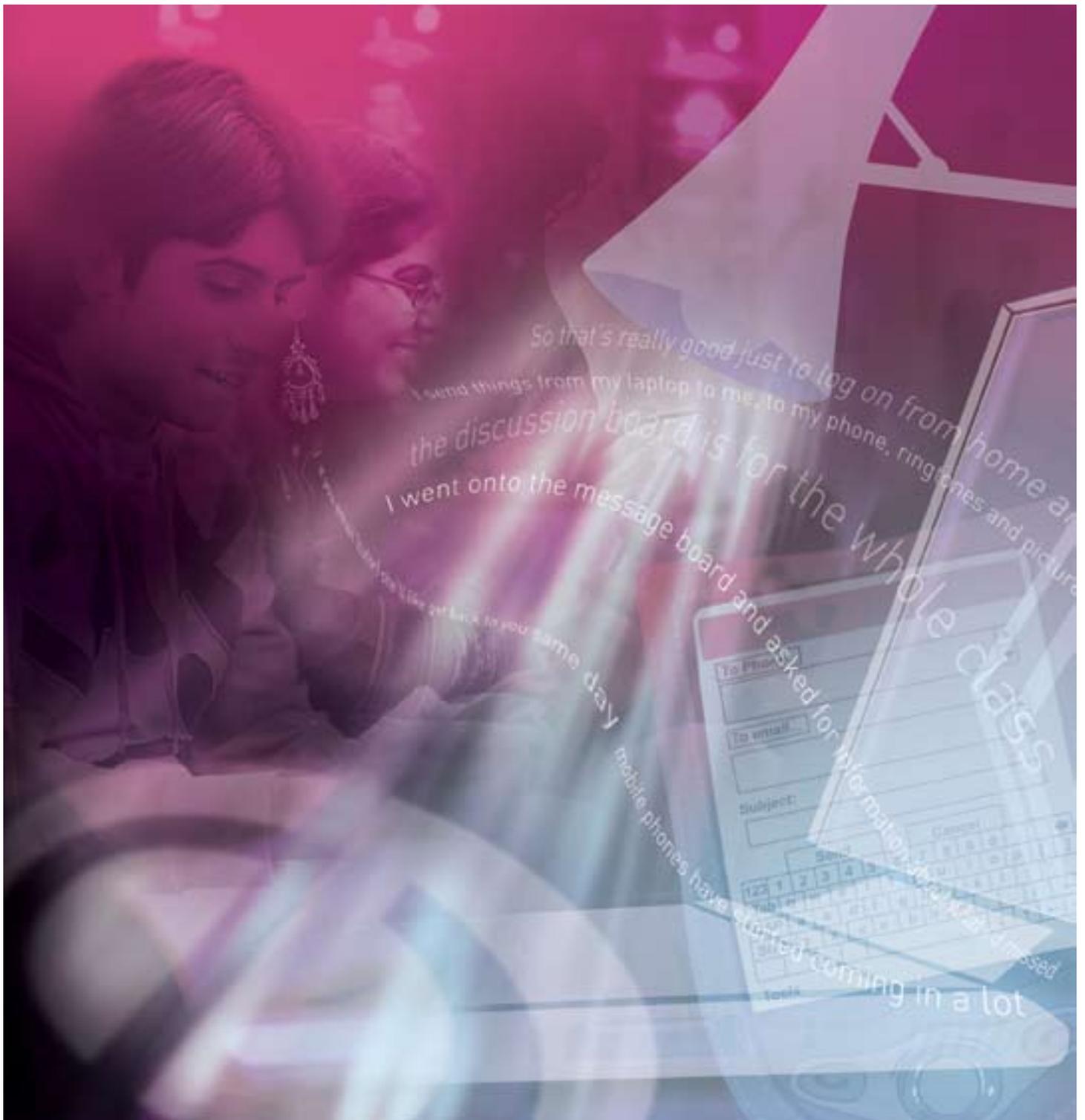
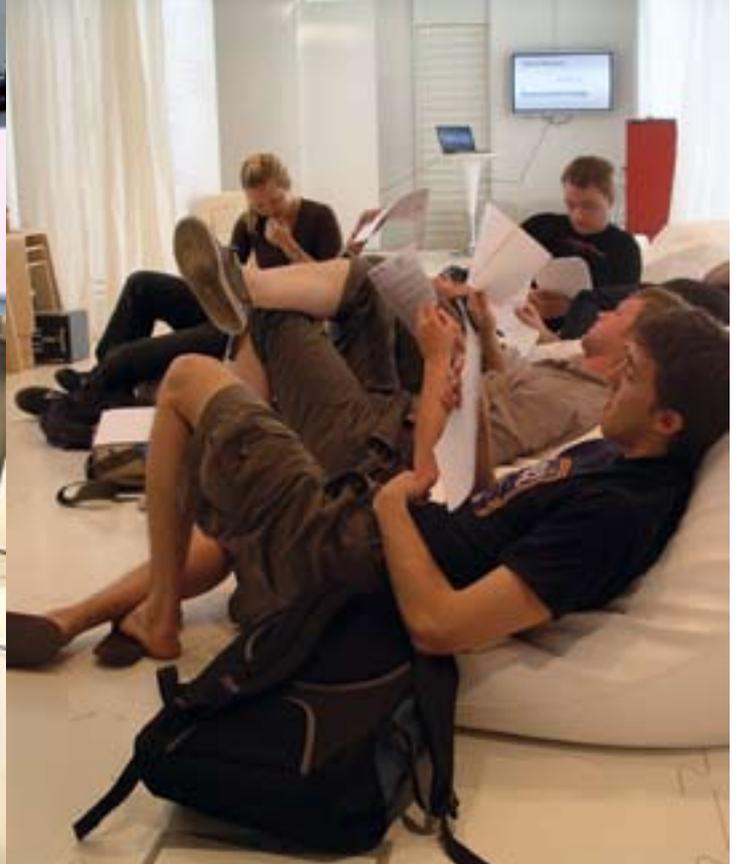


In Their Own Words

Exploring the learner's perspective on e-learning





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'There is in general a scarcity of studies of the learner experience [of e-learning]. In particular there is a scarcity of studies that can be characterised as expressing a "learner voice" i.e. in which the learners' own expressions of their experiences are central to the study.'

Learner Scoping Study (Sharpe et al., 2005)

Introduction

e-Learning is widely perceived as a learner-friendly mode of learning, offering alternative, self-paced and personalised ways of studying. But do we have any idea what learners themselves think or feel about e-learning – or what ‘choice’ and ‘personalisation’ mean to them?

Do we know, for example, which tools learners choose to work with from the range of personally owned and institutionally based technologies available to them? How they use these, and why? What frustrates or excites them about learning with technology, and how some of them overcome initial difficulties to learn effectively in a technology-rich environment – becoming what might be termed ‘digital learners’?

Understanding the views learners hold on e-learning is fast becoming an essential requirement for institutions and practitioners as emerging technologies and ubiquitous mobile connectivity challenge our preconceptions about what e-learning means and how learners should be supported.

In Their Own Words explores the under-researched and imperfectly understood world of the learner in a digital age by synthesising outcomes from the first phase of the Learner Experiences of e-Learning theme of the JISC e-Learning Programme. These outcomes include a scoping study and literature review, a methodology report and two studies – LEX: The Learner Experience of e-Learning (Creanor et al., 2006) and LXP: Student Experiences of e-Learning (Conole et al., 2006), plus five video case studies of experiences of e-learning recounted by learners themselves.

Because of the qualitative nature of the studies and the relatively small numbers of learners involved, it is not possible to generalise from the findings. However, the outcomes offer a compelling indication of the shape of learning in the future and open up a wider debate about how institutions should plan for the next generation of learners.

How to use this publication

The contents of *In Their Own Words* include resources in print and on a CD-ROM. These can be used in your institution or organisation in different ways – for example, to open up discussion or support further research into the learner’s perspective on e-learning. The publication’s suite of resources may thus form the basis for:

- staff development activities e.g. devising strategies for evaluating learners’ experiences of e-learning
- planning and debating e-learning policy and provision
- further research into the learner’s perspective on e-learning

CD-ROM

The CD-ROM on the inside back cover gives access to the reports and video case studies and also to five short guides which summarise key findings from the Phase 1 studies with recommendations for different roles and sectors. Where possible, these resources have been provided in more than one format.

Information sheets

Two pull-out information sheets form the final element of the publication. These provide explanations of two generic terms used widely in the studies – social software and personal tools and technologies. The information sheets offer an overview of the issues and benefits that learners’ use of such technologies raises for institutions and practitioners.

All resources, including the video case studies, may be uploaded to a learning platform for wider dissemination. Print documents may be photocopied as required for institutional use.



What the learners said

The studies in the JISC Learner Experiences of e-Learning theme use a blend of methodologies to investigate the role of technology in the lives of learners in a digital age. The evidence gathered during Phase 1 of this theme forms the basis of this publication and is summarised in this selection of learners' voices.

"Wikis are good sources of information and I can transfer information onto my PDA to review at a later date."

"Virtually all my work is done using a computer and the internet. However, I will still get books out of libraries, but will make notes on a word processor."

Learning in a digital age

Using technologies in all aspects of their studies, today's digital learners rarely see e-learning as a separate or special activity. They are adept at blending personal and institutionally owned technologies with traditional approaches to learning in ways that are unique to them.

