A Study of The Skills Sectors’ learners’ expectations and experiences of the digital environment

A Literature Review

Barry Phillips, SERO. December 2015
Background to the Sector and the literature review: Defining the scope and focus.

“This study will explore the needs of learners studying in the skills sector and their expectations and experiences of the digital environment. The scope of the study covers work based learning (including apprenticeships), adult and community learning and offender learning.”

Given the almost infinite scope of the “digital environment” we have focused primarily on the “digital environment in the skills sector”. However, where it can be assumed to have relevance, we have then taken account of the broader context. With a significant proportion of these learners (perhaps above those in other sectors) research (e.g. Alhassan 2012, Bickford & Wright 2005, Merriam 1993), and experience of working with these learners, confirms that the off-campus, home, and social environment can, and will, influence learner experience and outcomes – both negatively and positively. This was borne out in the subsequent research as will be demonstrated in the following text. As such, the broader context is rarely far removed from foreground.

This literature review is just one key strand in the wider package of research that includes learner focus groups, provider consultations, learner case studies and stakeholder interviews. In addition to standing-alone, this report will be incorporated into an overarching report which will bring together all of these research strands. For a greater understanding of the Further Education and Skills landscape with regards to students digital experience this, and the final overarching report, should be taken in conjunction with this year’s preceding Jisc report the “Jisc Digital Student: Further Education and Skills Review, Final Report 2015” (Jisc 2015) and its supporting report “Learners’ expectations and experiences of the digital environment in the Further Education and Skills sector: A review of the literature conducted for the Jisc FE Digital Student project” (Jisc 2014).

In defining the scope of the study we have taken note of the FELTAG observation (FELTAG 2012) that Further Education learners

“…are aged between 14 and over 65, on courses between entry level and NVQ level 5, which may be “niche” (such as violin-making) or very general (like GCSE mathematics), academic or practical (FELTAG 2012)”

Within this Further Education Sector it can be said that the Skills Sector covers:

- Work-Based and Work-Related Learning
- Adult and Community Learning
- Offender/Prison Learning.

On many occasions each/any/all of these may blur/merge, with/into the “mainstream” Further Education (college) Sector. Where relevant, and of value, we have allowed these incursions to be a part of this survey. By way of example, students on apprenticeships - in a college classroom - learning vocational skills that are intended to be applied in a work-based setting are of obvious interest. However, we have tried wherever possible not to
revisit or replicate the findings of the aforementioned sibling study, the “Jisc Digital Student: Further Education and Skills Project” (Jisc 2015).

It would be no over-simplification to say that, in comparison with other learning “Sectors”, the research into the learner experiences of, and attitudes to, technology for learning is somewhat underwhelming in terms of the body of work. Further to this lack of wider research, only a small proportion primarily concerned with “learner experiences”.

Indeed, this perception is supported in the published findings of the “Jisc Digital Student: Further Education and Skills Review” into the wider FE sector;

“...although the sector is responding with enthusiasm to the digital age...little...of this is based on research with learners” (Ibid).

and in more detail in the forenamed supporting Jisc literature review;

“(There has been) Little quality research investigating learners’ experiences and expectations in the sector. Where there has been an exponential increase in small scale studies of learners’ experiences in higher education, providing rich sources of data, we found only a handful of projects conducted with students in further education, and none after 2010” (Jisc 2014).

The vast majority of the existing research might be termed ‘Project Reports’ or (institutional) ‘Policy Recommendations’. As such, these are heavily biased towards those from a tutor perspective or Managers and/or Governors. It can be posited that, in a sector with so few sources of research-funding, it makes sense that what-there-is concentrates initially on wherever the maximum change might be effected.

There is a considerable body of evidence purporting to investigate “learner-centred” approaches and pedagogies but very few carry any significant learner voice. Learner experience is an element of some of the more generic research but, even then, rarely is it tagged as such. This means there is a need to scan methodically all reports and projects that may contain useful data and information. Not surprisingly, this is time consuming.

The situation regarding research has been exacerbated by the significant reductions to (and in notable cases, dissolution of) the few central bodies previously mandated to commission studies.

However, that is not to say that valuable work has not taken place. It is just that it tends towards the smaller scale and is not part of any coherent broader programme of research.

There is, indeed, a dearth of large-scale and/or longitudinal studies for the sector. We have tried to militate this wherever possible through the use of

- wider studies which take in teenagers’, young adults’ and adults’ experience of, and attitudes to, technology and learning. However, we have kept this to a minimum and as an admittedly crude attempt
A Study of The Skills Sectors’ learners’ expectations and experiences of the digital environment

A Literature Review

...to describe the context since in most (but not all) cases these studies are in turn too unsophisticated to take account of social and economic factors such as levels of educational and/or income.

We have also attempted to identify

- international studies (notably US Community College studies and Australian Offender Learning research) which may have some transferable lessons.

Finally we have

- scanned Student Satisfaction data (although this tends to be rather basic and without nuance where attitudes to technology are concerned).

A consequence of the above narrative is that the decisions of what to include and exclude from the final bibliography may, at first sight, seem to be something of an imprecise science.

In an effort to pre-empt, and thus reduce the risk of, being diverted down a seemingly endless discourse concerning the differences between generations (in a sector which takes in all post-primary school generations) it is worth, at the outset, clarifying our position. In most other sectors the Digital Immigrants versus Digital Natives debate was seen as relevant principally because the Immigrants were those who had traditionally been guiding the Natives i.e. the teachers guiding the students. However, in the Skills Sector, whilst this may often be the case, it is also the case that the learners span several generations – sometimes within a single cohort.

More than enough ink has been expended arguing about Prensky’s Digital Immigrants v Digital Natives thesis. Whether, or not, one agrees with Prensky’s original thesis it is clearly in need of a substantial refresh rather than being cited and then re-cited with no acknowledgement that it may have exceeded its shelf-life (1). Prensky published the thesis in 2001 – several years before the introduction of the iPhone or the mass take-up of the smartphone (at least outside of Japan) – and many of his “Digital Natives” would now be in their mid ‘30s. Equally, many of the “Immigrants” have become skilled-users of a variety of digital technologies. As our analysis of the literature will demonstrate the new “Natives” (teenagers and young adults) are often unskilled in the use of many technologies and particularly technologies for learning.

Prensky, himself, is amongst those to question his original thesis (Prensky, 2009).

In short, we accept that there may be generational differences in digital experiences but these are by no means easy to file into straightforward generational groupings. There are so many other variables as to make the categorization little more than a “rough guide”. Nuance is all.

1 It is worth remembering that Prensky’s Digital Immigrants were said to exhibit their “accent” or show their discomfort with technology, for example, through “…bringing people physically into your office to see an interesting web site (rather than just sending the URL)”. They “…think learning can’t (or shouldn’t) be fun.” (Prensky 2001) Behaviours and views that all but the most jaded would probably accept are now uncommon. At the same time, the Digital Natives “…grew up on the ‘twitch speed’ of video games and MTV” (Ibid).
In developing their “Visitors and Residents” thesis David S. White and Alison Le Cornu have perhaps constructed a typology that has more credibility and relevance in this particular sector (White & Le Cornu 2011).

A final concern - and in many ways the “Prensky debate” is a fine illustration - is that a significant amount of the research we considered has to be treated with caution if only because of the habit of citation and recitation thus giving a false currency to what is suspiciously outdated. This may well be perfectly acceptable in some areas of research but perhaps not when one is considering the use of specific technologies (or even pedagogies) by a certain age-group one, or even two, decades ago.

1. Work-Based and Work-Related Learning

“Work-based learning can, accordingly, relate to placements as part of education courses, to (semi-) formal on-the-job training provided within organisations or to the manifold forms of learning in informal and incidental contexts at the workplace” (Cheetham & Chivers, 2001 cited in Attwell, Pachler, & Pimmer, 2010).

The American researchers Ellington & Bryan noted the fundamental requirements:

“E learning curriculum must be designed to address the needs of both the learner and the industry the learner is a member of or will enter” (Bryan & Ellington, 2010).

We might add that the nexus of learner and industry-needs may be very specific and appropriate to a specific time and task – and liable to technological change and shifting economic priorities and influences. These can also, then, be ephemeral.

Whilst there is a lack of research relevant both to learner experience and the Skills Sector it is noticeable that (with some variations in specific detail) there is broad agreement across the literature in terms of what students want from technology, what they expect their colleges etc. to provide and the value they perceive.

i. West College Scotland (WCS) Student Survey of Learner Use, Experience And Expectation (WCS 2015)

We discovered one of the most comprehensive “learner voice” surveys as a result of canvassing contacts in the sector. This raises the possibility that there may be more unpublished (and potentially valuable) survey data. There are some contextual issues, which mean that the data need to be treated with some caution – primarily that a central component of the study was the online survey carried out using Survey Monkey via an e-mail and
the college internet (thus only students with Internet access could reply). However, staff involved suggest that, in their opinion, very few students would actually have been excluded for this reason. Furthermore, the study was supplemented with a series of focus groups.

The students were all at a Further Education college (West College Scotland). However, almost all of the learners who participated were “skills” students and so this study merits inclusion here.

