



AN APPROACH TO DIGITAL LEARNERS IN A CATALONIAN PUBLIC FACE-TO-FACE UNIVERSITY

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Introduction

According to Battro and Fischer (2012), education is being transformed by emerging technologies and new approaches to teaching, learning, and pedagogy. In higher education, institutions employ technologies to enhance learning, teaching and assessment activities, for example, use learning management systems (virtual learning environments) and web-based applications to deliver both the curriculum and student support. The growth in the use of Information and Communication Technologies (ICT), especially the Internet, is having a significant impact on society and on many aspects of daily life. The world that young people grow up in prior to their arrival at university is filled with new technology that is integral to the way they live, think, communicate, and the way they work (Jones & Healing 2010). According to Gabriel, Campbell, Wiebe, Macdonald and McAuley (2012), students arrive in colleges with different expectations, skills, and needs than those the traditional education system was designed to teach.

Some authors (Tapscott, 1998; Howe & Strauss, 1991; Prensky, 2001; Oblinger & Oblinger, 2005) have claim the existence of a new generation of students, who were born roughly between 1980 and 1994, and represent the first generations to grow up with this new technology, to have a more intuitive and deeper knowledge of ICT than previous generations. This generation was given several names that emphasize its affinity and tendency to use digital technology. According to Jones, Ramanau, Cross and Healing (2010) net generation, digital natives and Millennials are the most popular terms and “each way of describing this new group of students carries with it some distinct features but in general the terms are used interchangeably” (p.723). Whatever the terminology, the exposure to technology is a critical element in determining at least some of the characteristics attributed to these students (Gallardo-Echenique, Marqués-Molíás, Bullen & Strijbos, 2013).

The argument that there is a generation of learners with distinct skills and characteristics attributable to the exposure to digital technology had been accepted uncritically by many educators. The key claims of the “Net generation” discourse are not based on empirical research and seem to be inappropriate or insufficient to describe the population of current learners, because some key claims about this generation are still to be provided (Bullen,

Morgan & Qayyum, 2011; Gallardo-Echenique et al., 2013). This changed in 2007 as researchers began to take a more critical look at this issue questioning the validity of the generational assumption (Bennett, Maton & Kervin, 2008; Jones et al., 2010; Bullen, Morgan & Qayyum, 2011; Bullen, Morgan, Belfer & Qayyum, 2008; Bullen, Morgan, Romero, Sangrà & Guitert, 2012; Romero, Guitert, Sangrà & Bullen, 2013; Gallardo-Echenique, Marqués-Molíás & Bullen, 2015).

Given the lack of empirical support for the “Net generation” discourse, this study presents a different perspective of what learners think about their use of digital technologies for academic and social purposes and examines this issue in depth to gain an understanding of what the growing use of new digital technologies means for teaching and learning in higher education.

Aim and research questions

The central aim of the study is to understand how university learners use digital technologies and what are the implications of their use for Higher Education.

The study was guided by the following research questions:

- Do postsecondary students distinguish between their social and educational use of digital technologies?
- What impact does students’ social use of digital technologies have on postsecondary learning environments?
- What is the relationship between social and educational uses of digital technologies in postsecondary education?

Methodology

An interpretivist methodology was used to guide our research to emphasize interpretation and to focus on the meanings of the researcher and the participants (Bryman, 2004). In order to explore the research objectives fully, a mixture of both quantitative and qualitative research has to be undertaken (Creswell, 2009; Tashakkori & Teddlie, 2003).

This study used a sequential transformative mixed methods design, consisting of two distinct phases: in the first phase, the quantitative data is collected and analysed first to provide a general understanding of the research problem and to identify information about students’ communication and study habits. In the second phase, the qualitative data and its analysis refined and explained those statistical results by exploring the participants’ views regarding in more depth. In the study, the priority was given to the qualitative aspect of the study focused on in-depth explanations of the results obtained in both phases that were integrated during the discussion of the findings of the entire study (Hanson, Creswell, Plano Clark, Petska & Creswell, 2005).

Context

The research was conducted in the Faculty of Educational Sciences and Psychology of the Rovira i Virgili University (URV), a multi-campus system located in the cities of Tarragona, Tortosa and El Vendrell, Spain.

