

Cross Cultural Similarities in Using Mobile Technologies to Engage and Connect with Students

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Abstract—The access to mobile technologies is growing at an exponential rate in developed and developing countries, with some developing countries surpassing developed countries in terms of device ownership. It is both the demand for, and high usage of mobile technologies that have driven new and emerging pedagogical practices in higher education. These technologies have also exponentially increased access to information in a knowledge economy. While differences are often drawn between developing and developed countries in terms of the access and use of Information and Communication Technologies (ICT), this paper will report on a study detailing how higher education students use mobile technologies and social media in their studies and in their personal lives. It will contrast the similarities in how students from an Australian and Vietnamese university access and use mobile and social media technologies while also highlighting ways in which these technologies can be embraced by academics to connect and engage with students.

Index Terms—social media, mobile technology, cross-cultural similarities, higher education, connected technologies, knowledge economy

I. INTRODUCTION

The use of Information and Communication Technologies (ICT) has often been touted as essential in any 21st century learning environment [1], whether it be in the early years or tertiary education. There have been numerous studies undertaken about the affordances that ICT can offer students, including access, to increase learning outcomes and prepare students for the 21st century. This was often most strongly evidenced by the aim for many educational institutions, such as primary and secondary schools, to talk about the ratio of computers to students [2], however, this essentially places the focus on the computer (or technology) rather than the teaching and learning. Over the years, a number of lessons have been learnt from this approach with an ever increasing number of educators and researchers

advocating that ICT is merely a tool, and that it is the combination of pedagogical practices and appropriate teaching tools and learning environments that will support students in achieving quality educational outcomes. It is envisaged that this will prepare them for the 21st century knowledge economy in which they will be active participants. Access to Internet based tools and resources has drastically changed the landscape of ICT in education with an emphasis on reaching students from all parts of society, especially those with no access or poor access such as those in rural or remote regions [3].

However, with the advent of the Internet, the combination of new and emerging technologies such as smart phones and tablets which offer a range of combined services and applications (apps), there has been an increasing level of personal device ownership. This increasing personal device ownership has been the driving force behind educational institutions embracing a “Bring Your Own anything” (BYOx) approach [4]. While there have been a number of higher education institutions adopting this approach, there is often very little known about these students and what tools, skills and background expertise they bring into the classroom.

It is not safe to assume that all students will have access to these technologies or that they are all equally competent in using the technologies that they bring to class. While it can also be argued that educators struggle with many of these technologies in their classrooms [5] there is an ever-increasing push to accept them as essential tools in the classroom. It is within this context that this study endeavors to bridge the gap between what students are actually using in an undergraduate teacher education program and their own personal lives. In particular, this paper will compare the similarities and differences in the use of mobile technologies and social media between a cohort of students in a Vietnamese University and an Australian University.

II. BACKGROUND TO STUDY

The ability for an educator to connect and engage with students can be critical to the teaching and learning

process and the resultant student outcomes [6], [7]. There is a need to understand the student and to provide them with a supportive environment that is aligned with the many varied learning styles that students bring to the classroom. While it may not be possible to cater to every single learning style, the opportunities to connect and engage still need to exist. Too often assumptions are made about how students use ICT and in particular mobile and social media technologies. Questions about whether students use these technologies in a superficial way as a means to be social or whether they have a deep knowledge about how they operate and their full potential as a learning tool can be critical to how they are used as part of the learning process. As a result, labels are often used to describe the type of students coming into a course of study and this is often based on age or gender or both. Some of these labels have included the terms “digital natives” or “immigrants” [8] or labels such as Generation “C” [9] referring to students who are content creators. However, many of these labels and particularly the digital natives labels have been debunked many times (see [9] and [10]).