The survey had 685 participants of which 70% were female and 30% male, with 85% being full-time learners and 15% part-time.

The online survey revealed several themes familiar to most (UK) state-funded education institutions, particularly those in the FE and Skills Sector, in this case themes the college had already identified and made moves to address. Key amongst these was the need for more and better devices connected to more-pervasive and faster internet. Given that this will be of surprise to few in the sector, and that it has been addressed to the best of the college’s ability, it is illuminating to look also to some of the other responses.

These amply illustrate the issues facing work-related learning providers, not least the range of students’ technology and digital-literacy skills, the range of vocational and work-based contexts and the range of device/technology preferences. Some students want more specialized software for their work-based learning support, some want more tablets, some want more PCs, some want more Macs (some specifically want “less Macs”), some want more use of mobiles and some do not use mobiles for learning at all. Some asked for more paper based material (e.g. the prospectus).

Since the data is broadly in line with the many smaller-scale surveys and case studies, we read we have chosen to reproduce headline statistics in order to set a “peg’ on which to hang, and investigate further, the ensuing similarities and variations.

WEST COLLEGE SCOTLAND STUDENT SURVEY: WHAT OUR STUDENTS WANT (WCS 2015) Headline statistics as compiled and presented to staff by George Johnson.

<table>
<thead>
<tr>
<th>Ownership of Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 75% owned a laptop</td>
</tr>
<tr>
<td>• 58% owned a tablet</td>
</tr>
<tr>
<td>• 88% owned a smartphone (approx. even split between IOS and Android)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What type of learning do you prefer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No online: 11%</td>
</tr>
</tbody>
</table>
WEST COLLEGE SCOTLAND STUDENT SURVEY: WHAT OUR STUDENTS WANT

- Some online: 63%
- Completely online: 6%
- No preference: 20%

To support their learning, students want more:
- Use of their laptop in class (1)
- Online activities (2)
- Face to face interaction! (3)
- Use of their smartphone in class (4)
- Use of email (5)
- Use of social media as a learning tool (6)

Use of Smartphone or Tablet
- 60% or more said that these activities were important or very important:
  - Checking grades
  - Registering for courses
  - Accessing Moodle
  - Communication about class related matters
  - Looking up information in class
  - Capturing images of courses activities

Satisfaction with Moodle? Overall:
- 75% use Moodle
- Of these 80% satisfied and 20% dissatisfied

Most satisfied with:
- Accessing course content
- Checking course progress
- Submitting course assignments

Barriers to using a smartphone as a teaching and learning tool:
- Slow network connection
- Battery life
- Limited access to wifi
- Cost of the data service
- Cost of the device
- Usability (small screen, keyboard etc.)
## WEST COLLEGE SCOTLAND STUDENT SURVEY: WHAT OUR STUDENTS WANT

### Main messages from the focus groups:
- Issues with reliable access to IT
- Lack of awareness of Office 365 (e.g. cloud storage)
- Moodle use not yet universal
- Effective use of Facebook groups across all campuses.

### Some conclusions:
- There is a demand among students for a blended approach to learning and teaching.
- There is widespread (but not universal) ownership of mobile devices.
- Moodle and blended approaches are being used effectively but not universally.
- We should consider make greater use of student owned devices, including mobile.

Many of the WCS findings are mirrored across the literature - albeit with varying degrees of local colour and detail.

### ii. Quality and availability of devices and connectivity

As with WCS, at PROCAT (Prospects College of Advanced Technology) the students’ (2) biggest complaint was again the quality and quantity of laptops available in the college (Jewitt 2012). This rather prosaic request was common across the literature and may well be a consequence of the extant technology reaching the end of its shelf-life and college infrastructure generally being in need of refresh in the context of harsh economic constraints.

At PROCAT one possible strategy to alleviate the pressure on available devices was instead, in the opinion of students, a subject of some contention. Students reported annoyance that the Learning Resource Centre (LRC) was commandeered for teaching classes and they were given no prior warning as to its unavailability as an LRC. When they did access the LRC they reported that conditions were

---

2 Of the 116 student participants 78% were in some form of employment (many over 30 hours per week) and thus can also be considered part of the Skills Sector.
“...too restrictive, for example, no talking and no use of headphones, which restricts their learning experiences, such as collaborative discussion and watching and listening to audio and videos” (Ibid).

Students asked that they should have the ability to

“...sign out a machine/laptop for use in the LRC and to have access to quiet zones for studying, in order to, type up assignments, carry out research and answer e-mails” (Ibid).

On a similarly fundamental level, a common complaint across the surveys and across campuses was that students' learning was hindered by the lack of printers, the lack of functioning printers or simply lack of toner (Ibid).

Whilst the vast majority of students owned laptops and/or tablets and had internet access from home it is notable that, in the one survey which asked this question, 7% did not. It is not clear whether these students had some form of access via smartphones. The numbers of students with smartphones was reasonably consistent across the two major surveys (97% and 88% respectively) but it is not clear what proportion use them as "smart" phones. It is, however, clear that a significant proportion of students do not like using smartphones as their primary learning device. PROCAT students cited small screens, battery life and data costs as barriers additional to those faced when using the college laptops (Ibid). Interestingly the BBC Media Literacy Survey (BBC, 2012) found that screen size, data costs, speed and wifi access were all common barriers hindering general (not specific to learning) online access via mobile devices. That said, PROCAT students were happy to use their mobile phone cameras for capturing and presenting images as evidence in support of assignments and evidence-based portfolios (Jewitt 2012).

With reference to home access, the persistent nature of the "digital divide" and the variations within social and ethnic groups should not be forgotten. The BBC Media Literacy Survey reported that 21% of those aged 15+ years "never" accessed the Internet and noted that Internet usage amongst adults decreases with age whilst it increases with "social grading" where 50% of those adults not online have "no formal qualification." (BBC, 2012)

“When things became hard, the first thing I had cut-off was the internet and cable TV. Matt, Cardiff, Low Literacy (Ibid ).”

As with the US studies (e.g. Smith Jaggers 2014) it was also noted that connectivity decreases outside metropolitan areas. In another parallel with US research (e.g. Bryan & Ellington 2010) there were variations across ethnic groups and amongst adults with disabilities (Office of National Statistics 2015).

On a similarly fundamental level, a common complaint across the surveys and across campuses was that students’ learning (on campus) was hindered by the lack of printers, the lack of functioning printers or simply lack of toner.
iii. Technology and Learning for Work

PROCAT students identified a specific issue for Work-Related Sector students which also concerns the quality of access and which the literature suggests will be familiar to learners and staff across the country: The devices provided by the college are not powerful enough to run the specialized software (e.g. CAD) on which the students rely (Jewitt 2012).

PROCAT students have a strong focus on improving their employment prospects and have a keen understanding of how (for many) this is entwined with awareness of the technologies they will use in the workplace and an appreciation of how and why these technologies are used. In order to do this they want more hands on, supported access to, and experience of, work-place technologies both through on-campus access and more visits to, and from, employers and experts.

“They want access to the real environment” (Ibid).

“Students were very clear...that they expect the college to teach them the skills they need for the workplace. Their focus is 100% on being prepared individuals for the world of work and they expect the college to have thought this through. So that technology enhances their learning” (Ibid).

It would be erroneous to assume that this is an issue solely for those students (e.g. Engineering or Technology) who require specialised technologies in order that they can develop niche/expert skills. It was also clear that more conventional ICT skills and competences were also in demand amongst students who wished to enhance their employment prospects.

“They want to be using ICT in college, so that they are competent for the workplace and this includes literacy and numeracy, using Microsoft Office, digital literacy skills such as critical thinking, social engagement and collaborative working, being able to research online and problem-solving skills” (Ibid).

Engineering students consulted for the Learning Futures Reports (Learning Futures 2015a) with PETA Ltd (a private training provider) were enthusiastic about the use of technology to enhance their learning with specialized engineering tools. The students commented that they often had to wait for answers to questions about operating the machinery whilst the trainers dealt with other students’ questions.

An Apprentice at a PETA Ltd Focus Group commented

“It’s great that we all have a machine but if you have a question then you have to wait your turn and if the Instructor is already answering someone else’s question and there are 3 other people ahead of you then you have to wait. I had to wait half hour before my question was answered the other day” (Ibid).

In this situation the answer was to create “learning hotspots” using QR codes and self-help video support. QR code games and self-assessment quizzes now support the apprentices as they learn the correct names and functions for tools and equipment. The solution was carefully designed to work on a noisy and dirty, factory
shop-floor environment. It will be rolled out in academic year 2015-2016 but the students who were involved in the consultation agreed that this would be a useful development (Ibid).

Technology was deployed to enhance learning in the work environment in a very different context by the Association of Colleges Eastern Region (ACER) Learning Futures study. Geographically dispersed, and sometimes isolated, Horticultural students came to appreciate how Skype afforded them much more contact with, and support from their assessors, but also that

“...learners, who work in land-based industries, often in remote areas, are beginning to understand how they can improve communication, save time and continue to learn using mobile devices” (Learning Futures 2015b).

iv. Virtual Learning Environments (VLEs) and Learning Management Systems (LMSs)

Perhaps a little surprisingly, given the column acres and conference hours dedicated to explaining how and why VLEs would be incompatible with “21st century learners and learning”(3), we found that across the research (WCS, PROCAT and throughout the 17 Learning futures reports) students were extremely positive about VLEs. PROCAT students were enthusiastic about having access to a VLE with personal space to store college work; portfolio tool for coursework, digital templates etc (Jewitt 2012).

