Harnessing Technology Work-based Learning Sector Survey 2009-10

Contents

1 Introduction

1.1 Context

The Harnessing Technology: Next Generation Learning Strategy for 2008-14 was produced by Becta in July 2008. The strategy aims to develop an e-confident education and skills system where:

- learners access learning resources and support at any time and from anywhere;
- technology supported learning helps build higher order skills;
- technology helps deliver more personalised services to learners;
- all learners gain value including disadvantaged and vulnerable groups.

The strategy includes a performance framework to measure the effectiveness of the strategy. This incorporates a range of system wide outcomes presented under five themes.

Table 1.1: Harnessing Technology: Next Generation Learning, System Outcomes

Theme	Outcome
• Improved personalised learning experiences	• learners able to exercise choice among flexible learning options; • tailored and responsive assessment which addresses learners' needs; • engaging learning experiences which support deep and higher order learning.
• Confident system leadership and innovation	• education leaders understand how technology supports their priorities; • partners buy into strategic vision and actively support implementation; • innovation encouraged, good practice shared and adopted.
• Technology confident effective providers	• providers achieve well on e-maturity criteria; • provider capability in place to support home and extended learning; • technology based tools and resources support effective teaching.

Theme	Outcome
• Engaged and empowered learners	• learner entitlement is met with all vulnerable groups supported; • technology adds value to family and informal learning; • learners use technology confidently and safely to support their learning.
• Enabling infrastructure and processes	• systems for learner services fully integrated; • high quality, tailored resources available to all learners; • infrastructure designed for efficiency and sustainability.

1.2 Research objectives

This research aims to help monitor the implementation of Harnessing Technology Strategy and its continued refinement. Specifically it aims to:

- gather information on the use made of technology by Work-based learning (WBL) providers and staff;
- identify and analyse issues affecting the use of technology by WBL providers;
- identify national trends and issues for WBL providers in their use of technology;
- relate the findings to priorities identified in the revised Harnessing Technology Strategy and the FE and Skills Implementation Plan.

The research has been undertaken alongside other research in the further education (FE), adult and community learning (ACL) and offender learning (OLASS) sectors with the intention of developing a methodology for common measurement across the whole FE and Skills sector. This has included some use of common questions. Reports for these sectors are available separately.

1.3 Approach and methodology

This research builds on work undertaken annually since 2005 which has investigated the use of technology by WBL providers and work undertaken since 2007 investigating the use of technology by tutors, assessors and verifiers. The surveys were conducted during November and December 2009. This year's research involved five strands:

- consultation with sector stakeholders on the 2008-09 results and methodology. This helped refine the research tools;

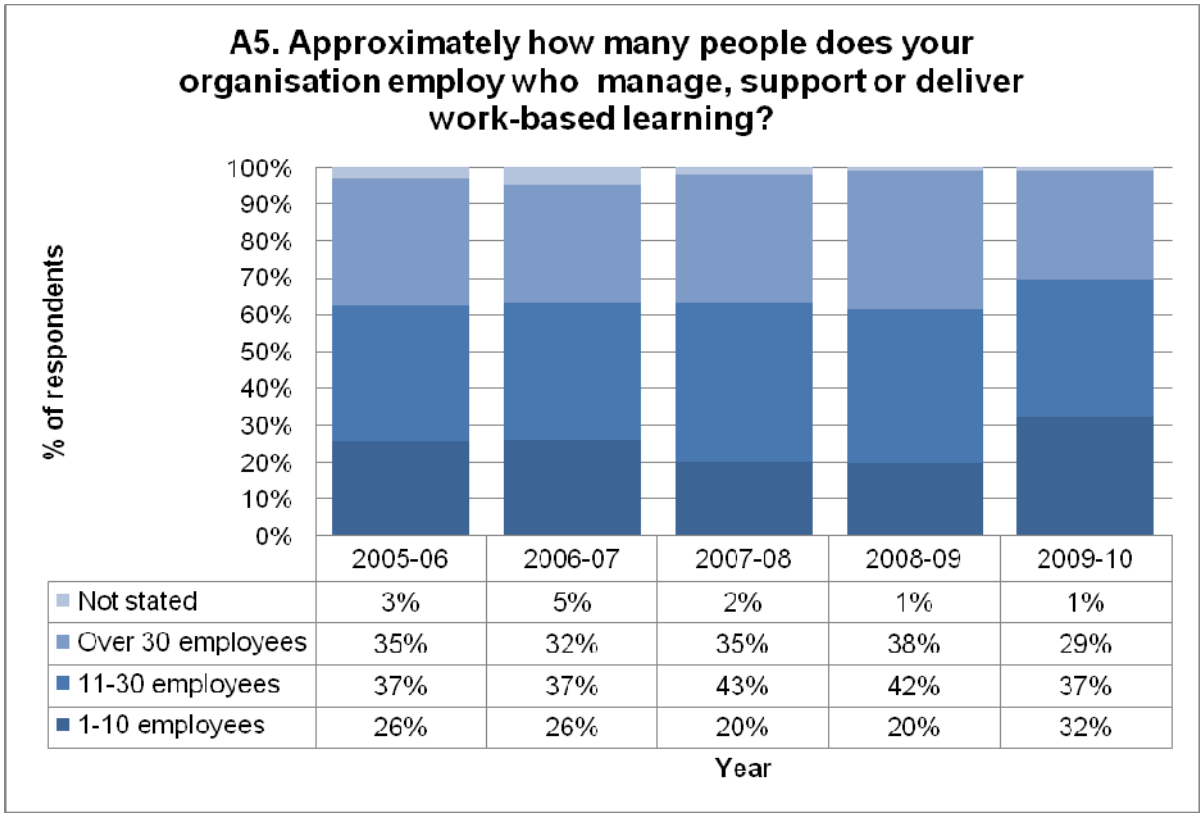
- a postal survey of senior managers produced 215 responses from the 1,150 LSC funded providers, a response rate of 19%;
- a combination of a postal and online surveys, sent to WBL tutors, assessors and verifiers (practitioners) in 754 WBL providers. We received 881 responses (266 by post and 615 online) from over 223 providers. Some respondents did not identify their employer.
- As practitioners were invited to participate through intermediaries and through both paper and on-line routes, we are unable to provide a response rate for practitioners, however we received a response from practitioners working in 30% of providers agreeing to take part and from 19% of all LSC funded WBL providers;
- visits to a selection of 14 WBL providers responding to the provider survey. These visits involved qualitative interviews with a senior manger and a selection of practitioners. Providers visited were at different levels of implementation of technology and covered all regions of England;
- a group discussion with senior managers of 12 providers represented on the Association of Learning Provider's (ALP) Train to Gain Special Interest Group.

1.4 Characteristics of respondents

The WBL provider survey resulted in responses from WBL providers of all types and sizes and covering a range of WBL provision. There were some differences in respondents compared to previous years. This year:

- less than half of providers (46%) reported Apprenticeships as the main type of work-based learning that they deliver, compared to nearly two thirds (65%) last year. In contrast more reported that they mainly delivered Train to Gain (25% this year compared to 10%) and NVQs (22% this year compared to 6%);

- slightly fewer responses were received from FE colleges (13% compared to 22% last year) and slightly more responses were received from national providers (17% compared to 9%);



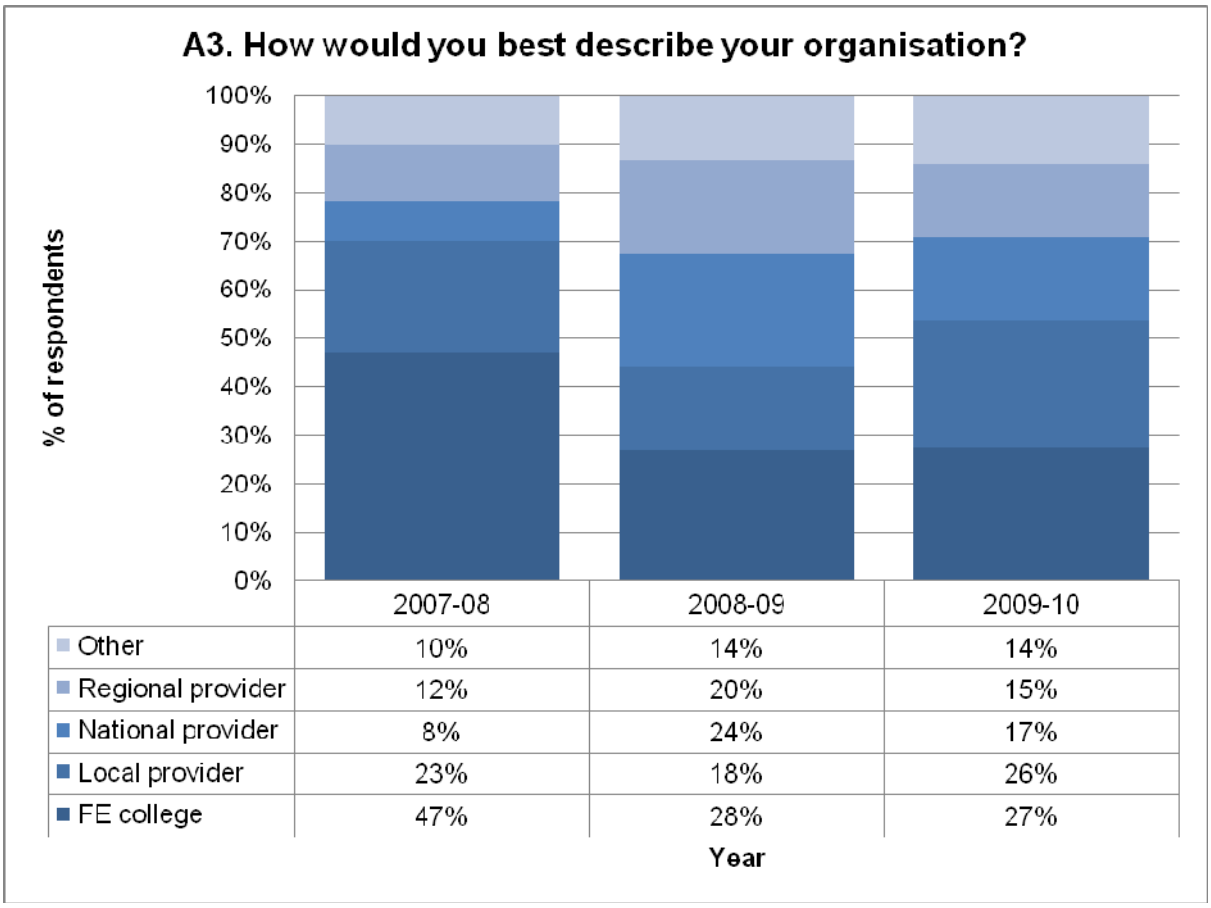
	2005-06	2006-07	2007-08	2008-09	2009-10
Not stated	3%	5%	2%	1%	1%
Over 30 employees	35%	32%	35%	38%	29%
11-30 employees	37%	37%	43%	42%	37%
1-10 employees	26%	26%	20%	20%	32%

- more responses were received from smaller providers (employing 10 or fewer) than previous years and subsequently fewer from larger providers (employing over 30).

Figure 1.1 Size of providers responding to the last five surveys

The practitioner survey resulted in a broad spread of respondents similar in characteristics to last year's survey. The main difference is that this year more respondents are working for a local provider rather than a regional or national provider. The number of respondents from FE colleges was again lower than in the 2007-08 survey.

Figure 1.2 Types of providers represented by practitioners responding to the last three surveys



1.5 Report structure

In the remainder of the report we present the findings of our combined research and where appropriate present them alongside the Harnessing Technology: Next Generation Learning System Outcome themes. Where relevant, we also report comparisons with previous surveys. However, caution should be taken when comparing small percentage changes between years. The size of the 2009-10 sample means the provider analysis has a margin of error[1] of approximately ±6% and the practitioner analysis has a margin of error of approximately ±3%. These margins of error are larger where analysis is made of sub-groups of respondents.

The report has six further sections reviewing:

- Management, planning and partnerships. This aligns with the confident system leadership and innovation theme within the strategy;

[1] Based on 95% confidence interval.

- Provider technology infrastructure and learning resources. This aligns with the enabling infrastructure and processes theme in the strategy;
- The use of technology for learner support, learning and teaching. This aligns with the improved personalised learning experiences and engaged and empowered learners themes;
- Practitioners' skills. This aligns with the technology confident effective providers theme;
- The impact and challenges associated with the introduction of technology;
- The research conclusions and progress against the Harnessing Technology: Next Generation Learning System Outcomes.

Unless specified otherwise, all the tables show percentages based on the number of responses reported at the bottom of each column. Where appropriate we have used quotes from our qualitative interviews to illustrate specific points. After each quote provide an indication of their stage of development of the provider based on their survey response (beginning, developing or performing) and their size based on the number of staff they employ.

2 Management, planning and partnerships

2.1 Introduction

The revised Harnessing Technology Strategy aims to ensure there is confident system leadership and innovation. Achievement of this will be illustrated through three outcomes:

- education leaders understand how technology supports their priorities;
- innovation is encouraged, good practice shared and adopted;
- partners buy into strategic vision and actively support implementation.

In this section we examine how close the WBL sector is to these outcomes by examining the:

- extent to which management has integrated technology into strategic planning;
- extent to which management encourages creativity and good practice;
- effectiveness of partnership working.

2.2 Strategic planning

Nearly two thirds of providers (65%) have a written plan, either as part of a wider strategy or on its own, which outlines how they intend to use technology. Larger providers are more likely to have a plan than smaller ones.

Table 2.1: B1 Does your organisation have a written plan (either as part of a wider strategy or on its own) outlining how your organisation intends to use technology?

Response	All	Number of people employed		
		1-10	11-30	Over 30
Yes	65%	52%	66%	78%
No	34%	47%	34%	22%
No reply	1%	2%	-	-
Base: All respondents	215	68	79	63

Written plans are most likely to include a vision for the use of technology and how to train staff to use technology. They are least likely to include how to use technology to engage employers and to train staff.

Less than half of employers (48%) have written plans relating to e-safety and security. Our qualitative interviews suggest that this does not mean it is being

ignored. Some providers have incorporated it into their induction programmes whilst others believe it is not, yet, an issue.

E-security was raised as a major concern amongst some providers, particularly those providers trying to introduce remote access in retail environments. However some of the issues they highlighted are also relevant in other situation. The costs associated with addressing e-security and e-safety issues has been raised by some providers in follow-up interviews.

Table 2.2: B2 What does your written technology related plan include?

Coverage of plan	% of respondents
Vision for the use of technology	78%
Training of staff to use technology	76%
Use of learner management system	60%
Purchasing/replacing technology	58%
Provision of technical support	48%
E-safety/security	48%
Use of technology to train staff	45%
Engaging employers	42%
Base: Respondents with a written plan outlining how they intend to use technology	139

Multiple responses

Direct comparisons with previous surveys on the use of written plans are not possible because of a change in the structure and wording of the question. Last year's survey reported that over half of providers (51%) had a written strategy (either as part of a wider strategy or on its own) that covered six aspects:

- ensuring technology related learning environments are safe and secure;
- ensuring learners and staff receive appropriate technical support when using technology;
- using ICT to manage and administer WBL more efficiently;
- accessing, developing and using ICT based WBL resources;
- ensuring the use of technology is financially sustainable;
- training staff to support and deliver e-learning.

However, we cannot assume that the use of written plans has increased over the last 12 months as the 2008-09 survey also reported that 92% of providers had a written plan that covered at least one of these aspects.

