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Exploring patterns of technology use in UK college students: a cluster analysis of learners' digital practices

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ABSTRACT

This study assesses the use of various technologies, from institutional virtual learning environments to Web 2.0 tools, amongst learners studying at six general Further Education colleges in the UK. The study surveyed 218 students from a range of disciplines and qualifications. Cluster analysis revealed distinct patterns of engagement with technologies in both personal/social and educational contexts. Some support was found for a connection between personal/social and academic uses of technology. In contrast to the dominant narrative of learners as digitally fluent technology users, the analysis showed the majority of learners were using educational technologies in fairly simplistic ways that satisfy the demands of their course. Significant relationships were found between digital practices in college and subject studied and gender. The discussion draws on the literature of digital literacy practices in order to interpret the findings and inform the planning and development of learning technologies.

KEYWORDS

Post secondary education; further education; digital literacy; technology-enhanced learning; surveys; cluster analysis

Introduction

Context

The education sector has been beset by calls to 'harness the potential of technology for radical change' from sector bodies and government (Fordham and Martin 2014, 1; ETF 2014; Cole 2014). Within further education there have been numerous reports from sector organisations calling for: a digital policy roadmap (ETF 2014) support for college leaders (Fordham and Martin 2014), developing teachers' digital competencies and skills (ECORYS UK 2016), self-assessment tools (Coralesce 2014), and using technology to hear from students about their experiences (LSIS 2013). There is a tendency in these reports to present learners as tech-savvy, confident and motivated about the use of technology. For example,

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the original report from the Further Education Learning Technology Action Group (FELTAG) referred to the 'under-exploitation of learners' skills, devices and technical knowledge when it came to the use of learning technology', explaining that 'the greatest resource available to FE and Skills providers in this domain is their learners.' (FELTAG 2013, 5). This language is typical of the way in which learners, especially young learners, have been characterised, as if they have access to technology, are proficient in its use and have ideas to contribute about its role in learning.

Such assumptions about the digital fluency of a generation of students have been difficult to find support in educational research. Large-scale survey studies of undergraduate students in both the UK and Australia initially drew attention to the mismatch between the generational labels and research findings which exposed a more complex picture of technology use (Jones et al. 2010; Kennedy et al. 2010). Researchers are increasingly drawing similar conclusions across a range of sectors and disciplines including dentistry students in Canada (Salajan, Schönwetter and Cleghorn 2010) and secondary school students in Ireland (Benini and Murray 2014). Students' exposure to digital technologies from an early age does not imply that all of them will be equally well-equipped with the skills and capabilities necessary for the use of later technologies.

Technology use by undergraduate students initially appears to be fairly limited when looking beyond generic technologies such as mobile phones and email (Kennedy et al. 2010). Similarly, Margaryan, Littlejohn, and Vojt (2011) found low levels of usage of personal web publication through blogs, wikis, and newly emerging technologies amongst students. Other surveys of students' use of technologies in higher education also show that they use a limited range of technologies in educational contexts (Thompson 2013; Gosper, Malfroy, and McKenzie 2013). These overall findings obscure a more complex picture of patterns of use. Jones et al. (2010) describe their sample as 'a minority of collections' from limited to extensive users. Whereas Kennedy et al. (2010) describe four groups of users: power users, ordinary users, irregular users and basic users. There are a number of cautions when attempting to generalise these findings. Jones et al. (2010) reminds readers that survey studies report data from self-selecting samples of students. Thompson (2013) cautions that it is important not to overgeneralise the findings from higher education to younger students or to those who might not have aspirations of a university education.

This generalisation about the skills of a generation is particularly unhelpful within the further education and skills sector. The most striking feature of this sector is its diversity: some students attend an FE college instead of school, some take vocational qualifications and others choose to study higher education (HE) courses within a FE college setting (Bhatt 2012). The wider skills sector encompasses specialist colleges, adult and work-based education and

offender learning. There is great variety in the places where learners in this sector will learn and the qualifications they can achieve (Lucas, Spencer, and Claxton 2012). Learners come from a great variety of ages, backgrounds, prior experiences and achievements and consequently approach their studies differently. Such diversity means that it is difficult to generalise about *the* learner experience. We need to understand what all learners bring to the learning context and to be able to understand how different learners interpret our planned activities, resources and environments.

