Who's learning and how? Researching the learner experience

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This paper provides an overview of the recently completed Learner Experience of E-learning (LEX) research study which was funded by the Joint Information Systems Committee (JISC) in the UK. By interviewing learners from a range of post-16 educational contexts from across the country, the study aimed to elicit their views, not only on technology enhanced learning, but also on how they use technology in their everyday lives, and the impact this may have on their attitudes and approaches to learning. The paper will explain the rationale behind the research, describe the development of an innovative research methodology and outline the main findings as illustrated in the final project report. The findings indicate that there are several under-researched aspects of e-learning which would merit further investigation including the ubiquitous use of social software, learner control issues and the emotional impact of technology use. The paper concludes that tutors, course designers and managers would benefit greatly from taking time to listen to their learners.

Keywords: learner experience, learner voices, research approaches, technology in life and learning

Introduction

Who are our learners, how do they learn, and what kind of technology are they using? These are just a few of the questions which the Learner Experience of E-learning (LEX) study set out to investigate. Most e-learning research to date has focused on specific aspects of technology enhanced learning with use of particular types of software and hardware such as virtual learning environments, discussion boards and, more recently, mobile devices (e.g. Browne & Jenkins, 2003; Sorensen & Takle, 2002; Attewell, 2005) Case studies of discipline-specific courses are also prevalent with useful examples of good practice in e-learning (e.g. Atak & Rankin, 2002; Dickey, 2004) which practitioners can adapt and emulate in their own context. Overall the emphasis is very much on the practitioner's perspective however, and in only a few cases do we hear the learner's own story (c.f. Jones et al., 2001; Timmis et al., 2004). A Scoping Study funded by JISC in 2005 to inform and shape its research strategy in this field also revealed that the majority of studies have taken place in the higher education (HE) sector and that learners from further education (FE) and adult and community learning (ACL) contexts are poorly represented (Sharpe et al., 2005). The LEX study therefore set out to help redress the balance.

Background

The LEX research study was supported by the UK's Joint Information Systems Committee (JISC) as part of the 'Understanding My Learning' theme under its Pedagogy research strand, and ran for one year from May 2005 to June 2006. LEX had the broad and wide-ranging aim of researching learners' current experiences and expectations of e-learning across the post-16 sectors of further, higher, adult, community and work-based learning. The final report on which this paper is based was completed in August 2006 and is available to download from the JISC web site (Creanor et al., 2006b).

Informed by the recommendations of the Learner Experience Scoping Study described above, we sought to find answers to three key questions:

- What might characterise effective learners in an e-learning context?
- What beliefs and intentions do effective learners display?
- What strategies and behaviours do effective learners display?

The paper will outline the approach to the research methodology and data analysis which the team adopted and provide an overview of some of the key themes which emerged from the study. It will briefly highlight the implications these raise for teachers, course designers and institutional management. Primarily however, it will focus on the learners' voices.

Research methodology

In order to elicit the wide-ranging and highly personal views which the study required, we adopted a phenomenological approach (Marton, 1994). The data collection was conducted primarily through face-to-face interviews with learners, supplemented by a few focus group sessions, initially to assist with the identification of suitable interviewees and latterly to cross-validate emerging themes. As the study focused on the very broad area of technology use for learning, we were keen to explore also how learners used technology in everyday life and how this in turn might impact on their learning. Following much useful debate and discussion with colleagues, we decided to adopt an interpretative phenomenological approach to encourage openness and informality during the interviews.

Interpretative phenomenological analysis, or IPA, has to date been used mainly in health and psychology disciplines (Reid et al., 2005). It relies on a very open approach to interview, and on the assumption that the interviewee is expert on their own experience. It does not seek to test assumptions, but rather depends on the emergence of themes as the interview progresses. The interpretative nature occurs as the interviewee seeks to describe and make sense of their lived experience for themselves and then for the interviewer, whose role is to encourage reflection and self-awareness.

To supplement IPA we also employed Interview Plus, an approach recommended by the JISC Scoping Study team and Pedagogy Strand consultant. Interview Plus involves the introduction of a learning artefact which has been produced or used by the participant in their learning, to provide a focus for discussion at an appropriate stage in the interview. Examples might include digital resources, a discussion board, blog or e-portfolio. To avoid too narrow a focus at the start of an interview however, we found it helpful to introduce these artefacts towards the end of the discussion when they often served to remind the interviewee of aspects of their learning which they may not have mentioned previously (see Creanor et al., 2006a). A fuller description of the innovative LEX methodology can be found in a separate report which is also available to download from the project web site (Mayes, 2006).