"I don't know what I would do if I couldn't email people. I use it much more than actually talking on the phone."

"Instant messaging has become THE primary form of communication for many students, so why not encourage lecturers to communicate to students in a distributed fashion?"

"I had to leave early last week because my childminder was off ... so I went onto the message board and asked for information about what I'd missed."

Communication and networking

Technology supports a continuum of social interaction, increasing learners' ability to network with their peers and communicate with their tutors.

While the findings cannot be taken as representative of all learners, the studies provide evidence of the increasing pervasiveness of technology in life and learning.

Concerns

Some learners find difficulties with asynchronous communication, others indicate a need for more assistance with the technologies they use in assignments, and the digital divide remains a potent concern.

“...we didn't get any official teaching in how to use PowerPoint. It's just assumed ... because at a basic level it is quite easy to use, that you can do what you need to do on it without any training.”

“For research stuff, it is hard to imagine life without the services of Google and all its offshoots.”

Benefits

Learners also find significant advantages in using technology. These differ according to the individuals' perspectives, but increased choice, ease of access to information and control over when and how they learn are highly valued.

“... we have made a promise that if one of us isn't there, we'll record the lecture for them and send them it later ...”

“Because I have a hearing impairment, sometimes I don't find classroom environments easy to work in ... If I'm ill and I can't go to a class then I've missed that lesson and I'm relying on somebody else giving me that information, whereas if I'm doing it online ... I can catch up.”

Using a complex mix of virtual and face-to-face environments, personal and institutional technologies, learners of all ages are developing new working practices around the technologies available to them. Increasingly, they look for flexibility and openness in the institutional policies and provision that support their learning.



JISC Learner Experiences of e-Learning theme

JISC Learner Experiences of e-Learning theme

Exploring learners' perceptions of and participation in e-learning in a digital age

Dates

2005 – 2009

Outputs

Phase 1

www.jisc.ac.uk/elp_learneroutcomes

Phase 2

www.jisc.ac.uk/elp_learnerexperience

Scope

Learners in higher (HE) and further education (FE); adult and community learning (ACL) and work-based learning

Overview

The programme of research is ongoing in its exploration of:

- how learners engage with and experience e-learning
- how e-learning relates to and contributes to the whole learning experience
- what characterises effective e-learning
- learners' perceptions of and feelings about e-learning

Background

Despite the growing importance of learner voice as a strategy for quality improvement in education, research into e-learning has hitherto focused on the institutional and pedagogical implications of using technology in learning. Little attention has been paid to learners' own perceptions of e-learning or to how they use technology to learn more effectively.

In response, the JISC e-Learning Programme has funded a two-part sequence of studies under the Learner Experiences of e-Learning theme, with the aim of informing the development of appropriate learning environments and tools and the effective design of learning activities. The outcomes of Phase 1 have provided striking insights into the way 21st century digital learners select and use technologies for learning, revealing some important implications for institutional IT provision, academic practice and learning support.

Phase 2 of the theme continues until 2009 and investigates learners' perceptions of blended learning, the distinctive experiences of learners with disabilities and – in an important longitudinal study – how learners use technology differently as they progress from one stage of education to another.

Learner Scoping study

To commence work under the theme, the Learner Scoping study (Sharpe et al., 2005)¹ reviewed existing research into learners and e-learning across the post-16 sector, seeking out those studies in particular which 'allowed the learner's voice to shine through'.

The review found little that covered the holistic nature of learners' experiences, or made learners' own expressions of their experiences the central focus of the study. Enquiries

¹ Sharpe, R., Benfield, G., Lessner, E. and De Cicco, E. (2005) *Learner Scoping study – Final report*, www.jisc.ac.uk/elp_learneroutcomes

‘A holistic view of e-learning should lead to a methodology which is open ended and empowering enough to allow the learners to be the ones who highlight the issues which are important to them.’

Learner Scoping study (Sharpe et al., 2005)

frequently centred on fully online rather than blended e-learning applications and reflected issues related to distance rather than campus-based learning. The more complex picture of how and why learners select and use different technologies as part of a richer pattern of lifestyle and learning choices required further investigation.

To support this process, the scoping study provided a database of all research reviewed under the enquiry, an evaluation matrix and a series of recommendations for the subsequent studies. It highlighted especially a need to explore the topic through learners’ own words using a broad definition of e-learning – one which included emerging and personal technologies, as well as those provided institutionally.

The scoping study recommendations

- Recognise the holistic nature of learners’ experiences of learning
- Use a blend of methodologies to capture learners’ motivations, beliefs and intentions towards using technology in learning
- Focus on learners’ own words to explore the meanings they attach to e-learning
- Identify the characteristics of expert e-learners to determine the most appropriate strategies for others





LEX: The Learner Experience of e-Learning study

LEX study

Investigating a broad spectrum of technology use by eliciting rich data about learners' feelings, beliefs and intentions towards e-learning

Dates

May 2005 – June 2006

Authors

Linda Creanor, Kathryn Trinder, Glasgow Caledonian University

Doug Gowan, Carol Howells, The Open Learning Partnership

Outputs

LEX: The Learner Experience of e-Learning – Final project report (Creanor et al., 2006)

LEX: Methodology report (Mayes, 2006)

www.jisc.ac.uk/elp_learneroutcomes

Scope

In-depth qualitative study involving 55 learners in HE, FE, ACL and work-based learning

Overview

The LEX study investigated learners' experiences of e-learning across a wide range of post-16 learning contexts using methodologies new to e-learning research

Aims

Following the recommendations of the scoping study, the LEX study captured learners' experiences of e-learning across a wide range of age groups, sectors and courses. Its aims were to determine:

- what characterises an effective e-learner
- what beliefs and intentions effective e-learners display
- what strategies and techniques effective e-learners use

Sample

The sample comprised mainly skilled digital learners in order to capture effective patterns of usage and behaviour and to avoid undue emphasis on the anxiety and frustration that frequently characterise those in the throes of learning new skills. Participants were recommended by their tutors as using technologies in learning, though they may not have been the most successful learners in terms of course assessments.

Fifty five learners were selected to provide a balance of age groups, genders, educational achievement and previous experience of technology. The majority (71%) were in employment, with 18 working full time and 21 part time. A further five were actively seeking employment.

Figure 1 Age range of participants in the LEX study

Age	No of participants	Percent
16-24	24	43.6%
25-34	6	10.9%
35-54	20	36.4%
55-64	2	3.6%
65+	2	3.6%
Unstated	1	1.8%

The group comprised 24 males (43.7%) and 30 females (54.6%) – one participant's gender was not given. Overall, three HE, four FE institutions and two ACL organisations were involved in the study.

‘As the learners reflected on and interpreted their experiences, both positive and negative, the underlying themes gradually surfaced and were cross-referenced by the researchers at group level.’

LEX: The Learner Experience of e-Learning – Final project report (Creanor et al., 2006)

Methods

Data was collected from face-to-face interviews, supported on occasions by focus groups.

Starting from the premise that learners are experts in their own experiences, an interpretative phenomenological approach (IPA) was adopted, in which interviewers encourage subjects to recount and interpret their own experiences. Designed to capture the meanings learners derive from their experiences of learning, this methodology explores what is important to learners, rather than tests hypotheses put forward by a research team.

An additional technique, Interview plus, used an artefact related to learning experiences, such as a web log (blog), or resources in an e-portfolio, to aid recall and discussion about the experience. Combining the two methodologies enabled a series of subjective, but richly informative insights into learners’ experiences to emerge.

A full account of the research methodology can be found in LEX: Methodology report (Mayes, 2006).

Findings

The LEX study reveals a wide variety of experience regardless of the sector the learners represent – in fact variations between learners within sectors are at least as important as variation across the sectors. Learners often do not recognise e-learning as separate from other approaches – technology use is pervasive in all aspects of their lives. However, they are very willing to discuss their experiences of learning, life and technology, and the methodologies used in the study ably support this process. Key findings include:

- Learners lead complex lives and require sophisticated time management skills
- The boundaries between learning and other aspects of learners’ lives are increasingly blurred

- Control and choice are of great importance – for example, being able to personalise the learning environment by selecting technologies meaningful to the learner
- Learners wish to have tutors who are fully engaged with e-learning, but also rely heavily on informal support networks
- While older learners feel the young have an advantage, as a group, effective e-learners are flexible, resourceful, self-aware and highly motivated

Conclusions

Learners of all ages are caught up in a fast-changing world, fitting in learning alongside work, family and other commitments. The LEX study catches a snapshot of the ways in which learners are using technology – personal and institutional – to increase their ability to cope with these conflicting pressures.