However, research into learners' experiences with and uses of technology within further education has been more limited. There has been some ethnographic research into literacy practices, including digital literacy (Miller and Satchwell 2006; Mannion et al. 2009; Bhatt 2012; Creer 2017) and evaluations of engagement with specific technologies such as Virtual Learning Environments VLEs (Parsons 2017). Surveys of digital access and practices, such as those conducted in HE, have been scarce since the last Becta Survey of FE Learners (Becta 2008). However, the Jisc Digital Student Experience tracker has recently reported findings from its first pilot which included over 12,000 students from 36 FE colleges (Newman and Beetham 2017) which will provide a valuable benchmark. This shows that FE students are considerably lagging behind their HE counterparts with respect to access to reliable wifi at their usual place of learning (63% vs 80%) and laptop ownership (48% vs 88%). It might be expected that given these differences in access, reported use would also differ, although both FE and HE students report the most common digital activities they conduct are finding information online and producing work in a digital format.

There is a tension then between a characterisation of learners as digitally adept and research with undergraduates which appears to show a more limited use of technology within an educational context. It is possible that given the diversity of the FE sector, both conclusions are masking more complex patterns of use. An interesting attempt to describe the entire population of FE learners was made by Davies and colleagues in the Becta-funded Learners and their Context project which interviewed 132 children and young people and visited 35 of these in their homes (Davies 2010; Davies and Eynon 2013). Rather than representing all learners as a homogenous group, they described a spectrum to describe the variation in 16–19-year-old learners ranging from those who were 'unconnected and vulnerable' through 'ambivalent' and 'mainstream', to 'intensive and specialist enthusiasts'. While intensive and specialist users were engaged and adaptable users of technology who were interested in the intrinsic quality of technology, mainstream users were more instrumental in the choices they made about using technologies.

The challenge for practitioners, researchers and policy makers is how best to conceptualise differences in students' digital practices without for example, over generalising generational attributes or over simplifying the impact of

differences in access. Questions remain about the relationships, if any, between social and educational uses of technology for students and the influence of the course being studied. This study set out to assess the use of technology amongst learners studying in UK FE colleges and to examine the influence of course on digital behaviours by looking at the ways in which technology is used by students for both social and educational purposes.

This led to the following research questions:

(1) What are college learners' patterns of technology use for *socialising* and *academic* purposes?
(2) Do the college learners' patterns of technology use for *socialising* differ according to the demographic characteristics of age, gender, and subject discipline?
(3) Do the college learners' patterns of technology use for *academic* purposes differ according to their demographic characteristics of age, gender, and subject discipline?
(4) Is there a relationship between the college learners' patterns of technology use for *socialising* and for *academic* purposes?

Method

The methodology was designed to access a wide variety of learners' perspectives by collecting data across six colleges and five subjects. The study assesses the extent of technology use by learners in social/personal and educational contexts and explores whether there are patterns of technology use displayed by different learners. The full project comprised both a questionnaire and focus group interviews with college students. In this paper, the questionnaire dataset has been used to provide a broad picture of college students' technology use patterns and approaches. The project received ethical approval from the lead institution: students participated on a voluntary basis in the project, having first been briefed on its purpose and ensured of confidentiality and anonymity.

Participants

The participating colleges were six general FE colleges in England, Scotland and Wales that differed in their histories, course profiles, and locations. The 218 learners were from diverse disciplinary areas studying a range of qualifications. We were fortunate that at each college the entire cohort of learners attended the focus groups, which began by completing the Learner Profile. Not all of the learners completed the demographic information in full (Table 1).

Table 1. Characteristics of learners who participated in the study at each college.

College	A	B	C	D	E	F	Total
Subjects being studied	IT Level 3 (n = 31)	Health and Social Care (n = 34)	Sociology A Level (n = 42)	Animal Management' (n = 34)	Child Health and Social Care (n = 29)	Creative Media Production (n = 48)	218
Gender							
Male	26	3	20	10	3	26	88
Female	3	31	22	24	26	22	128
Age							
15–20 yrs	31	32	42	33	19	47	214
21+ yrs	0	0	0	1	9	0	10
English First Language							
Yes	30	31	39	34	23	43	200
No	1	3	3	0	5	1	13
Learning difficulties							
Yes	31	29	39	28	22	43	192
No	0	5	2	6	7	2	22

To clarify the nature of the age differences, the participants were organised into four age bands: 15–16, 17–18, 19–20, and >20 years of age (see Table 4 for group sizes). In order to facilitate analysis of the disciplinary influence on technology use, the Higher Social Care course and Child Health and Social Care course were combined into a Health and Social Care category for analysis.