Population and Sampling

“Homogeneous” and “Convenience” samples were used; settings, groups and/or individuals are choosing based on similar or specific characteristics (Homogeneous) and are willing to participate in the study (Convenience) (Miles & Huberman, 1994; Collins, Onwuegbuzie & Jiao, 2006).

I Phase

First year university students of the Faculty of Educational Sciences and Psychology – of the degrees of Pedagogy, Social Education, Early Education and Primary Education in the 2012-2013 academic year. The sample consisted of 204 students.

II Phase

All the students of second-year – who previously participated in the I Phase – of the degrees of Pedagogy, Social education, Early education and Primary education (Campus Tarragona, El Vendrell and Tortosa), in the 2012-2013 academic year. The sample consisted of 40 students.

Instruments

In the first phase, the quantitative data was collected via an online questionnaire – adapted from a “Survey of Student Communication & Study Habits” that was developed by Bullen et al. (2008). The questionnaire was translated to Spanish by experts from the Open University of Catalonia (see Romero et al., 2013). The goal of this questionnaire was to understand how students interact with classmates and instructors outside of class. The survey uses a Likert-type scale of four choices (from “never” to “always”; “strongly disagree” to “strongly agree”) with 78 item questionnaire. This instrument was distributed by email and through the institutional learning management system from February to April 2012.

In the second phase, the instrument employed was developed by Bullen et al. (2008). The interview guide contained 13 open-ended questions about their use of ICT at the university and their overall perception about technology. The goal of this phase was to delve deeply into students’ use of digital technology for academic and social purposes, and to understand interviewees’ views on their situations, experiences and lives as expressed in their own words. Detailed information on content criteria validation about the survey and the interviews can be found at Romero et al. (2013).

Data Analysis Procedures

A descriptive statistical method and statistical software program (SPSS) were used to analyse, describe and present the quantitative data. The qualitative software Atlas.ti 7.1.7 was used to import the transcription of the interview and to code each response. Thematic analysis was employed to analyse the semi-structured interviews as outlined by Braun and Clarke (2006). Analysis was a highly iterative process involving successively reading, coding, reviewing, and re-coding the data into categories (Creswell, 2003; Fereday, 2006; Saldaña, 2009). This process uses inductive reasoning, by which categories and codes, supported by quotations, emerge from the data through the researcher's careful examination and constant comparison. Code names were assigned to those themes that were detected and then organized into categories (sub-categories) of related topics, patterns, concepts, and ideas that emerged from learners' perspectives.

Trustworthiness

Following Lincoln and Guba (1985), this study addressed quality in terms of trustworthiness: i) Credibility – prolonged engagement, triangulation (methods and data) and consultation with experts; ii) Transferability – thick description, providing rich detail of the context of the study; iii) Dependability – Cronbach's alpha coefficient (0.924), inter-coder agreement (98%) and codebook; and, iv) Confirmability – audit trail.

Finding and discussion

Due to space constraints, this paper focuses on present the most relevant findings and their discussion according the research questions.

RQ 1: Do postsecondary students distinguish between their social and educational use of digital technologies?

According to our findings all the students distinguish between their social and educational use of digital technologies (devices and software). This suggests that within an identified set of digital technologies, students were able to identify which was better suited to a given task. All students can distinguish social practices (e.g. Facebook) for academic purposes, choose technologies according to their need (social and/or academic purposes), and can see the affordances of technologies for various purposes (e.g. for entertainment, communication, interaction, etc.). For example, Facebook's integration into students' social practices, particularly in relation to different modes of access to Facebook (e.g. students use of Facebook's app on mobile on the go). In line with Barkhuus & Tashiro (2010), the students used the advantages that mobile access provides, especially in relation to relationships (peers, classmates, family, relatives); although it should be noted that we did not find any evidence of faculty and student communication through Facebook.

For academic purposes, it was found that learners (regardless of age) use the Internet as their primary source of information (e.g. Google) to find resources to support their studies. For social purposes, the findings showed that Internet helps students maintain close ties between

family and friends, both close and non-close, especially those too far away to visit in person on a regular basis (e.g. instant messaging, Skype, Facebook). The Internet, in its social role, acts as a means of communication (Neo & Skoric, 2009).

Learners are able to recognize what technology they can and cannot use given a specific context. The most illustrative example is student use of personal vs. institutional e-mail. All the students have a university's official communication e-mail address with professors and peers, but students are using URV e-mail more than any other digital technology option for communicating only with faculty in the advising experience when it comes to academic goals. According to Bullen, Morgan and Qayyum (2011), students used e-mail with professors in situations that demanded more formality, or where it was desirable to maintain a certain distance.