At Harlow College a project to support vocational tutors in Business, Media & Journalism and Hairdressing, to “...create innovative, relevant and diverse online content” was predicated on the views of the participating learners (Learning Futures 2015c).

“Our student feedback was very positive. Learners were able to access the resources available via Moodle. This has created a positive impact on the courses that have their guided learning hours reduced because of funding. The use of technology to motivate hard to reach learners and also work-based learners has been very successful” (Ibid).

On a parallel Learning Futures project at the Hull College Group the objective was to “...test the efficacy of flipped learning for vocational learners...aware that many of our students come from relatively deprived backgrounds and may have poor literacy...we wanted to identify any barriers they may experience in undertaking independent study as part of a flipped model” (Learning Futures 2015d).

---

3 See e.g. “The VLE is dead: The Movie” by James Clay http://elearningstuff.net/2009/09/09/the-vle-is-dead-the-movie/
The results were overwhelmingly positive. The survey was completed and returned by 177 students with 86% enjoying using the materials and 73% feeling that the online materials helped them learn about the topic studied. As ever, there were interesting variations within the overall study group – most notably by subject area. (Ibid)

"Broken down by curriculum area, 100% of Engineering and Higher Education students found the materials useful and enjoyed using them, 95% of Construction students found the materials useful and 92% enjoyed using them and 77% of Hair, Beauty & catering students found the materials useful and 87% enjoyed using them...Usage of the VLE went up substantially...and the percentage increase was highest in Hairdressing (62%) and Catering (45%)...Overall satisfaction with Moodle increased by 8% in the last year and is now 81%" (Ibid).

One can speculate as to the reasons for the significant differences between vocational courses: This could be a reflection of the vocation (its suitability for digital resources), the students or even the staff/materials.

At Furness College, staff designed a project to develop six digital assets for units on the Performing Engineering Operations course. Students were involved in the development of learning technologies within the College. As at the Hull College Group, student satisfaction has shown a marked improvement. Asked to respond to the statement "Materials on the VLE help with my learning” satisfaction levels increased from 89% (13/14) to 97% (14/15) (Learning Futures 2015e).

Perhaps the most practical application was that requested by the PROCAT students. Students on work placements reported that when in the workplace employers often expected them to be familiar with

"...the systems parts and industry specific maintenance manuals”.

The students requested that these manuals and materials be hosted within the PROCAT VLE allowing students to access them

"...anytime, anywhere from any device” (Jewitt 2012).

v. Social Tools

WCS students also reported setting up their own Facebook pages for peer support with their learning. This was reported across classes and at all campuses. At one campus, the lecturers have set up social media pages on which they

"...post links which may help or be of interest to students" (WCS 2015).

It would be interesting to investigate this in more depth to see the balance of work and social activities. Do students want these to be kept separate? Are they concerned at all about any blurring of the work, learning and
social boundaries? What is their attitude to staff “incursions” into their social space? Is this acceptable when the page was established primarily for learning?

PROCAT focus groups students, however, were unimpressed by the potential for the college to offer

“... *social media for learning*”

since they viewed it as

“*for socializing*”

and not surprisingly access to social was ranked last (12 of 12) amongst priorities listed in the survey (Jewitt 2012).

**vi. Students’ attitudes to learning with technology**

Throughout the PROCAT and WCS surveys (and across the WCS campuses) and the Learning Futures case studies it was clear that students were enthusiastic about having technology to support their learning. When asked for their “wish lists” the two words which stand out in the responses are “**more**” and “**better**”. However, despite not being connoisseurs of learning technologies the students are selective partners in its use.

Students want technology to stimulate interest and provide some variety to the learning experience. However, their main concern is that it is practical e.g. to facilitate off-campus and/or out of class access to course materials – namely

“*lecture notes, lecture recordings, presentations, reading lists and assessment criteria*” (Jewitt 2012).

in order that learning can be consolidated and missed lectures are less damaging to their prospects. This was particularly true for students with learning difficulties. Students are generally frustrated by the predominance of paper. They want online submissions and increased exploitation of e-portfolios (Ibid).

There was strong feedback from PROCAT students that they did not want to be walked-through PowerPoint presentations. They much prefer to be given “a headline and a framework” and then work collaboratively but independently to explore the subject or to do practical work.

Amongst the feedback from focus groups and surveys is the rejection of the offer of

“... *cloud storage, student e-mail account, use of a camera and the use of social media for learning*...”
Students already had access to all of these. They viewed a second e-mail as a superfluous irritation (another log-in required) and social media as being for socializing (Ibid).

PROCAT students did not like e-mail as a primary communication tool. They expressed a strong desire for communication across multiple media rather than simply e-mail where tutors erroneously assumed that messages had been received and read. Some students suggested that communication boards within the campus could be utilised better for this purpose (Ibid).

Students with disabilities did not feel adequately supported in using digital technologies to help overcome learning difficulties (Ibid).

vii. Students’ Digital Literacies

"Avoid doing the following: Making assumptions about digital literacy – trying too many apps and online tools can be confusing and become overwhelming to learners, a point made by our Business studies students who felt that they were victims of ‘app overload’. We should not take for granted that all learners are willing users of technology through given assumption by educators that all young people have grown up with it and expect to use it” (Learning Futures 2015c).

Across the UK and US literature this finding is repeated both by staff working closely (sometimes in partnership) with students and by students themselves. PROCAT students recognised the importance of acquiring ICT skills for the workplace and lacked confidence that they had sufficient opportunity in which to

"...learn and practice ICT skills in preparation for when they start working” (Ibid).

Students at WCS specifically asked for support to learn how to use Word and PowerPoint as well as Office 365 and student e-mail (WCS 2015). While PROCAT students asked for guidance using the internet to source information and evaluate it

"...for its quality, objectivity, relevance...”

and improve their referencing skills. Staff reflected that

"Students expect the college to teach them to be digitally confident...”

Students also needed help to stay on-task without becoming distracted watching videos or checking their social media accounts (Jewitt 2012).

Students do not, however, expect to be taught about cyber-bullying and online safety since these things were taught at school (Jewitt 2012). It would be interesting to know how older students (those who had left school
before “online safety” became a widely taught subject) felt. It may well be that it is not an issue for these students simply because they do not experience the same levels of unsavoury activity amongst their peer groups (that is not to say of course that online anti-social behaviour is the exclusive domain of younger generations).

Overall Results for Digital Experiences at PROCAT (Jewitt 2012)

Students ranked which digital experiences they expected the college to provide:

1. Experience with technologies used in the workplace
2. Experience with technologies used by researchers (e.g. for data collection/analysis)
3. Experience with presentation software (e.g. PowerPoint, Prezi, animation)
4. Experience creating and editing with digital media (e.g. video, audio, apps)
5. Experience working with social media for educational purposes
6. Experience collaborating online with others e.g. sharing files
7. Experience building/contributing to a public site (e.g. wiki, blog, website)
8. Experience participating in online discussions

2. Adult and Community Learning

“If we are to use digital technologies to make a step change in skills, our solutions must reflect the particular needs of this population. They must take account of the fact that learning is only one small part of what adults have to contend with. Complex lives and pressures of work mean there is plenty to be getting on with without having to undertake formal study. It is no surprise that formal learning is much less central to the lives of adults than young people” (UFI 2012).
“The proportion of time spent in formal learning is small, dropping from around 18% when of school age to a tiny percentage of waking hours when adult” (Ibid).

Adult & Community Learning has long been characterised by the diversity, not only of students, but also providers and sites of provision. Whilst this may contribute to its ability to meet localised, and even personal, learner needs it also has obvious drawbacks in terms of economies of scale and parity of learner experience. Today these issues are often considered to be of more concern than at any time in recent memory as the sector wrestles with ever-increasing pressure on budgets.

“This sector is a varied one, not only in the diverse character of providers, which range from local authorities (which themselves vary widely) to not-for-profit providers with charitable status and adult education colleges. This sector also includes the so-called ‘specialist designated institutions’, a category that includes some of the oldest adult education providers in Europe, such as the Workers’ Educational Association, the Mary Ward Centre and the Working Men’s College, which date to the 19th century” (Ofsted 2015).

“It is very common for learning to be delivered in community centres, tenants associations, churches, museums, libraries, classrooms and workplace” (Ibid).

“In recent years, learning funded from the public purse has come under considerable scrutiny…. The community learning budget has been frozen and therefore buys less each year. There has also been a shift towards courses for people who are more disadvantaged, which are more expensive to deliver” (Ibid).

If research which uses the learners’ own voice to express their experiences of learning with technology is lean in the Further Education Sector and leaner still in the Skills Sector, when one gets to the Community & Adult Learning Sector it becomes ever more sparse. For some important elements of the sector (e.g. Libraries and Museums) we have been unable to source recent (and relevant, UK) research. It is possible that such research exists but a decision had to be made with regards to the time spent searching set against the likely yield.