‘effective e-learners are flexible, resourceful, self-aware and highly motivated’





LXP: Student Experiences of Technologies study

LXP study

Exploring disciplinary differences in uses of technology by university students through a variety of methodologies, including an online survey, interviews and audio logs

Dates

December 2005 – November 2006

Authors

Grainne Conole and Jonathan Darby, The Open University

Maarten de Laat, Exeter University

Teresa Dillon, Polar Produce

Outputs

LXP: Student Experiences of Technologies – Final report (Conole et al., 2006)

Appendix A – Survey

Appendix B – Quantitative survey data

Appendix C – Qualitative survey data
(available on request only)

Appendix D – Audio logs

Appendix E – Interview questions

Appendix F – Interview summaries

www.jisc.ac.uk/elp_learneroutcomes

www.geodata.soton.ac.uk/eLRC/learner_survey

Scope

Quantitative and qualitative study based on a survey of 400+ learners, 85 audio logs and 14 follow-up interviews

Overview

The LXP study explored differences in subject disciplines through four Higher Education Academy subject centres: Medicine, dentistry and veterinary medicine; Economics; Information and computer sciences, and Languages and linguistics

Aims

The LXP study team contacted university students in different disciplines to explore:

- how learners engage with e-learning:
 - learners' perceptions of e-learning
 - the strategies and tools learners use
- how e-learning relates to and contributes to the whole learning experience:
 - how learners fit e-learning around their traditional learning activities

Sample

Effective digital learners were selected to determine more closely the characteristics of those who use technology successfully in their learning. A broad spectrum of over 400 learners took part in an initial survey conducted through participating Higher Education Academy subject centres. A smaller sub-sample took part in a series of 14 case studies using audio logs and interviews as data collection techniques. While a mix of age groups participated in the survey, the case studies focused on younger learners aged between 20 and 25 to explore the expectations and requirements of an oncoming generation of learners.

Methods

This study combined both quantitative and qualitative methodologies.

The first approach contextualised the enquiry through an online survey which included a series of matrices to identify which technologies learners preferred for particular learning-associated activities, backed up by open-ended questions to explore how and why the technologies had been used.

‘The...findings point to a profound shift in the way in which students are working and suggest a rich and complex inter-relationship between the individuals and the tools.’ LXP: Student Experiences of Technologies – Final report (Conole et al., 2006)

The second approach was purely qualitative and involved a sub-sample of learners recording their impressions of technology-based learning activities in audio logs. The audio logs and subsequent interviews allowed learners to describe in more detail the nature of the e-learning activity they had completed.

The questionnaire can be found in Appendix A of the LXP report, with summaries of the quantitative data in Appendix B and of the qualitative data in Appendices D, E and F.

Data was thus derived in three formats – from the online survey, from transcripts of audio logs and from interviews – making it possible to clarify and refine interpretation of the data through triangulation.

Figure 2 Breakdown of data collected from the LXP study

Phase 1 - context		Phase 2 – case studies			
Surveys		Audio logs		Interviews	
Economics	128	Economics	3	Economics	2
Languages	92	Languages	47	Languages	3
Medicine	31	Medicine	16	Medicine	5
Computing	158	Computing	19	Computing	4
Other	18				
Total	427	Total:	85	Total:	14

Findings

The study produced a complex range of data, which, when analysed, reveal some results that are predictable and others that are unexpected:

- Personal technologies – mobile phones, laptops and PDAs – are widely used to support learning
- Learners also use standard software to create, manipulate and present content

- Internet search engines are preferred to libraries for information retrieval
- Peer support provided by informal networks of friends and family, using email, texting, MSN® Messenger, chat or Skype™, provides an underworld of communication and information-sharing invisible to tutors
- Learners, like sophisticated consumers, choose from the range of options available to them, adeptly selecting the most appropriate for the task

Conclusions

This technology-savvy group of learners may indicate the future direction of learning – technology is central to their lives and therefore also to their studies. They have high expectations of how they should learn, selecting the technologies and learning environments that best meet their needs with a sophisticated understanding of how to manipulate these to their advantage.

The sample size was not large enough to make substantial generalisations about disciplinary differences. Nonetheless, the report clearly identifies ways in which learners’ study habits are changing, from prioritising use of the internet for information retrieval to incorporating personally owned tools and technologies – including mobile phones, laptops, PDAs and USB memory sticks – into their learning activities.



The learner's voice case studies

A selection of experiences of e-learning as narrated by learners

Laura

First year international business student, aged 18

Date of recording

2006

On-campus technologies discussed

Digital video camera

Podcasts

VLE

Off-campus technologies discussed

CDs

Digital TV with DVD recorder

DVDs

iTunes®

iPod®

MySpace®

Podcasts

Personal computer and shared family computer

VLE

Wireless network

Laura's story is told in The learner's voice video case studies on the accompanying CD-ROM



Laura, an experienced digital learner, represents a growing trend among higher education students – she attends a local university while living and studying at home.

Laura accesses course resources and information by logging onto the university's Virtual Learning Environment (VLE) from her personal computer in her bedroom, but also travels onto campus for classes and meetings with other students.

Both on and off campus, Laura is supported in independent learning by her university: lecture notes are available from the VLE in case of absence, and questions posted by students on the bulletin board are answered by tutors. Before examinations, podcasts in MP3 format are released so that Laura and other students can download these to revise while travelling:

Finbar

Part-time mature student of computing science and electronics

Date of interview

2006

Technologies discussed

Blogging

Email

Internet

Mobile phone

O₂ Web text

Personal broadband connection

Personal computer

Programming languages

VLE

Workplace computer and software

Wikipedia®

Finbar's story is told in full in the LXP report, pp. 35-38

With four children, Finbar has to fit his course into an already complex lifestyle since advancement at work depends on obtaining a degree. Already accustomed to using workplace software, Finbar has advanced his ICT skills as a result of his course by creating web pages, learning programming languages and keeping a blog. He studies in the university library, but also after hours at work and on his personal computer at home.

Technology gives Finbar more flexibility, but the timeliness of information is also important. Finbar relies on details of module options being available from the university's VLE and suggests that a central repository of information, approved by the university, would help learners locate online resources more efficiently, citing Wikipedia as an example of such a repository.

Finbar's story shows how important personal technologies are for part-time learners and highlights the need for prompt online support and information for those studying remotely.



“No journey to university is complete without the iPod – this thing is glorious.”

(Laura)

Collaborative group work is a feature of the university’s courses, but with group members living in many different locations, this could prove difficult without regular communication. In Laura’s case, an online community established through MySpace is at the heart of her student life. This virtual space is where Laura and her peers network, swap problems, offer one another support, and share a social life:

“It’s just all these little technology things that just make your life handier.”

(Laura)

Beliefs, feelings and expectations

Laura feels her life is enhanced by the technology that facilitates her preferred patterns of study and recreation. She is passionate about her iPod which goes everywhere with her, but enjoys opportunities to create as well as consume content in digital form.

Skills and strategies

Laura’s way of learning is fully supported by the university’s open policies on technology. Laura makes full use of the technology-rich contexts available to her, but prefers the virtual community offered by MySpace for communicating with her peers and friends. This social networking website provides a hub which connects the work and social aspects of her life in one convenient virtual space.

Issues and constraints

Recreational technologies, in particular those associated with music, act as distractions when Laura is studying at home. Otherwise this case study reveals only pleasure at the flexibility, creativity and companionship technology can bring to a learner’s life.

Beliefs, feelings and expectations

Finbar has found many changes since he was last in education and is pleased about the way the digital revolution has made it easier for part-time students to return to education.

Skills and strategies

Finbar is able to select study options which directly relate to his work, using colleagues in the work place as a support network. To research his essays, Finbar follows up web links provided by his tutor, but also searches for additional material on the internet. He often completes his research ‘on the fly’ at work, emailing the results to himself and reviewing the information before compiling it into an essay.

Finbar feels this strategy enables him to keep up with his study schedule while still meeting his work and family commitments. However, as a part-time learner, he could still be at risk of becoming isolated. To collaborate with his peers, he uses a mobile phone and Web text – an O₂ service

enabling a number of free messages to be sent from a computer each month.

Issues and constraints

One drawback of digital technologies is that learners expect the same speed of communication and level of service in their studies as are provided in commercial contexts. Finbar expresses some concern that the demand for rapid, bite-sized communication is diminishing learners’ reflective and evaluative skills:

“They just read information, cut and paste it and distribute it round without thinking a great deal about it.” (Finbar)

Finbar also finds delays in obtaining online information about his module options difficult – accurate and timely course information is especially important to mature learners juggling the conflicting demands of work, family life and study.

The learner's voice case studies

A selection of experiences of e-learning as narrated by learners

Jenny and Emma

Students on a PGCE course in post-compulsory education

Date of recording

2006

Technologies discussed

Blogging
Digital audio and video files
Digital photography
Mobile phone
MSN Messenger
MySpace
PebblePad e-portfolio system

Jenny and Emma's story is told in The learner's voice video case studies on the accompanying CD-ROM



Jenny and Emma piloted the use of e-portfolios for online reflection and communication as trainee teachers on a postgraduate certificate of education. Both are highly skilled digital learners.

Both students viewed e-portfolios initially as a means of confronting fears and sharing experiences from teaching practice with their peers, but such was the success of the pilot that they now consider these technologies to be essential tools for learning. A combination of a scrapbook, a reflective tool, a record of lifelong achievement and a means of communicating with others, their e-portfolios encapsulate everything that is important to them on their learning journeys:

"VLEs are owned by the institution, and the e-portfolio is owned by me."

(Emma)

Peizhi

Third year Masters student in applied linguistics for language teaching

Date of interview

2006

Technologies discussed

Blogging
Discussion forum
Email
QQ and ICQ® chat tools
MSN Messenger
Personal computer
Search engines
Skype
SPSS® data analysis software
VLE

Peizhi's story is told in full in the LXP report pp.42-46

Peizhi has had limited access to computers in her home country, China, but now makes frequent use of data analysis software, Skype, instant messaging and chat tools. She has developed these techniques only as a result of studying at a British university, where she has also had to learn to question others' points of view.

