

## **Student Communication and Study Habits of First-year University Students in the Digital Era**

### **Communication étudiante et habitudes d'étude des étudiants universitaires de première année à l'époque numérique**

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#### **Abstract**

This paper reports on research into the study habits of university students, their use of digital technologies and how they communicate with each other and their professors. We conclude that most students feel comfortable with digital technologies and that they use social media for connecting and interacting with friends rather than for academic communication. Students prefer face-to-face communication for both academic/school and social communication and they prefer to learn by themselves, work independently and to study at home.

#### **Résumé**

Cet article présente la recherche sur les habitudes d'étude des étudiants universitaires, leur usage des technologies numériques et leur façon de communiquer entre eux et avec leurs professeurs. Nous concluons que la plupart des étudiants se sentent à l'aise avec les technologies numériques et qu'ils utilisent les médias sociaux pour leurs liens et interactions avec leurs amis plutôt que pour la communication scolaire. Les étudiants préfèrent les communications en personne en ce qui a trait aux communications scolaires et sociales et préfèrent apprendre par eux-mêmes, travailler de manière autonome et étudier à la maison.

#### **Introduction**

We live in a digital era that presents challenges for education systems but also offers new opportunities for teaching, learning and pedagogy (Battro & Fischer, 2012). The digital era is a term that is ever more associated with digital technologies such as fast computers, multimedia environments, and devices that can process and present information in real time and at high

speed (Eshet-Alkalai, 2004; Shepherd, 2004). Digital technology means either: (a) digital information (text, images, audio, video, etc...) stored on a computer and other electronic device; or (b) digital devices such as a smartphone, laptop, camera, etc... (New Zealand Ministry of Education, 2015).

The growth in the use of digital technologies, especially the Internet, is having a significant impact on society and on many aspects of daily life (Acilar, 2011; Jelfs & Richardson, 2012). The Internet has the potential to change the ways that people learn and communicate; it allows them to stay in touch with family and friends and, in many cases, extend their social networks; it permits easy access to a vast amount of information; it enables fast synchronous as well as asynchronous communication; and it offers a wide array of entertainment possibilities (Bargh & McKenna, 2004; Battro & Fischer, 2012; Jelfs & Richardson, 2012).

In most developed countries, teenagers use digital technology intensively, especially the Internet for school, work and leisure (Gallardo-Echenique, Marqués-Molíás, Bullen & Strijbos, 2015; Kolikant, 2010). These young people are arriving at universities and colleges having grown up in a world in which digital technology was central to their social lives, and in many cases, was used to support their studies (Jones & Healing, 2010; Simoneaux & Stroud, 2010). However, the same cannot be said for many developing countries where access to digital technologies is much more limited (Acilar, 2011; Hilbert, 2011; Miah & Omar, 2012).

Higher education institutions are attempting to harness the potential of digital technologies to enhance and transform education (Battro & Fischer, 2012). For example, most universities and colleges use learning management systems and web-based applications to deliver both the curriculum and student support (Hawkins & Rudy, 2008; Browne et al., 2010; Jelfs & Richardson, 2012). “Students arrive at university already schooled in a variety of practices related to learning and technology” (Jones & Healing, 2010, p. 344) and “are heavily immersed in Web 2.0 technologies (i.e., Facebook, Twitter, podcasts, wikis, blogs, virtual worlds, video sharing and photo sharing)” (Bicen & Cavus, 2011, p. 943).

New and emerging digital technologies, particularly social media, offer the potential to transform classrooms into more engaging, collaborative and productive learning environments in which learning can be customized to student’s specific needs, interests and learning preferences. The range and variety of digital technologies and practices adopted by young learners are potentially important for enhancing our understanding of ways in which they may be appropriated to support technology-mediated learning in schools (Luckin, et al., 2009). Information services like Google Search, Google Scholar, GPS-enabled devices, e-books, online serials, and Open Educational Resources, are improving access and communication for learners (Lea & Jones, 2011; Siemens & Mateos, 2010; Van Harmelen & Randall, 2011). In recent years, the increase in computing and networking power has also enabled smartphones to provide users with a more user-friendly integration of Internet access and online digital resources, (e.g., text, images and audio/video streams) (Chen, Wei, Huang & Kinshuk, 2012).