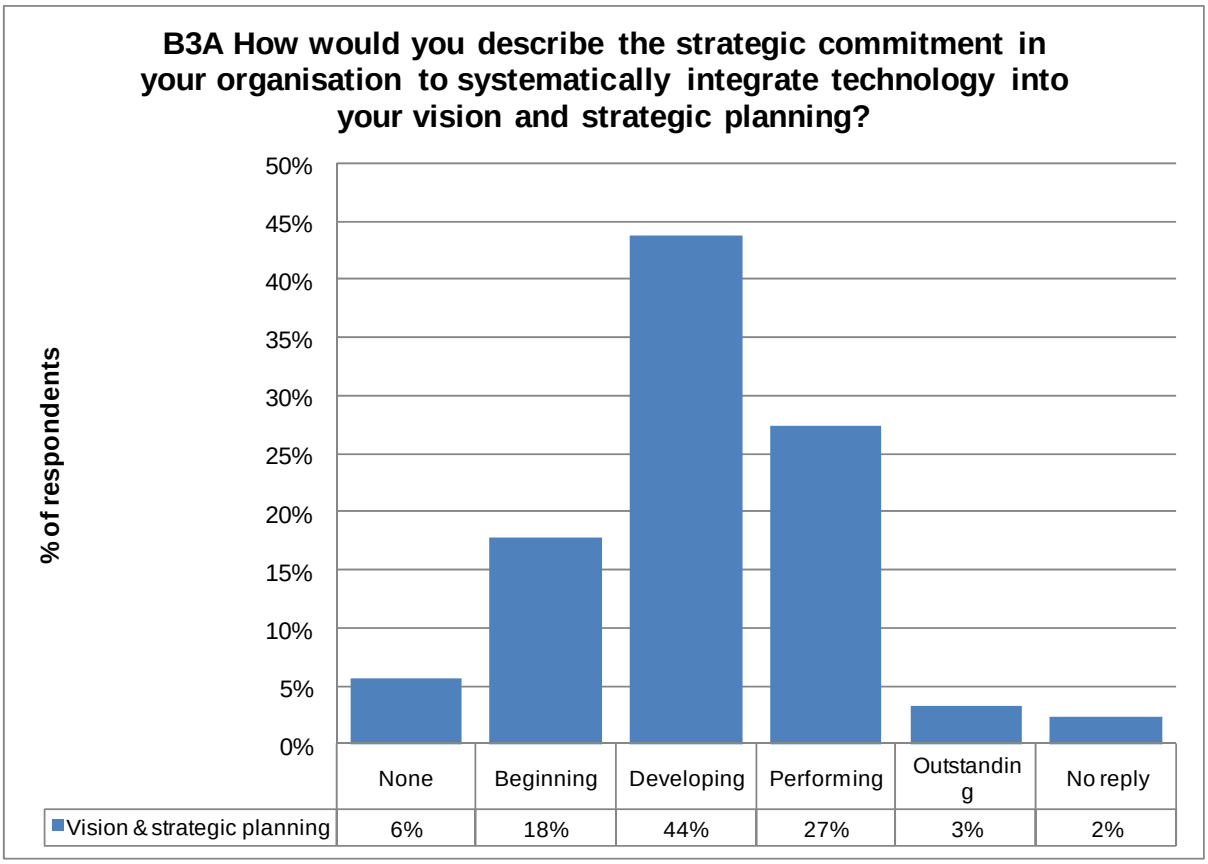
This year providers were also asked to rate the strategic commitment of their organisation to systematically integrate technology into different aspects of their organisation's activities. The rating scale used was based on the scale of used by the Generator Technology Improvement Leadership Tool[2] and used the following descriptions:

- None – No strategic commitment;
- Beginning – Very early stages of developing strategic commitment;
- Developing – Some strategic commitments in place, but working to develop these further;
- Performing – Comprehensive range of strategic commitments in place;
- Outstanding – Comprehensive range of strategic commitments in place which have been highlighted externally as exemplar.

Just under one quarter (24%) of providers either have no strategic commitment to integrating technology into their vision and strategic planning (6%), or are in the early stages of developing it (18%). In contrast 30% have a comprehensive range of strategic commitments in place.

[2] http://www.generatorfeandskills.com

Figure 2.1: Vision and strategic planning

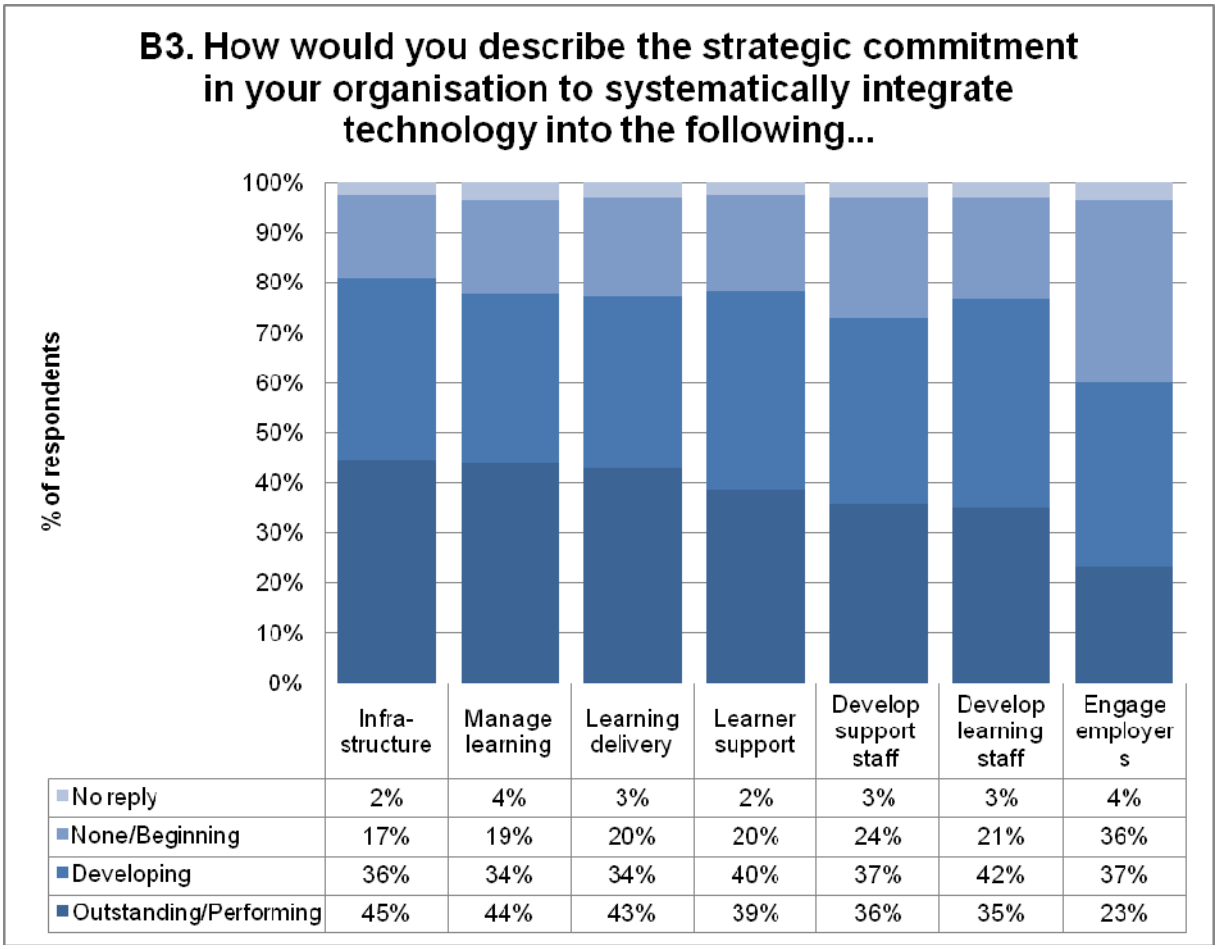


Over two fifths of providers believe they are either performing or outstanding in terms of their strategic commitment to systematically integrate technology into their activities associated with:

- infrastructure and equipment (45%);
- management of learning (44%);
- delivery of learning (43%).

In contrast under a quarter (23%) believe they are either performing (19%) or outstanding (4%) in terms of their strategic commitment to systematically integrate technology into their employer engagement activities. Over one third (36%) have made no strategic commitment (11%) or are in the early stages of developing it (25%).

Figure 2.2: Strategic commitment to different activities



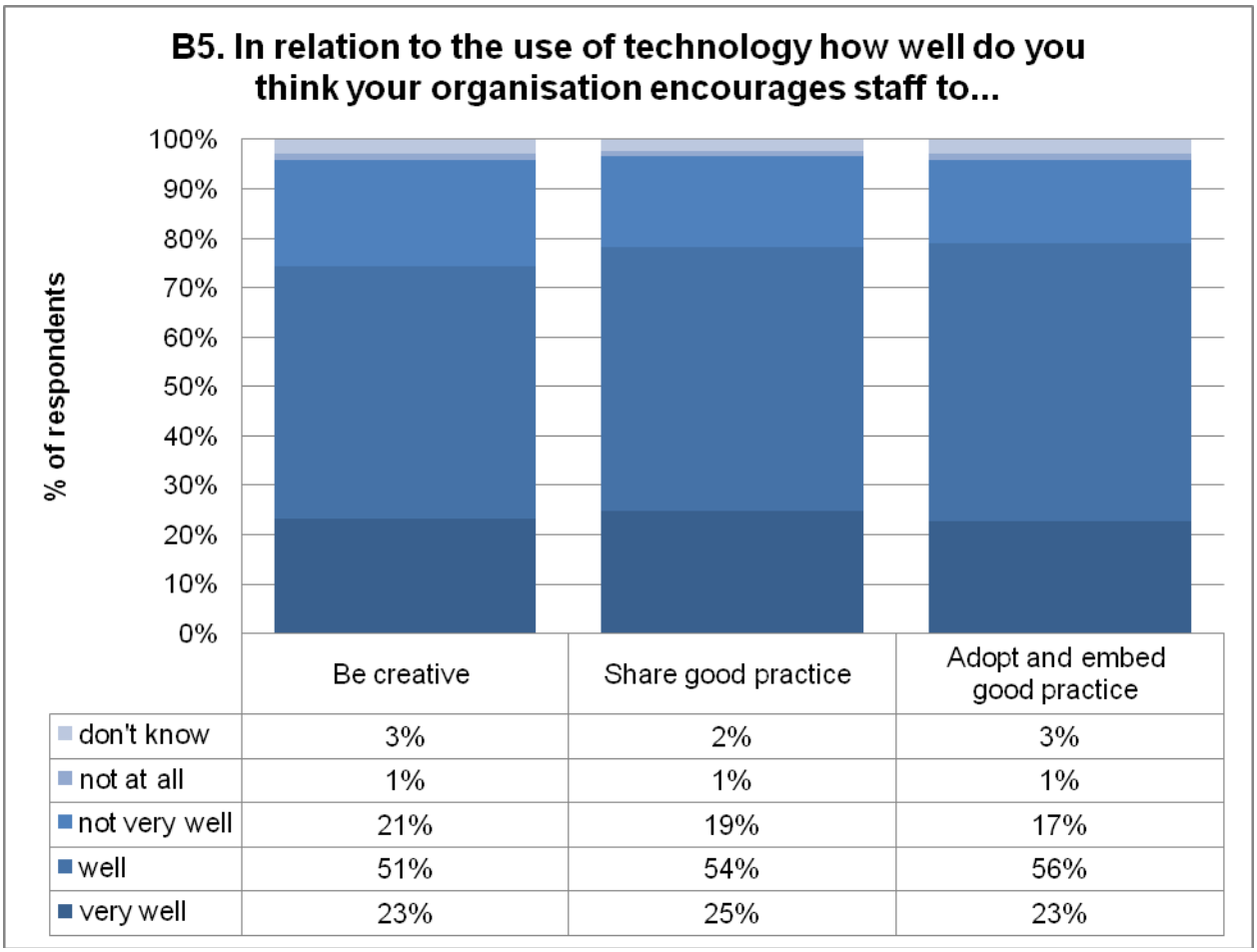
Our qualitative interviews with providers highlighted the importance of the commitment and enthusiasm of senior managers, as much as formal planning processes. In some cases having an interest in, or understanding of, technology was helpful. In contrast others highlighted the importance of building a business case.

2.3 Encouraging creativity and good practice

Three quarters of providers (75%) believe their organisation encourages staff to be creative in their use of technology, although just over one fifth (21%) believe they don't do this very well.

Slightly more (around four fifths) think that their organisation encourages staff to share good practice in relation to technology well (54%) or very well (25%) and also encourage them to adopt and embed it (79%).

Figure 2.3: Management encouragement of creativity and good practice



	Be creative	Share good practice	Adopt and embed good practice
don't know	3%	2%	3%
not at all	1%	1%	1%
not very well	21%	19%	17%
well	51%	54%	56%
very well	23%	25%	23%

2.4 Partnership working

Nearly three quarters of providers (74%) have worked in partnership with other organisations to help harness technology. Providers without a written plan outlining how they intend to use technology are less likely to have worked with another organisation (51%) than those with a written plan (86%).

Half of providers (50%) have worked with technology suppliers and nearly one third (31%) have worked with other WBL providers. Fewer providers report working in partnership with other organisations than last year, but this may reflect a change in the wording of the question. Our qualitative interviews suggest that some providers are not keen to work in partnership because they do not want to lose any competitive advantage. In some cases this was because they were an employer delivering training to their own staff.

Specifically one fifth of providers (20%) have worked in partnership with another organisation to develop computer-based learning resources. This is similar to last year (23%).

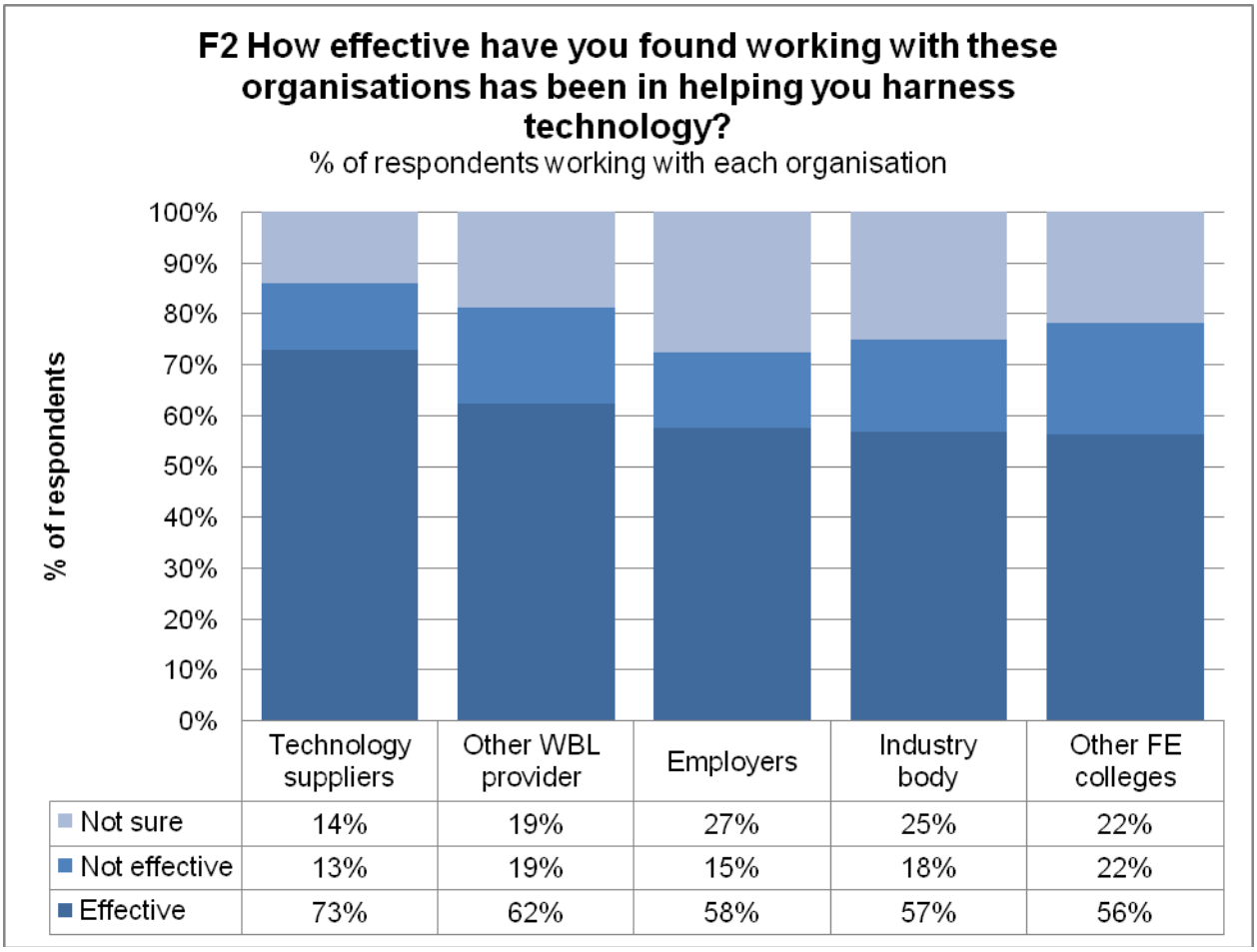
Table 2.3: F1 Have you worked with any of the following types of organisations to help you harness technology?