There is a small body of evidence concerning the use of learning technologies in this (sub) Sector but once again the views of the learners rarely feature. Again, most of the (UK) literature might be described as Policy Statements, Case Studies or Guides aimed mainly at an audience of institutional leaders and practitioners. We found little of scale or longitude. As such, throughout this research we have referenced the voices of individual learners not only where their statements illustrate a common theme but also if theirs is the only voice to articulate what we have judged to be illuminating or even prescient. Nowhere is this more necessary than in the Adult & Community Sector. Concern that this may encroach into the realms of the anecdotal is recognised but is balanced with the lack of research from which to draw.

A notable recent exception is the Jisc (2015) funded “Barriers To The Use Of Technology In Family Learning” a survey of 133 practitioners and 88 learners. Once again there is a caveat; it is possible that the survey-results are distorted since learners with lower educational levels, particularly those with literacy levels or non-English speakers may not have completed the survey. Thus, the potential barriers may have been under-estimated.
Previously, Futurelab published a wide-ranging “Review of the Current Landscape of Adult Informal Learning Using Digital Technologies” (Futurelab 2009) which includes data from a survey of adult use of technology to support informal learning. The caveats attached to this report are that it focuses almost exclusively on “informal learning”, that it was published only just as the economic recession became apparent, there have been two changes of Government since then, and the enormity of the public spending cuts was far from clear. Spending cuts which, as discussed elsewhere in this paper, had tangible impact on many learners, learning providers and sites (e.g. libraries) of learning provision (The Guardian 2014, 2015). However, much of the data remain useful as an indicator of adults’ attitudes to learning and learning with technologies.

i. Barriers to ACL learners’ use of technology

“Key barriers identified during the survey were knowledge and skills, confidence and time to practice/develop skills” (Jisc 2015).

Practitioners reported many of the logistical concerns already familiar from the previous section: Most notable were the lack of good quality equipment and unreliable and/or limited wifi. To these were added the challenges of transporting equipment to venues, blocks on sites when using school venues and not being provided with passwords by the venue. Not surprisingly, the practitioners faced their own barriers in terms of obtaining training in how to use technologies and insufficient time to prepare materials or backups and these will have impacted on the learner experience (Ibid). As is well understood within the sector, this has long been exacerbated by the difficulties in providing training for the vast numbers of part-time staff (HOLEX 2014). NIACE research affirmed the problems concerning some learners not having access to suitable devices (whether personal or institutional), connectivity challenges (including learners’ frustrations at having to enter a password on each visit to the centre) and limitations in staff capabilities (4) but also raised the learners’ lack of confidence in their own capabilities in using technologies for learning (NIACE 2015, Lockhart-Smith 2014).

Practitioners also reported their perceptions of the foremost barriers faced by their learners (quoted verbatim from the Jisc survey).

- Lack of confidence/fear
- Lack of skills and training
- Lack of support: insufficient numbers of tutors available in a session, lack of support outside of sessions
- Access to equipment: equipment is not affordable; may only have limited access within and outside of class; disability barriers
- Lack of time to develop skills
- Learners are not motivated to use technology and/or do not feel it is relevant to them/their learning
- Language barriers

4 It should be noted that in the later phase of the NIACE 2015 research (which involved a different sample to the initial phase) as many learners indicated that they had confidence in their capabilities as had raised concerns in the first phase.
Three or more practitioners also cited the following additional barriers:

- Large variation in skill levels within class
- Embarrassment that the children know more about using equipment than the parent
- Tutors lack of knowledge, skills and confidence
- Concerns re e-safety

Three or more practitioner respondents also identified the following as additional barriers:

- Language abilities of learners, especially the use of jargon that comes with technology
- A feeling that not all of the students wanted to use technology
- Insufficient space in classrooms for use of equipment
- Difficulties integrating technology into the curriculum/ensuring its use meets the needs of learners (JISC 2015)

As we will see, the evidence for some of these perceptions is sometimes thin and sometimes contradicted by the learners themselves.

The Futurelab survey found that:

- 94% of adults had engaged in some form of informal learning activity the three months prior to the survey
- 79% of adults said they used technology for learning in their leisure time and adults average use for this purpose was eight and a half hours a week
- 96% of those who used technologies to learn in their leisure time did so at home
- Adults used a variety of technologies to learn with internet technology: TV, DVDs and videos were the most common
- 75% of adults cited at least one benefit of using technologies for informal learning (23% were unable to cite any benefits)
- 47% of respondents did not think there were any factors preventing them from using technologies to learn informally, whilst 44% cited at least one barrier (Futurelab 2009).

Speaking at the FELTAG Meeting Learners Needs webinar (FELTAG date unknown) one adult learner (Amanda Scales) gave some personal insights about barriers from a learner’s perspective. First, trainers should not assume that learners have prior knowledge of any learning (not only learning with technology) and should avoid jargon and buzzwords.

Secondly, on a practical level, it was said that sign-in and registrations could be off-putting for adults considering or recently entering learning. There should be a non-registration option but that “Free Trials” were often
associated with commercial offerings that subsequently locked the user into an unwanted (monetary) commitment and were thus treated with some suspicion.

A further issue was "one-device households":

"If there is only one device in the household, you might have somebody fired-up, passionate, they’re absolutely desperate to get on with their learning but they’re in a queue which might mean they can’t do their learning for perhaps two days. It would be really wonderful if there was some sort of option where they could print something off, take it away, go perhaps to their own room where there’s a bit of peace and quiet... where they can actually get on, carry on doing their work... “ (FELTAG unknown date).

It was also said that some learners who had been away from education might prefer printed resources because these gave them time to work through at their own speed (Ibid).

**ii. Learners: Experience and experiences**

On the face of it, the majority of learners (more than three-quarters of the 88) who responded to the JISC 2015 study felt strongly that they had the

“...**knowledge and skills needed to use technology to support their learning**”

whilst only 6% disagreed or strongly disagreed. As the narrative explains though, there are concerns that this may be an over-simplification since lack of the necessary skills was often raised as a barrier in the qualitative elements of the survey

“...**including knowing what technology is available, how to use it, keeping up to date and a lack of training and experience**” (Jisc 2015).

"**When self-assessing ICT skills, practitioner and learners may not have identified all the barriers as they are not aware of the possibilities and uses of technology...** “ (Ibid).

Similarly, a significant majority (69%) of respondents agreed or strongly agreed with the statement

"**I have sufficient confidence in using technology to support my learning**”.

Yet again though, this was repeatedly spoken of as a barrier in qualitative elements of the survey (Ibid).

The situation with regards learners’ perceptions of the importance of technology to support their learning was less equivocal with 84% of learners agreeing or strongly agreeing that it is important. Only 5% disagreed or strongly disagreed. Learners (72%) also wanted to make more use of technology personally to support their learning and/or for their place of study to make more use of technology to support learning (58%). (Ibid)
Interestingly, George Roberts found that “Importantly, some people do not want the Internet in their homes. They resent its intrusion for strongly held reasons which need not be subject of argument or coercion” (Roberts, 2012).

And yet, these learners/centre-users were far from unenthusiastic about technology per se or technology to support their learning.

Roberts’ PhD thesis was “…a multimodal, qualitative, participant-voice study based on the biographical narrative interpretive method (BNIM)” (Ibid) at a City Information Technology Centre (CITC) in the South of England. Roberts followed 11 centre-users and conducted a number of in-depth interviews with them:

“The study addresses the conspicuous silence of learners’ voices in the literature about community education and gives space to the voices of users of the CITC” (Ibid).

Whilst the CITC is not solely a “learning centre” it is perfectly reasonable to argue that its primary function is to facilitate informal and formal learning opportunities and many of the study participants were (had been, or intended to be) thus engaged.

**What do you do with your community IT centre? Life stories, social action and the Third Space: a biographical narrative interpretive study of adult users of a community IT centre.**

(Interviews with CITC users, George Roberts 2011)”I've got a computer at home but I am not actually on the Internet. I am reluctant because of all the stuff that goes on, child pornography, I've got a real thing about that. I'm on a double-edged sword now, whether to get hooked up or whether just to use the library facilities for the Internet or here if needs be or work.” Angela, 38 years old

"We don’t have a computer at home. We have a WII games console. If there is one computer, the kids will fight over it. They fight over the WII now... We are getting a computer. Going to put it in the kitchen. Too obtrusive in living room. The kitchen is family area but “away”. “ Catherine, 36 years old

"It just occurred to me, that I can remember being frightened by computers, not very many years ago. I remember seeing people on TV using them, in drama or in documentaries or whatever, and it being a mixture of fear and envy that they were using a computer and I wasn’t” Robert, 54 years old

"I've got a computer, a printer and a digital camera and at the minute it is like sort of technology overload. I know that once I get my head around it, it will be ok. But I have this sort of fear at the minute.” Angela, 38 years old
Roberts’ speakers also described the many other reasons for using the CITC (which is essentially a centre for learning-with-technology despite fulfilling many other diverse functions): In addition to learning, it is a source of information (through the internet), a place to complete job-applications, a place for social interactions, a place of sanctuary (from one’s own home or outside life). These are of importance since they give some indication of the “pull” factors, which might entice users to the CITC.