Learner profile

The Learner Profile was developed in a previous project to standardise basic data collection in order to allow for sharing and cross analysis across projects (Jisc 2007). The Learner Profile comprises 21 questions including learner demographic information and reported technology use:

- Section A. Learner characteristics: age, gender, UK residency, English as an additional language, hours of paid work undertaken, highest previous qualification, current level of study, preferred place of study, and specific learning needs.
- Section B: Technology use: access to a networked computer and internet, frequency of computer and internet use, ways in which learners customise their computer, ownership of technology, expectations of technology use on campus, personal, social and educational uses of technology.

In this study the tool was adapted for use in Further Education. The profile was field-tested by college academic staff, students, and researchers in the project panel to gauge ease of use and clarity of questions. Based on the feedback from the pilot group, final revisions were made before the questionnaire was broadly distributed.

Results

Descriptive statistics were deployed to present the participant profile, which includes a breakdown according to age, gender, and college courses. To probe more deeply if there were highly differentiated approaches to technology use or sub-clusters in which students could be grouped, cluster analysis was performed. As there were more than 200 participants in the survey, a k-means clustering procedure was used, in this case grouping students by their experience of technology uses. The clusters were further analysed through crosstab and chi-square testing to determine which student profiles were associated with particular patterns of technology use in social and academic contexts. Finally, the clusters from the research questions regarding the learner's experience of technology uses in social life were cross-tabulated

(and chi-squared tests conducted) with the clusters from the research question on the participant's experience of technology uses in learning.

Access and ownership

Access and ownership is high (see Tables 2 and 3) with the vast majority of learners with access to a networked computer at their home or student residence and accessing the Internet daily. Most learners owned a smartphone and a computer, with laptops being owned more commonly than desktops. Only four learners did not own either a desktop, laptop or tablet. Use of assistive technology was low with only around a fifth declaring that they had changed settings on their computer to suit their personal preferences. Students further reported bringing personal computing devices onto campus. It appears that the great majority were in a good position to make use of technology both on and off campus.

Table 2. Access to technology.

Access to technology	N	%
Access to a networked computer		
at home	206	94.5
at college	62	28.4
at work	31	14.2
Access to broadband Internet		
at home	204	93.6
at college	163	74.8
at work	31	14.2
Frequency of using a computer		
Every day	167	76.6
A few times a week	44	20.2
Less than once a week	6	2.8
Frequency of accessing the Internet		
Every day	206	94.5
A few times a week	9	4.1
Less than once a week	1	0.5

Table 3. Ownership of technology.

Technology owned	N	%
Smartphone	203	93.1
Laptop	183	83.9
Digital camera	121	55.5
Tablet	119	54.9
Ipod or mp3 player	118	54.1
Webcam	94	43.1
Desktop computer	81	37.2
Digital video camera	52	23.9
Ebook reader	32	14.7
Digital audio recorder	22	10.1
Assistive technology	4	1.8

Social and personal uses of technology

When asked which of 11 technologies learners used in their social and personal lives, the most common activities were social networking and using messaging apps, with more than 90% of learners reporting that they used these (Table 4).

Cluster analysis was performed to explore any similarities between learners' social and personal uses of technology. That is, to explore whether all learners responded to this group of questions in similar ways. Figure 1 shows how responses fell into two clusters termed 'regular users' (85 cases) and 'active users' (129 cases):

- Regular users were less likely overall to report using any of the technologies listed than active users. Most regular users did use social networking and messaging apps but very few used wikis/blogs, online discussions or maintained their own blog/website.

Table 4. Frequencies of social and personal uses of technology.