### **Study Habits and Student Communication**

Research into student study habits has been approached from various angles and from a variety of disciplinary backgrounds. In recent years there has been a focus on student study

habits and the use of ICTs (Abdul Karim & Hasan, 2007; Gutnick, Robb, Takeuchi & Kotler, 2010). Research on study habits and how student communication among university students has gained as much attention in recent years due to the impact of digital media made available through the Internet and multimedia resources (Abdul Karim & Hasan, 2007; Igun & Adogbeji, 2007). To Crede and Kuncel (2008, p. 427), “study habits typically denotes the degree to which the student engages in regular acts of studying that are characterized by appropriate studying routines (e.g., reviews of material) occurring in an environment that is conducive to studying”.

Young people’s use of technology to communicate with one another is nothing new; however, what has changed is the form that communication takes, for example, text-based technologies are picking up where phones left off (Bryant, Sanders-Jackson & Smallwood, 2006). Students use the Internet, text messaging, and social networking, but they are using these technologies primarily for social and entertainment purposes. According to Gibbons (2007), they communicate differently (e.g., text messaging and instant message), use a different written language (e.g., text messaging), interact and socialize differently (e.g., via avatars in online games and Facebook), and have a different sense of authorship (e.g., Flickr and personal blogs).

University students are often forerunners in the adoption of new communication technologies, and most recently, the popularization of online social networking sites (SNS) has changed this landscape even further (Quan-Haase, 2007; Lewis, Kaufman & Christakis, 2008; Junco, 2012). Since their introduction in the past decade, SNS such as MySpace, Orkut, Facebook, Friendster, Cyworld, and Bebo, have attracted millions of users (Ellison, Steinfield & Lampe, 2007; Boyd & Ellison, 2008; Greenhow & Robelia, 2009; Peluchette & Karl, 2010; Dubrofsky, 2011) and are gaining rapid popularity, especially amongst groups of young people (Littlejohn, Margaryan & Vojt, 2010).

## **Research Design**

This study is part of a larger international research project, “Digital Learners in Higher Education” (<http://digitallearners.ca>) that is investigating how postsecondary learners in different institutional contexts and cultures think about digital technologies and how they use them in their social and educational lives. Data has been collected from four post-secondary institutions in Canada and Spain for this project: the British Columbia Institute of Technology (BCIT), the University of Regina, Rovira i Virgili University (URV) and the Open University of Catalonia (UOC) (for more information see Bullen, Belfer, Morgan & Qayyum, 2009; Bullen, Morgan, Qayyum, & 2011; Romero, Guitert, Sangrà & Bullen, 2013).

## **Aim of the Paper**

This paper reports on research into the study and communication habits and preferences of first year university students and how digital technologies are used to support these activities. The research question driving this study is: “what impact does students’ social use of digital technologies have on postsecondary learning environments?”

## **Methodology**

An interpretivist methodology was used to guide our research to understand values, beliefs, and meanings of social phenomena in order to arrive at a casual explanation of its course

and effects (Bryman & Bell, 2003; Kim, 2003). Our 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 Catalanian region of Spain. URV consists of 12 faculties and schools in which over 1500 lecturers and researchers provide degrees to 11600 undergraduates, 1842 master’s-degree and 1032 doctoral students, who attend courses in all knowledge areas: the sciences, health sciences, social and legal sciences, engineering and architecture, arts and humanities, all adapted to the European Higher Education Area (EHEA) (URV, 2013).

The survey instrument employed was a 78 item online questionnaire adapted from the Survey of Student Communication & Study Habits that was developed by Bullen, Morgan, Belfer and Qayyum (2008). The purpose of the questionnaire was to gain insights into how first-year university students communicate and their general study habits. The questionnaire was translated to Spanish by experts from the Open University of Catalonia (UOC) (see Romero et al., 2013).

The reliability of all items used was checked with Cronbach’s alpha coefficient. The reliability analysis results were an alpha of 0.924, which demonstrates a high level of agreement between participants (see Table 1).

Table 1

*Reliability*

Scale	N° of items	Alpha coefficient
Who do you turn to for help with your courses?	17	0.845
How and where do you communicate with peers and professors?	26	0.880
Your study and communication habits with classmates and professors	31	0.891
All items	78	0.924

This instrument was distributed by email and through the institutional learning management system in February to April 2012. Students were asked to volunteer to do the online survey anonymously and filled out the questionnaire; all participants were informed of the nature of the survey and of their voluntary and confidential participation. The average completion time of the survey was approximately 20 minutes.

