STUDENTS' EXPECTATIONS FOR THE HIGHER EDUCATION DIGITAL LEARNING ENVIRONMENT: A CASE OF GHANA

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ABSTRACT: The ubiquity of digital technologies in life, work and learning are changing the expectations that students have of higher education institutions. In the world of work, the increased use of digital technologies is generating new demands on the curriculum to account for changing skills that required of current graduates. Therefore, higher education institutions need to understand students' expectations to meet their needs. A survey was conducted among 1937 students at three institutions. The survey instrument comprised closed and open-ended items designed by the UK-based Joint Information Systems Committee (JISC) about their expectations of institutional digital learning environment. The findings indicated that only few students in higher education institutions in Ghana have access to institutional digital resources and devices whenever they needed them. They expect the presence of more digital technology in the learning environment and at the course level. Further, they expect lecturers to teach them the digital skills needed for the workplace. We therefore suggest the expression of employability skills in context of the subject disciplines.

Keywords: digital experiences, digital expectations, digital device, higher education institutions, digital resources

INTRODUCTION

As a consequence of broadened access to digital devices, students entering higher education increasingly do so with more digital capabilities than their predecessors. Through the internet, many students have acquired digital tools and capabilities, which they transfer to their studies overt time. These digitally confident students are highly focused on the tasks of study choosing appropriate tools to practice, research and develop on workplace skills using both personal and academic systems. They therefore require basic access to digital services and devices in their institution. Higher education institutions across the world are therefore leveraging these opportunities to enhance students' digital experiences by improving the institutional digital infrastructure for digital skills development (Alexander, Adams Becker & Cummins, 2017).

Even though policies exist for digital integration in higher education institutions in Ghana to develop students' digital skills little is known about what the students' experiences are for the university digital provision as well as their digital expectations for the digital environment in the Ghanaian context. Recent study focused on the students' experiences with specific aspect on digital skills development in context of the subject discipline, experiences of VLEs on course and students' value and difficulties of learning with digital technologies (Armah & Westhuizen, 2018).

Developing students' digital capabilities involves extending their digital capabilities from their basic expectations as a benchmark to a level that is expected for a graduate in the discipline (Coldwell-Neilson, 2017). This study seeks to understand from students' perspective what their experiences are with their institutional digital resources and devices. The study will also explore the students' expectations for the institutions digital learning environment. By means of descriptive survey, we investigated those experiences and expectations among students in three dual mode higher education institutions in Ghana. Our objective was not to determine the differences in

students' experiences and expectations by mode of study but to survey a large sample of students in order to obtain broader picture of students' experiences with the institution's digital resources and devices as well as their expectations. That will allow higher education institutions in Ghana to better prepare students in terms of digital skills for the digital workplace.

RELATED LITERATURE

Enhancing students' digital experiences cannot be realized without providing access to digital technologies. Access to digital technologies is key to the development of digital capabilities (Buckingham, 2015). According to Beetham and Sharpe (2010) students' experiences with technology begins from access to technology and functional skills to higher level capabilities. HEIs institutions therefore need to make investment by equipping classrooms with digital technologies and e-Learning solutions to unleash a generation of digital natives. This is necessary to propel students for future jobs that now requires more of digital skills (Raja & Christiaensen, 2017).

According to Hennessy, Harrison, and Wamakote (2010) plenty of digital provision can persuade the educator to embed them in the subject disciplines. Similarly, Newman, Beetham, and Knight (2018) opine that students' access to digital improves their experiences and use of digital to support learning. The limited digital resources in the learning environment according to Bolstad, (2015) impedes learning and the teachers' use of technology.

According to Gorard, See and Davies (2012) expectations involves what an individual believe will occur in the future. This can be a behaviour, an outcome or an event (Khattab, 2015). Mickelson (1990), defines students expectations are tangible values indicating the empirical realities faced by students, i.e. how students think they will perform in reality given their socio-economic background in addition to their past and current academic performance. In this study, students' digital expectations are defined as those skills and capabilities that students believe they will develop to succeed in academic endeavour and career.

> "Students expectations for their future influence what they choose to study and the activities they pursue. Factors that shape students' expectations in the learning environment include the influence of people close to the students, past academic achievement, the relative flexibility of schools' systems, and the degree of selectivity of higher education." (OECD, 2017 p. 43).

The students' expectations, whether intrinsically, or extrinsically motivated by educators or peers, greatly influence their behaviour. These expectations, according to Margaryan, Littlejohn and Volt (2010), are also strongly influenced by their prior experiences. They emphasized that students who have prior experience with technology expect digital technologies to be a part of their higher education studies and would prefer the methods of learning at post-school or work that reflected their learning methods at high school.