Social and personal uses of technology	Frequency	%
Use social networking sites	203	93.1
Messaging apps	197	90.4
Watch video streams on websites	166	76.1
Use on-demand video	165	75.7
Use advanced functions on my smartphone	149	68.3
Upload video or photo content onto the internet	128	58.7
Use wikis, blogs, online networks	80	36.7
Participate in online gaming	76	34.9
Participate in online discussion groups or communities	43	19.7
Download podcasts	33	15.1
Maintain my own blog or website	19	8.7

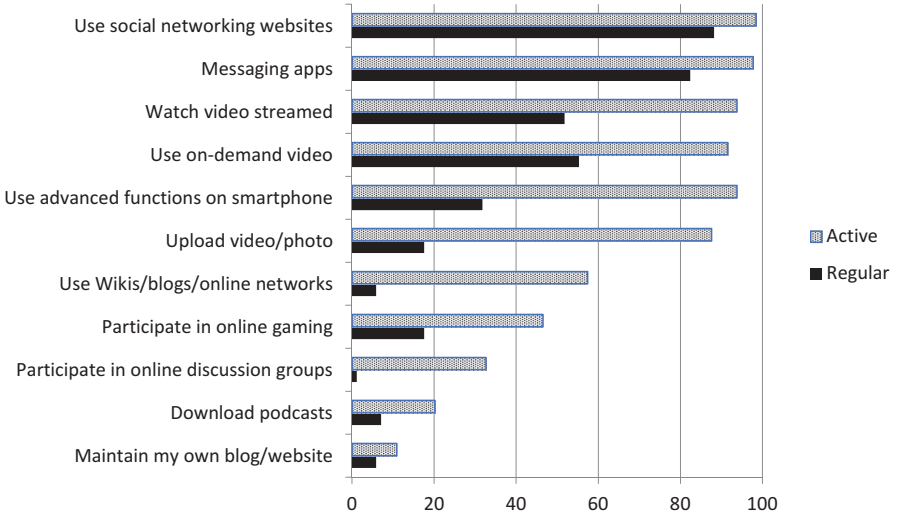

Figure 1. Percentages of social and personal uses of technology for active and regular users.

- Active users engaged with a wide range of technology-based social activities including using the advanced functions of their smartphones and exploring wikis/blogs/online networks, online gaming, and online discussions.

Having defined these user types, we sought to ascertain whether they were associated with three key demographic variables, namely, age, gender, and subject discipline. A series of chi-squared analyses revealed no significant effects of these three variables.

Educational uses of technology

When asked which of 19 technology practices learners had undertaken as part of their studies, using search engines to find out about a topic, word processing to write an assignment, slideshow software to present information and emailing a tutor were all used by more than 80% of learners (Table 5).

Cluster analysis was performed to explore any similarities between learners' educational uses of technology. An iterative series of k-means cluster analyses produced a three-cluster solution (see Figure 2) and clearly grouped the participants into 'reserved users' (55 cases), 'pragmatic users' (103 cases), and 'innovative users' (57 cases):

- Reserved users reported using a narrow range of standard technologies for study purposes, but these were restricted to general computing applications such as internet search engines, word processing software, PowerPoint, email, and library search engines for searches and presentations. Very few adopted the new or advanced Web 2.0 tools, handheld devices, and VLEs in their learning.

Table 5. Frequencies of educational uses of technology.

Educational uses of technology	Frequency	%
Using a search engine to find out about a topic	212	97.2
Using word processing software to write an assignment	206	94.5
Using PowerPoint to present information	198	90.8
Contacting a tutor using email	190	87.2
Using an electronic library or portal to find out about a subject	169	77.5
Learning via a mobile phone or tablet device	145	66.5
Using online learning materials I found myself	131	60.1
Using spreadsheets or data analysis software	130	59.6
Submitting materials for assessment online	129	59.2
Taking a computer-based test or examination	125	57.3
Using web forums or social spaces to find out about a topic	103	47.2
Accessing course materials via a VLE	103	47.2
Using a web page, wiki or blog to present information	71	32.6
Using an electronic whiteboard	71	32.6
Using design tools	57	26.1
Using an e-portfolio or digital CV	53	24.3
Using an online discussion forum to share ideas with other learners	51	23.4
Video or audio conferencing	25	11.5
Using modelling/simulation packages	19	8.7