Sampling strategy

The analytical nature of IPA methodology restricts the numbers of participants to a manageable number within the timescale available, with most research to date reporting on small studies with little more than a handful of participants in a particular context as described by Reid et al. (2005). As the LEX study encompassed a range of educational settings however, it was necessary to extend this limited approach to include a representative sample from HE, FE and ACL settings. Working with colleagues and with contacts from our own personal networks, we quickly identified a range of interesting courses from across the UK where learners were being asked to engage with e-learning in different ways. A total of 55 participants took part in the 22 interviews and 6 focus groups, comprising 24 males (43.7%) and 30 females (54.6%). One person did not state their gender. These participants represented a range of backgrounds including:

- Higher Education (HE): undergraduate Business Studies, Economics and Marketing programmes; postgraduate Law diploma
- Further Education (FE): Higher National courses in Social Care, Customer Care and Hospitality
- Adult and Community Learning (ACL): Trade Union course for union representatives; adult numeracy, literacy and English language (ESOL) courses.

Reflecting the changing profile of today's learners, they ranged in age from 16 to over 65, of whom 30 were aged 25 or over. The majority (71%) were also in employment, with 18 working full time and 21 part-time. A further 5 were actively seeking employment.

Learner voices

The complexity of the learning context is already well documented (e.g. Entwistle et al., 2002; Mason & Weller, 2000) but becomes more vivid as learners describe the complicated nature of their lives, the ubiquitous nature of technology use and the many external influencing factors over which tutors have no control. Accessing these very personal perspectives presents many challenges, not least of which is finding a common language. In this, we allowed the interviewees to take the lead. Only a small minority used the term 'e-learning', mainly because it had been introduced to them as such by their tutors. For most it was simply another method to help them learn.

> To me it's just learning, the fact that it's online as opposed to in a classroom is irrelevant. It's just another way of accessing it. It's all just learning... it strikes me as quite old fashioned and quite quaint, but talking to other people they're like 'oh wow! It's online! Its e-learning!' and I think it depends on where you're coming from what it means to you, but for me I just think of it as learning and I don't use the term. (Rebecca, adult online learner)

Defining 'effective' learners was always going to be problematic, and again we made a deliberate decision to allow characteristics to emerge rather than impose any preconceived, tutor-influenced preconceptions of what this might mean. As the learners reflected on, interpreted and re-interpreted their experiences, both positive and negative, the underlying themes gradually surfaced. The evidence gathered validates a few of the issues which are already familiar in the research literature, but other, less well-researched aspects have also come to the fore. The following sections provide an overview of some of these themes.

How do we characterise effective learners in an e-learning context?

Perhaps unsurprisingly, our findings show that technology rates as a relatively minor factor in the profiles of those who might describe themselves as effective learners. Characteristics such as confidence in their ability to cope with life, learning and technology; the capacity to network with others through a variety of communication channels; highly effective time management skills; and, most crucially, the skill to integrate and balance learning with work, leisure and family commitments are key. Boundaries between these different aspects of their lives were often blurred, and learning was seen as being very much part of their identity.

> And it is very, it's quite difficult, you know [learning], that's, that's the whole point really isn't it. It's a bit of a challenge to yourself, you know. (Vanessa, FE languages student)

> But something like this [the internet] I guess it expands all your horizons in completely different ways and helps you to apply academic stuff to everyday life and see where current affairs and things fit into the academic. (Emma, undergraduate business student)

A high level of IT skills was not necessarily seen as a pre-requisite for being an effective e-learner, nor was the type of technology used within a course (e.g. Moore & Aspen, 2004). There was also recognition however that the skill set required for e-learning differed from generic IT competencies. What appeared to be more important overall was a willingness to learn.