Organisation type	All	Providers with a written technology plan?	
		Yes	No
Technology suppliers	50%	63%	27%
Other WBL provider	31%	40%	14%
Industry body	21%	22%	19%
Employers	16%	19%	10%
Other FE colleges	15%	19%	8%
No reply	27%	14%	51%
Base: All respondents	215	139	74

Multiple responses

Nearly three quarters of providers (73%) working with technology suppliers and two thirds (63%) of those working with other WBL providers consider these partnerships to be effective. This is greater than last year, but again may reflect a change in the structure of the question. One provider we visited provided a good example of working with a local university's technology transfer partnership. This helped them in a number of ways, but particularly to drive their use of cameras to capture evidence and the development of video 'how to' guides and other bespoke learning resources.

Figure 2.4: Effectiveness of partnerships to help harness technology



	Technology suppliers	Other WBL provider	Employers	Industry body	Other FE colleges
Not sure	14%	19%	27%	25%	22%
Not effective	13%	19%	15%	18%	22%
Effective	73%	62%	58%	57%	56%

2.5 Conclusions

The majority of providers have a written plan setting out how they intend to use technology. Smaller providers are less likely to have a written plan, partly because they do no think it is needed. Written plans are most likely to include a vision for the use of technology and a plan to train staff to use it. They are least likely to consider how to use technology to train staff more generally or to engage employers.

E-safety and e-security is included in around half of providers' written plans. Some providers have not yet considered it to be an issue, but others, particularly those working to enhance remote access, are having to address issues associated with access to data.

Most providers feel their organisation encourages staff to be creative in their use of technology as well as to share and embed good practice.

Three quarters of providers have worked in partnership with another organisation to help harness technology more effectively. Half have worked with technology suppliers and nearly one third with other providers. Most providers that have worked

with another organisation have found this to be effective. This clarifies the findings of last year's survey which left some doubt about the effectiveness of partnership working.

Infrastructure and learning resources

2.6 Introduction

To effectively harness technology providers need an enabling infrastructure which ensures:

- infrastructure is designed for efficiency and sustainability;
- high quality, tailored resources are available to all learners;
- systems for learner services are fully integrated.

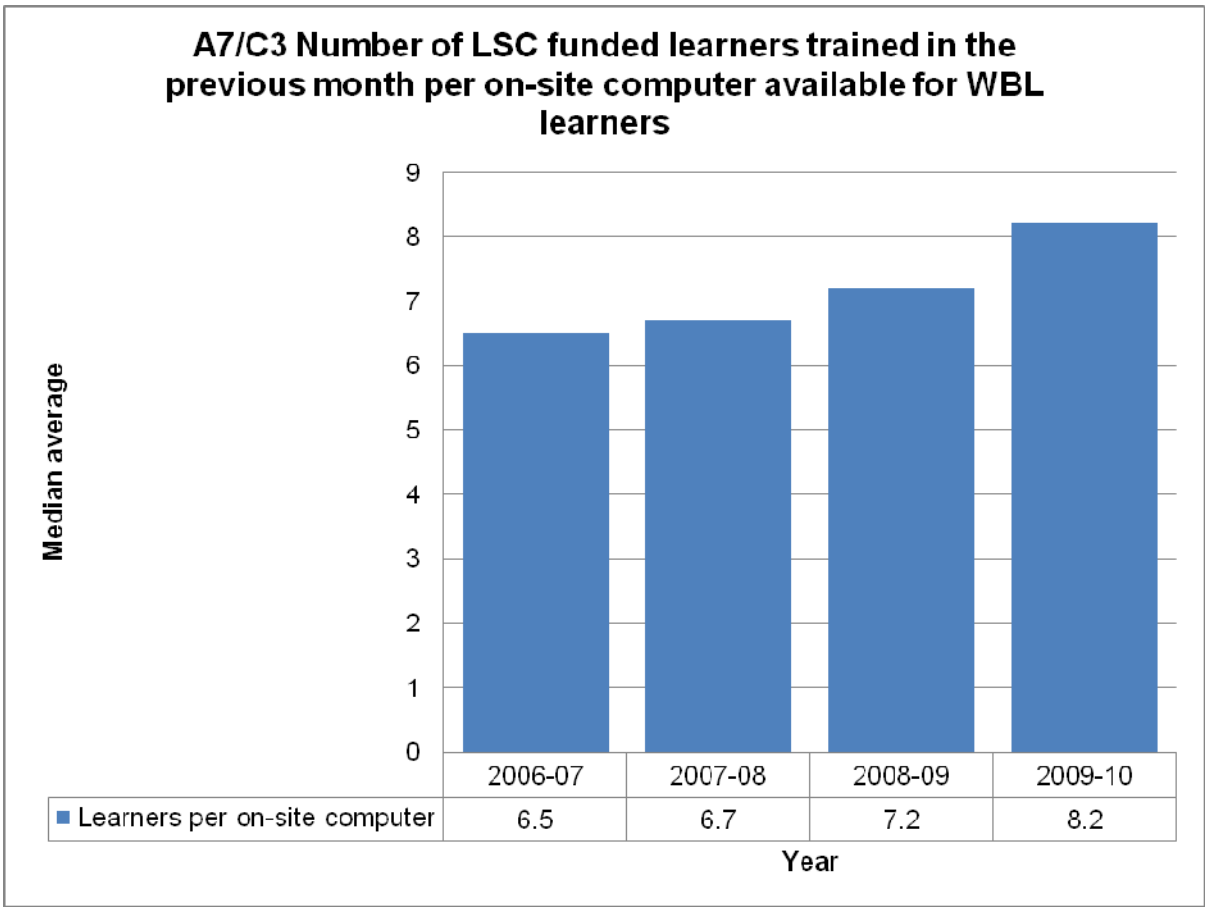
In this section we present what infrastructure and resources are being used by WBL providers and provide an indication of its impact.

2.7 Technology infrastructure

Work-based learning is primarily focused on learning in the workplace. Despite this, last year's survey reported that nearly all providers have computers on their premises for work-based learners to use. This year's survey shows that 81% also have computers with broadband access, a similar proportion to last year.

Based on the 162 providers that provided details of the number of computers they have available for work-based learners to use and the number of LSC funded learners they trained in the previous month we estimate that work-based learning providers have a median average of 8.2 work-based learners for every on-site computer. This average has shown a steady increase over the last four years. A small number of providers report more than one computer for every work-based learner. The largest ratio reported is 425 learners to every computer. The mean average is 22 learners per computer.

Figure 3.1: Learners' access to providers' computers



However providers also offer other computer access for learners. For example nearly three quarters (72%) ensure laptops are available for learners during tutor or assessor visits to the workplace, whilst just over one quarter (27%) have laptops for loan to learners in the workplace.

Our qualitative interviews suggests that some providers have undertaken significant investment over the last couple of years in laptops for tutors and assessors to use with learners when visiting them in the workplace and that this may not have been identified in previous provider surveys. Their usefulness has been reinforced by the use of 'dongles' so that they can access the internet through the mobile phone network. This avoids any issues that may be associated with internet access at the learner's workplace. One provider has also found this combination of laptop and dongle useful for delivering group-based learning off-site.

Providers also have a range of other technology. Around two thirds have data projectors (64%) and digital voice recorders (62%) whilst just over half have digital cameras (54%). Small providers (employing fewer than 10) and those without a written plan outlining how they intend to use technology are less likely to have each type of technology listed in the survey.

Compared with last year there:

- has been a dramatic increase in the use of digital voice recorders (62% compared with just 8% last year);
- a slight decline in the use of interactive white boards (42% compared with 54% last year).

Table 3.1: C1 Does your organisation have the following technology?

Type of technology	All	Number of people employed		
		1-10	11-30	Over 30
On-site computers for learners' use with broadband access	81%	68%	87%	84%
Laptops available for learners during tutor/assessor workplace visits	72%	63%	71%	83%
Data projectors	64%	52%	71%	68%
Digital voice recorders	62%	52%	66%	67%
Digital cameras	54%	38%	61%	60%
Electronic whiteboards	42%	24%	46%	54%
Video cameras	34%	24%	37%	40%
Laptops for loan to learners in the workplace	27%	22%	29%	30%
Mobile devices that are used for learning eg iPod touch, game consoles, PDA, mobile phones with camera/sound recording	26%	9%	25%	44%
Voting devices/systems	4%	2%	8%	3%
Digi memo's/writing tablets	3%	-	5%	5%
Remote video facilities	2%	4%	3%	-
Wireless internet access/dongles	2%	2%	3%	2%
Simulators	1%	-	1%	2%
Code readers/scanners	1%	2%	1%	-
Base: All respondents	215	68	79	63

Multiple responses

This technology is supported by a range of infrastructure. Over two thirds of providers (70%) have a network remotely accessible by staff, although fewer (38%) have a remotely accessible network for learners. The number of providers with different types of infrastructure has remained unchanged compared to last year.

The largest providers (employing over 30) are more likely than smaller providers to have:

- on-site technical support for learners (65%);
- a computer network accessible remotely by work-based learners (52%);
- a virtual learning environment (46%).

Providers without a written plan outlining how they intend to use technology are less likely to have each type of infrastructure listed in the survey.

A number of providers we visited as part of our qualitative interviews highlighted the importance of technical support for practitioners. For some providers they felt it was best to buy a technical support contract, others had internal technical support.

Table 3.2: C2 Does your organisation have the following infrastructure?

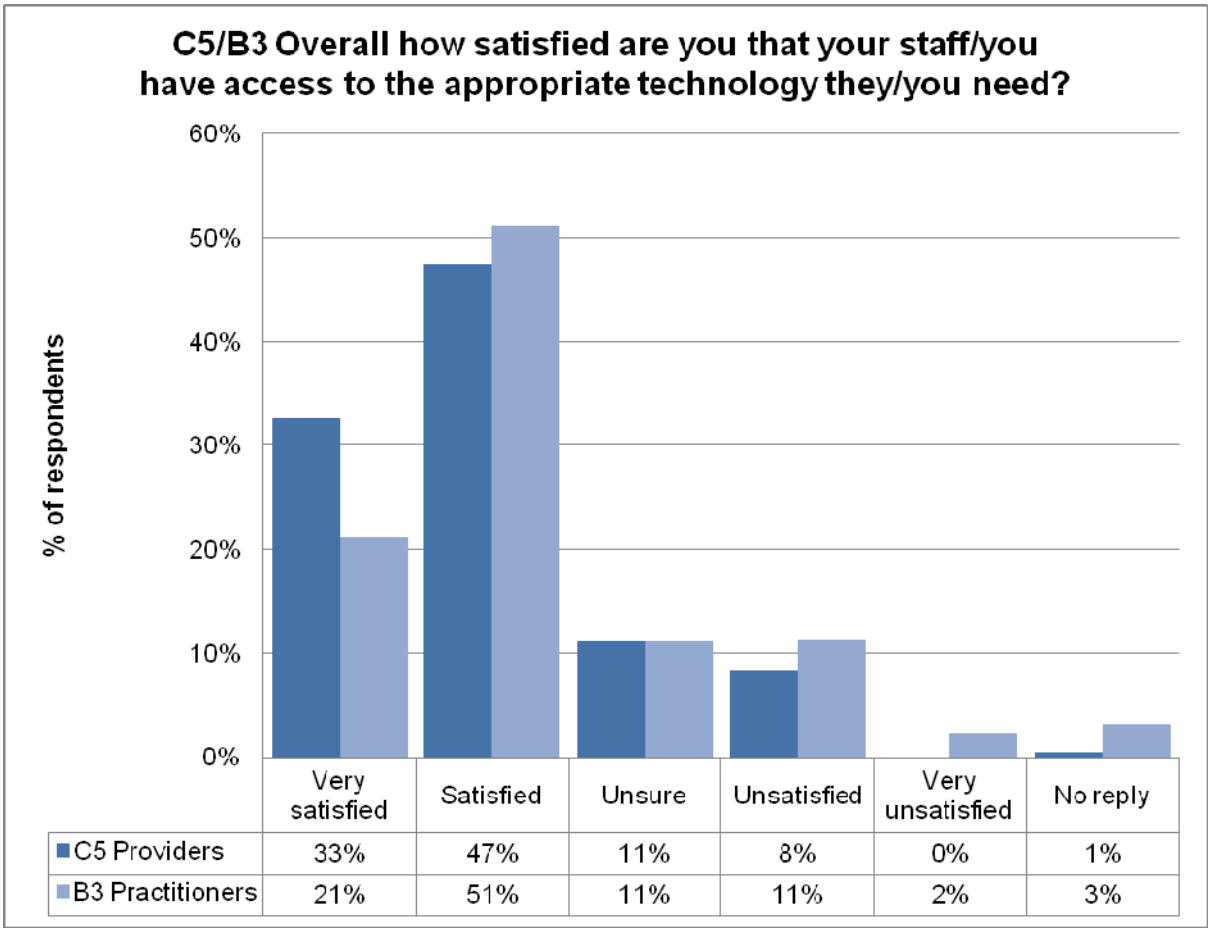
Type of infrastructure	All	Providers with the technology?	
		No	Yes
A computer network accessible remotely by staff	70%	61%	76%
On-site technical support for learners	47%	30%	58%
A computer network accessible remotely by learners	38%	20%	48%
A dedicated website to support learners	36%	18%	46%
A Virtual Learning Environment	31%	11%	42%
Technical support for learners off-site	18%	10%	23%
Base: All respondents	215	74	139

Multiple responses

Overall, around four fifths of providers (80%) are satisfied or very satisfied that their staff have access to the appropriate technology that they need. Less than one in ten (8%) are unsatisfied. This is similar to previous years, although this year no providers report that they are very unsatisfied.

Responses to the survey of tutors, assessors and verifiers corroborated this view and again reflect the findings of previous years. Nearly three quarters of practitioners (72%) are satisfied or very satisfied that they have access to appropriate technology and digital resources. Just 14% are unsatisfied.

Figure 3.2: Satisfaction with staff access to technology



	Very satisfied	Satisfied	Unsure	Unsatisfied	Very unsatisfied	No reply
C5 Providers	33%	47%	11%	8%	0%	1%
B3 Practitioners	21%	51%	11%	11%	2%	3%

Over three quarters of practitioners (77%) have access to their own computer and broadband internet (79%) at work. In addition nearly two thirds (63%) have access to a laptop when out of the office, although only two fifths (42%) can access their organisation's network when out. Over half have access to a mobile phone (56%) and a digital camera (51%). This is a similar response to last year although fewer practitioners report access to:

- the internet at work (79% this year compared to 89% last year);
- digital cameras (51% this year compared to 64% last year).

Our qualitative interviews also suggest that a number of providers have invested in smart phones for practitioners. The multi-function capability allows them to communicate with colleagues, access e-mails and the provider's systems if needed as well as providing a tool for recording both audio and video evidence.