Findings from a survey conducted by Walker, Voce and Ahmed (2012) revealed that students' expectations are driving an improved level of service provision by HEIs, particularly using digital technologies to support application and course selection procedures (see also Duncan-Howell, 2013). A survey report by Universities and Colleges Information Systems Association (UCISA) also indicates that meeting student' expectations and enhancing access to learning for students is a key factor driving the implementation of technology-enhanced learning in higher education institutions after enhancing quality of learning and teaching in general. The report further highlights that students' expectations formed the basis for the development of staff digital capabilities (UCISA, 2014).

Before entering higher education, students already have prior expectations about how they will be taught (Beetham & White, 2014; Margaryan, Littlejohn & Volt, 2010; Pleitz, MacDougall, Terry, Buckley, & Campbell, 2015). For instance, they may be aware of and prefer blended learning environments while beginning to experiment with MOOCs (Dahlstrom, Walker & Dziuban, 2013). They therefore expect digital resources to be hosted in institutional virtual learning environment to enable access to them anytime, anywhere from any device (Jewitt, 2012)

In an ECAR report, it was identified that students expect a moderate presence of technology in their course. They prefer freely available course content/open educational resource, e-books, simulations and education games, and e-portfolios in their courses. Other key among the students' expectations include the need for more and better devices connected to more-pervasive and faster internet, specialized software for their work-based learning support, mobile devices, Personal Computers and Mac machines for academics, and looking to institutions and instructors for opportunities and encouragement to do so (Dahlstrom, Walker & Dziuban, 2013).

Beetham and Sharpe (2013) argued that despite their high expectations for the HE digital environment students are essentially uncertain about the technologies they will use for study. Some have unrealistic expectation for the digital environment. They are also unclear about how to legitimate use of personal devices, services, networks and practices in academic contexts. They opined that course specific skills especially, do not fully emerge until students have had considerable experience and opportunity to compare their experience with that of other students or the demands of their future career (Beetham & White, 2014). It is therefore important that HEIs make the students aware of the digital skills important in their chosen career and provide avenue for them to develop those skills (Newman & Beetham, 2017). It is also important for students to understand and demonstrate the way in which their knowledge and competencies are being developed to build on them and apply them in different situations.

METHODOLOGY:

We investigated students' expectations of the higher education digital learning environment in Ghana. The study was guided by two main research questions:

1. What are students' experiences of universities digital resources and device?
2. What are the students' expectations of the universities digital learning environment?

The quantitative survey contained items that probed students' experiences of the digital provision in the universities and their expectations of the learning environment. These items were selected the third dimension of JISC higher education insight survey (2018). Part A of the survey seeks to elicit responses about access to and experiences of institutional digital resource and devices. The response type options were a 3-point Likert scale ranging from 'Never', 'Monthly or more' and 'Weekly or more'. In part B, students responded to an open-ended question about their expectations of the higher education digital environment.

Final year undergraduate students and postgraduate students from three dual mode higher education institutions in Ghana participated in the study. We used the census survey method to sample all of the students in the population of 32127 students. Altogether 1937 students participated in the online survey, representing a response rate of 6%. There were 1104 (57%) male and 833 (43%) female students. Most of the participants, 49.8% were between 15-25 years old, 30.4% were between 26-30 years old, and 19.7% were 31 and older. The students were drawn from different disciplines. Majority of the respondents 30.8% studied a subject in Education, 21.5% studied Business, 9.9% studied Engineering, Psychology 5.4%, Agriculture science 5.1%,

Liberal Arts and Humanities 4.5%, Biological and Medical science 4.2%, Physical science 4.2%, Computer Science 2.8%, Legal studies 2.7%, Architecture and Communications and Journalism 2.1% respectively, and Visual and performing Arts 1.3%. Within the group 54% studied fulltime and 46% studied on distance mode. Most of the respondents were Final year undergraduate students (86%), only 14% postgraduate students.

