### Expectations of technology

Learners have high expectations of technology with respect to access, choice and reliability.

**University e-mail**
I don’t really use for people at University, I usually use texting, Facebook or MSN.... You can get an immediate response with phones and Messenger.

E4L

**I am very very highly dependent on the Internet and the networks that the university runs**

STROLL

**At my old university I could access flawless wireless anywhere on campus, but this is not the case [here]**

Thema

**There was an Inter-professional Learning forum, but that was really difficult to use. It didn’t tell you whether or not you had read the postings, so you had to just keep looking through to see if there’s anything new. It got really tedious.**

LexDis

**I was expecting things to just be a bit more slick… my experience with our Wiki possibly made it harder, because then obviously I’ve got, I’m expecting buttons in certain places, and they’re not there…**

PB-LXP

### Expectation of VLEs

Learners expect consistency across modules in use of the VLE: most see it as an essential aspect of course admin and communication

…all my tasks, my deadlines, the module guides, all announcements, everything is on [the VLE], so if I didn’t have it I’d be buggered

E4L

**I use [the VLE] more or less every day. I check my email. I check to see if there is any added information that we need.**

[The VLE] is invaluable. Keeping in touch with your peers and the work on the project [when] you are all in different places.

I’ve become more dependent on [the VLE] as the years have gone on, and have found it more and more useful

STROLL

[The VLE] is simply outdated. Incredibly poor UI, terribly hard to navigate. Tutors have no idea how to use it and how to administrate it.

LXP

**I really like [the VLE], but I think that there is an awful lot on there, and it could be made a lot easier to use. The navigation is difficult.**

LexDis
### Expectation of tutors' skills

Learners have high expectations of their tutors' use of technology. They expect use of technology for learning to be appropriate and skillful.

*the professor doesn’t even know how to use Blackboard, so he puts everything in the same place, because this is the only thing he knows how to do. It just looks ridiculous and he tells you - he doesn’t know exactly how to use it.*

*Tutors have no idea how to use [the VLE] and how to administrate it.*

**LXP**

*My lecturer might say: “We’ve put up this, on this subject”, and then I won’t know which section it’s in. I’d have to go into each section and open each document section to find it.*

**LexDis**

*Encourage those [lecturers] not using [the VLE] to see what others are doing and see if it can be helpful and useful and not such a huge change, and make it accessible.*

**Lead**

### Balancing modes of learning

Students stress that learning with ICT should be balanced with face to face and paper-based learning.

*I would advise [new students] to not get too one dimensional in their study habits and only use IT but use other forms of learning as well.*

*I have online pages I read, but I’m still dodging Facebook. I know people who lose a lot of time to these things*

**Lead**

*in the end there was no way I could go near [the language-learning software], it was so piggin' boring… What I really wanted was to interact with people*

**E4L**

*When I’ve got to think in advance, oh I need to be at the internet… it does alter the flow…if you’re only studying from books and you’ve got your notes, you can study anywhere*

**PB-LXP**

*I believe that some […] professors use technology as a ’crutch’ and can abuse technology as a replacement for quality teaching.*

*It's [about the] kind of experience that you have sitting in those lectures listening to those people who are experts in their field.*

**Thema**

*I word-process on the computer but still draw mindmaps on paper because it's easier and quicker for me. I'm a firm believer in using whatever tool is appropriate for the job.*

**LexDis**
<table>
<thead>
<tr>
<th>Balancing structure and self-direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a tension between self-directed learning and students’ desire for clear structure, guidance on study and regular feedback</td>
</tr>
<tr>
<td>I think the way that the course heads kind of want us to learn [is] really helpful to your personal development but in terms of regular marking […] you can’t really assess your progression really well.</td>
</tr>
<tr>
<td>I mean they certainly do want you to be more independent. […] However, you need to give people tools to do that. And I personally… feel like I was not handed the tools that I needed to do that.</td>
</tr>
<tr>
<td>Last term I didn’t really know what the graders expected, I didn’t have any feedback, I didn’t know what style or format they looked for at this university which might be different from what I was used to.</td>
</tr>
<tr>
<td>All from Thema</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The technology hurdle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where technologies require learners to adjust their usual study practices, they can become a barrier. Such technologies require careful introduction and clear communication about the benefits of use.</td>
</tr>
<tr>
<td>I prefer to scribble down things, even if you are going to type them up neatly later, take notes quickly while you think about them… rather than searching through and copy pasting, combin[ing] bits and pieces.</td>
</tr>
<tr>
<td>Undergraduate student, Lead Project</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>LEX</td>
</tr>
<tr>
<td>I felt that I was doing two courses and that was, frankly, too much. I had to stay with my bad old habits just because I didn’t feel I had time to learn something new.</td>
</tr>
<tr>
<td>LexDis</td>
</tr>
<tr>
<td>Although I’ve become used to reading things on screen, I don’t really like the way you have to scroll down and can’t view the thing as a whole.</td>
</tr>
<tr>
<td>E4L</td>
</tr>
<tr>
<td>Next year…I’ll study the ICT stuff separately. I won’t do it in the same order as in the course.</td>
</tr>
<tr>
<td>PB-LXP</td>
</tr>
</tbody>
</table>
Trusted tutors