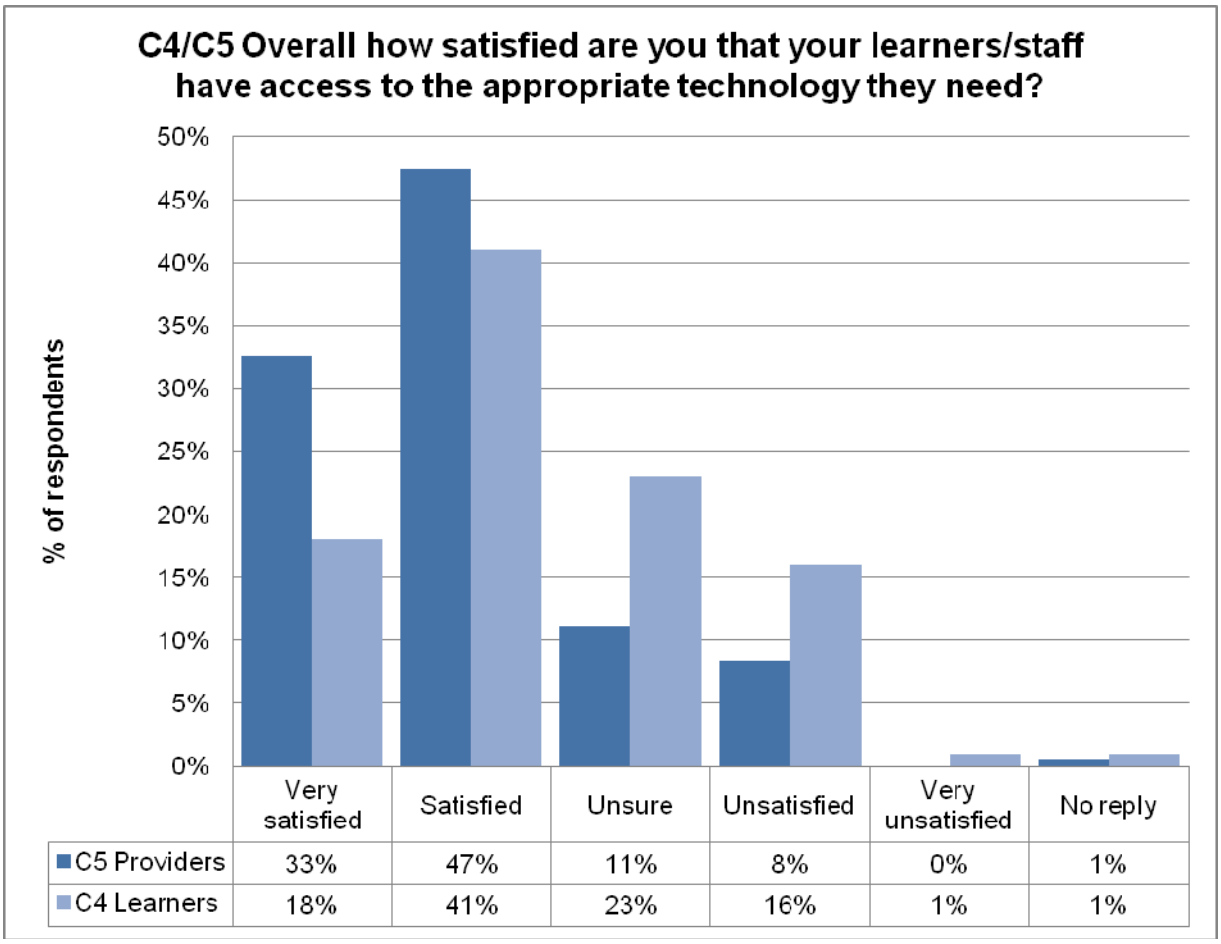
Table 3.3: B2 Which of the following equipment do you have access to, for use with WBL learners?

Type of technology	% of practitioners	
	2009-10	2008-09
The internet at work	**79%**	**89%**
Your own computer at work	77%	80%
A laptop when out of the office	63%	69%
Mobile phone for work	56%	Not asked
Digital cameras	**51%**	**64%**
Digital voice recorders	46%	Not asked
Your organisation's computer network when out of the office	41%	46%
Data projectors	32%	33%
Electronic whiteboards	34%	37%
A Virtual Learning Environment	25%	23%
Your own on-line learning space	25%	18%
Digital voting equipment	9%	Not asked
Mobile devices for learning eg iPod touch, games console, PDAs	8%	Not asked
Base: All practitioners	881	1,087

Multiple responses

Providers are less satisfied that learners have access to the technology that they need. Around three fifths (59%) are satisfied with learners' access to technology compared to 17% that are unsatisfied. The proportion of providers satisfied is a similar level of satisfaction to last year and suggests that providers are still more satisfied with their staff's access to technology than their learners.

Figure 3.3: Provider satisfaction with staff and learner access to technology



	Very satisfied	Satisfied	Unsure	Unsatisfied	Very unsatisfied	No reply
C5 Providers	33%	47%	11%	8%	0%	1%
C4 Learners	18%	41%	23%	16%	1%	1%

2.8 Learning resources

Over two thirds (68%) of providers use computer-based learning resources in some of their learning programmes. This is less than reported using them last year (79%). This may reflect:

- the greater number of smaller providers responding this year as 57% of providers employing 10 or fewer use these resources compared to 75% of providers employing over 31;
- the larger number of providers responding this year that are mainly delivering NVQs and Train to Gain. These are less likely to use computer-based learning resources (48% of those mainly delivering NVQs and 63% of those mainly delivering Train to Gain) than those mainly delivering Apprenticeships (81%).

A slightly different picture is illustrated when we consider all providers delivering each programme, rather than the main delivery programme. Over two thirds of providers delivering NVQs (71%), Foundation Degrees (70%), Skills for Life (69%) and Apprenticeship Key Skills (68%) use computer-based resources. This compares

to less than half of providers delivering Jobcentre Plus programmes (26%), industry recognised certificates (42%), Train to Gain (46%) and LSC employment provision (48%). More providers are using computer-based resources for Apprenticeship Key Skills (68%) than Technical Certificates (59%).

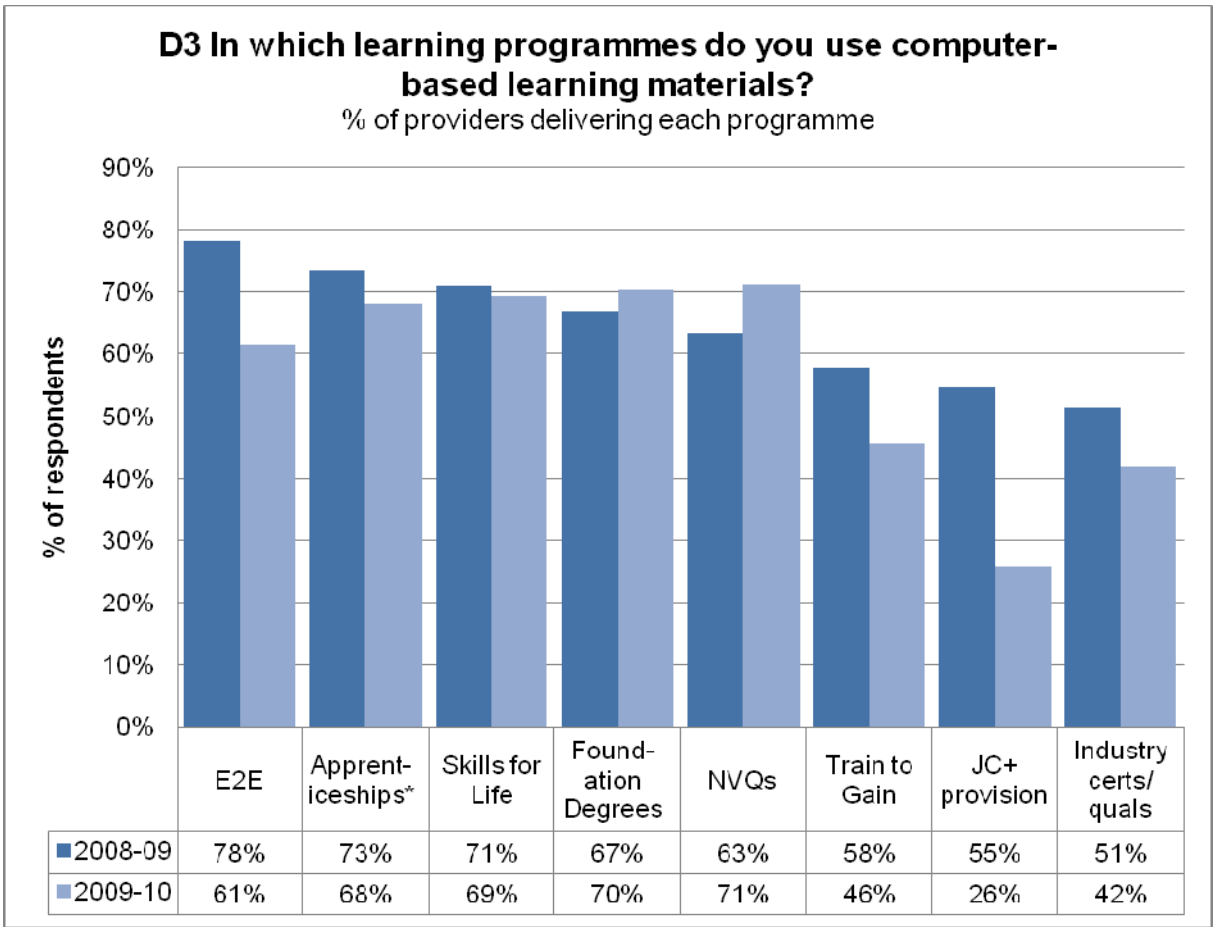
Table 3.4: D3/A8 In which learning programmes do you use computer-based learning materials?

Type of learning delivered	% delivering programme using materials	Base: Number of providers delivering programme
NVQs	71%	149
Foundation Degrees	70%	27
Skills for Life	69%	85
Apprenticeship Key Skills	68%	138
Entry to Employment	61%	44
Apprenticeship Technical Certificates	59%	138
LSC Employment provision	48%	25
Train to Gain	46%	158
Industry recognised certificate/qualification	42%	74
Jobcentre Plus provision	26%	35

Note: Percentages are based on the number or providers delivering learning in that programme area

Slightly more providers are using computer-based resources to deliver NVQs than last year, although fewer are using them to deliver Jobcentre Plus provision, Entry to Employment and Train to Gain.

Figure 3.4: Use for computer-based learning materials in each programme type



	E2E	Apprent-iceships*	Skills for Life	Found-ation Degrees	NVQs	Train to Gain	JC+ provision	Industry certs/ quals
2008-09	78%	73%	71%	67%	63%	58%	55%	51%
2009-10	61%	68%	69%	70%	71%	46%	26%	42%

* 2008-2009 % using resources to deliver Apprenticeships, 2009-10 % using resources to deliver Apprenticeship Key Skills

Similarly, computer-based learning resources are used widely by providers across all occupational areas. Small sample sizes means that comparison across most occupational areas is not statistically robust. Nevertheless the responses suggest they are least likely to be used amongst providers delivering in agriculture (29%), transportation (33%) and manufacturing (46%) occupations. These were the same occupational areas reported last year as least likely to be using them. In contrast as with last year they are most likely to be used by providers delivering in media and printing occupational areas.

Table 3.4: D2/A10 In which occupational areas do you use computer-based learning materials?

Occupational area delivered	% delivering occupational area and using materials	Base: Number of providers delivering in occupational area
Media and printing	200%*	3
Finance, insurance and real estate	87%	15
Health and beauty	73%	44
Admin, IT, management & professional	64%	110
Engineering	61%	54
Hospitality, recreation and travel	54%	52
Construction	51%	49
Customer service, retailing and wholesaling	50%	107
Health, care, education and public services	48%	97
Manufacturing, including food and drink	46%	35
Transportation	33%	24
Agriculture	29%	17

Note: Percentages are based on the number or providers delivering learning in that occupational area.

*More providers reported using computer-based learning resources for delivering in this occupational area in D2 than reported delivering in this occupational area in A10.

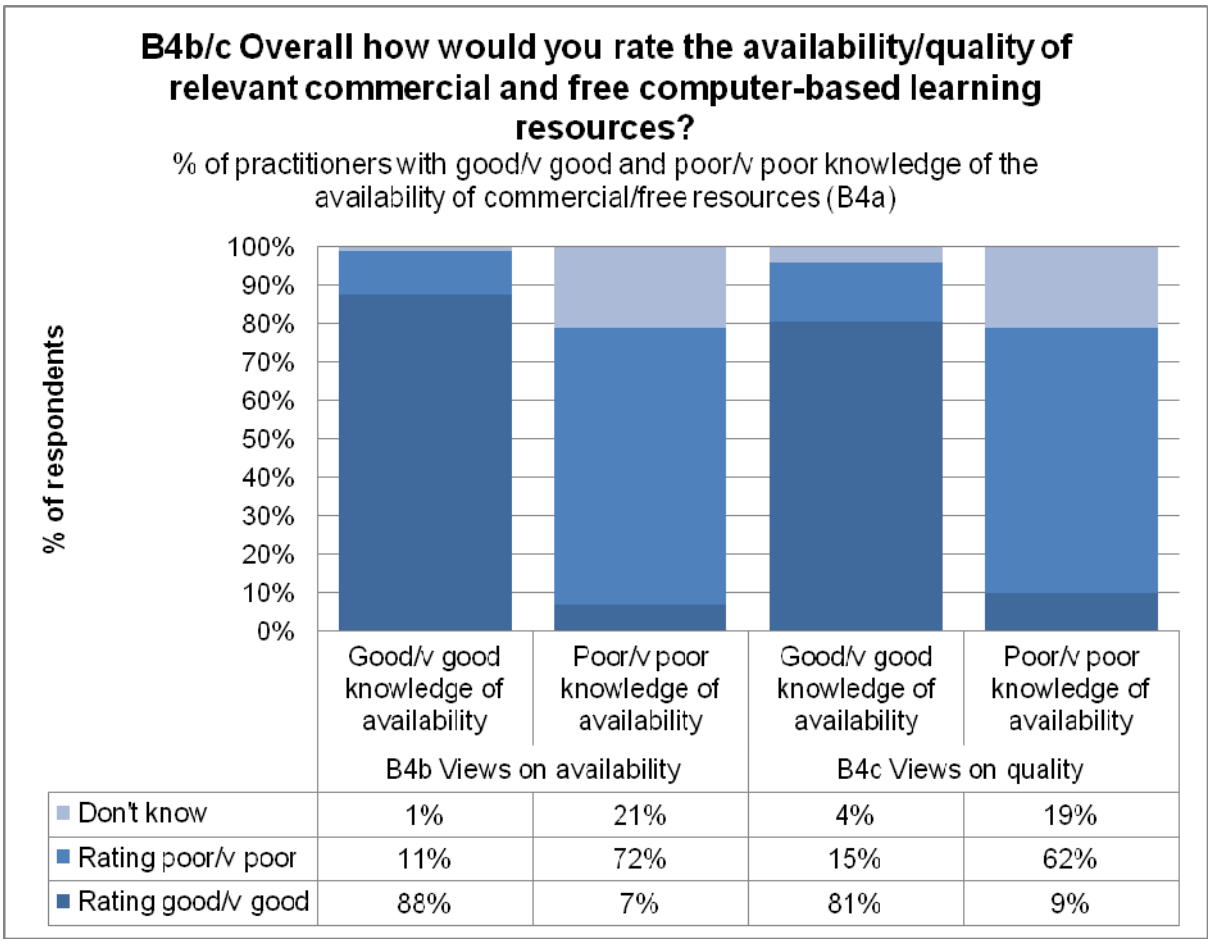
Over three quarters of practitioners (77%) report using technology to create electronic learning resources at least occasionally. Over two fifths (41%) create electronic resources frequently or all of the time. Just 3% felt they did not know how to create electronic learning resources and 15% never did it. This is similar to the responses received in the previous two surveys.