The use of mobile technologies and social media technologies have been reported as growing exponentially with many developing countries surpassing developed countries in terms of ownership of these devices [11]. Often associated with this growth in these countries is the fact that they are more likely to use them for the sole purpose of accessing the Internet. Vietnam is often referred to as a developing country with one of the highest rates of device ownership in terms of smart phones. It is reported that 76% of the Vietnamese population use smartphones to access the Internet [12].

It is within this context that this study aims to understand the background knowledge and skills students bring to university as well as the types of devices and social media that they use. In particular, the study seeks to understand the similarities between students using mobile and social media technologies in Australia and Vietnam and some of the underlying reasons as to why they use them in a particular way. The study reported on here is a work in progress, being in its initial phases and reports only on the initial data collection.

III. RESEARCH METHODOLOGY

A mixed methods approach was adopted for this research. Using Creswell and Plano Clark's [13] definition and core characteristics, the study combines ‘methods, a philosophy and a research design orientation’ (p.7). During the research, data was collected and analyzed using both qualitative and quantitative methods. A qualitative case study methodology based on Yin's model [14] for exploratory case study, using multiple sources of evidence was applied in this study. The study was designed to understand the similarities between students using mobile devices and social media when entering a pre-service teacher education program in an Australian and Vietnamese university. It also explored the types of mobile devices and social media technologies these first year students used in their personal lives, while

drawing upon their experiences of university expectations in an attempt to identify the potential role these technologies play in teaching and learning while eliciting the challenges for educators.

The data was collected over a period of 12 months in the first year of a pre-service educators degree. The cohort sizes were different in each location with N=317 participants at the Australian university and N=46 participants from the Vietnamese university. The pre-service educators are from the teaching areas of Early Childhood, Primary and Secondary Education. The study employed a “wide range of interconnected interpretive practices” (p. 3) [15] to identify the use of mobile devices and social media technologies by students through a range of surveys, interviews and focus groups to elucidate rich and meaningful data for analysis. Students were asked to voluntarily complete an online survey at the beginning of the semester and a follow up online survey at the end of the semester. Semi-structured interviews and focus groups are being conducted with students throughout the semester and at the end of the teaching period. The findings reported on in this paper are based on the survey data.

IV. FINDINGS & DISCUSSION

Over 82% of survey respondents from each university were female with the majority of participants being in the age range of 18-22 years of age from each university. This result is not dissimilar to other studies that identify pre-service education courses to have a larger percentage of females to males in their courses. When students were asked to respond with regards to their reliability of access to the Internet, 82.5% of students from the Vietnamese university indicated that their access was from a 3 to 5 on the scale whereas 96.5% of students in the Australian university indicated their access was in this same range.

Based on the ability for students to stream video over their Internet connection 82.61% of students in Vietnam indicated that they were able to do this while 97.45% of students from the Australian university indicated that they could. The findings, in terms of access and reliability between students in the two universities are quite high, indicating that many are able to reliably use the Internet as part of their studies. In terms of mobile devices that the students would deem as necessary to bring to their university and use for their studies the results were not so similar. In the Australian university the laptop was by far the most popular device student's owned and brought to class and was seen as essential to their studies (79.68%) with the iPhone following closely behind this at 73.97%. In the Vietnamese university 71.74% of students had access to a laptop and brought this to class while the Android smart phone trailed this at 21.74%. It is important to note that further analysis of this question also reveals that 80.39% of students at the Vietnamese university still had unique access to some form of smart device or tablet computer such as an iPad or windows based smart phone, whereas it was more likely that a student from the Australian university owned multiple devices and indicated that they would bring more than

one device at any one particular time. The fact that 80.39% of students in the Vietnamese university do have access to such a device while studying indicates the opportunity to harness the strengths of a more flexible and responsive pedagogical approach that could be used by educators in the university. While further data would need to be collected to validate these initial results, they do indicate that similar approaches to teaching and learning could be adopted in each of the universities and a BYOx approach may be possible using mobile devices.