Peizhi finds keeping a blog beneficial as she adjusts to these new ways of working, usually making daily entries. She speaks enthusiastically about working with British and other international students, as these contacts give her greater opportunities to learn about the way people think and speak.

Peizhi provides a valuable insight into the many cultural differences that exist in study techniques and use of technology, but also reveals how tools and technologies can act as a bridge between worlds for the many international students studying in the UK.



For Emma, the community of practice that developed out of blogging is also 'a lifeline of communication', while Jenny links her personal space on MySpace to her e-portfolio to create an integrated world of digital resources for learning and opportunities for social encounters. But she too finds that blogging has enhanced her learning:

"Being critical of myself scared me. But somehow, blogging with other people and hearing their thoughts, I started becoming reflective."

(Jenny)

Key for both learners is the sense of control and ownership over their learning that these technologies offer them.

Beliefs, feelings and expectations

Emma and Jenny enjoy the efficiency and coherence their 'digital filing cabinet' has brought into their lives. However, the greatest satisfaction comes from narrating and illustrating their learning journeys – a process described by Emma as addictive. Building her personal e-portfolio remains central to Emma's identity as a learner, while Jenny admits to feeling equally committed to her mobile phone and MSN Messenger, which keep her in touch with a supportive community of friends around the world.

Skills and strategies

Both students use digital video, audio and image files to capture actual and metaphorical representations of stages in their learning journeys. These technologies have enabled their learning to become more personalised, reflective and meaningful.

Issues and constraints

Neither student records any restrictions or concerns since the technologies were introduced as part of their course and have become integrated into an established way of life. In fact, Emma now considers communication and portfolio-building tools to be the shape of learning in the future.

Beliefs, feelings and expectations

Resources such as course handbooks on the VLE are of great benefit to Peizhi, who finds it reassuring to know that information is always available online. She finds it more frustrating, however, to use asynchronous discussion forums and is reticent about participating in discussions, being inclined to observe and watch rather than contribute.

Skills and strategies

Peizhi frequently uses email and instant messaging tools, such as MSN Messenger and Skype. Peizhi's chat sessions often have multiple purposes, as she uses these tools to collect data for her dissertation, reflect on her experiences and keep in touch with friends and family in China.

Issues and constraints

Peizhi can see a number of disadvantages in learning with technology. She uses search engines but is aware of the need to understand how information is tagged to avoid being overwhelmed with inappropriate results:

"I think [I] use search quite often, however you must be very good at using, choosing key words, or else you'll find a pack of rubbish."

(Peizhi)

In Peizhi's experience, fewer students in China own their own computers and those that do have to share them with others. As a result, Peizhi would prefer not to own a personal computer. She also feels that she can concentrate better when writing by hand and often finds the availability of so many programs, especially email and MSN Messenger, distracting while she is working.

Peizhi illustrates the complex differences in social conventions and study techniques that can affect the progress of international students, but also the importance to their new way of life of a personal computer with broadband connection and instant messaging tools.

The learner's voice case studies

A selection of experiences of e-learning as narrated by learners

Melvyn and Julie

Graduates of an access course at an adult education college

Date of recording

2006

Technologies discussed

Digital image manipulation software
Email
Online resources
Palmtop
Remote access to a personal home page
Webcam
Web design and animation software

Melvyn and Julie's story is told in The learner's voice video case studies on the accompanying CD-ROM



Melvyn and Julie have completed a diploma programme to gain access to higher education in their chosen fields.

Changing circumstances, injury or ill health mean that many adults retrain at some stage in their lives, but some return to education to rekindle a genuine love of learning. Melvyn left school to work as a miner and as a baker, before becoming enthused by learning with technology. Julie's life changed direction when she was diagnosed with multiple sclerosis. Always interested in art, she decided to learn web page design, including image manipulation software and Flash® animation.

Gary

Fourth year medical student, aged 21

Date of interview

2006

Technologies discussed

e-Journals
e-Textbooks
Google™
Medical databases
Microsoft® Word
Microsoft PowerPoint®
Wikipedia

Gary's story is told in full in the LXP report pp. 25-31

Gary has taught himself ICT and e-learning skills as a result of competing assignments at university. He is now competent in selecting appropriate resources from databases of information, e-journals and internet searches and in using Office software to repurpose and present content.

The need to prepare and present assignments based on his own research has helped Gary to develop faster and more systematic ways of working – essential components in a professional's skills base. As a result, Gary values technology primarily for its efficiency and time-saving affordances, since it makes him appear more professional to his peers and tutors:

“...And because they [technologies] save me time, I can spend more time doing the research and getting everything ready, because I know when I put the whole thing together, it will come together quite smoothly.”

(Gary)



“I was scared that I’d break a computer if I even switched one on.”

(Julie)

Melvyn and Julie show how acquiring ICT skills can transform people’s lives – pride and passion about their achievements emerge in everything they say. Their new skills have inspired them to give something back – by training to become an IT teacher in Melvyn’s case and, for Julie, by designing a disabled learners’ web page on the college website.

“I thought, well, let’s give this IT a crack anyway, just bite the bullet.”

(Melvyn)

Beliefs, feelings and expectations

Melvyn and Julie can perceive new opportunities as a result of acquiring digital skills. Both learners began as ICT novices, but increasing levels of skill have transformed their lives. Melvyn’s enthusiasm for online learning now extends to acquiring a handheld device and both learners have expectations of completing degree courses.

Skills and strategies

Julie finds that creating a web page for other learners has provided the motivation to acquire new skills. She is also aware of the need to keep up with the younger generation and has bought a webcam at her daughter’s persuasion. A deciding factor in Melvyn’s success has been the ease of access to learning resources at a time and place convenient to him.

Issues and constraints

Learning part time at a specialist adult education college has been instrumental in the success of Melvyn and Julie, illustrating the importance of access to adult training in IT skills at advanced as well as at basic levels.

Beliefs, feelings and expectations

Technology is widely used in hospitals, increasing Gary’s belief that such skills are vital to his career. He speaks with satisfaction about mastering software and developing techniques of ensuring the validity of the resources he uses.

Skills and strategies

Aware of the possibility of misinformation, Gary has developed strategies for checking the validity and authorship of digital content. He bookmarks a number of websites that he trusts, but finds Google useful when seeking general information related to policy documents and patient care. Despite occasionally using Wikipedia, Gary prefers e-textbooks for definitions. In general, he uses sources that have been peer reviewed and validated by professionals in the field.

Issues and constraints

Gary is aware of how using technology could reduce what he calls ‘the total learning experience’. The tendency to reduce

the broader picture into specific bite-sized chunks of information can be a disadvantage in his view.

Gary is also concerned by the level of support for students undertaking assignments which depend on the use of software, since those who are technically more competent may be able to exploit the software to enhance their performance, while those who lack the necessary skills can be disadvantaged:

“...there is a definite gap between what we need and what we are given, where we have to find out how to use the technology for ourselves, which is for most of us a case of trial and error.” (Gary)

Gary’s case study shows how some learners devise effective information-handling techniques. However, it also suggests that skills development for effective learning in a digital age is of high priority.



Beliefs, feelings and expectations

Since the findings of the studies are based on more than one methodology, the most frequently occurring themes offer the most reliable indications of what digital learners feel about the e-learning applications and tools they use. These predominant themes have been synthesised in the next three sections to support debate about policies and provision for learning in a technology-rich environment.

Pleasure and pain

“I use my laptop. I take it away, it’s attached to me. I couldn’t survive without it.”

(Emma, undergraduate business student: LEX report)

The emotionality of learners’ experiences is one of the most striking findings from the studies. Pleasure at the efficiency of technology, a sense of achievement, passion – and occasionally annoyance – are all feelings registered by learners when reflecting on the technologies they use for learning. The most frequently occurring response, however, is satisfaction at the ease of information retrieval via the internet.

Fears and frustrations – the most anticipated reactions to technology – are usually reported as occurring in the past before learners’ confidence as e-learners had fully developed. Older learners quoted in the LEX report believe that younger age groups gain an advantage from having grown up with technology. However, because of the perceived benefits of technology, older learners in the studies were determined to master technical skills:

“Yeah, well, basically, when I first went on and started to look at it, I thought ‘Oh my God, I don’t know whether this [online learning] is for me!’, but then I thought, ‘Calm down a bit and sit down and go through it step by step.’”

(Michele, adult online learner on trade union course: LEX report)

'They [learners] have an expectation of being able to access up-to-date and relevant information and resources and see this as vital. They don't see technology as anything special...just another tool to support their learning.'

LXP: Student Experiences of Technologies – Final report (Conole et al., 2006)

The prime motive learners have for overcoming initial difficulties is to balance their complex and demanding work, home and study routines. But some also reveal a deep-rooted sense of attachment to the technologies they find the most valuable, even admitting to being addicted to their laptop, to MySpace, or to an internet-enabled mobile phone. For the majority, however, the use of search engines generates the greatest sense of achievement – and dependency:

“...well, I use Google almost every day. And it actually turns up quite a bit of scientific data and if you go to 'Limit', or do a special search or detailed search, you can limit things down too. Well, you can take off .dot or .co.uk sites and then it tends to give you back scientific sites and I turn up quite a bit of information through that.”