Providers get their computer-based learning materials from a wide range of sources. Over two thirds of providers that are using computer-based learning resources (69%) have bought them commercially, whilst a similar proportion (67%) have developed their own resources. Over half (53%) are using resources that are freely available online. One in five (20%) have developed them in partnership with another organisation. This is a similar pattern to that reported last year.

Our qualitative interviews suggest that where providers are not happy with commercially available computer-based resources this tends to be because they either think they do not meet their needs or are too expensive (or both).

Over half of practitioners (55%) believe that they have a good knowledge about the availability of commercial and free computer-based learning resources. Amongst this group there is general satisfaction about the availability and quality of commercial and free computer-based learning resources. One in ten (11%) believe their availability is poor or very poor and 15% have a similar view on their quality. However those practitioners without a good knowledge of their availability have a much poorer perception. Nearly three quarters of this group (72%) rate their availability as poor or very poor, whilst nearly two thirds (62%) rate their quality as poor or very poor.

Figure 3.5: Practitioners views on the availability and quality of commercial and freely available computer-based learning resources based on their own knowledge of these resources

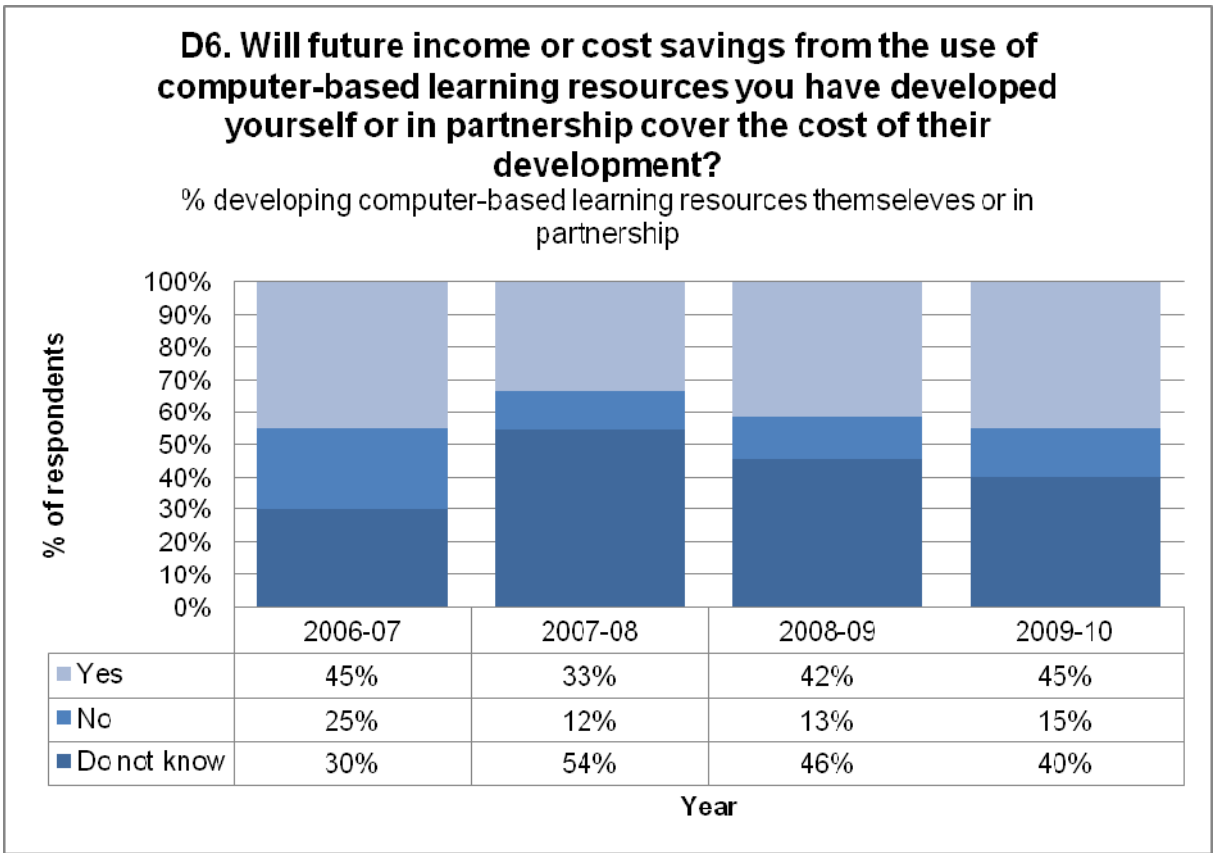


	B4b Views on availability		B4c Views on quality	
	Good/v good knowledge of availability	Poor/v poor knowledge of availability	Good/v good knowledge of availability	Poor/v poor knowledge of availability
Don't know	1%	21%	4%	19%
Rating poor/v poor	11%	72%	15%	62%
Rating good/v good	88%	7%	81%	9%

There is still a great deal of uncertainty over whether future income or savings will cover the costs of resources developed in-house or in partnership. Two fifths (40%) of providers developing their own resources do not know whether they will cover their costs. A further 15% do not believe they will cover the cost of development. Nearly half (45%) believe cost savings or income will cover costs and this is a slight increase on the last two years, but is similar to 2006-07. The number of respondents

means that comparison with previous years should be treated with caution, due to sample error.

Figure 3.6: Will providers cover the cost of computer-based resource development?



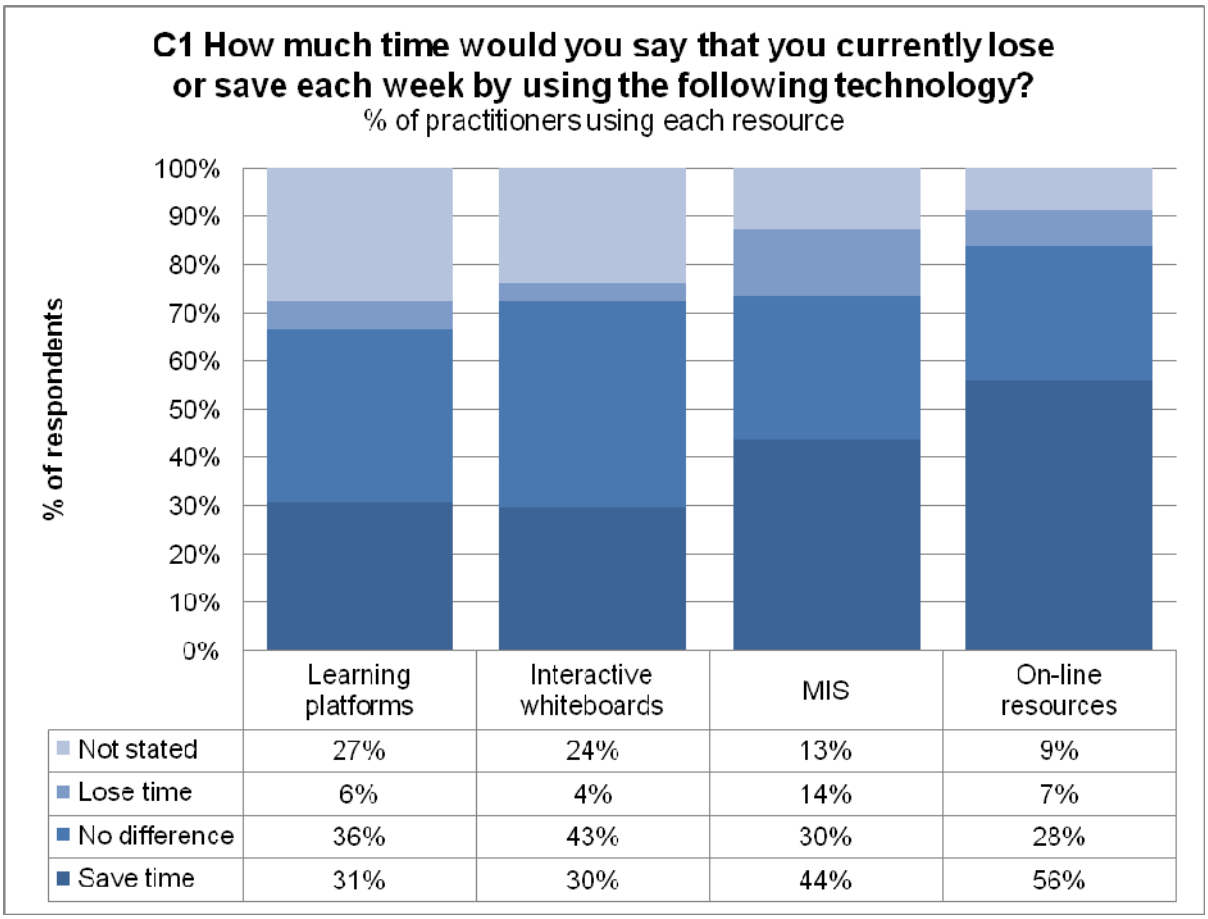
Number of respondents for each year: 2006-07 (87), 2007-08 (98), 2008-09 (96), 2009-10 (121)

The majority of practitioners (60%) believe the quality of computer-based resources developed by their organisation is either good (50%) or very good (10%), although over one quarter (27%) believe it is poor (23%) or very poor (4%).

2.9 The impact of technology

Practitioners were asked how much time each week technology saves them. Over half (56%) of practitioners that use online resources find they save time, whilst just 7% find they lose time. Nearly half (44%) find management information systems (MIS) save time, whilst nearly one third (30%) save time using interactive whiteboards and learning platforms (31%). However, only 43% of practitioners responding use the latter two technologies.

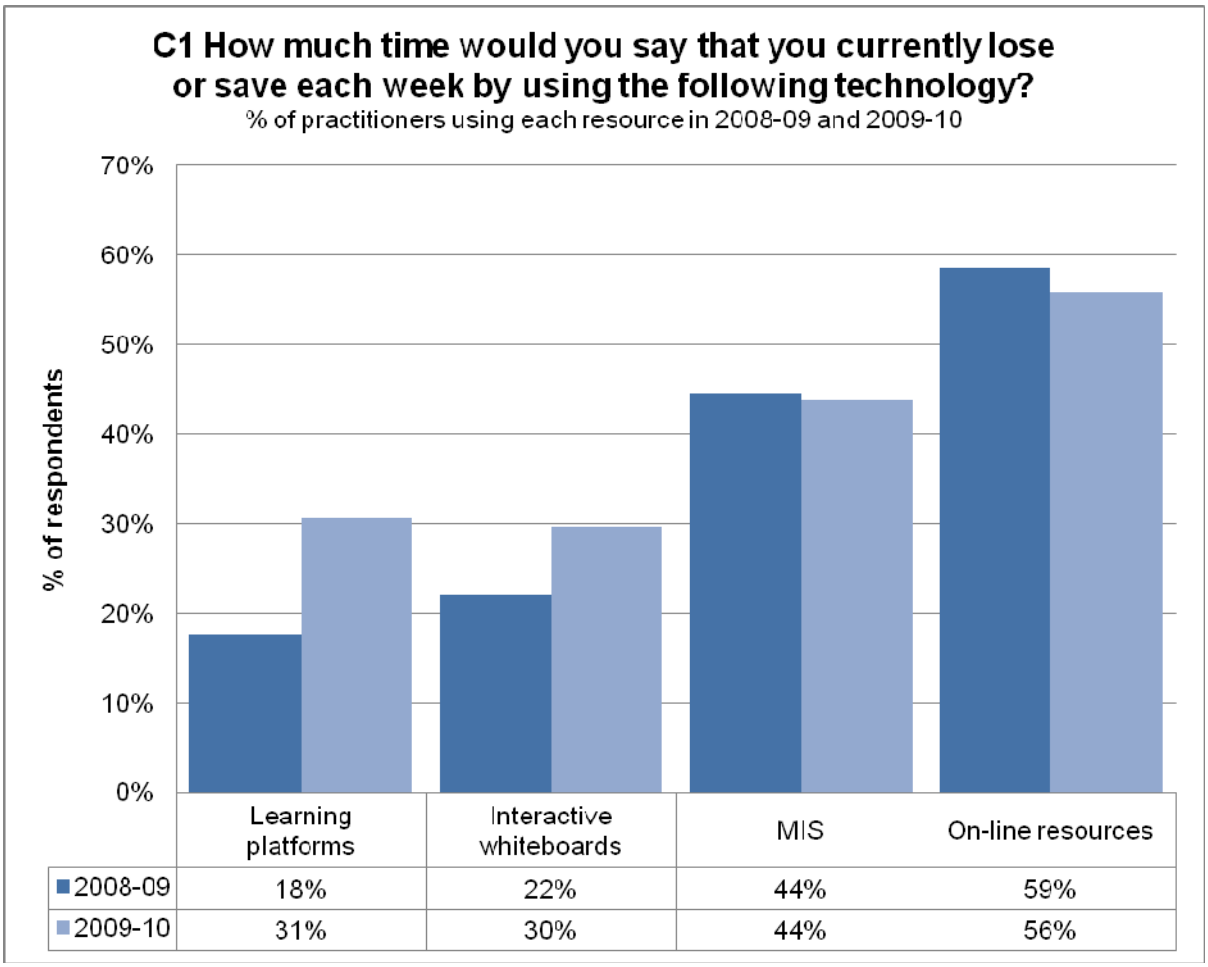
Figure 3.7: Does using technology save practitioners time?



Number of respondents using each technology: Learning platforms (379); Interactive whiteboards (377); MIS (644); On-line resources (754).

Although the same proportion of practitioners is using each of these technologies as last year, more practitioners this year are reporting that learning platforms and interactive whiteboards are saving time. Some of the providers we visited felt that they are not using interactive whiteboard to their full potential.

Figure 3.8: Changing views on how much time technology saves practitioners?



Management information systems and online resource can save practitioners significant time during a week. Nearly one fifth of practitioners (17%) report online resources save them over two hours per week, whilst 13% using MIS report it also saves over two hours.

A number of providers visited as part of our qualitative interviews also highlighted the benefit of technology on management information in particular.

Table 3.10: C1 How much time would you say that you currently lose or save each week by using the following technology?

Response		On-line resources	MIS	Interactive whiteboards	Learning platforms
Time saved	>2 hours	17%	13%	5%	7%
	1-2 hours	20%	13%	11%	7%
	<1 hour	18%	18%	14%	17%
Makes no difference		28%	30%	43%	36%
Time lost	<1 hour	4%	4%	2%	2%
	1-2 hours	2%	5%	1%	2%
	>2 hours	1%	5%	1%	2%
Not stated		9%	13%	24%	27%
Base: Practitioners using each technology		754	644	377	379

2.10 Future investment

Half of providers (51%) have plans for capital investment in learning technology in 2010-11. This is slightly fewer than planned to invest in 2009-10 (62%). Providers with a written plan outlining how they intend to use technology are more likely to be planning to invest (63%) than those without plans (28%).

Just over half of providers (58% or 64 providers) planning to invest in capital next year provided estimates of the level of investment. Between them these providers intend to invest £3.11 million in learning technology capital in 2010-11. However, the value of the investment varies widely from £500,000 to just £60. The median average for investment is £15,000.

Providers were asked if they had access to capital funding to invest in technology, other than replacing existing computers, what would you use it for. Over half of providers wanted to develop new learning materials (56%) and buy mobile technology (51%). Others identified:

- introducing a new integrated learning management system (41%);
- purchase additional computers (34%);
- upgrade the computer network (34%);
- purchase electronic whiteboards (27%).

A number of providers we visited as part of the qualitative interviews highlighted difficulties associated with the availability of funds to invest in technology, however a number also highlighted the importance of investing in training staff to use technology and the difficulty in finding funds to do this effectively.

2.11 Conclusions

Over the period of the five provider surveys the levels and types of technology used appears to have remained fairly static. Any changes are small and difficult to distinguish from sample error, although the survey appears to indicate increasing use of digital voice recorders for collecting evidence. Small providers and those without written plans for the use of technology tend use less technology.