> I'm beginning to rely less and less on other people showing me what to do. Instead of being afraid of technology on the computer, I'm beginning to learn, well, it's not as bad as it seems, take your time, if you make a mistake it doesn't matter, just do it again. (Michele, adult learner on trade union online course)

> I thought it would be OK because I'm so used to doing word processing ... and I'm really fast at typing and things so that wouldn't pose a problem for me at all. What I didn't realise was that I would need to go into the internet and so I was feeling quite confident but now I don't feel as confident about that. (Focus group member, FE social care day release course)

The influence of technology on informal learning also emerged strongly for these learners, e.g.

> I do think I learn outside the university through the internet because you can get websites now, Wikipedia, the online encyclopaedia, I've been on that recently and just so many facts I've picked up from that, just me being bored looking at things. (Laura, first year undergraduate student)

Confirming studies by Oblinger (2003) and Veen (2005), effective learners described themselves as highly skilled networkers, often using the technology to access support when needed.

> Using, like, computers for your assignments and even mobile phones …, getting with your friends or even tutors, mobile phones have started coming in a lot….Just by using text messages maybe and saying, 'Do you know how to do this bit?' (Richard, FE Hospitality student)

There was also evidence to confirm that more mature learners felt that younger people had an advantage when it came to using technology,

> ... the kids know everything there is to know about new technology, you know, so if you've got a young person around then they would be able to show you everything there is to know about it. (Focus group, FE Social Care students)

with the younger learners essentially confirming this view.

> ...you just, you take it for granted because, well, our generation has sort of grown up with it so ... we just take it all for granted that, oh well, that's always been there and we'll just use it. (Lynsey, first year Economics student)

Effective e-learners therefore are flexible, resourceful, self-aware, and highly motivated. They generally remain unphased when aspects of learning and/or technology do not proceed quite as expected as they have strong support networks and are adept at knowing when and how to use them.

What are the beliefs and intentions of effective e-learners?

Not all interviewees were entirely convinced of the benefits of e-learning, and several noted that they expected technology to be employed in a way that would be beneficial for their learning, rather than simply for the sake of convenience,

> I don't really like to, just sort of go headlong into using something new because I always like to see what it is that, you know, what the new technology's going to do for me... (Amanda, postgraduate law student)

Many strongly believed that technology could support and enhance their learning, and in many cases was an essential part of their lives,

> I'm addicted, it's the first thing I turn on in the morning before I even wake up and it actually it's very, very bad. I think in the future people can't cope without their laptops. My main use of it is I guess social networking. It would be My Space and Messenger and e-mail things like that and then secondary would be information gathering in terms of, like I said, my home page is the technology website and current affairs, news. I have alerts coming into me so I get information and then I use search engines for academic purposes. (Emma, undergraduate Business student)

> Because I have a hearing impairment sometimes I don't find classroom environments easy to work in and I have other health issues … 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 just go in tomorrow and I'm ok and I can catch up. (Jenny, adult online learner)

One recurrent theme was the learners' strong emotional response to technology and to e-learning, including frustration, gratitude, fear and even love (c.f. O'Reagan, 2003).

> I use my laptop, I take it away, it's attached to me, I couldn't survive without it. (Emma, undergraduate business student)

> 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)

Several interviewees preferred to separate technology use into study and leisure activities, particularly when it came to their personal gadgets such as mobile phones and MP3 players, while others managed to combine them successfully.

> I try and only do fun stuff at home and I don't really know if I would want to have an iPod with like [learning] stuff on it because then if you're not doing work you feel guilty, but if you are doing work the temptation's there to listen to more interesting things. I think it's quite good just to separate them. (Nicola, postgraduate law student)

> 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, 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. That's the technology I use. (Dumisani, undergraduate marketing student)

There was also substantial evidence that the use of technology had an impact on learners' confidence and self-esteem.

> I am, yes, very much, so [confident], you know, and even at work, you know, I've been able to help people out, you know, maybe people that have problems or whatever and I've been able … to show them how to do different [things]. (Anne, FE Estates Management student)

In many cases, tutor influence and human intervention were highlighted as key factors, and learners were very aware when tutors were not fully engaged, or if the e-learning was not well integrated with face-to-face activities.

> I think it depends on the teacher really….if they're on board with it a hundred and ten percent then you'll be included. If they're not then they won't use it and neither will you. (Vanessa, HND languages student)

Beliefs, attitudes and intentions are as varied as the participants, and the themes highlighted here represent only a proportion of those which emerged. Nevertheless, they tell us that effective e-learners are generally positive about technology and are willing to engage with it, even when they do have some initial reservations. They have clear expectations on tutor involvement, hold strong views on how and why technology should be used, and most importantly, display very understandable emotional reactions to the technology and the way they are expected to engage with it.