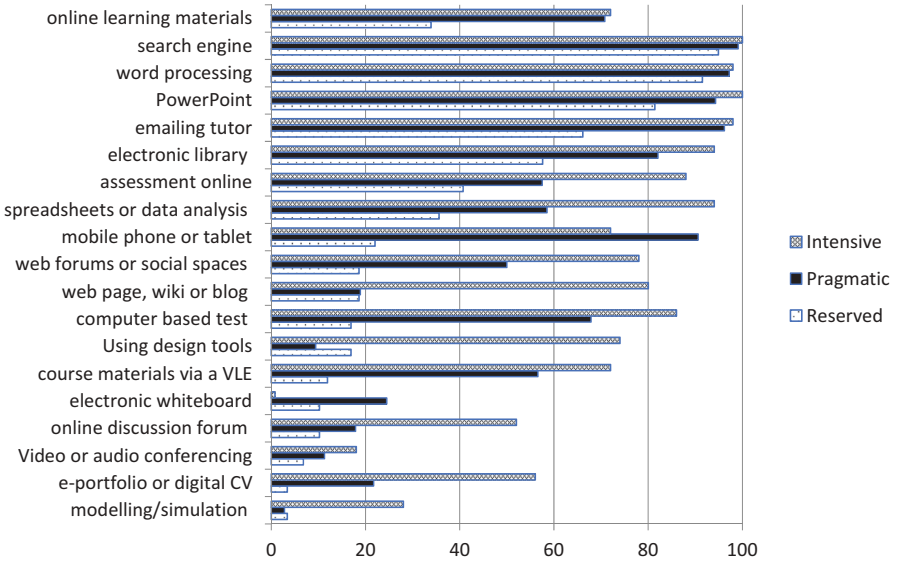

Figure 2. Percentage of learners in each cluster using educational technologies.

- Pragmatic users were not only using a wide range of digital tools but also added a virtual learning theme to their use. In this cluster a substantial number of students used mobile phones or tablet devices, email, online resources, online tests or examinations, and online assignment submissions. They did not use digital tools such as design tools and modelling or simulation packages.
- Intensive users showed large numbers of the members used web forums or social spaces and VLEs. Notably they made more use of technologies that were not adopted by other clusters: web pages, wikis, or blogs to present information; interactive whiteboard; design tools; e-portfolios; and online discussion forums for interaction, sharing, and distributing knowledge between/within students and teachers.

A cross tab and chi-square analysis was also performed to compare the association between students of different age groups and their approaches to technology uses for learning, with the exclusion of mature students aged 21

Table 6. Chi-square analysis of association between age and patterns of technology uses.

		Patterns of technology uses		
Age		Cluster 1 Reserved users	Cluster 2 Pragmatic users	Cluster 3 Intensive users
15–16 years of age	Count (std. residual)	12 (1.8)	14 (.3)	5 (−1.3)
17–18 years of age	Count (std. residual)	28 (−.6)	67 (.0)	42 (.5)
19–20 years of age	Count (std. residual)	6 (−.6)	17 (.2)	10 (.2)

*p < 0.5

Table 7. Chi-square analysis of association between gender and patterns of technology uses.

		Patterns of technology uses		
Gender		Reserved users	Pragmatic users	Intensive users
Male	Count (std. residual)	18 (−.8)	33 (−1.3)	34 (2.5*)
Female	Count (std. residual)	36 (.6)	70 (1.0)	22 (−2.0*)

*p < 0.5

and over owing to insufficient data for this age group. Results of the chi-square analysis for age [X^2 (4, N = 201) = 6.138, p > 0.05], as shown in Table 6, indicate that these age groups differ somewhat in their use of technologies, although there are few clear trends evident in the distribution of the data. In other words, for younger students of 15–20 years, the age influence on the pattern of technology uses was not salient.

The results of a chi-square test on gender demonstrated that technology usage significantly differed between the male and female students [X^2 (2, N = 213) = 13.742, p < 0.01]. Table 7 illustrates that the male students were more likely to fall into the category of intensive users. Conversely, the female students were less likely to be intensive users. Overall, it appears that female students are less likely to exploit the educational affordances of the emerging technologies as intensively as their male counterparts.