This year's providers survey along with our qualitative visits and practitioner survey suggests that providers are making extensive use of provider and assessor laptops to support learners in the workplace and that the usefulness of this has been helped by increasing use of mobile internet access. Some providers are also now using smart phones for multiple purposes such as collecting evidence, accessing documents and communicating with learners. Despite most providers being satisfied with practitioners' access to technology, fewer are satisfied with learners' access.

Slightly fewer providers appear to be using computer based resources than last year. This may reflect a slight change in the type of providers responding. More smaller providers and providers delivering Train to Gain responded than last year and these groups are less likely to use computer based learning resources.

There is general satisfaction with the availability and quality of commercially and freely available learning resources. Practitioners that are less satisfied tend to be less knowledgeable about their availability. As with last year over three quarters of practitioners report using technology to create electronic learning resources at least occasionally, but there is still uncertainty amongst many providers over whether future income or savings will cover the costs of the resources developed.

There is further evidence from practitioners that management information systems and online resources can save practitioners a significant amount of time during a week. Although no more practitioners are using interactive whiteboards or learning platforms than last year they appear to be using them more effectively with a greater proportion reporting that they save time.

New mobile technology and learning materials are top of providers' wish lists for the future, if capital funding were available, but some providers are mindful that new capital tends to also link to increased training costs.

3 Learner support, learning and teaching

3.1 Introduction

The Harnessing Technology strategy aims to develop a system which exploits the benefits of technology for learning and delivers improved learning outcomes for all. This includes improved personalised learning experiences and engaging and empowering learners.

In this section we show how providers and practitioners are using technology to help improve the management of learning and support its delivery.

3.2 Organisational use of technology

The proportion of WBL providers using technology for various purposes is very similar to that reported in previous years. Over three quarters providers are using technology to:

- register learners (81%);
- help tutors develop paper-based work-based learning materials (79%);
- help monitor work-based learners' progress (77%).

The way technology is used has remained fairly consistent over the last three years. The main changes have been an increase in the use of technology to help learners monitor their own progress (an increase to 34% from 19% 2007-08). There also seems to have been a small decline in the number of providers using technology to help assess the initial skill needs of learners. However some of the providers we visited highlighted some of the benefits of using technology for initial assessment.

Table 4.1: C6 Does your organisation currently use technology to…?

Use of technology	% of providers		
	2009-10	2008-09	2007-08
Register learners	85%	83%	85%
Help tutors develop paper-based work-based learning materials	79%	86%	84%
Help monitor work-based learners' progress	77%	81%	78%
Support collaboration between staff	70%	58%	63%
Help assess the initial skill needs of work-based learners	67%	81%	80%
Help tutors develop electronic-based learning materials	65%	69%	67%
Provide tutor support to work-based learners	65%	63%	61%
Assess work-based learners for certification	60%	57%	56%
Communicate and share documents with employers	57%	Not asked	Not asked
Help work-based learners monitor their own progress	34%	31%	19%
Support collaboration between learners	32%	23%	24%
Support learners progress to other learning opportunities	28%	33%	28%
Help assess the training needs of employers you work with	19%	19%	18%
Base: All respondents	**215**	**183**	**160**

Multiple responses

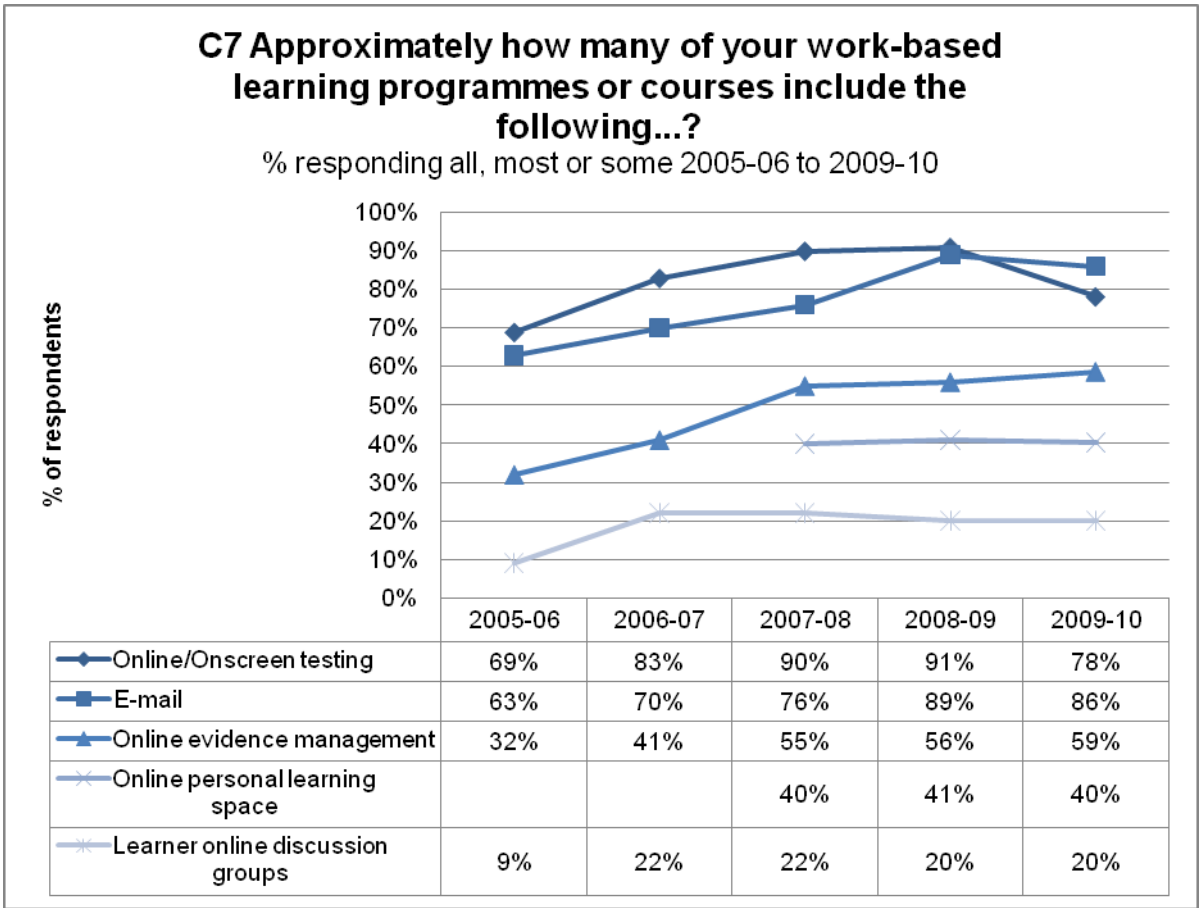
Specifically providers have increased their use of technology to support learners and for assessment:

- the use of e-mail to communicate between learners and tutors is now used by 86% of providers. This support activity has had one of the greatest increases in usage over the last four years, and has grown most since 2007-08. Over half of providers use it for most or all of their programmes;
- online or onscreen key skills tests are used by over three quarters (78%) of providers and in around half of providers they are used for all or most of their courses or programmes. The use of onscreen and online testing

has also increased over the last four years, although dropped back during the last survey. This may reflect a change in the question;

- over half of providers (59%) now use technology for online evidence management compared with one third four years ago. More providers (14%) are also using it across all of their programmes;
- a learner online learning space is offered by 40% of providers. This has not changed over the last three years;
- learner online discussion groups continue to be used by a minority of providers (20%) and rarely across all or most of provision.

Figure 4.1: Changing use of technology to support learners and for assessment



	2005-06	2006-07	2007-08	2008-09	2009-10
Online/Onscreen testing	69%	83%	90%	91%	78%
E-mail	63%	70%	76%	89%	86%
Online evidence management	32%	41%	55%	56%	59%
Online personal learning space			40%	41%	40%
Learner online discussion groups	9%	22%	22%	20%	20%

Note: Before this year (i) online and onscreen testing were asked as separate questions, although the trend was similar. The data shown is for online testing; (2) unmoderated and moderated online discussion groups were asked as separate questions. The data shown is for moderated online discussion groups.

Table 4.2: C7 How many of your work-based learning programmes or courses include the following…

Response	Online/ Onscreen testing	E-mail	Online evidence management	Online personal learning space	Learner online discussion groups
All	28%	28%	14%	7%	3%
Most	21%	24%	13%	7%	3%
Some	28%	34%	33%	26%	14%
None	15%	10%	28%	44%	64%
No reply	7%	4%	13%	16%	16%
Base: All respondents	215	215	215	215	215

Around one in seven providers (14%) have introduced a single system which:

- allows them to track and manage learners;
- helps them develop and deliver learning content;
- lets learners manage their own evidence portfolios online;
- lets learners access learning content.

A further 11% have a single system which does three of these, whilst 17% have systems which do two. Most commonly over half (56%) of providers have a single system which allows them to track and manage learners. Over one third have a system that incorporates the development and delivery of learning content (36%) and allows learners to access learning content (37%).

Table 4.3: C8 Have you introduced a single system such as an integrated learner management system or virtual learning environment which…?

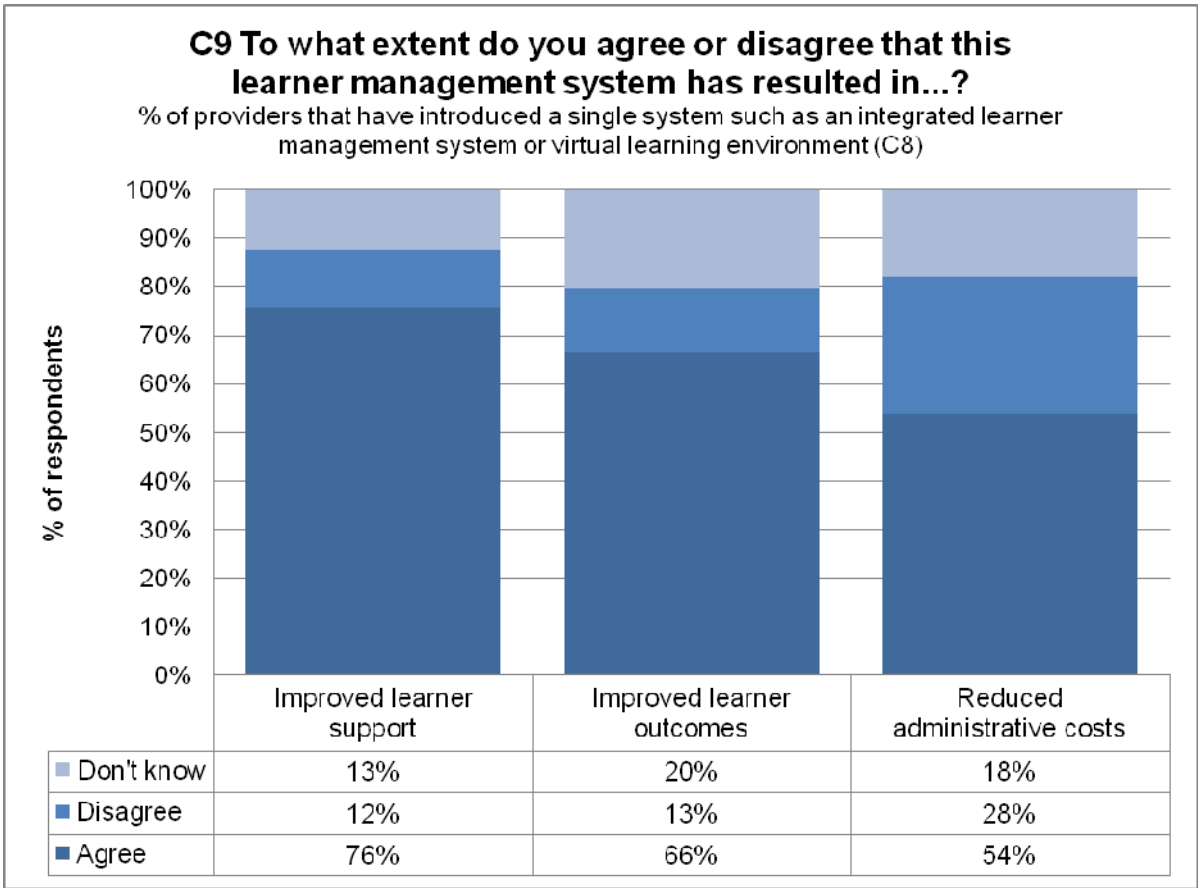
Function of system	% of respondents
Allows you to track and manage learners	56%
Lets learners access learning content	37%
Helps you develop and deliver learning content	36%
Lets learners manage their own evidence portfolios online	25%
No reply	29%
Base: All providers	215

Multiple responses

A number of providers we visited recognised there may be benefits to such systems but identified issues related to costs and infrastructure.

Over three quarters (76%) of providers that have introduced a single system such as an integrated learner management system or virtual learning environment believe it has improved learner support and two thirds (66%) agreed it has improved learner outcomes. Over half (54%) agreed it had reduced administrative costs, although one quarter (28%) disagreed.

Figure 4.2: Impact of learner managment systems



	Improved learner support	Improved learner outcomes	Reduced administrative costs
Don't know	13%	20%	18%
Disagree	12%	13%	28%
Agree	76%	66%	54%

3.3 Practitioners use of technology

Tutors, assessors and verifiers use technology for a wide range of purposes. Nearly all use it to:

- support their own professional development (96%);
- collaborate with colleagues (95%);
- research & access learning materials (93%);
- create paper-based learning materials (93%).

Although most practitioners do, they are least likely to use it to:

- encourage collaboration between learners (76%);
- create electronic learning materials (77%).
- manage individual targets setting for learners (78%).

Table 4.4: B1 Do you regularly use technology to carry out the following tasks…?

Task	% of respondents using technology all the time, frequently or occasionally
Support your own professional development	96%
Collaborate with colleagues	95%
Research and access learning material	93%
Create paper-based learning materials	93%
Communicate with employers	89%
Track learners' progress	87%
Help learners collect evidence	86%
Communicate with learners in their workplace	84%
Assess learners' work	82%
Make learning materials available to learners electronically	81%
Manage individual target setting for learners	78%
Create electronic learning materials	77%
Encourage collaboration between learners	76%
Base: All practitioners	881

Multiple responses

Comparison with the 2007-08 survey suggests that technology is being used more often by practitioners to communicate with learners in the workplace and assess learners work.

Table 4.5: B1 Do you regularly use technology to carry out the following tasks…?