In the Vietnamese university 82.35% of students used Google Drive as a form of cloud based storage for backups and sharing documents, while the results of how Australian students used cloud based storage were spread over multiple vendors. For example, 69.34% of students used iCloud for storage and would choose between multiple options such as Dropbox or Google Drive. This question merely indicates an acceptance of cloud storage and its use by students in both universities as part of their studies and in their personal lives. Approximately 83% of students from both universities used their mobile devices for checking email.

The section in the survey asking students about how regularly they used the various social media technologies and software tools yielded the most similar results between the students from each university. Facebook was the most frequently used social media tool used by students from each of the universities (see Fig. 1).

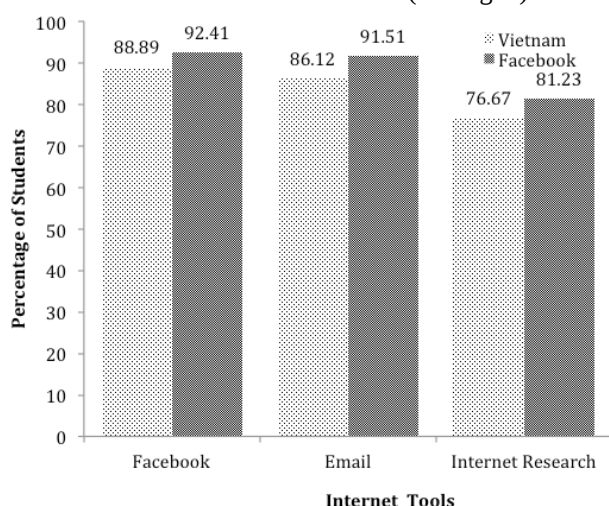


Figure 1. Use of internet tools by students

Similarly, email was the next most often used Internet based technology that the students saw as essential to their studies. The students in both universities then indicated that general searching on the Internet for research was the third most common ICT practice. There were 88.89% of students from the Vietnamese university that indicated that they regularly to very often used Facebook followed by email being 86.12% of the students and research for study and teaching being 76.67% of the students. In the Australian University, similar preferences were given with 92.41% of students most often using Facebook, 91.51% email and for research for study and teaching it was 81.23% of students. The results for this section of the survey indicated that

Facebook was by far the most popular, however it was often seen more as a social tool, rather than a tool as a choice for academic studies. Students regarded email as the more official method of receiving university correspondence.

In terms of social media platforms used in Higher Education, Facebook has been the focus of many studies (see [16]-[18]), though many of these studies were based on small sample sizes. A large number of these studies have also focused on supporting students or enhancing learning (often through communication strategies), hence being used in a social manner. The study by Nykvist, Daly and Ring [18] focused on education students supporting one another as they undertook their practicum experience in Malaysian schools and once again reinforced the supportive nature of this medium. Given the prevalent usage of Facebook reported in this study, the challenge for educators would be how to successfully embrace social media to support new pedagogical approaches to learning at university.

It is within this context that the survey revealed that 49.67% of the Australian students felt that using social media gave them a sense of belonging while 44.17% of Vietnamese students also felt this sense of belonging from the use of social media. Of note, when referring to the question about social media giving a sense of belonging, approximately 38% of the Vietnamese students responded by selecting neutral as a response whereas approximately 34% of the Australian students indicated a response of being neutral. When students were asked about whether social media helps them to reinforce ideas and opinions 32.87% of the Australian students indicated that it did where as only 12.5% of the Vietnamese students indicated that social media reinforced their ideas or opinions. In each university, over 90% of students also indicated that they were occasionally to very often distracted through the use of social media and mobile devices. Their written responses exclusively indicated that Facebook was one of the largest contributors to this distraction, with YouTube being the next largest distraction. When exploring this question further with students, it was understood that there were a number of implications associated with this distraction as it often led to extremely late nights with many students indicating a lack of sleep when using their devices. A 2007 study [19] did find a correlation between the use of phones and increased tiredness in adolescence.