In their use of technology, students are strongly influenced by tutor recommendations and course requirements.

Things like [the VLE], University e-mail account and language learning software, they were all introduced to me by teachers and tutors. Friends would introduce things like SMS, YouTube, AQA…

E4L

I didn’t really know how to use the online journals… now I can use them confidently
I’ve gone from using pencils to do my drawings to using different mediums like digital media, photoshop and flash
Over the three years I have had to do presentations… so I have had to use different technologies
All from STROLL, describing course-led skills development
The resources I have used so far to do my studying are what the lecturers have recommended us to buy and the [VLE]

Lead

I don’t think before the start of this course I’d discovered iPlayer. But that was a bad mistake – now I can watch all the TV programmes I never got round to watching!

PB-LXP

Academic digital content

Quality academic digital content is regarded by learners as a significant benefit of F/HE: they become significantly more adept at using it as they mature in their studies

I’ve been using a lot more journal articles for research data to complement the books that I’ve been getting from the library. I can access it wherever I am via the Internet.

STROLL

Electronic resources should aid and not replace paper but all the time the two should work in harmony, and it's brilliant that the [VLE] service has been very useful.

Lead

When we use the search engine for journals and such like, I really did think … yes, this is loads better than going to find a paper journal. The convenience of it, because all you have to do is type in what you like or what you’re looking for… It will search 7,000 journals or whatever in a minute

E4L

e-books and journals are a fantastic resource via an Athens account

LXP

It will check everything, I mean everything, from the newspaper archive...I love that... it's just amazing

BLUPS
# 24/7 access

Learners really value 24/7 access to online learning materials which allows them to fit learning into their lives.

*I think for me I find it beneficial because I can basically take my work along with me wherever I go. I quite often find I work in a friend's house or a parent's house, or if I am in work...*

PB-LXP

*Podcast continues to be a great inspiration to the way I learn, I find it so helpful to listen to again and again*

STROLL

*Digital technologies give great power to students as they provide quick and easy access to a huge wealth of information... I've not had to go to the library once for a journal article*

Thema

*The big thing that came out of this for me is that it would really help if the lecturers put as much as they could in an electronic format*

LexDis

*I would be working at 3 or 4 in the morning... It means at home, whatever time of day or night I could grab my files and start working.*

STROLL

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# Meaningful choices

Learners want meaningful choices about how they learn, with and without ICT.

*Students learn differently and want choice. Such as paper or book, computer or internet, hand out or [VLE].*

Variety... with different options for each course, so students can choose which systems to learn from.

Lead

*Tailored, bite-sized chunks... If I want to learn something, I want to try it out.*

*I hate sitting in front of the computer when I'm not working because I just get sick of being there 10 hours a day anyway, so really I would much rather be out walking with my MP3 player*

E4L

*For socialising, you are selecting what you want. Whereas for learning, you have to take what is available.*

LexDis
**Multi-tasking**

Many learners use technology to multi-task while some find being online a distraction from study.

I suppose I would [write my essay] for about an hour, and then if I got bored or needed a break then maybe I'd take a break by going on MySpace or Hotmail.

LEX

Yes, music, MSN, Facebook, because I can't simply just do work on its own. I find it quite boring. I need something else to keep me occupied, something to motivate me.

E4L

I'm still dodging Facebook. I know people who lose a lot of time to these things.

It’s very useful to have one’s own laptop for work and social purposes but it can also be very distracting.

Lead

I simply unplug my Ethernet cord, keeping me from the internet altogether. Additionally, I sign out of Skype, gchat etc when I don't want those distractions.

Thema

To break up the day I checked my email accounts and Facebook for around half an hour.

BLUPS

If I’m at home I’ll have whatever I’m doing like Word and then I’ll have Windows Media Player, Messenger and Lime Wire, and all the other ones... At the University, it’s a lot easier to get work done. I can just work solidly without distractions.

E4L

**Agile adopters**

Some learners, including many disabled learners, are agile adopters and explorers of technology.