Type of technology	% of practitioners using technology all the time or frequently	
	2009-10	2007-08
Collaborate with colleagues	85%	87%
Support your own professional development	83%	Not asked
Research and access learning material	75%	78%
Create paper-based learning materials	73%	77%
Track learners' progress	73%	69%
Communicate with employers	67%	Not asked
Help learners collect evidence	60%	58%
Communicate with learners in their workplace	**61%**	**43%**
Manage individual target setting for learners	56%	50%
Assess learners' work	**55%**	**46%**
Make learning materials available to learners electronically	48%	49%
Encourage collaboration between learners	44%	44%
Create electronic learning materials	41%	47%
Base: All practitioners	881	387

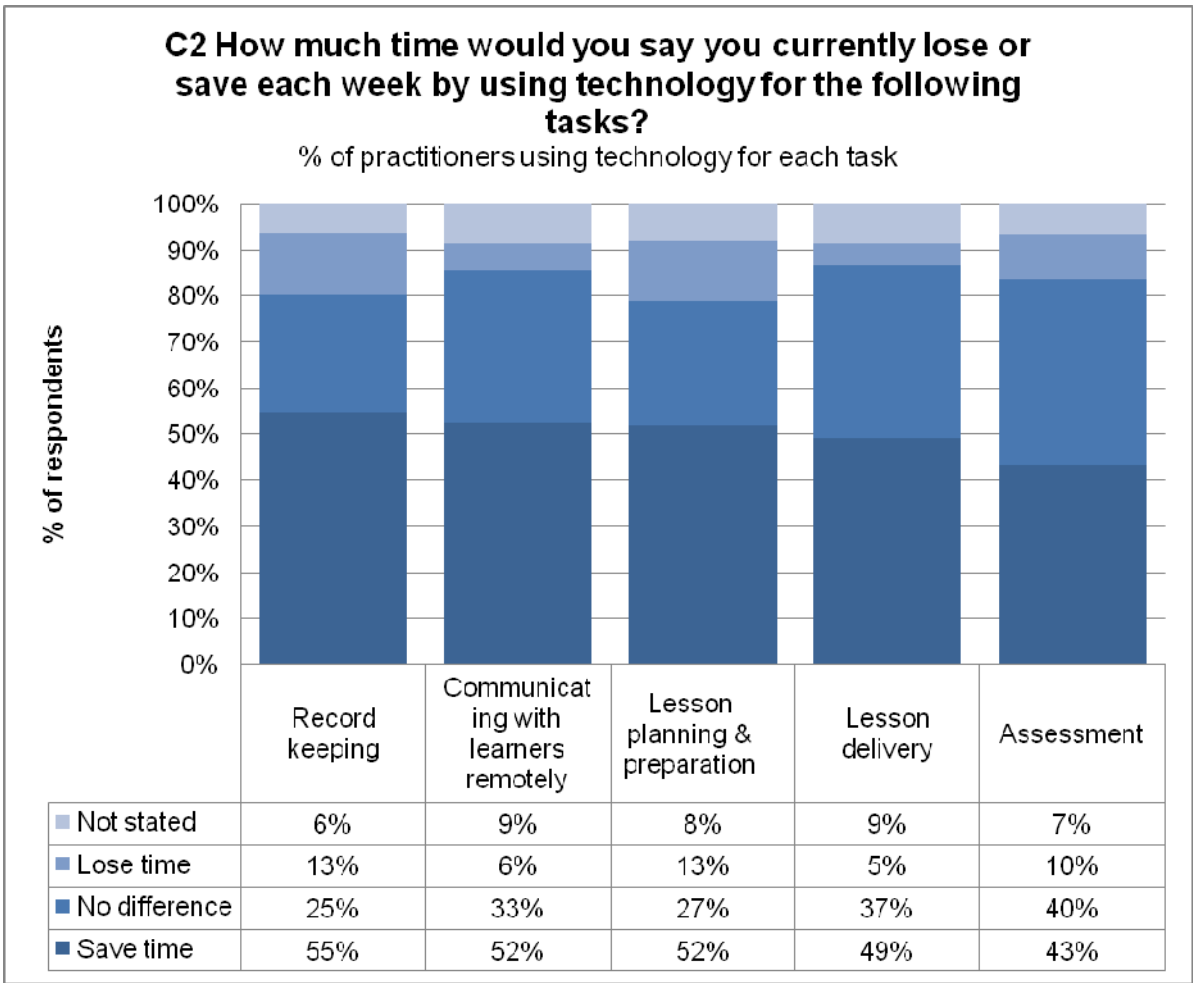
Multiple responses

Practitioners were asked how much time they saved or lost each week by using ICT for various tasks. Around half of practitioners who use technology for the following tasks find that it saves them time:

- record keeping (55%);
- lesson planning and preparation (52%);
- communicating with learners (52%);
- lesson delivery (49%).

This is similar to the findings last year, and shows that more practitioners than in 2007-08 (41%) believe that using technology to communicate with learners is saving them time.

Figure 4.3: For which tasks does technology save practitioners time?



Number of respondents using each technology for each task: record keeping (815); communicating with learners remotely (683); Lesson planning and preparation (674); Lesson delivery (661); Assessment (739).

Using technology for record keeping and lesson planning can save practitioners most time during a week. Each saves one third of practitioners over an hour each week.

Table 4.6: C2 How much time would you say that you currently lose or save each week by using the following technology?

Response		Record keeping	Comm-unicating with learners	Lesson planning	Lesson delivery	Assess-ment
Time saved	>2 hrs	17%	14%	15%	11%	14%
	1-2 hrs	16%	13%	18%	16%	11%
	<1 hr	21%	25%	19%	22%	18%
Makes no difference		25%	33%	27%	37%	40%
Time lost	<1 hr	4%	3%	5%	2%	5%
	1-2 hrs	5%	1%	3%	1%	2%
	>2 hrs	4%	2%	5%	2%	3%
Not stated		6%	9%	8%	9%	7%
Base: Practitioners using each technology for task		815	683	674	661	739

Overall more providers believe that their practitioners are making effective use of technology for the learner support aspects of provision than the delivery of learning:

- three quarters of providers (76%) agree that tutors, assessors and verifiers are able to share and use information and data effectively for the benefit of learners. 15% disagree;
- around half of providers (48%) agree that Tutors exploit technology consistently to offer engaging and effective learning experiences. Over one third disagree (36%).

This is similar to the response received over the last two years. Practitioners skills are discussed further in the next chapter.

3.4 Conclusions

The way technology is used has remained fairly consistent over the last three years. The main changes have been an increasing use of e-mail to communicate between learners and tutors and online or onscreen key skills tests.

More providers are using online evidence management for both their own management purposes and to help learners manage their own learning. Around one quarter have single systems in place covering both the learner support and learning

delivery aspects of provision. Overall there is still greater focus on the use of systems to manage learning, although those providers that have implemented single systems are more likely to identify benefits associated with learning outcomes and learner support than reduced administrative costs. Costs, infrastructure and nervousness that systems may not meet the provider's needs are the main barriers to greater take-up of these systems.

4 Practitioners skills

4.1 Introduction

Technology confident effective providers:

- effectively implement the use of technology in learning and teaching;
- are capable of supporting home and extended learning;
- have technology based tools and resources to support effective teaching.

In this section we discuss:

- whether practitioners have the skills and competences to ensure technology is used to deliver effective learning;
- assess the e-maturity of work-based learners using the methodology used last year.

4.2 Practitioners' skills

The majority of WBL providers (71%) believe there is a gap between the skills their workforce needs to effectively deliver and support learning using technology and the skills they actually have. This is a slight fall compared to two years ago (80%). Having a written plan outlining how a provider intends to use technology does not appear to make any difference as to whether they identify a skills gap or not.

To explore this further they were asked to describe the skills and knowledge of their practitioners in a number of technology areas using a rating based on the scale of used by the Generator Technology Improvement Leadership Tool[3]. We used the following descriptions:

- N/A – Our staff do not need this skill/knowledge;
- Beginning – Small numbers of staff have the skills/knowledge and the majority need further training/support;
- Developing – Large numbers of staff have the skills/knowledge but a few still need training and support
- Performing – The majority of staff have the skills/knowledge
- Outstanding – All staff have the skills/knowledge and our organisation has been highlighted externally as exemplar.

Over two fifths of providers believe that majority of their staff need further training and support relating to:

[3] http://www.generatorfeandskills.com

- skills to use technology to develop electronic learning materials (43%). One in ten believe the majority of their staff have these skills;
- skills to teach and support learners online (41%).

Around one third of providers thought the majority of their staff needed further training in all the technological areas listed. Three providers illustrated the problem.

Providers were most confident that the majority of their staff had the skills to use technology for assessment (33% are performing or outstanding) or face-to-face with learners (29% are performing or outstanding).

Table 5.1: E3 How would you describe the skills and knowledge of your tutors, assessors and verifiers related to the following technology areas?

Knowledge or skill area	% of employers rating practitioners' skills and knowledge as…	
	Beginning	Performing/ Outstanding
Skills to use technology to develop electronic learning materials	43%	10%
Skills to teach and support learners online	41%	14%
Knowledge about how to harness technology to manage learning	38%	19%
Knowledge about how to harness technology to deliver learning	37%	20%
Skills to use technology face-to-face with learners	36%	29%
Knowledge of online learning resources	34%	24%
Skills to use technology for assessment	31%	33%
Base: All providers	215	215

These skills gap areas are also identified by practitioners who provided their view on their own skills levels. Around one third of practitioners rate themselves as beginners in using technology to:

- develop electronic learning materials (36%);
- teach and support learners online (31%);
- teach and support learners remotely (30%).

Practitioners were much more advanced in their skills to use technology to:

- communicate with learners (50%);

- teach and support learners face-to-face (45%);
- assess learners (44%);
- track the progress of learners (42%).

Table 5.2: B5 Overall how would you rate your skills and knowledge in relation to the use of technology for the following…?

Use of technology	% of practitioners rating their skills and knowledge as…	
	Beginner	Advanced
Developing electronic learning materials	36%	11%
Teaching and supporting learners online	31%	12%
Teaching and supporting learners remotely	30%	12%
Assessing learners	11%	44%
Tracking progress of learners	9%	42%
Manage learning and workload	8%	38%
Teaching and supporting learners face-to-face	7%	45%
Communicating with learners	5%	50%
Base: All practitioners	881	881

Providers are finding it most difficult to ensure that staff have the skills they most need. Half (54%) have found it difficult to ensure that staff have the skills to develop electronic learning materials. Two fifths (44%) have found it difficult to ensure staff can teach and support learners online or know about how to harness technology to deliver learning.

Table 5.3: E5 and E3 providers' rating of the skills their practitioners have and the skills they are finding diffcult to ensure they have.

Knowledge or skill area	% of employers …	
	reporting the majority of practitioners need further training in these skills	finding it difficult to ensure practitioners have these skills and knowledge
Skills to use technology to develop electronic learning materials	43%	54%
Skills to teach and support learners online	41%	44%

Knowledge or skill area	% of employers …	
	reporting the majority of practitioners need further training in these skills	finding it difficult to ensure practitioners have these skills and knowledge
Knowledge about how to harness technology to manage learning	38%	36%
Knowledge about how to harness technology to deliver learning	37%	44%
Skills to use technology face-to-face with learners	36%	30%
Knowledge of online learning resources	34%	27%
Skills to use technology for assessment	31%	30%
Base: All providers	215	215

The main barrier appears to be finding time to train staff in the skills they need (66%), although over one third report difficulties finding appropriate provision (35%) or providing staff with opportunity to practice and use their knowledge or skills (39%). Two providers illustrated ways they addressed these challenges.

Lack of time for something can also be interpreted as it having a lower priority than other things. One quarter of providers (26%) identified motivating staff as an issue.

Table 5.4: E5 What difficulties are you having ensuring your staff have the appropriate skills or knowledge to use technology?

Difficulty	% of respondents
Finding time to train them	66%
Providing staff with opportunity to practice and use their knowledge or skills	39%
Finding appropriate training provision	35%
Motivating staff to learn	26%
Effectively sharing knowledge and skills between staff	20%
Management commitment	9%
Finance/funding issues	4%
Staff adopting new ideas and technology	1%
No reply	13%
Base: All providers	215

Multiple responses

Practitioners also report time, either to learn (57%) or practice new skills (48%), as the main barrier preventing them gaining the skills and knowledge to use technology effectively. One fifth (22%) have not identified any barriers.

Table 5.5: B6 What are the main barriers preventing you from getting the skills and knowledge to use technology more effectively?

Barrier	% of respondents
Time to learn	57%
Time to implement and practice new skills and knowledge gained	48%
No barriers	22%
Limited opportunity to share knowledge with, and learn from, colleagues	21%
Commitment of managers to support training in this area	15%
Commitment of managers to make greater use of technology	15%
Unconvinced of the need to gain these skills	5%
No reply	4%
Base: All practitioners	881

Multiple responses

5 Impact and challenges

5.1 Introduction

Much of the previous analysis in this report has reviewed the use of technology in the WBL sector and examined the processes underpinning its use. In order to assess the effectiveness of the Harnessing Technology strategy, it is necessary to review what impact technology is having and how this relates to the intended system outcomes.

In this section we present:

- providers' and practitioners' views on the impact technology has had;
- some of the challenges associated with implementing technology in the future.

5.2 Impact of technology

Nearly two thirds of providers (64%) believe the use of technology has increased the choice of methods of learning for learners. Over half also believe it has:

- increased the motivation of learners (58%);
- increased learner satisfaction (52%);
- increased the choice of learning opportunities available (52%);
- ensured the learning experience is more closely tailored to individual learner needs (50%).

Compared to 2007-08 more providers believe technology has allowed learners to have a better choice of learning opportunities.

Fewer providers identified benefits related to attracting more or different learners. Indeed some providers we visited felt that particular learners would by put off by technology.

Few also identify benefits associated with employers. In some cases providers feel this reflects a lack of interest amongst employers.

Table 6.1: D7 Overall what impacts do you believe your broader use of technology has had on learners and employers?

Learner/employer impact	% of respondents	
	2009-10	2007-08
Increased the choice of methods of learning for learners	64%	72%
Increased the motivation of learners	58%	48%
Increased learner satisfaction	52%	46%
Increased the choice of learning opportunities available	52%	38%
The learning experience is more closely tailored to individual learner needs	50%	51%
Increase communication with employers	33%	Not asked
Increase employer satisfaction	27%	Not asked
Attracted more learners	19%	15%
Attracted different groups of learners	17%	15%
Base: All providers	215	160

Multiple responses

Providers also identified a range of benefits for their own organisation and staff. Mostly these are associated with time savings for practitioners (70%) and the more efficient management and administration of learning (63%). Around half also identified:

- increased collaboration between staff (56%);
- increased the motivation of staff (50%);
- improved the quality of learning delivered (50%);
- more effective assessment of learning (49%);
- reduced environmental impact (48%).

Providers are more likely to identify impacts on processes than outcomes, perhaps because the impact of technology is difficult to isolate. Fewer providers identified impacts on achievement (36%), completion (28%) or retention (26%).

Compared to 2007-08 many more providers report that technology has increased collaboration between staff.

Table 6.2: D8 Overall what impacts do you believe your broader use of technology has had on your staff and organisation?

Learner/employer impact	% of respondents	
	2009-10	2007-08
Saved time for tutors, assessors and verifiers	70%	58%
More efficient management and administration of learning	63%	73%
Increased collaboration between staff	56%	34%
Increased the motivation of staff	50%	48%
Improved the quality of learning delivered	50%	58%
More effective assessment of learning	49%	50%
Reduced our environmental impact	48%	Not asked
Increased achievement	36%	45%
It has reduced costs	33%	Not asked
Increased completion	28%	39%
Increased retention	26%	32%
Base: All providers	215	160

Multiple responses

Practitioners were also asked whether they thought the use of technology has impacted positively on the activities of their employer. Their views were similar to the responses of providers. Around 70% think that technology has, to a large extent or a bit:

- improved staff continuing professional development (73%);
- increased efficiencies in delivery and Administration (72%);
- allowed greater choice in learning opportunities for learners (69%).

Fewest think it has:

- improved engagement with employers (51%);
- improved learner retention (51%);
- helped attract more learners (53%).

Fewer practitioners than in 2007-08 believe technology has allowed greater choice in learning opportunities for learners.

Table 6.3: C3 Do you think that using technology has impacted positively in any of the following areas at your provider?

Impact	% of respondents responding 'a large extent' or 'a bit'	
	2009-10	2007-08
Improved staff continuing professional development	73%	72%
Increased efficiencies in delivery and administration	72%	76%
Allowed greater choice in learning opportunities for learners	69%	81%
Improved learner satisfaction	66%	68%
Improved learner outcomes	63%	Not asked
Improved staff satisfaction	62%	66%
Increased efficiencies in assessing learners	62%	59%
Helped attract more learners	53%	53%
Improved learner retention	51%	53%
Improved engagement with employers	51%	Not asked
Base: All providers	881	387

Multiple responses

5.3 Challenges

Providers have identified public audit requirements as a major barrier to their effective use of technology. Specifically one fifth of providers (20%) consider the LSC's requirement for a paper signature to be a complete block to its effective use. A further 44% consider it a major barrier. In addition over half (55%) consider that the requirement for paper documents for audit to be a complete block (11%) or a major barrier (44%). Just 7% did not consider either of these two issues to be a barrier. In addition:

- two fifths thought that LSC system for funding work-based learning was either a major barrier (34%) or a complete block (7%);
- one quarter consider the provider inspection system to be either a major barrier (18%) or a complete block (6%). However 23% did not consider it to be a barrier at all. A separate question shows that two thirds of providers have introduced technology or used it differently as a result of an inspection report or their own self-assessment.