A chi-square analysis tested for any association between patterns of technology uses in socialising and learning. This revealed that the social and personal engagement patterns were significantly linked to a greater degree of educational uses of technology [X^2 (2, N = 213) = 21.853, p < 0.001]. The results of a cross tab (Table 8) indicate that regular users of technologies in their personal and social life were more likely to be reserved users and less likely to be intensive users. The reverse was the case for active users in social and entertainment technologies, who were more likely to show technological enthusiasm in both social and educational environments.

Disciplinary differences

Finally, each of the three clusters was cross-tabulated and chi-square tests conducted with the five course types. The chi-square test confirmed a significant association between course type and patterns of technology use for academic purposes [X^2 (8, N = 215) = 44.792, p < 0.001]. Further analysis

Table 8. Chi-square analysis of association between patterns of technology uses in socialising and learning.

		Patterns of technology uses in learning		
Patterns of technology uses in socialising		Cluster 1 Reserved users	Cluster 2 Pragmatic users	Cluster 3 Intensive users
Regular users	Count (std. residual)	32 (2.2*)	43 (.5)	9 (−2.8*)
Active users	Count (std. residual)	23 (−1.8)	58 (−.4)	22 (2.3*)

*p < 0.5

Table 9. Chi-square analysis of association between course studied and patterns of technology uses.

		Patterns of technology uses		
Subjects		Cluster1 Reserved users	Cluster 2 Pragmatic users	Cluster 3 Intensive users
ICT	Count (std. residual)	10 (.7)	4 (−2.8*)	17 (3.1*)
Health	Count (std. residual)	26 (2.5*)	28 (−.4)	9 (−1.9)
Creative Media	Count (std. residual)	11 (−.2)	27 (1.1)	8 (−1.2)
Sociology	Count (std. residual)	3 (−2.3*)	29 (2.1*)	9 (−.6)
Animal Management	Count (std. residual)	5 (−1.3)	15 (−.3)	14 (1.7)

*p < 0.5

results, as shown in Table 9, indicate that the disciplinary areas had a varied impact on students' use of technologies. IT students are significantly more likely to be intensive users and less likely to be pragmatic users than their peers in other disciplines. Health-related course learners were more likely to be reserved users, whereas sociology learners were more likely to be pragmatic users and less likely to be reserved users than learners from other disciplines.

Discussion

This study presents a broad and comprehensive report of the technological experiences of over 200 learners studying in UK Further Education colleges. The findings reflect the experiences of entire cohorts of learners and provide information on their technology ownership and use in both social and educational contexts. Overall, access and ownership of technology is high. These findings mirror surveys into the ownership and access of computers in undergraduate populations (Margaryan, Littlejohn, and Vojt 2011; Jones et al. 2010), confirming that established technologies such as computers, the Internet, and mobile phones are widely used by college students. However, a very small number of students were identified who did not own either a computer or tablet and so were reliant on institutional computing facilities.

The question set about technology use in personal and social lives revealed variations in patterns of use beyond a core set of technologies. While most learners were regularly using social networking sites, messaging apps and watching streamed videos and videos on demand, a cluster of more active users were distinguishable from these regular users by being more frequent users of a wider range of technologies in their social lives, which included uploading photos and videos, using wikis/blogs and online networks and gaming. The ways in which the data can be clustered into different usage patterns is similar to the analysis undertaken by Kennedy et al. (2010) on survey data from university students. However, while Kennedy et al. found their cluster of 'power users' engaged in Web 2.0 publishing activities, in our analysis very few learners in either cluster were maintaining their own blogs

and websites. This is one example of the need for studies to be conducted with FE learners rather than generalising findings from higher education.

The question set about technology use in educational contexts asked a series of questions about digital practices undertaken as part of studies. When looking at the group as a whole, the most common practices were concerned with information searching and retrieval and use of software to present work. Only around a half were undertaking self-directed activities to use resources they have found themselves through searching or participating in online social spaces, only a quarter using discussion groups to share ideas with other learners and even fewer using video conferencing or simulation packages. These findings are consistent with the survey studies from both FE and HE (Kennedy et al. 2010; Jones et al. 2010; Henderson, Selwyn, and Aston 2017; Newman and Beetham 2017).