With current literature suggesting that students are often referred to as content creators as well as consumers the survey indicated that all (100%) of the Vietnamese students used mobile devices to create digital media artifacts such as photographs, animations and video. Similarly, the data revealed that 99.34% of the Australian students had also created digital media artifacts with their mobile devices. This not only indicates the student's ability to use the mobile device, but also their ability to create digital media artifacts. In an educational setting, educators would be able to harness these capabilities within their approaches to teaching and learning in the classroom.

From a personal perspective, many of the digital media artifacts that students produce or even conversations they have on social media, are able to be geographically referenced (geo-tagged) and organized. The geo-tagging and location services that these devices offer has allowed these tools to be used in unique ways that would not have been thought possible only a few years ago. For example, geo-tagging services combined with social media allow proximity socialization based on a specific location and allows individuals to interact via online chat prior to meeting in person. This has become very popular in the personal lives of students, however is rarely used within educational settings. If the strengths of these devices can be combined with new pedagogical approaches, then new learning opportunities would present themselves enabling students to connect and engage at many new levels.

Pre-service education students are often influenced by the way their previous teachers used ICT in the classroom when they were in school and this has been recognized as a possible barrier to how new teachers adopt ICT in their classroom. Students from both universities indicated that the most common ways they saw ICT being used in the classroom was through the use of Microsoft PowerPoint and a data projector. Some of their experiences also referred to their teachers using email as a direct communication tool. There were very few students who indicated that their previous school teachers used mobile devices or social media as a tool to connect and engage with them in the teaching and learning process.

With mobile devices becoming more prevalent in society, students were asked in the survey if they believed that there was a place or need for mobile technologies in teaching and learning. All the Vietnamese students indicated that mobile technologies were somewhat relevant to very relevant in the teaching and learning process while 98.98% of the Australian students indicated that it was somewhat relevant to extremely relevant. When students were asked to elaborate on their responses in relation to this question, Student A responded by saying that "because these days we need/use our electronic devices in the classroom, for example when my laptop is dead or left at home I do struggle." With such a high number of students indicating that these tools are important to teaching and learning, there is some indication that their prior experiences with these tools in their own teaching and learning may not impact on their future pedagogical approaches. Further longitudinal research would need to be conducted in this area with a much larger sample size to validate this claim.

V. CONCLUSION

The use of mobile and social media technologies by students in their everyday lives is strongly evidenced through the initial data collection and analysis reported in this paper. While it is a work in progress, there is sufficient evidence to suggest that there are similarities between how students use mobile devices and social media technologies in developed and developing countries and that the majority of students in first year education degrees do have access to some form of mobile

technologies and can use these for creating digital media artifacts or actively using social media tools. While some research states that the notion of mobile learning is a relatively new field of study [20], students (and others) have been accessing web based resources and apps since the launch of smart phones and tablet devices. Students use these technologies to connect and engage for personal learning and/or as a social construct through the use of social media tools. Educators need to embrace these technologies and use them where new approaches to learning are practical and add value as opposed to just using them for the sake of using them.

While the full potential of mobile devices and social media are still to be realized in higher education, it is essential that academics consider their digital identities and how this pertains to their pedagogical approaches and assessment practices. In achieving this, academics need to understand their students and avoid making assumptions about how students engage with mobile devices and social media tools, whether it be a group of students in a developed country, a rural setting or a developing country. This paper highlights the fact that the patterns of usage and social media access of tertiary students in Vietnam was very similar to that in Australia. The main differences were in the areas of device ownership where the Vietnamese students reported a lower ownership of multiple devices compared to Australian students. Despite the continued access to ICT and mobile devices, many educators still struggle with ICT in their classrooms, to understand students, and to put high impact pedagogical practices in place. This struggle is relevant in both developed and developing countries. It is this buoyant partnership between mobile devices, the Internet and educators that is most promising: to create supportive learning environments with sound pedagogical practices.

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