(Annmarie, fourth year medical student: LXP report)

Expectations and implications

Learners with good technical skills and the willingness to experiment gain the most from e-learning, but also pose the greatest challenge for institutions – such adept users of technology expect to be able to use their favourite technologies within their place of learning, as well as outside it.

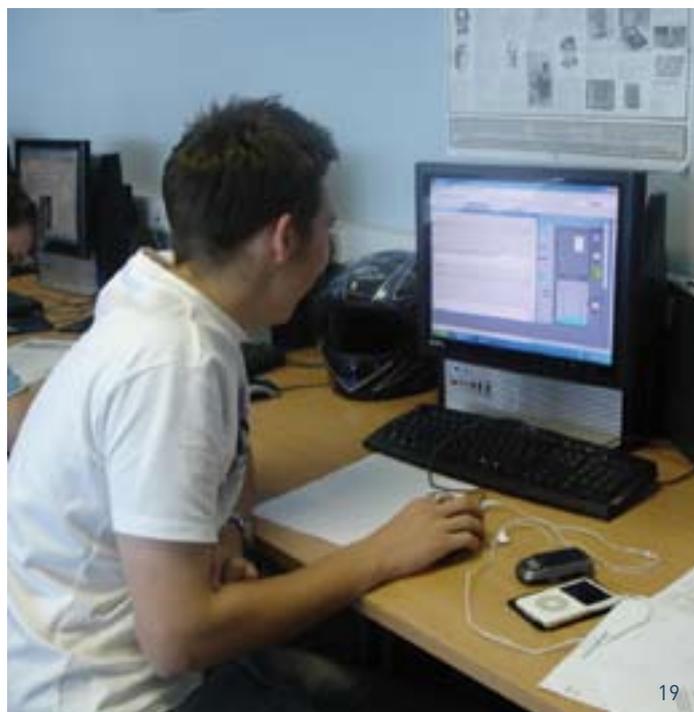
Many speak of their personal devices as individualised learning environments which, if possible, go everywhere with them. As a result, they express a need to integrate personal technologies with institutionally based systems – for example, downloading podcasts onto a palmtop or uploading work from a storage device, such as a USB memory stick, to an institutionally based computer – to provide a seamless flow of study, despite changes in working context. Not being able to do so causes them frustration. The majority also view the internet as the first port of call for information and learning resources, by-passing library and learning centre provision.

Many have absorbed technology so seamlessly into their lives and their studies that the term 'e-learning' means little to them. However, some learners interviewed for the LEX study separate their technologies into personal (i.e not primarily used for learning) – such as mobile phones or digital audio players – and study-focused technologies – such as the VLE. For these learners, the 'fun' technologies are seen as distracting from the serious business of learning. Managing the range of technologies available to learners in a digital age presents problems as well as benefits.

And it seems that some aspects of learning may still be preferred in a traditional format:

“I just don't want books to be on the computer, I don't like that idea at all. Everything else, films and things like that, OK, but books, no, it creeps me out.”

(Laura, first year economics student: LEX report)





Skills and strategies

Becoming an effective digital learner means acquiring both technical skills and the ability to use technologies appropriately. Such skills add value to learners' workplace and social experiences as well as enhancing their learning. However, those with inadequate skills – both in the use of software and hardware and the more complex skills that underpin effective e-learning – are increasingly left at a disadvantage.

Skills for learning

Undergraduate learners interviewed for the LXP study feel that the relationship between themselves and the university is frequently mediated by technology – for example, student services and student profiles are typically accessed online and appointments with tutors made by email. This increasing dependence on technology in the administration and support of learning deepens the divide between those who have the skills and ease of access to computers, and those who do not.

The majority of learners at university complete assignments using standard software, which they exploit to improve the quality of their work:

“I usually word process my work since it is easy to change the structure of an essay (without copying it all out again).”

(Survey student: LXP report)

However, effective digital learners in the LXP study are aware of discrepancies between their skills and those of many of their peers and point out that the need for skills development often goes unrecognised by tutors. Furthermore, skilled digital learners know how to minimise the impact of their weaknesses – in the case of Jack, a dislike of reading documents in print. Jack's familiarity with technology enables him to find ingenious solutions to the chore of learning:



‘Effective learners tend to be highly skilled networkers and often use the technology to pull in support when needed.’

LEX: The Learner Experience of e-Learning – Final project report (Creanor et al., 2006)

“...if I had spare time, I’d put one of the lecturer’s presentations on, just flick through it and make some quick notes, especially when you’re revising, that’s the way I’d have done it. Make notes on, on what was done....”

(Jack, third year computer science student: LXP report)

These testimonies indicate the importance of technical and e-learning skills in successful learning and argue powerfully for institutional responses at all levels to reduce the impact of the digital divide.

An underworld of communication

Digital learners frequently maintain an underworld of communication and networking that runs parallel to their official studies and sidesteps channels of communication set up by tutors.

This private world of personally selected technologies is largely used to gain support from peers. Skype, for example, is cited by 19 students in the LXP survey as one of their four key technologies – yet few computer science students surveyed used Skype to communicate with tutors. Across all the disciplines represented in the LXP report, Skype is used for the many private and personal activities that support or run parallel to learning, often in preference to a discussion board on the VLE. For sharing tips, confiding in one another, or seeking last minute information, informal communication technologies owned by the learner take precedence:

“So my [group] we always text each other and say, ‘Oh, are you coming in at this time, or we’ll meet at this time’, and so it looks on

the face of it from the university website [VLE] that we haven’t been communicating all year, but we have, it’s just outside of that board.”

(Nicola, postgraduate law student: LEX report)

Mixing and matching

Effective digital learners also blend personal technologies with those provided in institutions and the workplace – and do so with consummate skill. They use mobile phones to obtain help from friends, but text or email to request meetings with tutors; Skype or MSN Messenger to communicate with other group members when working on an assignment, but discussion forums on a VLE when they want to be visible to their tutors. They use ‘down time’ at work to catch up with studying and are adept at networking via a range of technologies. The flexibility of the one-stop-shop mobile phone with internet access is considered particularly useful for networking:

“I use my phone because it’s like a mobile internet to me because they can talk to me, they can SMS me, unlike the email, [where] I need to go on the computer and open my mail box, but with the mobile phone, I can get any communication any time I want.”

(Dumisani, undergraduate marketing student: LEX report)

These learners combine institutional and personal choices of software and tools to create a learning environment which is under their control. Their approach to technology is resourceful and selective and may involve avoidance strategies wherever the technology enables these.



Issues and constraints

The collective testimonies of these learners indicate use of a wider range of technologies in learning than previously realised – yet practitioners often design courses and activities with a limited choice of tools in mind and may be unaware of the working patterns and lifestyles of digital learners.

Mismatch in expectations

A variety of newly emerged technologies – camera and video phones, iPods, MSN Messenger, Skype, Wikipedia and social software – vies for learners' attention alongside traditional resources and established technologies supplied by course tutors and institutions. This mix of options is significantly shifting patterns of study and causing a mismatch between the expectations of academic staff and the study habits of learners – one of the most salient findings of these studies.

Wikipedia, rather than course text books, is frequently cited as a source of definitions. Del.icio.us and CiteULike are recommended by some learners as tools to make collaborative learning richer and more efficient. Yet these are rarely recognised officially as tools for learning. Many institutions block access to social software and fail to see the need to assist learners in effective use of these resources, which are nonetheless frequently relied upon. Learners, on the other hand, have mixed views on institutionally favoured technologies, such as discussion forums in a VLE.

Dominance of the internet

There is a clear consensus that the internet is now the primary information source for most learners. Search engines offer those with personal computers instantaneous, any time, anywhere access to a breadth of resources and, whether used on or off campus, the internet is dominating learners' research practices and altering the way in which they interact with and assimilate information.

‘Content is no longer “fixed” and “valued”. It is a starting point, something to interact with, to cut and paste, to adapt and remix.’

LXP: Student Experiences of Technologies – Final report (Conole et al., 2006)

However, only the more sophisticated refine their searches or critically evaluate the resources they discover. For the unprepared or unfocused, the internet causes bewilderment and frustration, yet is still used in preference to textbooks because of its speed, low cost and convenience:

“...when doing research, it’s torture if it’s a bad website...and they’re saying use books, but books cost money so the internet is the main thing that we end up using...”

(Laura, first year undergraduate economics student: LEX report)

Others, such as Fabio, a more accomplished digital learner interviewed in the LXP study, cross-reference internet resources with those recommended by tutors. For Fabio, the ones that appear on both Google and the recommended reading list are those he feels confident about using. This is a strategy he has devised for himself, without the involvement of his tutor. The internet may even replace tutor guidance entirely:

“...I don’t think most teachers would appreciate that we get everything from the internet.”

(Fabio, first year undergraduate economics student: LXP report)

Such accounts indicate a need for practitioners in academic, library and learning support roles to engage more fully with the changing nature of learning and to develop best practice guidance for learning in a context in which information is so freely available.