These generalisations mask differences within the group and again the cluster analysis allows for a more nuanced understanding of patterns of use. This study provides further empirical evidence for Davies' spectrum of 16–19-year-old learners (Davies 2010). Here our three clusters (reserved users, pragmatic users, and intensive users) roughly formed a bell curve distribution, with the pragmatic users representing the largest group. This finding is in line with studies demonstrating that college students have by and large embraced the 'practitioner level' of the digital literacy, which indicates that they are competent at linking technologies with related learning activities, such as composing text, submitting assignments, and downloading teaching material on VLEs (Schulmeister 2010; Selwyn and Gorard 2016). The smaller group of intensive users were much more likely than other clusters to engage in participatory practices such as using web forums for finding information, using online discussions to share and using a wiki or blog to present information. They were also more likely to experiment with advanced tools such as e-portfolios, simulation packages and design tools. By contrast, reserved users were less likely to use any digital tools at all in educational contexts, and these advanced tools in particular.

The cluster analysis allows for further exploration of the headline figures available from large-scale surveys of FE students (Becta 2008; Newman and Beetham 2017). Indeed the Jisc Tracker pilot report calls for more work to establish 'patterns of ownerships and use in more detail … and to explore whether factors such as socioeconomic background, gender and age play a role in learners' access and choices' (Newman and Beetham 2017, 13). In this dataset there was no significant effect of age although the age range of five years was likely too limited to expose any differences. Gender differences showed males more likely to be intensive users and females reserved users. There were also significant relationships between social and personal uses of technology and digital practices in educational contexts. The differences by subject studied are interesting in helping to understand

the development of digital literacies. Davies (2010) posited that intensive users 'often develop trajectories of personal technology interest that have implications for choices about areas of study and possible future employment' (6) and this is what we found here with IT students significantly more likely to be intensive users. At the other extreme, health students were more likely to be reserved users and so may need extra support in developing their digital capabilities.

While these relationships between digital practices and subject might at first glance seem obvious, they are worthy of closer inspection. These relationships were only found when learners were asked to report on their digital practices as part of their studies not their personal and social uses of technology. It is likely that digital practices developed within a personal context do not easily transfer to an educational context. Digital literacy researchers have explored the boundaries and tensions between practices developed and demonstrated in social and educational environments (Mannion et al. 2009; Bhatt 2012; Creer 2017). Their recommendations are for colleges to make this transfer easier by explicitly valuing and accepting the literacy practices that intensive, specialist users bring into education from other areas of their life.

Digital literacy research emphasises the socially situated nature of digital practices (Beetham and Oliver 2010; Gourlay and Oliver 2018). That is 'the most private habits of mind depend on shared tools and collective values' (Beetham and Oliver 2010, 158). The shared tools and values are determined by the subject studied and the way the course is taught. It helps to understand digital literacy as an academic literacy practise, where learners have been found to organise their learning activities around their interpretation of the course requirements, and especially the assessment tasks (Lea 2009). Subsequent analysis of the focus group data will further explore the influence of the course on learners' digital practices.

These findings also direct our attention towards the largest cluster of learners, the mainstream pragmatists who are using a limited range of technologies in superficial, passive and perhaps unimaginative ways. For these learners, we might expect that their experiences of formal education would be influenced to a large extent by the activities designed by their tutors and the environments provided by their institutions such as the VLE (Parsons 2017). The role of the lecturer is likely to be crucial in expanding the digital practices of such students. We should take note of studies of lecturers which show that although they are curious, they lack the confidence, the time to experiment, funding to purchase digital tools and convenient ways to access appropriate professional development or share innovations (Rebbeck, Ecclesfield, and Garnett 2012; FELTAG 2013). Support for lecturers who design the experiences for the majority of mainstream pragmatists is likely to be crucial in the coming years.

Conclusions

The research explored college learners' self-reported uses of technology in social/personal contexts and their digital practices as part of their studies. In line with findings from studies of undergraduates, learners were not a homogenous group but displayed a range of patterns of use. The analysis of digital practices within an educational context revealed that it was only a minority of learners who were using a wide range of technologies intensively in a way which fits the description of learners in many policy reports. The majority of learners seemed to be more pragmatic in their use of technologies in fairly simplistic ways that could be driven by course demands. Given that digital literacy research understands these practices as socially situated, the role of the course context in driving technology use needs to be further explored.

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