Train to Gain providers that took part in our focus group discussed these issues at length. A number identified the funding bodies' inability to accept electronic signatures as evidence requirements for the courses they fund as a significant barrier to their effective and efficient use of technology. They also highlighted frustration that some auditors were not IT literate and preferred paper. One large provider pointed out that they only used electronic documentation except for their WBL provision for one large funding agency, whilst another suggested that the requirements meant that staff had to do paper and electronic based monitoring which makes it very difficult to encourage staff to learn the new ICT skills.

More broadly some providers in the focus group felt that the main impact on their use of technology was the funding regime and that frequent changes made it more difficult and expensive to develop monitoring and tracking systems. It also made it more difficult to undertake long-term planning and made capital investments more risky.

In terms internal challenges nearly half (48%) of providers responding to the survey consider that not having the time to investigate or implement the use of technology is a major barrier to its effective use, although only 1% consider this to be a complete blockage. This was highlighted as a major barrier in last year's survey.

Given the previous findings on skills gaps it is unsurprising to find that 79% of all providers consider staff skills to be a barrier, although for the majority (53%) this is only considered slight. Amongst those providers identifying skills gaps 36% consider lack of skills to be a major barrier or complete block.

Table 6.4: F3 To what extent do you think the following factors are barriers to the effective use of technology within your organisation?

Barrier	% of respondents answering 'a major barrier' or a 'complete block'
The requirement for paper signatures	64%
Requirement for paper documents for audit	55%
Time available to investigate or implement the use of technology	49%
The system for funding WBL	41%
Financial return on investment	28%
Skills amongst staff to use technology effectively	27%
Employer interest in the use of technology	25%
Provider inspection system/framework	24%
Our organisation's ICT infrastructure	20%
Quality of software available to help deliver and support learning	16%
Quality of software available to manage learning	14%
Learner interest in the use of technology	13%
Management's knowledge about its potential use and implementation	8%
Base: All providers	215

Multiple responses

Providers were also asked an open question about the factors preventing their organisation using technology effectively. Over half of those that replied made comments relating to a lack of funding and the cost of using technology. This option was removed from the barriers question this year, but last year 67% of providers reported that lack of capital funding was one of the three main barriers to their use of technology to manage or deliver e-learning in the next two years. This was also the highest response.

5.4 Conclusions

Providers and practitioners are most likely to identify business benefits such as time savings and more efficient management of learning as a result of the use of technology. They are more likely to identify impacts on processes than outcomes, perhaps because the impact of technology is difficult to isolate. They also both believe that the major impact on learners has been the provision of greater choice of learning opportunities. The number of providers believing this has increased over

the last two years. Providers are less likely to identify impacts relating to employers or to attracting new or different learners.

The majority of providers believe that the LSC's requirement for paper signatures is a significant barrier to their effective use of technology. A significant minority consider it is a complete blockage. They are also frustrated by the paper-based audit requirements.

In terms internal challenges nearly half of providers consider that not having the time to investigate or implement the use of technology is a major barrier to its effective use. This was also highlighted as a major barrier in last year's survey.

6 Conclusions

6.1 Introduction

In this chapter we present progress against the Harnessing Technology Strategy's System Outcomes before summarising our conclusions and discussing further work.

6.2 Work-based learning sector system outcomes

The Harnessing Technology Next Generation Learning Strategy sets out a number of system outcomes in order to illustrate its success. This research aims to help measure progress against these strategic outcomes within the work-based learning sector.

Tables 7.1-7.5 provide indicators for each of the outcome areas and where appropriate illustrates progress over the last 12 months based on these survey results. Overall the tables show little change compared with the baseline. Where there are differences these are generally not large enough for us to be confident they are not due to sample error. Specifically the indicators for the system outcomes associated with:

- Technology confident effective providers show:
  - 32% of providers can be considered e-mature and 24% are late adopters. Direct comparison with previous years should be undertaken with care due to changing methodology;
  - around one third of providers have some capability to support technology based learning off-site. Similar to last year;
  - around half of providers believe that technology is used effectively by tutors to offer engaging learning experiences and that technology has improved the quality of learning delivered. This is similar to last year.
- Engaged and empowered learners show:
  - most providers ensure that learners have access to technology to help them undertake their learning. Although the number of learners per computer on a provider's premises has declined, around three quarters of providers are also providing access for learners when off the premises through access to laptops;
  - around half of providers encourage their staff to consider e-safety standards and a third include this within their written strategy. This has not been assessed previously.
- Confident system leadership and innovation show:
  - around two thirds of providers link technology to their priorities through a written plan. One third consider themselves to be performing or outstanding in their commitment to systematically integrate technology into their organisation's vision and strategic planning;

  - around two fifths of providers think the WBL funding system is a major barrier or complete block to their effective use of technology. In comparison just over half of providers have worked with employers and/or industry bodies to help them harness technology and consider this to have been effective;
  - around three quarters of providers think they encourage staff to be creative in the use of technology and to share and embed good practice.
- Enabling infrastructure and processes show:
  - one quarter of providers have a single system that allows both providers and learners to either manage their learning and/or access learning content;
  - around three quarters of practitioners are satisfied that they have access to appropriate technology and resources, similar to last year. However the proportion of providers using computer-based learning resources has fallen slightly compared to previous years, particularly amongst those providers delivering Entry to Employment and Train to Gain;
  - just under two thirds of providers report that technology has resulted in more efficient management and administration of learning, although still only around one third that have developed computer-based learning resources think they will recover the costs of their development. Nearly half of providers report that technology has reduced their environmental impact.
- Improved personalised learning experiences show:
  - around two thirds of providers think technology has improved learners' choice of methods of learning. An increasing number (around half) believe it has increased learners' choice of learning opportunities;
  - half of providers use online or onscreen testing for all or most of their learning programmes and also think technology has led to more effective assessment of learning. Around one quarter use online evidence management for all or most of their learning programmes and around two thirds use technology to help assess the initial skill needs of work-based learners. The latter has declined slightly since last year;
  - over half of providers report that the use of technology has improved learner satisfaction and motivation.

Table 7.1: Technology confident effective providers

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
1. Provider capability in place to support home and extended learning;	% of providers have a computer network accessible remotely by learners	38%	38%
	% of providers have laptops for loan to learners in the workplace	24%	27%
	% of providers offer technical support for learners off-site	18%	18%
	% of providers have introduced an integrated learner management system which lets learners manage their evidence portfolios online	26%	25%
	% of providers have a dedicated website to support learners	32%	36%
2. Technology based tools and resources support effective teaching.	% of providers agree that tutors exploit technology consistently to offer engaging and effective learning experiences	50%	48%
	% of providers report that technology has improved the quality of learning delivered	54%	50%
	% of practitioners report that the use of technology has improved learner outcomes either a bit or to a large extent	64%	62%
	% of providers report that technology has increased achievement	39%	36%

Table 7.2: Engaged and empowered learners

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
1. Learner entitlement is met with all vulnerable groups supported.	Median average work-based learners per computer available at a provider's premises.	7.2	8.2
	% of providers with Laptops for loan to learners in the workplace	34%	27%
	% of Laptops available for learners during tutor/assessor visits to the workplace	N/A	72%
2. Technology adds value to family and informal learning	Not applicable		
3. Learners use technology confidently and safely to support their learning	% of providers have a written strategy (either as part of a wider strategy or on its own) that includes E-safety/security	N/A	31%
	% of providers that think their organisation encourages staff to consider e-safety standards	N/A	54%

Table 7.3: Confident system leadership and innovation

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
1. Education leaders understand how technology supports their priorities	% of providers consider they are performing or outstanding in their commitment to systematically integrate technology into their organisation's vision and strategic planning	N/A	31%
	% of providers with a written plan (either as part of wider strategy or on its own) outlining how they intend to use technology	N/A	65%
2. Partners buy into strategic vision and actively support implementation	% of providers think the WBL funding system is a major barrier or complete block to their effective use of technology	N/A	43%
	% of providers have worked with employers to help them harness technology consider this to have been effective	N/A	59%
	% of providers have worked with industry bodies to help them harness technology consider this to have been effective	N/A	58%
3. Innovation encouraged, good practice shared and adopted	% of providers that think their organisation encourages staff to be creative in the use of technology (well/very well)	N/A	75%
	% of providers that think their organisation encourages staff to share good practice in relation to technology (well/very well)	N/A	79%
	% of providers that think their organisation encourages staff to adopt and embed good practice in relation to technology (well/very well)	N/A	78%

Table 7.4: Enabling infrastructure and processes

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
1. Systems for learner services are fully integrated	% of providers agree that practitioners are able to share and use information and data effectively for the benefit of learners	69%	76%
	% of providers have a single system that allows them to do three of: track and manage learners; develop and deliver learning content; lets learners manage their own evidence portfolios online; lets learners access learning content.	N/A	25%
2. High quality, tailored resources are available to all learners	% of practitioners are satisfied or very satisfied that they have access to appropriate technology and digital resources	77%	72%
	% of providers delivering Apprenticeships programmes are using computer-based learning resources within these programmes	73%	68%
	% of providers delivering E2E programmes are using computer-based learning resources within these programmes	78%	61%
	% of providers delivering Train to Gain programmes are using computer-based learning resources within these programmes	58%	46%
3. Infrastructure is designed for efficiency and sustainability.	% of providers report that technology has resulted in more efficient management and administration of learning	74%	63%
	% of practitioners think that using technology has impacted to a large extent or a bit on increased efficiencies in delivery and administration	77%	72%
	% of providers introducing an integrated learner management system agrees that it has reduced administrative costs	48%	54%

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
	% of providers developing computer-based learning resources themselves or in partnership report that future income or cost savings will cover the costs of their development.	42%	37%
	% of providers reporting that technology has reduced their environmental impact	N/A	48%

Table 7.5: Improved personalised learning experiences

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
1. Learners able to exercise choice among flexible learning options	% of providers report that technology has increased the choice of methods of learning for learners	59%	64%
	% of providers report that technology has increased the choice of learning opportunities offered	32%	52%
	% of practitioners report that technology has allowed greater choice in learning opportunities for learners	78%	69%
2. Tailored and responsive assessment which addresses learners'	% of providers report that technology has led to more effective assessment of learning	53%	49%
	% of practitioners report that technology has increased efficiencies in assessing learners	65%	62%

Strategic outcome	Indicator	Baseline (2008-09)	Current (2009-10)
needs	% of providers use online or onscreen testing for all or most of their learning programmes	N/A	50%
	% of providers use online evidence management for all or most of their learning programmes	19%	26%
	% of providers use technology to help assess the initial skill needs of work-based learners	81%	67%
3. Engaging learning experiences which support deep and higher order learning	% of providers using report that the use of technology has improved learner motivation	N/A	58%
	% of providers report that the use of technology has improved learner satisfaction	N/A	52%

6.3 Management, planning and partnerships

The majority of providers have a written plan setting out how they intend to use technology. Smaller providers are less likely to have a written plan, partly because they do no think it is needed. Written plans are most likely to include a vision for the use of technology and a plan to train staff to use it. They are least likely to consider how to use technology to train staff more generally or to engage employers.

E-safety and e-security is included in around half of providers' written plans. Some providers have not yet considered it to be an issue, but others, particularly those working to enhance remote access, are having to address issues associated with access to data.

Most providers feel their organisation encourages staff to be creative in their use of technology as well as to share and embed good practice.

Three quarters of providers have worked in partnership with another organisation to help harness technology more effectively. Half have worked with technology suppliers and nearly one third with other providers. Most providers that have worked with another organisation have found this to be effective. This clarifies the findings of last year's survey which left some doubt about the effectiveness of partnership working.

6.4 Infrastructure and learning resources

Over the period of the five provider surveys the levels and types of technology used appears to have remained fairly static. Any changes are small and difficult to distinguish from sample error, although the survey appears to indicate increasing use of digital voice recorders for collecting evidence. Small providers and those without written plans for the use of technology tend use less technology.

This year's providers survey along with our qualitative visits and practitioner survey suggests that providers are making extensive use of provider and assessor laptops to support learners in the workplace and that the usefulness of this has been helped by increasing use of mobile internet access. Some providers are also now using smart phones for multiple purposes which such as collecting evidence, accessing documents and communicating with learners. Despite most providers being satisfied with practitioners' access to technology, fewer are satisfied with learners' access.

Slightly fewer providers appear to be using computer based resources than last year. This may reflect a slight change in the type of providers responding. More smaller providers and providers delivering Train to Gain responded than last year and these groups are less likely to use computer based learning resources.

There is general satisfaction with the availability and quality of commercially and freely available learning resources. Practitioners that are less satisfied tend to be less knowledgeable about their availability. As with last year over three quarters of practitioners report using technology to create electronic learning resources at least occasionally, but there is still uncertainty amongst many providers over whether future income or savings will cover the costs of the resources developed.

There is further evidence from practitioners that management information systems and online resources can save practitioners a significant amount of time during a week. Although no more practitioners are using interactive whiteboards or learning platforms than last year they appear to be using them more effectively with a greater proportion reporting that they save time.

New mobile technology and learning materials are top of providers' wish lists for the future, if capital funding were available, but some providers are mindful that new capital tends to also link to increased training costs.

6.5 Use of technology

The way technology is used has remained fairly consistent over the last three years. The main changes have been an increasing use of e-mail to communicate between learners and tutors and online or onscreen key skills tests.

More providers are using online evidence management for both their own management purposes and to help learners manage their own learning. Around one quarter have single systems in place covering both the learner support and learning delivery aspects of provision. Overall there is still greater focus on the use of systems to manage learning, although those providers that have implemented single systems are more likely to identify benefits associated with learning outcomes and learner support than reduced administrative costs. Costs, infrastructure and nervousness that systems may not meet the provider's needs are the main barriers to greater take-up of these systems.

6.6 Practitioners skills

The majority of providers believe there is a gap between the skills their workforce needs to effectively deliver and support learning using technology and the skills they actually have. The main gaps identified were:

- skills to use technology to develop electronic learning materials;
- skills to teach and support learners online.

These are the areas that practitioners feel they are least proficient and where providers are finding it most difficult to provide these skills. The main barrier appears

to be finding time to learn or practice new skills, although for some providers there are difficulties finding appropriate provision.

6.7 Impacts and challenges

Providers and practitioners are most likely to identify business benefits such as time savings and more efficient management of learning as a result of the use of technology. They are more likely to identify impacts on processes than outcomes, perhaps because the impact of technology is difficult to isolate. They also both believe that the major impact on learners has been the provision of greater choice of learning opportunities. The number of providers believing this has increased over the last two years. Providers are less likely to identify impacts relating to employers or to attracting new or different learners.

The majority of providers believe that the LSC's requirement for paper signatures is a significant barrier to their effective use of technology. A significant minority consider it is a complete blockage. They are also frustrated by the paper-based audit requirements.

In terms internal challenges nearly half of providers consider that not having the time to investigate or implement the use of technology is a major barrier to its effective use. This was also highlighted as a major barrier in last year's survey.

6.8 Further work

Over the last two years we have produced a range of baselines to measure progress against the Harness Technology System Outcomes and provided some indication of progress against these baselines. Further work will need to involve:

- narrowing down the range of measures for each indicator;
- relating these measures to those being collected in other sectors to ensure compatibility and collation of measures from across the FE and Skills sector.

Additional work will help us to understand the impact of these changes in methodology on comparisons with previous years so that some indication of changes over time can be measured.

This year we have changed a number of questions so that they are similar to the question used in the surveys of other parts of the sector. Further work is required to compare responses and investigate any similarities or differences. Refinement of future surveys will be needed to further align the surveys.