RESULTS

Students were asked to choose which institutional digital resources they had access to whenever they needed them. Resources such as reliable Wi-Fi, online course materials, e-books and e-journals, file storage and back-up, computers and printer and students own social media were listed for students to choose all that apply to them. A summary of the results is shown in Figure 1.
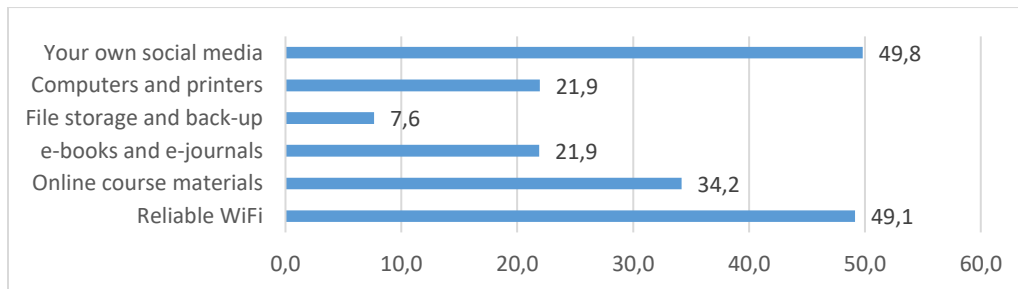

Figure 1: Students' access to institutional digital resources

The most common resource available to students was 'Reliable Wi-Fi. Some 49.1% of the students said they have access to reliable Wi-Fi and 49.8% said they have access to their own social media such as Facebook, and twitter via the institutional Wi-Fi. Only 34.2% opined that they have access to online course materials, whilst 21.9% have access to e-books and e-journals and computers and printers respectively. See Figure 1.

The students were also asked to select from five institutional devices; desktop computer, laptop computer, tablet / iPad, smartphone and printer that they use to support their learning. The percentage summary is shown in Figure 2.
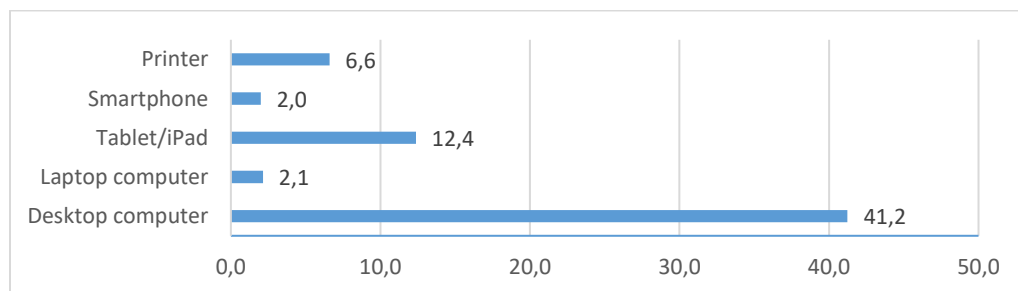

Figure 2: University owned devices used by students to support their learning

The result in Figure 2 shows that institutional desktop computer is the device used mostly by students to support their learning, but only 41.2% of the students said they use desktop computers. This is followed by institutional tablet / iPad, 12.4% (that is distributed to students by the institution). Few students had access to the institution's laptop computers (2.1%) and smartphones (2%).

Figure 3 shows the results of students' active use of digital technology on their course
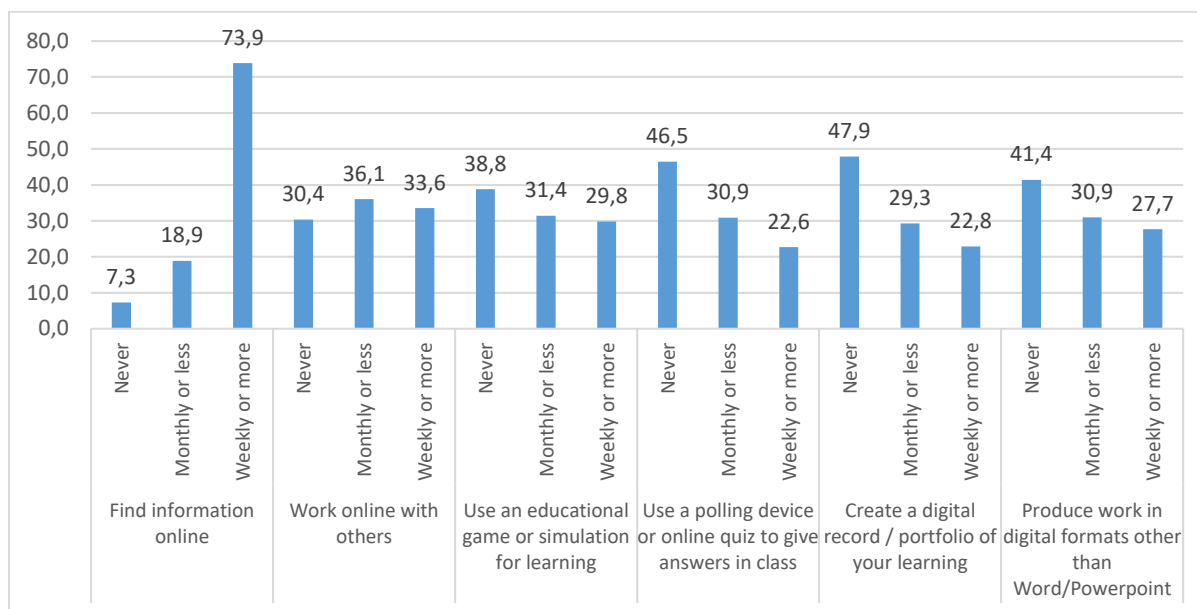