“Despite assertions in policy about the importance of computers (see Ch 1 section 1.2.1 & 1.2.4), further to Ofcom (2010), Seale (2009a), Selwyn (2003) and Webb (2006) this thesis will show that IT is not the magnet that draws people into uncomfortable spaces; comfortable spaces draw people into IT use and comfort is a factor of community” (Ibid). Brilliant Stories was a project based in Haringey (the 13th most socio-economically deprived of 326 English Local Authorities) and with corresponding low educational achievement levels amongst adults (parents) and children (Kumrai, 2013).

The aim of the project was to address this and support parents and carers

“...to become more actively involved in their children’s education.”

“...I didn't read enough with my children and didn’t know about tablets. Kids these days all want gadgets. This was a brilliant opportunity for us all as it provided parents and children with some excitement. I remember thinking, oh yes, it’s on a tablet and we’ll get to go on it. I was really happy as since the Brilliant Stories course started, parents and children have made stories every week using tablets” (Ibid).

Kumrai reports the impact on the adult learners (and their children and communities)

“Parents were more confident in storytelling, finding different ways of using stories and sharing stories with their children.”

“The immediacy and visual aspect of using a tablet device and the ‘Our Story’ app were appealing to parents and children.”

“Problem-solving skills were developed with parents and children working together through discovering how to use a tablet device.”

“Different nationalities worked together. This helped to break down misconceptions and avoid isolation, leading to greater appreciation of cultural diversity.”

“Schools reported more parents willing to act as volunteers and as community ambassadors as a result of learners taking part in the project” (Ibid).
Learners in the NIACE BYOD study groups (Lockhart-Smith 2014) reported that, subsequent to undertaking the online courses (in a supported, face-to-face environment), many would purchase iPads/tablet computers for use at home:

"...searching the internet to find information; shopping online; taking photographs and videos; downloading new apps; emailing family and friends; recording appointments via the calendar App; writing notes on Notes App; reading the news and checking the weather (BBC Apps); playing games to stay mentally active and using iPlayer to watch missed TV programmes."

Learners also noted that they became aware of the benefits using the devices in their everyday life (Ibid). Providers at one project (s) reported that amongst learners there was a perception that the tutors had responsibility for their devices when it was taken to classes and yet the learners had not taken relatively simple precautions – such as installing anti-virus software and undertaking basic “housekeeping” - to preserve the integrity of the devices (Ibid).

At the “Adult informal learning and the role of technology” Open Space discussion in September 2008, Dr Leila Walker summarised the stated view of the then Museums, Libraries and Archives contributor as follows:

“The development of technology is supporting adults to make connections between different episodes of learning. We know, for example, that the Who Do You Think You Are TV programme has led to an enormous increase in the number of adults accessing archives online to explore family histories. Barriers are more behavioural than technological. It is an inherent fear to not wish to look stupid when using technology than the technology itself” (Futurelab 2008).

As stated previously we have not found appropriate research into adults’ experiences in this sector in the UK. Somewhat surprisingly, the DCMS Statistical Release (DCMS 2013) now equates “Digital Engagement” with visits to Museum websites. But perhaps the 2013 Pew Internet survey of the situation in the US can be used (with caveats) as an indicator of its importance amongst marginalised (groups of) learners:

“...three-quarters (77%) of Americans think it is “very important” for public libraries to provide free access to computers and the internet to the community” (Purcell, Rainie, & Zickhur, 2013).

“The vast majority of blacks (92%) and Hispanics (86%) consider the free access to computer and the internet that libraries provide “very important” to the community, making them significantly more than whites (72%) to say this. Additionally, women (81%) are more likely than men (73%) to consider this access “very important,” as are adults ages 30-64 (81%) compared with other age groups” (Ibid).
iii. Learner expectations and needs

“A key takeaway from andragogy: Adults are self-directed learners. One of the most empowering ways in which we can assist adult learners is to put the learning tools into their hands. Technology helps us to do that” (Keillor & Littlewood date unknown).

Keillor and Littlefield explore and model best practices in incorporating technology into teaching, assessing and communicating with non-traditional adult students and offer the following:

Best Practices to Promote an Adult’s Readiness to Learn:

a) Create a safe, welcoming learning environment.

b) Culture empathy, respect, approachability, authenticity.

c) Collaborate on the diagnosis of learning needs.

d) Collaborate on developing learning objectives and in instructional planning.

e) Ensure the practicality of all learning activities (Ibid).

As we have seen throughout this section, there is evidence that the learners themselves would almost certainly agree wholly or mostly with these ambitions. So, perhaps of more practical interest is what the learners actually wanted to study with technology. It would appear that much of what they want to learn about is the use of technology itself. Or more accurately, specific technologies.

NIACE conducted a number of small-scale international studies which looked at adults learning with technology and canvassed learners’ opinions. In a study of learners from the UK, Germany Poland Bulgaria it was found that the learners’ “most useful internet applications” were Wikipedia and Google, Email, Facebook and YouTube, Doodle, Dropbox and Other (Wordpress, Stumbleupon, Pinterest, bol.com, Pixlr Express) (Easton, date unknown). Some of the more surprising amongst these may be explained by divergent national preferences.

Whilst the JISC Family Learning Survey asked what learners wanted to learn:

“Elements that learners expressed interest in learning included general practice in using websites and apps, Microsoft operating systems and Office applications, troubleshooting, e-safety, photo sharing and social media” (Jisc 2015).
3. Offender and Prison Learning

“Learning and skills and work in prisons have been the worst performing elements of the FE and skills sector for some time, and Ofsted has long been critical of this failure. Last year, there was a small degree of improvement in inspection outcomes. This year, the outcomes are very poor and considerably worse. Of the 50 prisons with inspection reports published this year, fewer than a third (28%) were judged good or outstanding for their learning and skills and work activities. Standards were markedly worse compared with last year” (Ofsted 2015).

“Prison regimes did not give sufficient priority to education and training as a means of reducing reoffending or rehabilitating offenders. Prison governors were still not doing enough to ensure that their prisons had enough education, training and work places for all prisoners throughout the working week. Governors were not held to account for the quality of this provision or its impact on supporting prisoners’ employment on release” (Ibid).

However, it is worth noting that Ofsted reported the situation to be much better in women’s prisons for women.

While the performance of men’s prisons in delivering education and work was exceptionally weak, three out of the four women’s prisons inspection reports published this year included some good practice” (Ibid).

This study is not the forum to attempt to unpack the reasons for this persistent negative view of the sector and it is also the case that there are many excellent providers and practitioners operating effectively under difficult conditions.

It is also worth noting that the ongoing Ministry of Justice Review of Prison Education explicitly mentions that one of its strands will be to consider “The increased use of technology in prison education” (Ministry of Justice 2015). An interim report setting out the review’s initial findings is to be submitted to the Secretary of State for Justice early in 2016. The final report setting out the review’s findings and recommendations is expected by the end of March 2016.

Whilst, as noted repeatedly above, there is not a great deal of research concerning learner experiences of using technology to support education in the Skills Sector there is perhaps more than might be expected for Offender and Prison Learning (by comparison with e.g. Adult & Community Learning). There is a handful of prolific, high-quality and dedicated researchers working in the field and the research (again by comparison with the other parts of the sector) draws heavily on the voices of the learners. Some is even longitudinal and follows offenders post-release. It is worth reproducing Dr. Anne Pike’s description to the ACEA Conference, Hobart, Tasmania (Nov 2015) of her research programme to illustrate both the rigour and the relevance.

“I conducted a qualitative longitudinal study in the UK between 2010 and 2013 (Pike, 2014 a, b). It explored the learning journeys of 61 prisoners/ex-prisoners (including 12 women) as they attempted to integrate into society on release from prison. I also gained the views of 67 others (prison, education and probation staff, family, employers), adding meaning to the prisoners’ narratives. Ten of the 61 participants had been released for some time and formed a pilot group. The other 51 participants were serving prisoners and were initially interviewed in 10 prisons in England.
and Wales shortly before their release...A total of 28 participants were traced after release and 25 (including 5 women) were contacted up to six times in the following 12 months” (Pike 2015).

In addition to this, bodies such as the Prisoners Education Trust (PET) and the Prison Reform Trust (PRT) are reasonably prolific providers of high-quality research and their understanding is sufficiently sophisticated to include learning-with-technology as a standard component. Both organisations also have a deep commitment to gathering and sharing the voices of learners as evidenced by the PET online collection of “Learners’ Stories” (6).

The PRT and PET jointly commissioned “Through the Gateway: How Computers Can Transform Rehabilitation”. This research was constructed around a survey sent to all governors and directors in England and Wales plus visits to nine prisons, expert roundtables and a survey of prisoners’ families plus a focus group of prisoners’ families (Champion & Edgar 2013).