[using my assistive technology] helped me to develop more courage to use new things... they were all in awe of my preparation, my MindMap.

I use Inspiration only because I've decided that I'm going to do as much as possible to further myself in my life. So I have all this stuff and I'm going to mess around with it.

The only way you can become a positive learner and get to use the product better is – when it does go wrong – [think] right it has jammed up so we will work around things.

I have to customise everything I use to my own preferences. That saves me time in the future and I store data in a very organised way.

LexDis

I build a lot of my own software, e.g. for bibliographic referencing, because it better fits my own way of working.

LXP
### Conservatism

Among novice learners at least, very few actively explore and investigate the potential of software or technologies.

(Researcher) Have you ever gone off and investigated technologies yourself that you might want to use...? (Student) No, I stick to what I'm told about.

E4L

Some of the newer software that has come out which I'm not familiar with using, if I come to a point when I just can't find out a way to use it I'll just leave it and won't bother with it.

E4L

[exploring online social networks] is a guilty pleasure because I think that I really should be working instead, so I don't try out all these wonderful things.

LexDis

The resources I have used so far to do my studying are what the lecturers have recommended us to buy and the [VLE]

Lead

### Personal technologies

Learners expect to be able to use personal technologies and services in institutional contexts.

If we are required to be networked for a computer workshop, for example, there generally aren't places you can plug in a laptop with assistive technology in. So, then you are reliant on whatever assistive technologies are available on the network generally.

LexDis

Being tethered to a cable is restrictive and not conducive to the group-style learning that the Department is trying to foster.

Thema

Favourite technologies cited in STROLL and other projects: laptop, mobile phone, pen drive, pen tablet, voice recognition software, RSS feeds

### My technology my self

Technologies are integral to learners' lives, and they attach emotional significance to their personal technologies.

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

LEX

I absolutely love my MacBook

My little memory stick which I can carry about in my handbag [means] I can get things from home to Uni and vice versa.

Technology is a big part of my life, both in working and playing. The first thing I do in the morning is to switch on my TV and computer because I have to check my emails.

STROLL

My whole life is on my laptop: pictures, music, every Word document I've created since...
I cannot imagine my life without my mobile phone
I think it’s not good that I’m kind of an internet maniac because I don’t feel safe if I can’t get online.

I’ve got iGoogle set up so that whenever I’m at work, at home, I just go in and it shows me some of the sports headlines, some of the news headlines…

I depend on my phone, because it has an organiser application so I use this to schedule and structure my day and to list any important things I had to do that day.

My mobile phone, my great Samsung … I wouldn’t leave my room without it. I find it extremely useful, because I can record a whole hour of lecture and seminar.

Learning spaces
Learners are creating their own learning spaces, blending virtual with face-to-face, and formal with social learning

They’ve created an environment that’s relaxed, not too formal, that no-one’s going to email you, well they probably will but you could just ignore it. It’s just a particular clean space

I’m portable and I could go and sit in a cafe as long as they have wireless access

(On MSN) we suggest websites to look on for things to do. It’s just to know that somebody else is there doing it as you are.

I still wouldn’t like it to be silent, I like to have some music, whereas other people want absolute silence

BLUPS

In a cafe, so long as there are no distinct distractions [and...] I have my own music. I have all my “break-excuses” at my disposal so find I take fewer breaks of shorter duration.

I avoid libraries as much as possible and find it difficult to find the materials I need, so I rely primarily on e-journals that I can download and read in the comfort of my own home. [...] I would personally rather be home in my slippers working with my laptop from the sofa.

In fine weather I like to sit under a tree in the local parklands

Informal collaboration

is widespread, often facilitated by technology that is under learners’ ownership and control

On Facebook you can keep threads, email more than one person at once and upload photos, which is good from a social point of view and also to ask about work queries.

Sometimes I will be asked my interpretation of a question if a friend rings or texts me. I generally use these channels of communication, finding they produce much quicker answers.
I used my mobile phone to contact a friend to find out where I could get my cover sheet for my essay... I found one on another student’s home page who’d put it up there conveniently.

I find it really helpful to go over material with other students, whether I'm organising that through IT discussion boards or just emailing a person I know.

[Lead] [I use my blog to talk about] my lecture, what I understand or not, and then my friends can discuss more about lectures and they answer my questions.

I think we learnt the most by actually forming groups of people to study together. [...] And some people understood more of some parts of the material and then we would explain to each other as well and take notes.

I have asked one of my classmates to be my ‘research buddy’. This means that we meet once a week, discuss on Skype and exchange e-mails. We talk to each other about our dissertations and get the other person’s views.