Tutor involvement

Despite the range of approaches devised by more expert digital learners, both reports reveal reluctance by academic staff to be involved with e-learning. The LEX report shows that

learners are very aware when tutors are not fully engaged, or if e-learning activities are being used as a bolt-on extra:

“... the tutor was, like, ‘I’ve never seen this [online resource] before and I don’t even know what it is and I hope I don’t have to get involved in it’.”

(Alan, postgraduate business student: LEX report)

When learners need support, they are turning instead to vigorous informal networks they have created for themselves. The learners in these studies are active members of networks which involve peers, family, and even work colleagues. Within these private worlds, they share information and assignments, seek advice and evaluate each other’s work using mobile phones, email, Skype, instant messaging and social software, including MySpace. They also exhibit high levels of supportive and collaborative behaviour, confirming findings from other studies, notably Oblinger (2003)², that younger learners are highly skilled networkers:

“We’ve made like a promise that if one of us isn’t there, we’ll record the lecture for them and send them it later.”

(Lynsey, first year undergraduate economics student: LEX report)

Given the increased reliance by the learners in these studies on online communities and social networking websites, there is an urgent requirement for tutors and course designers to explore the potential of social technologies in learning. One of the key debates arising from these studies must be how the collaborative and creative potential of emerging technologies can be harnessed for pedagogic gain, rather than being shunned for their drawbacks.

² Oblinger, D. (2003) *Boomers, Gen-Xers and Millennials: Understanding the new students* (Educause review), www.educause.edu/ir/library/pdf/erm0342.pdf



Learners' needs are clearly changing as technology use becomes more pervasive. The more expert among them demonstrate unexpected levels of skill in manipulating the range of tools and resources at their disposal. Yet how often are the perspectives of digital learners at the forefront of institutional decision-making on e-learning?

It is widely acknowledged that listening to learners is good educational practice – doing so can benefit both institutions and those who design e-learning or blended learning activities. It can also inform the development of effective e-learning tools and applications.

Accounts from learners such as these, who have developed effective strategies for learning in a technology-rich context, provide a valuable starting point for decision-making on infrastructure and learning support – the skilled users of technology today show us where the average learners will be tomorrow. Their expectations and preferences identify the likely direction of travel and indicate which technologies are the most relevant and meaningful and should therefore become the focus of further development. And as learners reveal their beliefs, feelings and intentions about using technology in learning, a clearer picture emerges of how tools, systems and designs for learning activities can best support them.

The ways in which testimonies differ offer a further rich vein of information. For example, while some learners participating in the studies described sophisticated strategies for evaluating and validating content, such levels of information literacy were not evident in every case, pointing to an urgent need for updated support for learning in a digital age.

As a recent Futurelab report³ suggests, learners are unlikely to have a single voice. It is important to listen to the

Listening to learners

experiences of all types and age groups of learner – including non-traditional learners and those with disabilities – to avoid making the assumption that all learners' needs are the same. It is also essential to sample their views in ways that enable an authentic learner voice – or voices – to be heard. If the elicitation of learners' experiences of e-learning is limited for reasons of speed and simplicity to standardised learner satisfaction questionnaires, much essential information will be lost.

These studies support the view that it is only by establishing a culture of listening to learners – including those that represent more individual experiences as well as the general trends – that the full range of possible responses will be recognised. Without this understanding, institutions, practitioners and e-learning developers could fail to help learners achieve their full potential.



³ Rudd, T., Colligan, F. and Naik, R. (2006) *Learner voice: A handbook from Futurelab* www.futurelab.org.uk/download/pdfs/research/handbooks/learner_voice.pdf

‘... for many learners, the complex nature of their lives was reflected in how they used technology to study, communicate with peers, family and friends, and engage in leisure activities, often at the same time. This is very different from the traditional quiet study mode which tends to be supported within institutions.’

LEX: The Learner Experience of e-Learning – Final project report (Creanor et al., 2006)

Effective strategies for learning in a digital age

A summary of the strategies adopted by the effective learners participating in the studies provides an important indication of the changing nature of learning in a digital age. These

pointers are intended not as a definitive checklist of skills, but as a contribution to the ongoing debate about how the process of learning is evolving and how learners’ needs might be met. However, it is only by listening to learners that these strategies have emerged.

Some effective strategies for learning in a digital age

- Blending the use of familiar personal technologies – such as iPods, MySpace or mobile phones – with institutionally based technologies and traditional practice – such as VLEs, face-to-face classes and lectures – in ways that make learning more efficient, spontaneous and meaningful
- Exploiting the potential of technology for reflective learning, using, among other resources, blogs, collaborative software, discussion forums, podcasts, digital photography or video and e-portfolios to capture and analyse the process of learning
- Using evaluative skills to triangulate between online and other resources to check the validity and appropriateness of information
- Using internet-based information critically and selectively and deploying standard software to comment on and incorporate content into new resources
- Using technology to manipulate the timing of engagement in learning and to fit learning into a frequently demanding and cash-strapped lifestyle
- Building virtual and face-to-face communities, locally and globally, to obtain and validate information and to seek support and companionship
- Keeping in contact with these communities at all times via text messaging, chat, MSN Messenger, Skype and mobile phones, as well as email
- Sending and receiving content in multimedia formats, where appropriate
- Developing strategies through the use of technology to overcome problems, circumvent disability, or finding alternatives where a barrier to learning exists
- Creating as well as consuming content, capturing in real time the actuality of learning experiences in digital images, blogs and instant messaging software in ways that may circumvent official channels of communication
- Selecting the most appropriate tool to suit the purpose and urgency of the task
- Being aware of potential disadvantages in learning with technology and employing a range of approaches to achieve a balance



Implications for institutions and organisations

It is likely that the outcomes of the JISC Learner Experiences of e-Learning studies will generate different priorities and concerns for different users. For that reason, a series of five guides are included on the CD-ROM to address the perspectives of different sectors and roles. These are:

- **Guide 1:** Recommendations for managers in post-16 institutions (HE)
- **Guide 2:** Recommendations for managers in post-16 institutions (FE)
- **Guide 3:** Recommendations for designers of learning activities
- **Guide 4:** Recommendations for researchers and course evaluators
- **Guide 5:** Recommendations for IT managers and staff

Elements from these guides are incorporated into the following three sections.

Improving choice and flexibility

The JISC Learner Experiences studies indicate that learners make far greater use of their own technologies, websites and services than anticipated and expect these choices to be accessible to them wherever they learn.

For maximum flexibility, they seek access to learning resources via web services that are not device-specific, or to resources that have been reformatted so that the content can be accessed on the move. An example would be podcasts of lectures in MP3 format for revision purposes.

Providing access on campus to learners' own choice of devices and software may be considered to raise problems of security and inappropriate use, especially for those institutions

and organisations with learners under the age of 16. However, it is important to recognise the learning potential in social networking and communication technologies while assisting learners to use these and other technologies safely, effectively and appropriately – an essential requirement for learning in a digital age.

There is widespread use of the internet for research, including online materials generated by other institutions. In an increasingly open market for information and learning resources, institutions, especially universities, may consider aggregating approved content into repositories through which learners could devise their own learning pathways. Learners benefit from more open and flexible learning environments and will increasingly seek out institutions that support rather than restrict their learning options.

VLEs

The studies show that learners appreciate the convenience of access via a VLE to essential information and course materials – for example, timetables, downloadable learning resources and revision notes. As a result, inconsistency in the availability of such materials must be seen as detrimental to learners, especially to those with mobility or organisational difficulties.

However, VLEs are often used for passive rather than active learning and a significant number of respondents in the LXP survey listed discussion boards as one of their least used technologies. This may indicate a need for staff development in creative learning designs based around a VLE and greater understanding by both staff and learners of the role of asynchronous communication in learning.

‘Students clearly place greater value on technologies they have “discovered” or selected for themselves. Ownership, personalisation and appropriation of technologies is one of the overarching themes which emerge from the data.’

LXP: Student Experiences of Technologies – Final report (Conole et al., 2006)

Another approach supported by these studies is to explore the potential in the technologies learners prefer to use for sharing information – instant messaging, email, texting and a range of online group collaboration tools, such as CiteULike. Formal and informal technologies can complement one another if used appropriately to fulfil different purposes and address different learning preferences.

Supporting the individual learner

Two findings have particular importance for institutional support for individual learners. Firstly, learners are relying on a range of technologies which they have adapted and personalised to their own needs and which must be considered to form an essential part of their learning preferences. In some cases, this includes having access on campus to virtual spaces and communities that learners have devised for themselves and which form part of the identity they have of themselves as learners. An ability to integrate institutionally owned and personal technologies is likely to be more widely required.