The authors list three reasons why research into the use of ICT (7) in prisons has been so difficult:

“Pace of change – the ways that prisons make use of ICT, the extent of coverage, and even policy have been changing constantly during the course of the project; in particular, the survey of prisons which was conducted in mid-2012, reflected the use of ICT at that time in a fast-changing environment” (Ibid).

“Commissioning, contracts and commercial interests have meant that part of the explanation for dimensions of ICT delivery are not in the public domain” (Ibid).

There are also a number of Anglo-Australian studies and the prison populations and systems are analogous enough for us to include evidence from these in the research where we deem it of particular value.

i. Barriers to Offender and Prison Learning

“...despite good IT skills and improved technologies, prison learners’ access and use of technology is hampered by conflicting priorities amongst the multiple organisations controlling prisoner activities. This can lead to a prison in which menial work is valued far higher than learning. Technology-enhanced distance learning, perceived by many to be a lifeline in a desolate environment, is heavily restricted in such prisons. The situation is thought to be deteriorating as the number of organisations involved increases and the Government's plans for “working” prisons gather pace” (Pike & Adams 2012).

The challenges facing offender learning, and particularly those where technology is concerned, are long-standing and well documented – the lack of access to devices, technologies and the Internet result in a subsequent lack of access to digital content and online tutors (Pike, 2015; Champion & Edgar, 2013; Hopkins & Farley, 2014), all of

6 See [http://www.prisonerseducation.org.uk/stories](http://www.prisonerseducation.org.uk/stories)
7 The study was of ICT use in prisons of which Education and Training was just one facet.
which challenges are aggravated by the familiar complaints of unreliable devices, passwords forgotten or the need to borrow mobile phones in order to get free texts (Pike 2014). Insufficient information about, and support for, contacting distance learning providers also proved a major factor contributing to study drop-out rates. However, as Pike illustrates above there are also conflicting priorities which are perceived as being to the detriment of learners. Pike pursued these themes in her 2015 paper to the ACEA Conference in Hobart:

"The three main barriers to learning were insufficient readiness for independent learning, inadequate resources for learning and insufficient information for release. The organisational structure of most prisons was fragmented and uncoordinated which resulted in confused priorities for learning and ultimately a low priority given to higher-level learning. The most difficult places to study were a ‘working’ prison (see Pike and Adams, 2012) where participants were expected to work in the workshops all day and there was little time or space for distance-learning. In those prisons the whole process of distance-learning appeared difficult, with lack of guidance to available courses, complex application processes, delayed receipt of learning materials, difficult assignment submission and lack of tutor contact. There were, of course, some outstanding staff (mostly the education staff) who went the extra mile in providing the support which made learning possible, but they were usually working against the system“ (Pike 2015).

In this paper Pike is unpacking some of the less obvious barriers to prisoners using technology to support their learning - those which exacerbate, and go beyond, inadequacy of capital or revenue investment, which are more rooted in the culture and behaviours inherent in much of the UK (and to a large degree Australian) prison system. Pike finds the “learning prisons” versus the “working prisons” typology useful to create a picture of the prison learning landscape.

"To explain this contrast, the terms “learning” and “working” have been used for the prisons at each end of a spectrum. Counter-intuitively, as physical restrictions eased, access to technology appeared to reduce. Thus at one end of the spectrum, student-inmates perceived a “learning” prison, (usually private or high security), providing an environment where student-inmates believed they could learn independently and grow as individuals, through reflection“ (Pike and Adams 2012).

This would include “unrestricted” access to technologies and online learning materials and encouragement/support to collaborate with other prisoners on “creative” projects. Pike gives examples of this higher-level distance learning being incorporated into the full-time education programme (Ibid).

However, as prisoners moved through the prison system – towards release, thus presumably demonstrating rehabilitation – and entered more relaxed prisons they were denied access to this kind of learning with technology. For them the emphasis shifted to closely-regulated “work”.

"At the other end of the spectrum, the participants perceived a highly regimented “working” prison, mostly lower security which provided a strict working environment which did not allow space, time or technology for independent learning. Distance learners were not normally allowed to use the upgraded computers in the education department. They were allowed in the library, but sometimes only for a few hours a week where they shared the limited resources with non-studying inmates” (Ibid).
“Getting a laptop in here [open prison] is like asking for early release. You have got to have a really, really good reason (Ethan).” (Ibid).

“We are placed in somewhere we can be suitably trusted, in open conditions, but I don't really see that trust (Ethan)” (Ibid).

The Learning Prison versus the Working Prison
(reproduced verbatim from “Challenges for technology enhanced distance learning in prison” - Dr Anne Pike, Digital Inclusion Conference, Sheffield, Jan 17th 2012)

<table>
<thead>
<tr>
<th>The Learning Prison versus the Working Prison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning culture</td>
</tr>
<tr>
<td>HE and distance learning is part of a full-learning programme</td>
</tr>
<tr>
<td>Dedicated classrooms/session-times</td>
</tr>
<tr>
<td>Supportive, open learning community</td>
</tr>
<tr>
<td>Open access to ICT with supported internet/intranet access</td>
</tr>
<tr>
<td>Good communication between provider, education staff and students</td>
</tr>
<tr>
<td>Dedicated distance learning coordinator</td>
</tr>
<tr>
<td>Progression monitored</td>
</tr>
<tr>
<td>Course application and funding is well-organised</td>
</tr>
<tr>
<td>Stakeholders work together with one aim Rehabilitation/Employability?</td>
</tr>
</tbody>
</table>

Participants in the study generally

“...lacked easy access to mobile technologies and the Internet so communication with large organisations was difficult” (Ibid).

This contributed to the existential difficulties faced when attempting to continue their education post-incarceration.
It is worth noting that Pike and Adams (2012), somewhat surprisingly perhaps, discovered that “…IT skills were good overall”.

Whilst this should challenge some of the easier assumptions concerning prisoners levels of education there are some possible explanations that might explain and/or challenge these findings. These are implied in Pike and Adams’ own words.

“All participants self-reported IT skills at level 2 or above, though many had developed those skills in prison, and the only student to admit lack of internet skills was in the oldest age bracket. Nonetheless, 60% reported hand-writing all assignments” (Ibid).

Elsewhere Pike reports distance learners (8) in working prisons having to study in their cells “…which are cramped, noisy and inappropriate spaces for learning”.

This contrasted sharply in the (rare) learning prisons where distance learners were provided with dedicated learning spaces (Pike 2014).

“Through focus groups with ex-prisoners, local employers, charities and education providers, a virtual hub of resources was developed. The resources, including Open Educational Resources, were trialled through workshops. Findings suggested that the resources alone were not enough. An independent physical space with peer-guidance was also required, to build a safe community where hope and identity could be restored” (Pike 2015).

Pike found that students were said to have become dispirited with the conditions and support came primarily from staff who were forced to take a liberal interpretation of the rules in order to help.

“I do think there is the stigma that it [distance learning] is just recreational…a lot of the officers think it is just a case of some purposeful activity that keeps the guys amused. (Minny, [education staff])” (Pike 2012).

Hopkins & Farley reported similar experiences in the Australian prison system. Students often had only four hours per week in which they were allowed to use a computer – even when it was compulsory to type up assignments. Some students were unable to study in the evenings because they were on sedative medication (Hopkins & Farley 2014). Whilst the Justice Action Draft Paper (2014) noted that students were not able to save any work to the computers in the learning centres because the computers were regularly and frequently cleansed and all saved work was deleted.

---

8 It was estimated in 2012 that there were approximately 4,000 distance learners in UK prisons on any given year which forms 1.5% of the male prison population and 1.8% of the female prison population. Distance learners tended to share the same low-entry qualification levels with the general prison population (Pike 2012 DIGI CONF SHEFF).
ii. Learners: Experience and experiences

"The most common uses of ICT in education were the VC (9) and interactive whiteboards. 62% (of providers) were using it to support distance learning. Less than half of prisons were using ICT to screen or support those with learning difficulties. None of the responding prisons were using ICT for virtual teaching (for example, linking to a college outside via a video link); and none were making use of e-books. In-cell terminals were operating in only about 5% of prisons."

"Most prison managers and staff responding to the survey said that they had between 11 and 30 VC-enabled computers. Over 100 prisons in England & Wales now have the VC... there are about 1000 new users registering per month“ (Champion 2012 cited in Champion & Edgar 2013).

The Virtual Campus (VC) is a walled-garden platform that allows providers to offer offender-learners access to training materials to support release and employment, including the potential for secure access to websites and electronic messaging between students and distance tutors.

"Local arrangements for the VC vary: no two prisons use it in exactly the same way. On the visits to prisons, we learned that its location is crucial in determining how often and for what purposes it is used” (Champion 2012 cited in Champion & Edgar 2013).

"In some prisons, the intranet-enabled computers were found only in education departments; others had specific rooms for it; and others had computers in a range of locations throughout the prison including resettlement departments and libraries. The pilot at HMP Thameside has the VC enabled in-cell.” (Champion 2012 cited in Champion & Edgar 2013)

"In one prison, the project heard that due to staff cuts, prisoners could no longer be escorted to the VC room. To move the terminals would incur added cost, so it remained un-used. In hindsight, they acknowledged that they should have located the computers in areas already accessed by the prisoners“ (Champion 2012 cited in Champion & Edgar 2013).