What strategies and behaviours do effective e-learners adopt?

As is already evident from the literature (e.g. Allan, 2004; Sweeney et al., 2004; Moore & Aspen, 2004), the flexible nature of e-learning is generally welcomed by learners. We found that this was particularly important for adult learners who reported making full use of the technology to help them organise their study around other aspects of their lives.

> I can do them [the online activities] anytime, anywhere. At home, at work. When I've got 10 minutes in between meetings, half an hour between other things, its just you can slot it in any day of the week, you don't have to take a whole chunk out of your day to attend a course. (Rebecca, adult work-based online learner)

> I think that's very helpful, we get to work through that at our own pace and it's all on the web page at the college. It's good that everything's on there so I can access it from home, I can access it from work, I can access it in here [the college] and [the VLE] tends to be quite well laid out and quite user-friendly. (Joe, day-release Social Care student)

Approaches to study were varied, but 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 all at the same time. This is very different from the traditional quiet study mode which tends to be supported within institutions.

> I was writing my ... project, I was doing my blog and doing my homework for economics all at the same time and the funny thing was, I mean I was sitting there and ... listening to music in the background and having a laugh to myself thinking who says men can't multitask! (Paul, mature undergraduate student)

Many reported being very aware of the distractions offered by technology, but still found them hard to avoid.

> I find it a bit difficult using the internet all the time because I find that you get waylaid and other things pop up and ... I find I'm distracted, very distracted, you know, that I find that you just can't access the exact thing you're looking for and I spend so much time trawling, surfing the net looking for the information that I'm looking for, you know, the specific stuff that I need. (Focus group, FE students)

There were many instances where family relationships were reported as important aspects of learning.

> [e-learning] is actually helping me with my kids as well because as my eldest son, like I said, he wants to do games design, here. But now we can discuss things and look at things together… but him and I can discuss things now without it going right over my head. (Paul, mature undergraduate economics student)

> …my Mum did a course in Microsoft Word and Excel, like, at college, and she taught me how to use, like, all the detailed versions, then when I was at school I learned bits and that but my mum was the main teacher to me of the processes. (Alan, final year undergraduate student)

Although home circumstances sometimes had a detrimental effect on access to technology.

> The only bad thing I've got is, if I'm sitting on the computer, guaranteed the kids want on it and then they're like, 'oh can I get on, can I get on', so in the end I just get up and leave it and let them go on it. (Focus group member, FE students)

Student perceptions of online discussions are well represented in the literature (e.g. Sweeney et al., 2004; Rourke & Anderson, 2002; Salmon, 2002), and are often key features of the e-learning experience. The interviewees reported mixed views on these as well as other types of learning activities such as online group work, e-portfolios, video lectures and assessment.

Online group work:

> It's dependant on other people or the rest of the class catching up on some of the activities, you can't do without everybody else for instance. I find that slightly irritating because why I go online is that you should be able to go at your own pace but it doesn't always work out like that, depending on how the course is set up. (Rebecca, adult work-based online learner)

Video lectures:

> … I find my concentration's not so good, do you know what I mean, because you know, you're sitting there on your own [watching a video lecture] and you're sort of looking at the

> time and thinking, 'Oh well I really want a cup of tea' and thinking 'Well, I'd better watch this' Obviously if you're in a lecture theatre, you know, you have to be there for an hour and that's it finished…. (Amanda, postgraduate student)

Assessment:

> [E-learning] doesn't help you in your exam periods because it's not a traditional form of assessment so if you're teaching over the internet you should also include, like, literature skills you need for exams. It's harsh for [the tutor] to say you've got to do this piece of course work on the internet and use the internet and type it up and use these specialist programmes, but then your exam's something you've got to write about ... so I think that's a disadvantage. (Alan, final year undergraduate student)

Learners often reported taking control of their learning by making choices on how, when and where they learned. This often subversive behaviour was reported as being mostly invisible to tutors.

> 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 that we haven't been communicating all year but we have, it's just outside of that [discussion] board. (Nicola, postgraduate law student)

Cost effectiveness was also a key factor for many, particularly in comparing books and the internet, but this was also tempered by a realisation that online information may be less reliable.