The survey was distributed to all first-year students (457 students) of the Department of Pedagogy of the degrees of Pedagogy, Social education, Early education and Primary education and 204 students answered the questionnaires (see Table 2). For the purpose of the study, homogeneous and convenience samples were used; settings, groups and/or individuals were chosen based on similar or specific characteristics (homogeneous) and were available and willing to participate in the study (convenience) (Collins Onwuegbuzie & Jiao, 2006).

Table 2

*Population and Sampling*

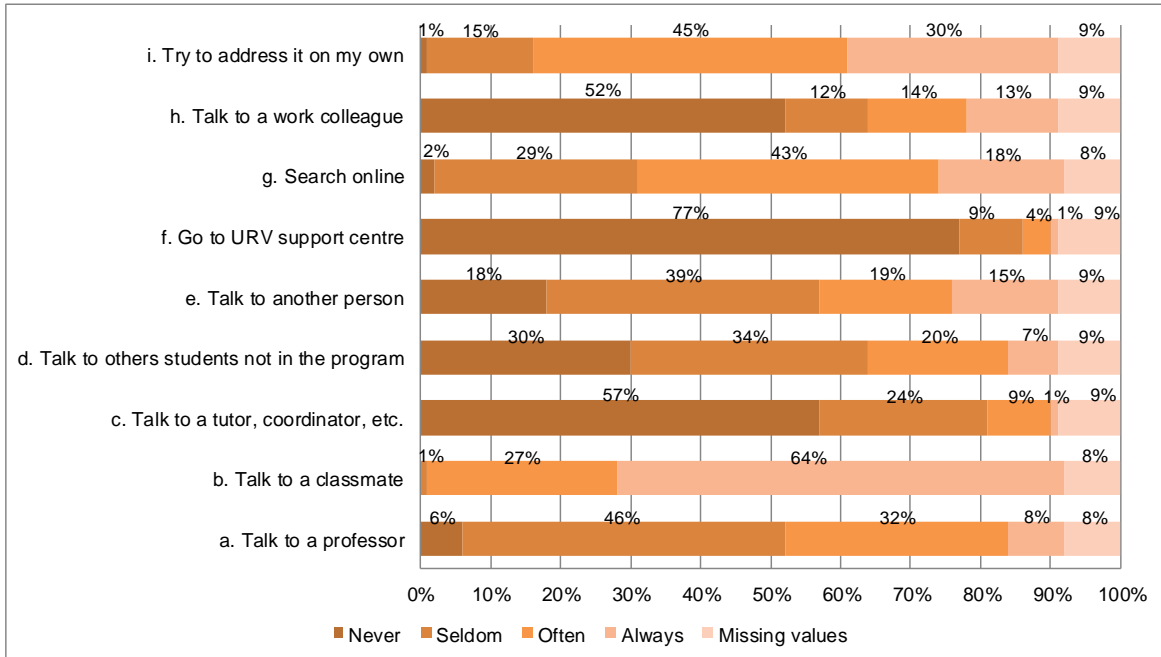
Programs	Campus					
	Tarragona		Tortosa		El Vendrell	
	U	S	U	S	U	S
Early education	122	62	40	15	40	9
Primary Education	120	71	40	7	0	1
Social Education	53	22	0	0	0	0
Pedagogy	42	17	0	0	0	0
Totals	337	172	80	22	40	10

*Note.* Universe (U); Sampling (S). Universe 457 students; Sampling 204 students.

**Results**

The results are hereby presented in descriptive statistics and thematic narrative form. We use descriptive statistical technique to calculate the frequencies, means and standard deviations of the collected data.

Respondents were all first-year students of the pedagogy (8.3%), social education (10.8%), early education (42.2%) and primary education (38.7) programs. The majority were between the ages of 19 (35.8%) – 20 (12.3%) and 86.8% were females. To find out about how many hours students “spent studying or working on class projects” (Table 1), we asked the question in three contexts: hours of classes attend per week (Mean=16.07), hours on campus each week (Mean=22.43) and hours of work at a job each week (Mean=7.57).



*Figure 1.* What students do when they have a doubt about their courses' content.

Students were asked to indicate on a four-point scale ranging from *never* (1) to *always* (4) their views about what they do when they have a doubt about their courses' content (see Figure 1). According to their responses, students seldom talk to a professor (also includes lecturer, assistant and associate professor). Most students are reluctant to: a) talk to a tutor, coordinator, b) to talk to others students not in the program, and c) to go to the institutional support centre. Almost all respondents prefer to search online. Over half of the students prefer personal communication with their classmates and never talk to a work colleague, and a majority of them try to deal with their questions on their own.