There was one of the team that had used Skype previously and he kept badgering us ‘you’ve got to get an account’. And we did in the end and then ‘oh this is good, yeah we like this’ So you’d be at home at night on the computer and all of a sudden someone will pop up and you’ll have a chat with them.

As the use of technology makes more learning happen in ‘public’, learners are being socialized to play the academic game in new ways.

You get assessed on how much you talk on [the forum], so we try to keep to a minimum the other contact, unless we meet in person and the facilitator is there to see that we have done it. … quite a lot of the time you go on there, and someone’s just replied to someone who has said “I’ve done lots of work” - “Well done”, just to say that they have had a look at the forum and they have seen the work that is being done!

Whenever we were doing group work this year, I had to tell them to send me a text to let me know when they’ve put it up. That way I would be able to go straight to it and look, instead of wasting time.

So I think oh okay, perhaps I should post these concepts on [the VLE] to make my tutor understand that I did make some progress.

the wiki sort of made me relook at those notes and... put then in a different format

it’s all about like trade-offs I think [...] between what you’ve got to do to jump through the hoop, and also what’s really going to be interesting and useful in the future.
Formal collaboration with support from technology is an increasingly common feature of courses: feelings about it vary.

Communication over group assignments is done sometimes face to face or over the internet depending on the task itself. If we can do something without meeting, then we jump at the opportunity because it saves us time from finding a place and time to meet. However, if we feel it requires us to meet then we do.

Towards the end we were much more of a team and were editing [the wiki]... people were really getting stuck in.

PB-LXP

The biggest thing that would allow me to work more effectively would be if more students were aware of the possibilities of using group collaboration tools such as citeulike and del.icio.us

LXP

I think some actual lecturers have added groups on Facebook so if people have got any problems they can go on that site.

E4L

[Audiovisual conferencing] just made the team work possible...without the ICET element I can't imagine achieving the same thing. We'd have had to be co-located so that we could meet up at regular intervals or use teleconferencing which isn't as good. You just don't get the interaction.

Being able to see people was brilliant...especially when people are talking... It was good to go and see peoples' expressions and emotions.

For me it reflects what happens really...living in the real world in so much as you often don't have the luxury of meeting face to face, you've got to network with people...in different parts of the world...

PB-LXP

The digital divide may be getting narrower but deeper: those without basic access and skills are increasingly disadvantaged.

I find IT more of a challenge than traditional students who grew up in the Information Age. My IT skills are not as good, yet some instructors take it for granted that all of their students possess equal competence with technology.

Sometimes technology can turn people away if they’re not confident in using it. I’m not really confident, but I just feel a bit more at ease with it [than my mum would] because I’m a little more familiar.

E4L

I had to continue to go back to the library. Those who have internet at home can check it all day. But, I went to the library in my pyjamas because it got so late! This is unfair.

LexDis
We had extensive computer training at my school from when we were eleven, and we had our own school intranet … and we were taught how to use all the different things from quite a young age.

The internet was not really introduced into our school until I was in 5th year.

I think the university should be careful that new students aren’t feeling pressurized into buying their own laptops – it is extravagant, they can be broken or stolen and some people can’t really afford it.

Lead
You are given the technology, to make it all even, but sometimes it is making you ‘separate’ again.

LexDis

<table>
<thead>
<tr>
<th>Time and training</th>
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</thead>
<tbody>
<tr>
<td>Disabled learners are particularly affected by time constraints and the training required to adopt new technologies</td>
</tr>
</tbody>
</table>

I didn’t have time to have the training, which was quite frustrating, but having had the training on it now it’s just amazing the difference it has made to my thought processes and timing

I felt I was doing two courses, and that was frankly too much. I had to stay with my old bad habits because I just didn’t feel I had time to learn something new.

I wouldn’t scan it in… because of the timescale it takes.

LexDis

<table>
<thead>
<tr>
<th>Skills gap</th>
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</thead>
<tbody>
<tr>
<td>Despite their facility with personal technologies, learners often lack skills in using technology to support learning. This can be true even after considerable time at college.</td>
</tr>
</tbody>
</table>

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.

LEX

Online learning has been through trial and error

LexDis

The information literacy of young people, has not improved with the widening access to technology: in fact, their apparent facility with computers disguises some worrying problems

Google Generation, JISC 2008

We didn’t get a use of [ICT in school] and never really got taught it. We just kind of went on and got slapped if you went on chat rooms.