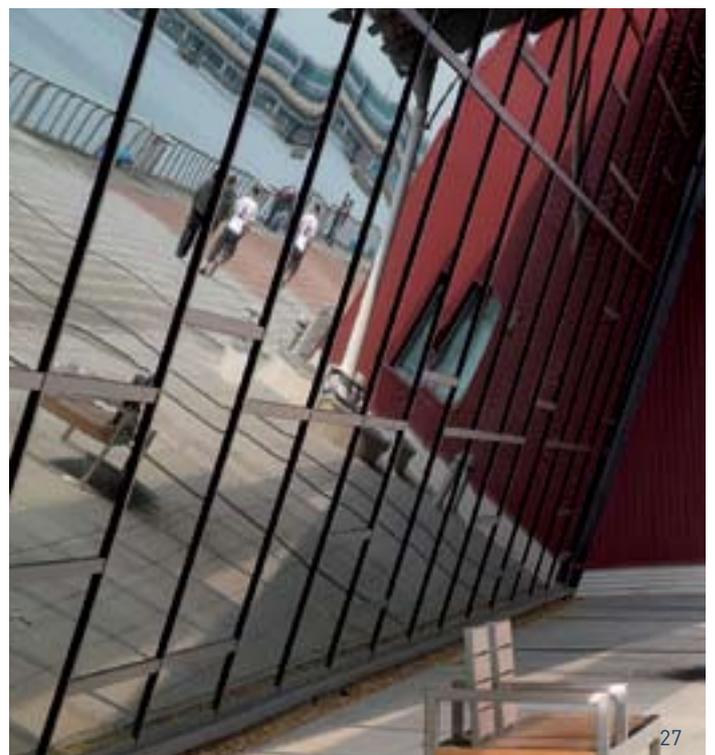
A second development is the continuing rise in learners’ ownership of personal computers with fast broadband connections. As a result, learners in all parts of the sector will increasingly require remote access to learning resources. However, a minority without their own equipment will be correspondingly disadvantaged, especially when course information is solely located online. Policies for supporting these increasingly marginalised learners are of high importance.

‘An ability to integrate institutionally owned and personal technologies is likely to be more widely required.’

Recommendations

Institutions and organisations should consider:

- allowing learners to personalise their learning technologies when this has clear benefits
- ensuring minimum standards for course and module information on a VLE across all courses and programmes
- promoting active learning methods that go beyond a ‘filing cabinet’ use of a VLE
- evaluating the ways in which learners interact with formal and informal technologies and updating policies accordingly
- developing strategies to respond to the digital divide
- giving high priority to assisting learners in ethical and appropriate uses of digital resources





Implications for the design of learning activities

Harnessing the full potential of technology

Emerging technologies can provide powerful and cost effective tools for learning. A variety of more informal technologies, including instant messaging and social software, is shown in these studies to be making important contributions to learning when used alongside institutionally based technologies.

Many learners appreciate resources that are bite-sized, interactive and flexible and can be adapted in terms of font size or colour, or offer multi-sensory learning experiences. They value being able to adapt and create content digitally themselves and are skilled at mixing and matching tools to achieve their purpose. The studies also demonstrate high levels of interaction between learners supported by ubiquitous ownership of personal communications technologies.

Where possible, tutors and designers of activities should consider making more use of tools and channels of communication that are relevant, meaningful and accessible to learners, ensuring that learners understand what kinds of collaboration are academically appropriate.

Dominance of the internet

Search engines, in particular Google, and collaborative websites, such as Wikipedia, are the mainstay of learners' research activities. While some digital learners have developed sophisticated techniques for verifying what they find against approved sources of information, the convenience and low cost of internet-based research – compared to purchasing text books or travelling into a library – mean that less-skilled learners also rely on this practice. Academic, library and learning centre staff, and learners, would benefit

from evaluations of how best to conduct and support research activities in an age in which unprecedented levels of information are freely available.

Recommendations

Those designing learning activities should consider:

- looking beyond software and tools provided as standard by the institution to explore the potential of emerging technologies
- assisting learners to develop skills of selection, evaluation and appropriate use of information and promoting the importance of these skills through assessment



“We’ve been brought up using new technologies, and introducing new ones to our way of work as new technologies appear, it’s not a case of ‘fitting around’, it’s just the way I work, using multiple methods, some ‘traditional’, some e-learning.”

Software engineering undergraduate: LXP study

Changing nature of learning

The studies have revealed a number of significant trends. Firstly, learners are relying on an eclectic mix of personal and institutionally based technologies. When devising courses or activities, it is important to understand why learners select particular technologies, what value they find in those technologies, and what they find difficult to use, to ensure the appropriateness of learning designs.

Secondly, the learners participating in these studies often made sophisticated choices about which technologies to use, and when. They might avoid applications and services that they did not see as relevant or beneficial to their studies – for example, ‘lurking’ without participating in asynchronous discussion forums, or choosing not to attend lectures on courses for which significant online resources are available – but equally, they made fine judgements over which communication tools to use for different purposes. Also evident were some effective strategies for evaluating, managing and repurposing digital content, and for fitting learning into increasingly complex lifestyles.

These insights suggest that the choices of tools and resources made by learners should be monitored and evaluated to ensure the continuing relevance of institutional provision and support and to identify opportunities for greater flexibility in meeting learners’ needs.

The design of learning activities at a course or modular level could also allow for a choice of technologies to be used within the activity. Open designs that enable learners to select their own tools and technologies need not prejudice the outcomes of an activity, provided that tutors outline the value and potential pitfalls of adopting learning strategies based on particular technologies.

Changing role of the tutor

These changes indicate a strong need for tutors and subject specialists to develop their own skills in using emerging, as well as established technologies. Educational and staff development units play a key role in exploring with staff how different kinds of technology can add value to learning and teaching and by discussing the impact of these technologies on the role of the practitioner.

Tutors and support staff will continue to play a critical role in managing variations in learners’ technical and digital learning skills for some time to come. As the difference between learners who can effectively search for and manipulate online content, and those who cannot, becomes more marked, the urgency of support and guidance for learning in a digital age will increase.

Recommendations

Staff development units should consider:

- enabling staff to capitalise on emerging technologies in ways that enhance the learner’s experience
- providing training for staff in supporting learners with varying levels of expertise as digital learners
- exploring learning activity designs that accommodate technologies preferred by learners
- supporting staff in developing effective learner-focused approaches to learning design



Researching and evaluating the learner's perspective

Methodologies explored in the JISC Learner Experiences of e-Learning studies

Purposive sampling

This technique selects subjects according to their ability to provide information-rich data for a given purpose – in this case, the studies set out to explore the characteristics of effective e-learners across the post-16 sector

Interview plus

An approach used by the LEX study in which an artefact or activity, such as diary or an assignment, is used to assist learners in describing or recalling their experiences

Audio logs

Audio recordings were pioneered in the LXP study to capture learners' experiences as close as possible to the moment of using the technology. In this case, learners used the telephone to record messages on a server at times convenient to them. The points they raised were then used in face-to-face interviews

Interpretative phenomenological analysis (IPA)

This approach was used in the LEX study to explore how learners made sense of their experiences by interpreting narratives recounted by individuals in their own words. An IPA approach typically uses purposive sampling to obtain information-rich accounts from small samples of participants

Further detail about the methodologies used in the studies can be obtained from the reports.

Methodologies with a learner focus

Methodology is a key aspect of these studies. The LEX and LXP reports are based on data collection techniques which bring learners' own narratives to the forefront, enabling the diversity and individuality of learners' uses of technology to be captured. This section outlines some of the guidelines and supporting documents developed by the research teams involved in the studies.

The following resources will be of particular interest: LEX: Methodology report (Mayes, 2006), Guide 4: Recommendations for researchers and course evaluators – both of which can be found on the CD-ROM – and a supplementary toolkit for evaluators⁴ (Beetham, 2007).

Sampling and recruitment

The JISC studies used purposive sampling to explore the characteristics of effective e-learners. Other aspects that could be investigated using this sampling technique include the experiences of those who avoid using technology in learning altogether, the experiences of disempowered groups, or of the under-16s in further education. While purposive sampling supports a specific research agenda well, other research tasks may require different sampling methodologies.

Methods of recruiting participants also need careful thought, since the in-depth nature of the research makes it time consuming for participants.

Guidelines for external researchers include:

- using a local contact person, for example a tutor, to gain access to learners. This person needs to be kept fully informed of the rationale behind the study and its progress
- checking participants have experiences and insights that are appropriate for the study

‘Whatever technique(s) you decide are appropriate for your project, bear in mind two of the learner-centred evaluation principles: involving learners in the process, and building dialogues and relationships with learners as stakeholders in their own learning.’

Evaluating the learner experience: Some guidelines for e-learning projects (Beetham, 2007)

- seeking participants’ agreement to be involved in the research and explaining how their contributions may be used
- making repeated contact by letter, email or phone to establish and confirm participants’ involvement
- personalising correspondence to build rapport
- exploring techniques for capturing and recording data that participants will find natural and easy to use
- involving all concerned in the results of the research, notifying them of any actions to be taken as a consequence
- recompensing participants for their time and expenses

Senior managers, e-learning coordinators and learning technologists may also wish to draw on the JISC studies to evaluate learners’ interactions with e-learning as part of quality improvement strategies. Eliciting learner perceptions is clearly of high value when designing courses and learning activities which involve elements of e-learning, or are to be accessed entirely online.

Such evaluations could be used, for example, to explore comparisons between actual and expected uses of technologies and to assist in the forward planning of institutional infrastructure and support services.

For internal evaluation purposes, consideration should be given to:

- maintaining a flexible schedule, since interviews need to be conducted in periods when students are actively involved in their studies, but are not preparing for examinations
- encouraging thoughtful and meaningful contributions by providing appropriate contexts for interviews
- ensuring there is no dependent relationship between participants and evaluators

Supporting documentation

An underpinning principle behind all learner-focused enquiries is respect for participants. An interview permission form and a pro-forma for learner profiling are available in the appendices to LEX: Methodology report (Mayes, 2006), which also includes guidance on formatting questions for interviews and focus group sessions.

