry recognised accreditations that were valued by employers. For example, an employer in the qualitative research had engineering staff on an accredited cyber security bootcamp to help them meet the changing needs of their clients. This accreditation was valued by the employer who was therefore accommodating of the high number of learner hours employees needed to dedicate to the training in order to complete it.

6.9 Employer views on proposed Wave 2 payment model

Employers were asked for their views on how an introduction of a payment model (of around 30% of course costs) for employers who put staff onto bootcamp training would affect delivery in the future. Generally, employers involved with the bootcamps in some way reported being happy to contribute towards cost of training in the future, even if they may not have been able to for the most recent bootcamps due to limited finances during the pandemic. The self-employed/sole traders who were interviewed were more hesitant, with one explaining it would depend on weighing up the benefit of future training versus cost, and the other unable to pay for training. In respect of implementing this policy, this suggests that different approaches will be needed for large and small employers, similar to the different policies for employer contributions to apprenticeships.

In responding on the contributing to costs in the future, employers considered a range of factors including training people on the job, and the costs of graduate schemes and the lead-in time to seeing full productivity in individuals. Digital employers particularly are regularly recruiting, and this is a large cost to businesses. Hence for large employers, particularly, contributing to the costs of provision which supplied people for entry level roles who they could grow onwards into more specialised roles made a lot of sense.

7 Conclusions

The bootcamps have been well received by all stakeholders engaged in the evaluation. This includes by a large majority of learners, demonstrated by the survey findings, and by employers who took part in qualitative interviews. Regional leads see a clear role for this form of training linked to local industrial and local inclusive growth strategies. Rising needs for digital skills particularly caused by the trend for automation and more recently by the changes wrought by the pandemic mean that all stakeholders see the importance improving the supply of these skills as well as ensuring a route to satisfying and sustainable careers for individuals. Regional leads and providers mobilised bootcamps rapidly and saw high demand for their courses, which were tailored to industry needs and, in some cases, bespoke designed for some particular employers or occupations.

Bearing in mind the limitations of the data available, the management information data (MI) suggested high rates of completion (84%) alongside learners passing the planned assessments and assignments (81%). It was notable within the data available that women saw high rates of success in courses, and despite the impacts of the pandemic on carers (including those looking after dependent children) this did not appear to have a substantial effect on outcomes.

There is overwhelming support for bootcamps to continue to be offered amongst those involved in the evaluation.

7.1 Successes and challenges

A key success and one of the main challenges was the speed at which the bootcamps needed to be implemented. While with more time, increased co-design and employer involvement might have evolved. Nonetheless, the courses were seen as pertinent and delivering the skills employers need. Increasing engagement with employers and working with them to build their knowledge of training content will underpin further success in future delivery.

At a practical level, the digital bootcamps for the large part, successfully transferred to remote delivery in response to the COVID-19 containment restrictions. The change of mode brought further changes – many of which were positive, in respect increased flexibility in the timing of classes and expectations for independent study, and in the intensity of delivery which could shorten the duration of courses to enable learners to more quickly enter the labour market. Apps that supported group interaction and messaging helped to replace the course community that would be established in classroom-based learning and supported ongoing connections between learners as well as with providers beyond course completion. Some learners encountered issues with digital inclusion issues but for the large part these were overcome by providers and regional leads.

It was less possible for technical bootcamps to move into the remote mode; consequently, these courses had to be delayed until conditions allowed for delivery with social distancing. These courses were typically designed for and delivered with specific employers and this close collaboration was supportive in enabling the shift in timetable and reduction in the numbers who could be accommodated in courses necessitated by COVID restrictions.

Beyond this, the flexibility of the provision was seen as a key success. The provision was not tied to particular qualifications or training standards which meant it could be dynamic and respond to employers' needs. Some employers noted that skills needs in the digital sector were subject to rapid development and change. The bootcamps could respond to this, whereas traditional qualifications with lengthy approvals processes would always lag behind, in some cases by years. Employers appreciated the preparation of learners for entry level roles by trainers who were often industry experts. Providers highlighted that while learners might enter entry level roles, their skills would lead to rapid progression and better pay.

The actual concept is brilliant. It's something that can be used in the future as a quick response programme.

Provider

While due to the timeline for implementation it had been challenging to engage employers systematically in design, many bootcamps nevertheless engaged them in aspects of delivery. This could involve talks about the industry, as well as setting project briefs and being part of assessment of these. Some providers invited employers to attend 'demo' days where learners could show the portfolios and projects they had developed, and this could prove an effective route to recruitment. The quality of the skills learners gained meant that the bootcamp could become the preferred recruitment source for entry level roles. Some providers were delivering bespoke bootcamps for some employers and again this meant that employers were assured they would have access to the skills they needed.