Lead
**Google generation**

The Internet is the first port of call for information: sites such as google and wikipedia are referred to before academically approved resources

well firstly if I want to look anything up... I will usually Google it... Then I would fire up MSN... Finally [the VLE] and all the resources the University makes available online

[The internet] is a world of information. You don't have to go anywhere, it is all on one database

You can Google it and you’ve got what you need in a second.'

STROLL

and they’re saying use books, but books cost money so the internet is the main thing that we end up using...

LEX

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**Active learning**

Students value ICT-based activities, especially those closely related to assessment tasks that support reflection, meta-learning, practice and revision

I think you've got to see progress... [as in] the little tests that you quite often have on this software.

E4L

The online materials are very good, especially the interactive quizzes and things and the way it’s structured. It’s all in digestible chunks.

It was interesting to see how many of us pulled out these mindmaps that we’d done on the computer

I really think [the wiki] helped me with my revision, with my relating it to real life

I'm one of these people that tends to learn from doing... if I actually go through the process a couple of times it sticks so much better, and having the ICT that enabled me to actually do it

It’s good because it breaks the learning up a little bit and makes it a bit more practical

PB-LXP

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**Quality teaching**

is of more interest, particularly to experienced students, than the technology used: they expect sound educational justification for use of 'new' technologies

I like to see practical alongside theory

E4L

If tutors were to adopt Facebook as a method of communication it would be purely for 'trendy' purposes.

It seems to me that if blogging is to be useful for learning, you need to have academic material substantial enough that students can spit out a non-trivial stream of updates on it.

For most coursework purposes, I think that forums would be more efficient and useful than blogs

Thema
### Different strokes

Learners display enormous differences in past educational experiences, needs, and motivations. These have a profound influence over their preferred strategies for using technologies.

*We had extensive computer training at my school from when we were eleven, and we had our own school intranet which was very similar to WebCT... And we were taught how to use all the different things from quite a young age*

*We didn't get a use of it and never really got taught it. We just kind of went on and got slapped if you went on chat rooms.*

**Lead**

*I prefer to do it by hand rather than on computer ... my computer has crashed about three times since we've been at Uni and I've lost everything that way*

**LexDis**

*Technology I think is better interactively to be honest with you... I find it easier to learn from.*

*If we had none of these [technologies]... I don't see how we'd get anything done.*

**E4L**

### Multi-media

Many learners, particularly proficient e-learners, are used to learning and accessing knowledge via images and video.

*If it was in a podcast [sic: student means videocast] for me it would be a lot more helpful because I'm more of a visual person. I'd rather watch something than read. If it was on a podcast and I was on my way here or on the bus or something, I could watch it on my phone or MP3 player.*

**E4L**

*Television and computer... I'm a visual learner and I like to have colour. I definitely understand when I get that kind of thing.*

**STROLL**

*(Researcher) Why [do you like watching videos]? (Student) It keeps you focused more. Like I said if you're just listening to somebody talk, sometimes you can drift, but when you're actually watching it, it holds your attention.*

**E4L**

*The CDROM especially was good... video clips and interviews and bits of audio as well...exercises to do on top of that. So that was good – the change of pace and different sort of method of learning really.*

**PB-LXP**
## Managing life

Learners particularly value the flexibility that technology gives them to fit learning into busy lives.

*I record conversations with lecturers when I go to discuss my assignments for later review and I also use my mp3 player to take notes in lectures.*

*e-libraries are great because I'm not tied to being on campus... My PDA and laptop also give me increased flexibility.*

*I can do [online activities] anytime, anywhere. When I've got ten minutes between meetings, half an hour between other things... you can slot it in.*

*You often don’t have the luxury of meeting face to face, you’ve got to... network with people... some of the tools I’ve learned have been really good for that.*

*I'm portable and I could go and sit in a cafe as long as they have wireless access.*

*There's nobody saying 'well, your hair's a mess and you shouldn't be drinking coffee, and you can't sit curled up in a chair'.*

*I've got a radio which rigs up to my mp4 player so I'm able to... play it when I'm driving.*

*I was serving on board [a naval warship]. I did all my study in my cabin onboard which had a laptop computer with internet access.*

## Public/private spaces

Learners have different attitudes to learning in the public/private spaces of social networks.

*I think it’s great to have tutors/university staff/lecturers on Facebook. After all, it is supposed to be a social community network and I think they [deserve] the right to have their own community or form a network with students (if the students are willing).*

*Facebook and Myspace are avenues to get away from learning not to help learning.*

*I think that from the moment one person is present on the internet by giving his/her real name, by having blogs or using wikis for example, he/she is aware of evolving in a public space.*

*I wouldn't want to befriend people I work with or my supervisors because there are certain things about my life I like to keep separate.*