Recommendations

- **To obtain a holistic view, focus on contexts in which e-learning plays a part, rather than on one mode of learning, such as online or distance learning**
- **Use more than one source of data to enable triangulation between the outcomes. Such mixed-mode studies are likely to provide more trustworthy results than those that rely on a single approach**
- **Explore the use of different media for data capture. Learners respond in slightly different ways to recording their thoughts in a blog (detailed and reflective), on video (involves teamwork and pre-planning) or audio (spontaneous and personal)**
- **Seek to include in the sample those learners in traditionally disempowered groups – exploring learner differences is as important as determining overall trends**
- **Ask initial general questions about participants’ experiences of learning to contextualise their experiences of using technology**
- **Encourage and support full responses by using techniques that aid recall and encourage deeper reflection, such as Interview plus**

⁴ Beetham, H. (2007) *Evaluating the learner experience: Some guidelines for e-learning projects*, www.jisc.ac.uk/learnereval



In conclusion, we consider the changes the JISC Learner Experiences of e-Learning studies suggest are occurring in the relationship between institutions and learners.

Phase 1 explores the beliefs and feelings about e-learning held by learners at different stages in life. As a result, one finding is particularly significant. Despite considerable differences in previous educational experiences, expectations and motivations, most learners seek to personalise the technologies they use, just as they control other aspects of their learning environment.

In response to a variety of pressures – including shortage of time, lifestyle, personal preferences and course requirements – learners are now selecting their own blend of technologies to make their learning experiences more congenial, manageable and appropriate to their needs. However, their increasing confidence with technology is having an impact on institutional provision and support in a number of ways.

Personal ownership of tools and technologies

More learners have access at home or in the workplace to computers with a fast broadband connection and to powerful mobile devices. Consequently, they are able to work in more than one location and need to blend their use of personal technologies with those provided by the institution – for example, transferring files between locations on a USB memory stick, having access to their choice of software on campus, or to course information and learning resources via a mobile device in any location.

A networked society

The studies reveal a high level of social interaction taking place via learners' personal communication tools, while VLE-based discussion forums are used with more reluctance. However, in making their own selection of technologies, learners often bypass formal support structures associated

Conclusion

with institutionally based learning, basing their strategies for learning around the technologies they have access to – in particular, the internet and their choice of communication tools – rather than on the guidance of tutors, library and learning support staff.

A changing relationship

Thus a process of integration of personal tools and technologies is occurring, which introduces both benefits and risks. This is likely to be reinforced by oncoming generations – Prensky's 'digital natives'⁵. Yet learners' preferences are largely unrecognised within their institutions, where the need for skills development in effective e-learning strategies is often underestimated and access on campus to technologies of their choice restricted.

For most learners, the institution still remains the central focus of their learning. There is little to suggest that learners' use of personal technologies has replaced institutional provision entirely – rather that the greater diversity of options now available to them enables learners to become more efficient in their use of time, more flexible in how and where they study, and more wide ranging in their use of resources.

Nonetheless, personal technologies and social networking are emerging issues in e-learning, requiring greater flexibility and diversity in institutional policies and provision, combined with an increased focus on skills development for learners in the benefits and the pitfalls of their choices.

Rather than acting as guardians and controllers of learning, institutions – as illustrated in Figure 3 – may increasingly become providers of services, offering the infrastructure and opportunities for skills development to support appropriate and effective e-learning based on a wider range of options.

⁵ Prensky, M. (2001) Digital Natives, Digital Immigrants, *On the Horizon* (NCB University Press, Vol. 9 No. 5, October 2001), <http://tinyurl.com/yggvf>

'I constantly remind educators that, while in the past kids grew up in the dark intellectually and our role (and value) as teachers was to enlighten them, in the twenty-first century our kids grow up in the light, connected to the world by television, mobile phones and the internet long before they ever go to school.'

To Educate, We Must Listen (Prensky, 2007)

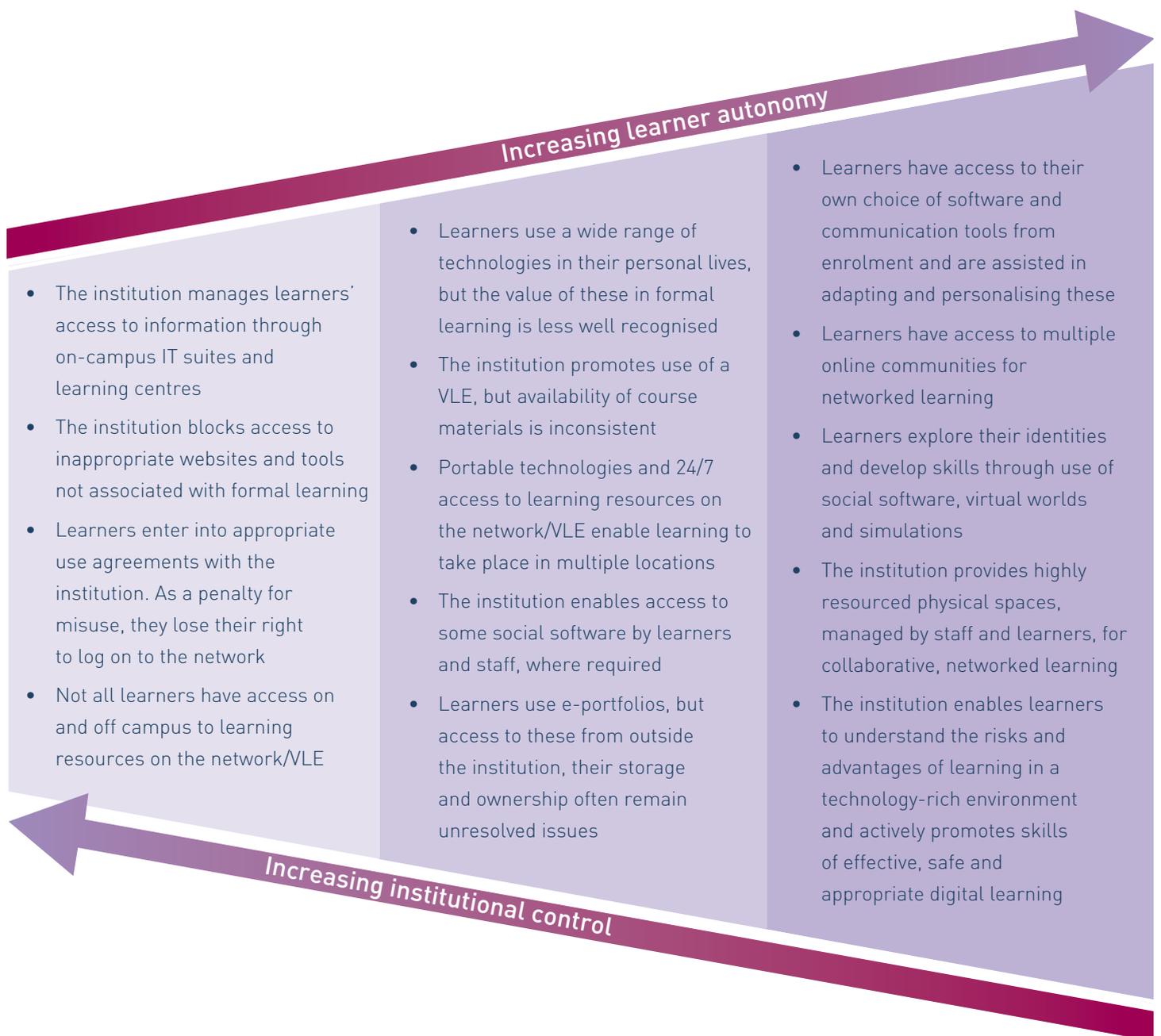


Figure 3 Changing relationship between institution and learner

Acknowledgements

Grateful thanks are due to the following for their advice, encouragement and contributions to this publication:

Professor Gráinne Conole, The Open University

Linda Creanor, Glasgow Caledonian University

Anne Irving, University of Surrey

Sophie Paluch, Birmingham College of Food, Tourism and Creative Studies

Particular thanks are due to Sarah Knight and Paul Bailey, JISC, and to the Learner Experiences Support and Synthesis Project team:

Helen Beetham, Consultant

Dr Rhona Sharpe and Greg Benfield, Oxford Brookes University

Ellen Lessner, Abingdon and Witney College

Eta De Cicco, NIACE.

JISC is also indebted to the learners and staff who participated in the research activities and case studies.

Images

Abingdon and Witney College

University of East London

University of Sussex

University of Warwick

Further information

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	Laura – a first year undergraduate student describing blended use of technology for leisure and study purposes
	Melvyn and Julie – adult learners revealing the impact of technology on their lives
	Paul, Simon and Beth – student nurses explaining their use of the Virtual Ward, an online multimedia simulation
	Jenny and Emma – PGCE students discussing the benefits of using an e-portfolio to record their progress as trainee teachers
	Amanda – a mature student recounting her experiences of a virtual law firm and other technologies to facilitate her learning
Guides	Guide 1: Recommendations for managers in post-16 institutions (HE)
	Guide 2: Recommendations for managers in post-16 institutions (FE)
	Guide 3: Recommendations for designers of learning activities
	Guide 4: Recommendations for researchers and course evaluators
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