Learners gained much in confidence, industry knowledge and skills, as well as in respect of employability. Alongside this the certificates, industry accreditations and/or portfolios were seen as valuable evidence of their skills and capabilities. Learners believed their courses were of good quality, measuring this in terms of the quality of teaching, of training staff, and the support offered. There was some variability in whether they were aware a job interview would be offered, although this did not change overall views of satisfaction with the training.

There are some notable messages in respect of the difference made to BAME learners. While the survey showed they were more likely to be unemployed on joining bootcamps, it also indicated that they saw better rates of outcome and employability. This group were also amongst the most likely to say they would recommend their training to other people.

The pandemic did have an effect in respect of delivery models but also on withdrawals from training. People on furlough could be required to return to their jobs, and parents found themselves with childcare and home-schooling responsibilities they had not anticipated. This therefore complicates reaching firm judgements on the suitability of this model of learning, although levels of satisfaction suggest it is well matched to learners and employers preferences and worth testing in a context which is more supportive of people being able to focus on their career and retraining goals.

7.2 Lessons for the future

The Wave 1 findings indicate that the critical success factors (CSFs) of the bootcamp coalesce around their flexibility (responsiveness in learning mode and training curriculum, and enabling people to train alongside work), employer engagement and providers and trainers recognised as industry experts. A focus on these will be important to future bootcamps.

Some key lessons from Wave 1 findings which indicate how these CSFs can be extended include:

- Flexibility of start dates to respond better to employer needs; as providers work more closely with employers on delivery, increased flexibility on delivery dates will ensure they can optimise training for recruitment rounds or demand peaks
- Flexibility in duration and intensity of training; the move into remote mode led to increased intensity and shorter duration of training in some courses, and providers reported this could increase retention and completion
- Flexibility in what counts as a positive outcome; a job interview or salary increase is not necessarily a suitable outcome for all learners. Those training to upskill for an existing role would not count as a success by these measures; similarly, those in self-employment would not be seeking employment. Finally, in making career changes learners may move to lower salaried jobs, but stakeholders with experience in digital industry indicated, that subject to good performance, they would see rapid increases in salary within the industry.
- The data suggested that the bootcamps could readily be scaled up, but it was important to their impact that they remain responsive to industry and employers' needs and do not standardise – this flexibility in design is crucial.
- Employer involvement is key to learner satisfaction and delivered the live insight into the industry and helped learners build networks. It was especially effective where employers were involved in co-designing curricula which built their knowledge of the training and buy-in as well as learners' confidence in the relevance of training.
- To boost employer engagement, gaining support of anchor organisations within local areas and particularly the public sector would provide role models for taking on Bootcamp graduates.

- Working with training providers specialised in digital skills who have expert trainers has increased the credibility of the bootcamps with learners and employers. Ensuring this facet of quality – which concerns detailed industry insight alongside curricula that meet employers’ needs rather than national training standards - is maintained will be important in the future success.
- Systematically incorporating professional careers guidance and services, including NCS both as a referral source and to support retention. This would help individuals better understand their career options and make the optimal course choices. Within a referral capacity, careers advisers could refer individuals who are well-motivated and knowledgeable about the careers paths they want to take and how a skills bootcamp can support this. University careers services could also be a rich source of referrals of the unemployed and underemployed graduates who are represented in current cohorts.
- To ensure that the management information datasets are of a suitable quality to monitor performance and for evaluation purposes, amendments need to be made to the data collection sheets given to the providers. This would include ‘locking’ cells so that only certain responses or categories of data can be input; allocating unique identification numbers for all applicants that stay with them from the application stage through to participation; and ensure completeness of data in particular in categories that can be used to match to other datasets for longitudinal outcomes tracking. Clear instructions should be given for how these will be used and the importance of clear, accurate, and timely information
- In order for researchers to be confident in that participants have given permission to be contacted for the voluntary aspects of the evaluations going forward, providers’ contracts must set out that they will record the consent status for learners and employers so that they can be contacted for evaluation purposes.

On the national policy agenda, improving alignment between skills and welfare systems will ensure that people on unemployment benefits can access the courses and gain high quality skills, and receive their benefits. Flexibility on course duration and intensity, in addition to employer engagement, may make this more possible. As the policy moves to a co-funding model with employers, building in funding differentials for larger and small employers will be important to retaining employer support and involvement.

7.3 Next steps for the programme

The Department is continuing the bootcamps for a further period. This includes extending some of the Wave 1 bootcamps reported here, as well as expanding the offer to all regions of England through new commissioning. Some local areas intend to add in funding to extend the scale of the offer as well. The approach to extension will allow new entrants to the bootcamps market as well as existing providers to continue to grow and develop their offer and further lessons may emerge as a result.

The Department is aiming to test the impact of bootcamps on employment as part of the future implementations through a randomised controlled trial. Alongside further primary data collection, this should lead to new learning about the value of bootcamps and their position within adult learning funding regime and overall training provision in England. The information gathered for the Wave 1 process evaluation indicates firm commitment to the model from the range of stakeholders, and bootcamps are seen as suited to adults who are seeking to upskill or retrain.



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