> ...when doing research its torture if it's a bad website and sometimes I'm finding, on essays and things, you've got to add lots of references … and they're saying use books, but books cost money so the internet is the main thing that we end up using and just trawling through all these websites, you never know if the knowledge is actually good or not, so I'm always worried that I'm handing something in which is completely just one guy's opinion, but it looks really professional, but maybe he's a complete liar but he's made a really pretty web page [laugh]. (Laura, first year undergraduate economics student)

Based on the evidence gathered here, effective learners have strong views on how and why technology is used for their learning, and are prepared to adapt activities, environments and technologies to suit their own circumstances. They have a very sophisticated awareness of their own preferred approaches and those of others. The influence and support of family and friends play a major role, and control and choice are key factors.

Towards a conceptual framework of the learner experience

In order to make sense of the rich data collected and to provide a higher level framework within which the learner experience might be situated, we settled on two key learner questions:

- What factors influence what I do with my learning?
- What factors influence how I feel about my learning?

This led to the creation of a series of five, high level categories relating to life, formal learning, technology, people and time, within which a further five dimensions encompassing the main influencing factors are situated, i.e. control, identity, feelings, relationships and abilities. In keeping with the ethos of the study, each of these is evidenced by the learners' own words. A short extract from this, highlighting the technology category only, is reproduced in Table 1 below. A more complete version along with an accompanying concept map is available on the project web site (Creanor et al., 2006b).

Table 1: Towards a conceptual framework

	Control	Identity	Feelings	Relationships	Abilities
Technology	It's the same way with learning to use computers and software packages… It tends to be very hands-on and people like to just touch it and feel it and experience it and it's like a friend of mine bought a new phone last week and she spent the entire day she got the phone just exploring it, do you know, working out how everything works and what way you want it to work for you. It's very much an interactive touchy-feely thing.	I'm beginning to rely less and less on other people showing me what to do, instead of being afraid of technology on the computer, I'm beginning to learn well its not as bad as it seems, take your time, if you make a mistake it doesn't matter just do it again.	Because to me a … design is a creation like a painting or you know, drawing and if I did it on the computer it would sort of lose, I think it would look too clinical.	…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 that we haven't been communicating all year but we have, it's just outside of that board…	You get a wee boost the first time you do something, you get a 'oh right, I've done that myself' and then you get that wee confidence boost and you'll go to the next step, you know. The first time you kind of hit a brick wall you kind of, you know, I did it too and you go 'aargh' but when you do it the first time you think 'I done that' and then move onto the next thing, it's definitely worth it.

Conclusions and recommendations

The LEX project has broken new ground through the exclusive focus on the learner voice across the post-16 sector, and in the development of a robust methodology for interviewing, recoding and analysis. The learners we spoke to were ready and willing to talk about their experiences of learning, technology and life and our findings show that any initial hesitation can be overcome if a suitable approach is used. They have provided us with a huge amount of extremely rich data that will take some time to fully analyse. What we have presented here gives a flavour of their views, from which tutors, course designers and institutions have much to learn. For example:

- How ready are we to capitalise on the ubiquitous use of technology in our learners' lives?
- How will institutions cope with the increasingly pervasive nature of social software and mobile devices which learners choose to use, often overriding tutor guidance and institutional support structures?
- How will we adapt the design of e-learning to encompass, rather than exclude, the technologies and approaches our learners are comfortable with and choose to use?
- How can we prepare staff for these new approaches in an evolving learning landscape?

Although some of the themes which emerged are already familiar, others warrant further investigation. These include, for example:

- the 'underworld' of digital communication among learners
- building on the increasing prevalence of informal learning through technology
- the extent of learner choice and control over technology, learning activities, and the learning environment
- emotional aspects of technology enhanced learning and its impact on confidence, self-esteem and motivation to learn

As a research team, we feel privileged to have been allowed access to the very personal reflections and experiences of the learners, and would commend the LEX approach as a valuable one in eliciting thoughts, feelings and attitudes which are unlikely to emerge through large scale surveys, questionnaires or even semi-structured interview techniques. In conclusion, we would recommend that all those involved in teaching, developing, supporting and promoting technology enhanced learning should regularly take time to pause, listen and learn directly from the learners.

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Bionotes

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