Also, all the respondents were capable to identify the benefits of digital technologies for academic and social purposes. The majority of students valued speed and the convenience of portability and function available in mobile devices (e.g. laptops, smartphones). New advances in technology is providing an opportunity for people to take their technology with them wherever they go (e.g. portable media players, smartphones, small laptops, tablets) could all be utilized to create, store, and access a wide range of digital information from a variety of locations.

RQ 2: What impact does students' social use of digital technologies have on postsecondary learning environments?

There is insufficient evidence to identify the actual impact of such technologies upon learning either in terms achievement or final academic results. Results from this study do demonstrate some impacts in their learning by improving the communication between them and peers. We could declare that some digital technologies impacted on the way they collaborate with their peers. The findings show that while learners are using some digital technologies for socializing, they are clearly being used in multiple spaces, including the formal contexts of the school setting. For example, Facebook is a social tool and our findings indicate that the students used it as a pedagogic tool for communication and interaction according to their needs via Facebook's group and discussion forum that facilitates participation and discussions. According to students' responses, Facebook is an important method of communication for the majority of students and they were sharing with their friends' class-related information. The participants also found their interactions with classmates via Facebook were important in helping them make sense of the subject matter, providing some homework help and support during classes and they also reported that these interactions extended their learning.

The findings show that the vast majority of students were using some particular digital technologies in their everyday lives, for their in-university and out-of-university contexts. We also found that increased familiarity with these technologies (e.g. Facebook, WhatsApp) positively impact into the developing of important social skills. Clearly both Facebook and WhatsApp are attractive, engaging interactive activities for most of the students. A possible reason could be that Facebook offers a variety of intrinsically interesting activities to perform

(e.g. posting status updates, view pictures and chatting with friends) that can all be performed within a single site (Wood, Zivcakova, Gentile, Archer, De Pasquale & Nosko, 2012). WhatsApp relies primarily on exchange messages without having to pay for SMS where students can create groups, send each other unlimited images, video and audio media messages.

Our findings evidence that the students spend some of their time with mobile SNS on Facebook and Facebook Chat. This is primarily due to the fact that many respondents were using software applications that more easily allow for real-time communication and sharing (course information, college notes). With the Facebook and Twitter applications available for their smartphones, it was easy for learners to check updates (Barkhuus & Tashiro, 2010). These results show that mobile technologies have had a positive impact on students' communication and data transfer reducing dependency on fixed locations for both social and academic activities, and thus have the potential to change the way students work and learn (Rapetti, Picco & Vannini, 2011). These findings indicate that somehow, mobile technologies are more flexible and enable students greater freedom of learning any place and any time.

RQ 3: What is the relationship between social and educational uses of digital technologies in postsecondary education?

At a general level there is a close relationship between social and educational use of some ICT. In theory, the social and academic lives remain as separate activity systems (Morgan & Bullen, 2009), however, our findings suggest that there is also a significant overlap in their use of some digital technologies (e.g. mobile phone, WhatsApp, Facebook) for academic and social purposes. For example, Facebook is a SNS that is mainly used for social interaction, especially to maintain existing relationship; however students were using Facebook for both academic (e.g. completing school assignments) and social purposes. This finding could suggest that the boundaries between formal and informal spaces are becoming blurred (Benfield, Ramanau & Sharpe, 2009; Clark, Logan, Luckin, Mee & Oliver, 2009).

Besides, students expressed a preference for the social networking platform over other the institutional course management systems (URV Moodle). One possible explanation of students' inclination to use Facebook is that "Moodle tends to be very focused and lacks the personal touch and networking capacity that SNSs offer" (Brady, Holcomb & Smith, 2010, p.152). With regard to communication, it is noticeable that students are not using the communication capabilities in Moodle, particularly advanced communication elements like forums, chats, blogs, and wikis. Most of students' communication is done in groups (Facebook and WhatsApp groups). Also, the findings suggest that while some students may feel comfortable with educational applications of Facebook and Twitter, few professors are ready to engage with them in such uses. To Hilton III & Plummer (2012), professors are reluctant to use it because some consider that an entry into Facebook world of their students may undermine their credibility as qualified professors.

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