"Prisoners can rate the VC content using a star rating system. The most popular pages are interactive, such as the national learning network. Unfortunately too much of the content is not interactive, comprising pdf files which need to be printed off (not much of an improvement on holding paper copies in the library)” (Champion 2012 cited in Champion & Edgar 2013).

Sadly, prisoners’ own views of the VC were little, if any, better by the time of the PET 2014 Brain Cells report:

- Most respondents felt that access and support for the Virtual Campus (VC) was poor; 83% said the VC is not easily accessible within their prison and 87% said that prison staff did not support and encourage prisoners to use the VC. In qualitative responses, some respondents said they had never heard of, seen or used the VC.

---

9 The Virtual Campus
Some learners mentioned problems with using the VC for Open University and distance learning courses as well as for vocational learning.

Respondents were positive about the potential of the VC and put forward suggestions for improvements such as: updating content, using more for learning and resettlement purposes and introducing to prisoners at the start of sentences to ensure they gain maximum benefit.

23% of respondents felt that the VC had enhanced their IT skills (Taylor, C. 2014).

It is noticeable that the students’ suggestions for improvements are remarkably consistent with those in the 2012 report. On a positive note, students remained positive about the potential of the VC.

The NatCen (Turley & Webster 2011) evaluation of the Test Bed Virtual Campus reported how, simply having access to technologies-for-learning improved prisoners’ feelings of self-worth and helped improve attitudes regarding future prospects. As such, offender-learners talked about how using the VC helped in some way lessen the stigma associated with being an offender.

"For some individuals, using a computer in this context and being able to access resources and jobs on line made them feel more normal, as it mirrored mainstream provision and was more likely to support rehabilitation“ (Ibid).

However, Pike (2012) quotes a prisoner who objects to the closed nature of the VC which limits what the students can access and suggests that it is a poor relation to the internet which is, by its nature, “unlimited.”

Farley & Doyle (2014) reported on a project to introduce various types of e-reader and a Moodle into the Australian prison system. The findings illustrate the value of learner voice in helping to identify the peculiar challenges of the prison environment, the prisoner “work-arounds” and preferences.

One example given was that students preferred to write up their assignments on computers not, as the researchers thought, because of the neater presentation but because of the spell-check. Students also had very clear preferences about which e-readers they would use – and which they would rather do without. Small screens and small font-sizes were a recurring complaint as was the need to exit a text before moving to the next.

E-readers with the ability to highlight text and make notes and/or those with an on-board dictionary were most popular. Speed of loading was seen as important (given the controlled amount of learning time available this is hardly surprising) and slow loading e-readers were handed back to officers with requests to exchange them for hard copies of learning materials.

With respect to the ‘Stand Alone Moodle’ (SAM) student feedback was

"...largely positive” with students particularly liking the "...instant feedback afforded by the self-marking quizzes. Students also reported that they would make more use of the SAM if they were given devices to type up assignments in their cells, if SAM were accessible in their cells and if there was a greater selection of courses on SAM” (Ibid).
These findings with regards to SAM mirror those of Hopkins & Farley (2014) who found that some students liked working on the Moodle because it

“... was almost like being on the internet.”

There was, however, the caveat that many required materials were not uploaded to Moodle and many readings were missing or incomplete.

### iii. Digital isolation: An additional punishment?

All of the researchers working in this field (e.g. Pike 2012, 2014, Champion & Edgar 2013) reference cases of prisoners lacking access to technologies for learning. In their study of the Australian prison system Hopkins & Farley (2014) investigate the nature and impact of this.

“...most prisoners...enter prison with a low level of social capital relevant to the rest of the population and this social marginalisation is exacerbated by the period of ICT disconnection... (which) in turn increases the likelihood of further alienation, unemployment, poverty and recidivism or reoffending. While incarcerated, offenders are literally and metaphorically ‘disconnected’ from the digital society and economy and subsequently are not adequately prepared for productive and engaged digital citizenship upon their release.”

The authors describe how the students were only too mindful that being deprived of access to their everyday (outside world) technologies – smart phones and mobile, internet-connected devices – was part of their punishment. Whether this is “fair” for these previously digitally active prisoners to have an additional punishment is not within the remit of this study. However, it is worth recording that it deprives incarcerated individuals of a potentially valuable resource to improve their education and prospects post-incarceration. Prisoners are further alienated from, and out of touch with, the fast-moving world beyond the prison boundaries – whether that means socially, culturally or economically.

“...their sense that the social and cultural world was moving on without them was one of the most frequently mentioned ‘pains’ of their imprisonment” (Ibid).

Hopkins & Farley (2014) also note that for prisoners serving longer sentences there is a real risk that they will feel substantially estranged from new and emerging technologies. This is disadvantageous when considering education whilst in prison and detrimental to their prospects on release.

“I have been incarcerated for a substantial period of my life. There is almost no technology in correctional centres, so the eReader was as foreign to me as the outback is to an Eskimo” (Ibid).
iv. Prisoners expectations

The Prisoners Education Trust surveyed 500 people in prison in 2012 (PET, 2012) and asked for the main areas in which they would like to see improvements. These include:

- A wider range of provision
- More opportunities for progression
- Increased screening and support for prisoners with learning difficulties
- Improved use of individual learning plans
- More engaging learning
- Better advice and guidance about education and training opportunities
- Better access to learning materials and resources
- Better access to learning opportunities outside the core day
- Fewer waiting lists
- Less disruption to education caused by transfers
- More support with accessing employment, self-employment and learning opportunities after release

In the PET Brain Cells survey (Champion, 2012) 70% of prisoner respondents said better access to a PC would help them learn.

“I’d like a basic laptop in my cell so I can type up my OU assignment. We can have Playstations, why not something for people on courses requiring computers?” (Prisoner respondent Ibid).

“Laptop loan to do work evenings and weekends if I feel like it and in the long term I would pass exams quicker, thus freeing place for someone else” (Prisoner respondent Ibid).

As we have seen, we can add to these, a dedicated learning space (Pike 2012, 2015).

4. Conclusions: What have we learned from the literature?

We do not propose to make recommendations about funding regimes, investment strategies or addressing perceptions of inadequate investment. Recommendations from a literature review from researchers with no fiscal responsibilities will likely carry very little weight with those tasked with controlling the purse-strings - whether at institutional or national level. Our observations are focused very much on the views of the learners and (where relevant and based in research) the views about the learners from those who work with them. We hope that these might be able to inform the decisions of those who control the purse-strings.
Across the sector generally, “learner-voice” seems to have a disappointingly low-profile. Of course, this is not surprising given the parlous state of finances, the relentless succession of cuts to the (non-apprenticeships) adult education budget (TES 2015, 2014) and the need to concentrate on what is essential to maintain a service. However, a strong-case might be made that “learner-voice” be integrated into the organisational learning-technology strategies. Considering that HOLEX (2014) reported the majority of organisations either do not have, or are unaware of, any organisational learning-technology strategy a strong-case might also be made for the sector to take a more strategic approach – particularly when set against the need to maximize value for money.

**Work based and work-related learning**

- There are deep-seated and persistent problems with students accessing the quality of devices and internet connectivity that they require and expect. Their expectations of the technical-infrastructure are not excessive and chiefly involve the ability to use machines running standard Office and Word type packages (or similar) over a domestic equivalent-standard internet connection.

- That access to a decent quality laptop, or the facility to use their own, high speed, reliable wifi and printers is consistently the top-rated student priority suggests that policy makers at all levels may be wise to focus on these rather prosaic goals above more “charismatic” technologies.

- Learners expected the same, or better, services that they had in school. Given that spending at school level – whilst also under severe pressure – is relatively protected there has to be a risk that students become disillusioned when they experience a notable decrease in the quality and availability of the technology.

- On another level, students working in industries which make use of specialist packages expect their providers to furnish them with those packages – and devices of sufficient power to run them.

- Generally, students expect their colleges to provide the experience of the hardware and software, and opportunity to develop the skills, which will prepare them for work and enhance their employment opportunities.

- VLEs and LMSs are far from redundant technologies. It is likely that they are yet to approach reaching their potential.

- Students’ technology skills are far from homogenous – even within same-age-groups. Skill levels cannot be assumed. Students’ skills with “learning technologies” further complicate this. The Digital Immigrants versus Digital Natives typology is not particularly helpful.

- There is a lack of student voice (with some honourable exceptions) in the research. This leads one to ask whether there may be a lack of student voice in the sector.

- By comparison with the HE sector and the compulsory education sector there is little research focusing on learning with technologies.