Figure 3: Students' experiences with digital technology in subject discipline

Figure 3 shows that use of digital to find information online is relatively frequent in higher education institutions in Ghana. A majority of the students opined that they actively use digital technologies to 'find information online'. However, almost half of the students said they have never created a digital record / portfolio of their learning; 46.5% of the students have never used a polling device or online quiz to give answers in class. Four in ten students have never produced work in digital format other than word / PowerPoint nor used educational game or simulation for learning. Some 30.4% of the students have never worked online with others

We asked the students about their expectations of the digital teaching and learning. The result was grouped into themes for further analysis. About 987 out of the 1937 students responded to the question, which is approximately 50% of the respondents. Table 1 summarises the results.

Table 1: Themes comparison and frequencies of students' response

Theme	Students	Sample Comment
Provide digital support	3.9%	Lecturers should be ready to give support to students whenever they need help on digital tools and apps
Provide digital skills needed for the workplace	6.45%	Teach us both theory and practical digital skills we will need at the workplace.
Presence of technology on course	11.8%	Bring out course activities which will help us in learning computers and applications
Access to freely available course content	13%	The university should provide students with free digital teaching and online learning resources e.g. recorded lectures, lecture notes, e-books, e-journals
Access to robust Wi-Fi	29.05%	Provide free access to stable Wi-Fi Connection without limitations
Access to quality institutional digital devices e.g. computers and printers	35.8%	Provide quality computers and printers and should be more accessible without restrictions

DISCUSSION AND CONCLUSION

The study identified that only few of the students in the three universities had access to institutional digital resources such as e-books and e-journals, whenever they needed them. About four in ten students opined that they had access to computers and printers in their institutions, however only few of the students had access to the institutional desktop computers and printers respectively whenever they needed them. The result also revealed that the most frequent digital activity in the institutions is the use of digital technology to 'find information online'. However, access to reliable Wi-Fi is still a problem for students in the three institutions. Lack of access to reliable Wi-Fi according to Galanek, Gierdowski and Brooks (2018) impedes students right to digital resources such as 'online course materials' and 'e-books and e-journals' (see also Bolstad, 2015; Beetham, Newman & Knight, 2018).

Analysis of the free response coded and analysed quantitatively, shows clearly that students expect access to quality institutional devices such as desktop computers and printers connected to more pervasive and faster internet as well as access to robust Wi-Fi at their study point on campus. They also expect digital resources to be hosted in VLE environments to ensure uninterruptible access to the resources anytime, anywhere from any device. This finding is in line with earlier findings by Dahlstrom, Walker and Dziuban (2013). Some students mentioned that they expect digital technologies to be part of their learning as used in the workplace that will allow them to enter a workplace and feel confident with the technology used there. However, these expectations are ignored by the three universities (Duncan-Howell 2013; Walker, Voce and Volt, 2010). These findings are in line with earlier findings that suggest that HEIs need to make the students aware of the digital tools and skills important in subject disciplines as well as provide opportunities for students to develop those skills in their chosen career (Beetham, Newman & Knight, 2018; Beetham & White, 2014; Jewitt, 2012; Pepler & Jeans, 2016).

CONCLUSION

The study sought to understand students' experiences and expectations of digital resources and devices in the digital learning environment. The purpose was to provide insight into students' digital expectations of digital in their chosen career. Students would want their lecturers to use technology on their course that will help them to acquire the skills necessary for their future workplace however, their experiences of the digital resources and tools in the three institutions is less and the universities seem to ignore the students expectations. We therefore suggest the expression of industry standard and up-to-date tools and skills in context of the students chosen career. Further investigation needs to consider digital investment aimed at equipping classrooms with digital technologies and e-Learning solutions to unleash a generation of digital natives in Ghana.

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