- There does not seem any great desire amongst students for anything resembling MOOCs. In fact, some college (skills) students were clear that they did not want any “external” engagement other than that which involved their places of employment. That is not to say there is no potential.
A Study of The Skills Sectors’ learners’ expectations and experiences of the digital environment

A Literature Review

Adult & Community Learning

- Again, the existential issue is the lack of good quality equipment and reliable and/or ubiquitous hi-speed wifi. To this one can add the challenges of transporting equipment to venues, blocks on sites when using school venues, not being provided with passwords by the venue. Not surprisingly, the practitioners faced their own barriers in terms of obtaining training in how to use technologies and insufficient time to prepare materials or backups – to the detriment of the learner experience.
- The high proportion of part-time tutors working in the sector creates significant challenges for delivering effective CPD.
- There is also a lack of tutors.
- Skill levels cannot be assumed – either positively or negatively.
- Again, there seems to be little enthusiasm for MOOCs in their current guise amongst learners in the Adult & Community Learning Sector. There is obviously some potential but the need to identify correctly and address the skills of the learners against the skills required may be too onerous at the present. Given the high drop-out rates for MOOCs and the impact that perceived “failure” has on non-Higher Education adult learners, serious consideration must take place before deploying any technology and pedagogy which could potentially do more harm than good.
- There is very little student voice (visible) in the literature – with honourable exceptions. Again, this raises the possibility that student voice is little heard in the sector. It may, of course, be that the research was not easily identifiable. Given the heterogeneous nature of the learning constituency it may be difficult to act on student voices without there being winners and losers.

Offender and Prison Learning

- Access to devices, access to the internet, access to information and access to support are all priorities for incarcerated learners. At times, this is further complicated by students being denied access to existing technologies due to competing priorities and/or philosophies.
- Access to meaningful learning opportunities often decreases as incarcerated students progress through the prison system towards release.
- This is aggravated by the lack of continuity of learning, support and access post-incarceration.
- Amongst the key student requests is for a dedicated technology-enabled learning space within prisons.
- Despite persistent problems, in terms of access, support and quality of content, the Virtual Campus is viewed by incarcerated learners as having considerable potential. Perceptions of a lack of tangible progress may ultimately erode this enthusiasm.
- Skill levels cannot be assumed – either positively or negatively.
- There is evident in the literature for this sector - a significant focus on student voice (particularly for the incarcerated learners).
However, there is little evidence of student-voice actually influencing anything on a substantial scale.

Some sector experts are reasonably positive about the potential for MOOCs as a supplement to the prison-learning toolkit. Of course, there are possible explanations for what might at first seem counter-intuitive: not least that whilst the vast majority of prisoners have below average qualifications there are prisoners of all ability levels and some are already graduates and/or post-graduates.

“The best practice was observed where a prison had a learning ethos which was shared by the staff, where higher-level learners were given dedicated space and time for learning and where learners were encouraged to take responsible peer-support positions which raised self-esteem and helped to develop a community” (Pike 2015).

Final Cross-Sector considerations

NIACE’s research into Digital learning (NIACE 2015) with under-represented groups aggregated the findings of the participating groups which included FE colleges, community learners, incarcerated learners and those in a residential college. It is difficult to isolate the findings and attribute them to a particular cohort. However, as can be observed throughout this report, there is a core of findings common across the groups and sub-sectors within the Skills Sectors (with some relevant to a specific group or context e.g. Offender Learning). As such, these aggregated findings are of value to this report and deserve inclusion. With regards to “barriers” there were concerns amongst learners (most of which were mirrored by providers’ concerns for learners) about access to appropriate hardware and connectivity, their own capabilities and also securing quiet, study-time at home and for some learners connectivity in the home. Whilst the majority of learners in the NIACE research did not anticipate “benefits” from online learning a majority subsequently reported that they had, indeed, benefited listing a variety of ways such as

“...learning new skills, greater flexibility and accessibility...the availability of more interesting and useful material...easier learning...more continuity between sessions ...access to more support from peers and teachers ...lower costs...and being part of something new and exciting.” (Ibid)

Learners also reported that they felt better connected to, and thus supported by, both their peers and their tutors when engaged in online learning.

If the opinions of learners in both the work-related learning and Offender/Prison learning sectors are a measure, then VLEs still have a major role to play in the wider sector. The Adult and Community Learning Sector is notable by its absence. Perhaps this is (partially) explained by the HOLEX survey of 2014: whilst 88% of respondents to survey said their organization had a VLE, less than one-third of those with a version of Moodle (79% of respondents had a Moodle) were actively using it (HOLEX 2014).

The need to assess and cater for the different digital literacies and different levels of digital literacies are consistent throughout the research and across this sector. This may not be the place to discuss the topic in depth.
but the for those interested in further investigation the JISC pages Developing Digital Literacies has a library of useful resources and links and is a recommended first-point-of-call (JISC https://www.jisc.ac.uk/guides/developing-digital-literacies).

Acknowledgements

We would like to thank all of those who gave freely of their advice, guidance and support to this report and without whom it would have been so much more challenging. In particular we are indebted to Katharine Jewitt, George Johnson (West College Scotland), Chris Swingler (AELP), Susan Easton (The Learning and Work Institute), Joe Wilson and Sarah Knight (Jisc).

Bibliography


Bickford M D.J. & Wright, D.J. In Chapter 4: Community: The Hidden Context for Learning Spaces Editor Diana Oblinger 2005


https://www.academia.edu/10766046/The_e-Adult_Learner_the_definitive_classic_in_e-workplace_development

Capita (2015) Greater achievement in the palm of their hands Why further education colleges cannot afford to ignore the rise of mobile technology

CAVT (2013) It’s about work…Excellent adult vocational teaching and learning: the summary report of the Commission on Adult Vocational Teaching and Learning - See more at:
http://www.excellencegateway.org.uk/content/eq5937#sthash.7c27NGzU.dpuf


http://www.prisonreformtrust.org.uk/portals/o/documents/through%20the%20gateway.pdf

Dept Culture, Media & Sport (2013) Taking Part 2013/14 Quarter 1 Statistical Release September 2013

Easton, S. (Unknown) Digital Literacy 2.0 Experiences and Results of Evaluation, The National Institute for Adult Continuing Education (NIACE), UK


FELTAG (date unknown) Meeting Learners Needs: FELTAG webinar


The Guardian (2014) Library usage falls significantly as services shrink (December 10th 2014)

The Guardian (2015) Libraries suffer fall in users as Tories slash funding *December 9th 2015

HMP Castington: Improving the recording and use of visual images in an offender education setting


http://www.digital-literacy2020.eu/content/conference/DLit2_0_FinalConference_Expectations_and_EvaluationResults_NIACE.pdf
A Study of The Skills Sectors’ learners’ expectations and experiences of the digital environment
A Literature Review

MIT Press

Jewitt, Katharine: Technology Solutions for Student Learning: Research Study into the experiences and expectations of digital technology by students at PROCAT
http://procatdigital.co.uk/technology-solutions-for-student-learning/


Keillor, C. & Littlefield, J. (date unknown) Engaging Adults Learners with Technology.
http://digitalcommons.macalester.edu/cgi/viewcontent.cgi?article=1236&context=libtech_conf

Laurillard, D. (2013) Technology as a driver and enabler of adult vocational teaching and learning: Technology as a driver and enabler of adult vocational teaching and learning: Briefing to the Commission on Adult Vocational Teaching and Learning
London Knowledge Lab, Institute of Education
http://www.excellencegateway.org.uk/content/eg5858#sthash.fAY3mva5.dpuf

Learning Futures (2015b) Learning Futures Programme Final Report: Digital Approaches to English & Maths - using technology to support learners on Traineeships & Apprenticeships The Association of Colleges in the Eastern Region (ACER)


Learning Futures (2015) Learning Futures Programme: Final Report Cultureshift: Embedding Technology In Staff And Student Practice Blackburn College

Learning Futures (2015c) Learning Futures Programme Final Report: Applying the successful Kube model to 16-19 study programmes (Lead organization Harlow College)
Learning Futures (2015d) Learning Futures Programme Final Report: Improving Success by Flipping the Learning Hull College Group


Learning Futures (2015) Learning Futures Programme Final Report: Blending In – motivating, monitoring and tracking students working online Lewisham Southwark College


Learning Futures (2015) Learning Futures Programme Final Report: The innovative use of assistive technologies to engage and support curriculum accessibility Runshaw College

Learning Futures (2015a) Learning Futures Programme Final Report: Video Learning For Engineering Apprentices


LSIS Flexibility and Innovation Fund Engaging Technology – Cinderella goes to the ball Carlisle College
http://repository.excellencegateway.org.uk/fedora/objects/eg:4451/datastreams/DOC/content


National Student Survey results 2015
http://www.hefce.ac.uk/lt/nss/results/2015/


NIACE (2014) Skills For Prosperity: Building Sustainable Recovery For All
A Study of The Skills Sectors’ learners’ expectations and experiences of the digital environment

A Literature Review


http://www.educause.edu/research-and-publications/books/learning-spaces


http://www.ons.gov.uk/ons/dcp171778_404497.pdf


Pike, A (2012) Challenges for technology enhanced distance learning in prison Digital Inclusion Conference, Sheffield, Jan 17th 2012b

https://www.academia.edu/11706374/Digital_inclusion_in_prison_education


http://www.open.ac.uk/blogs/per/?p=3342&LKCAMPAIGN=tw100&MEDIA=tw100ngencom_352


Paper for presentation at ACEA Conference, Hobart, Tasmania Nov 2015

https://www.academia.edu/17852667/Technologies_to_support_ex-prisoners_into_employment_training_and_continued_education


http://innovateonline.info/