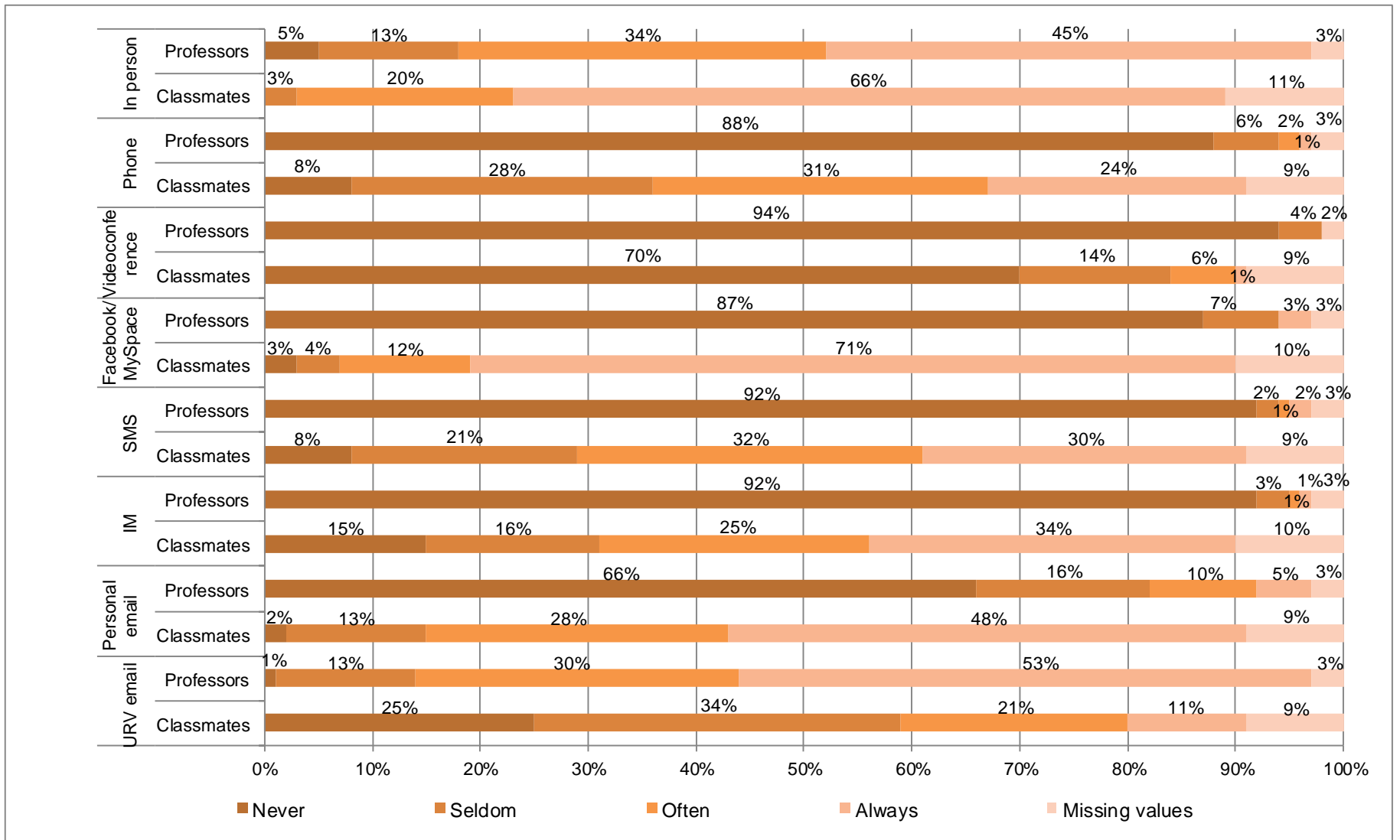


Figure 2. Students' communication preferences with classmates and professors.

Students were asked to indicate on a four-point scale how often they used each technology (email, instant messaging, text message, social networks, videoconference, and mobile phone) to communicate with classmates and professors about courses (see Figure 2). According to the findings, the vast majority of students still prefer face-to-face discussions with classmates (86%) and professors (79%). To communicate with their professors, three-quarters of students prefer institutional email. Students prefer personal email to communicate with classmates, while the second favourite option is text-messaging (or short-message-service/SMS) via mobile phone and the third one is instant messaging (or Internet Messaging/IM) over the Internet.

In regards to the use of IM, the vast majority of students report they do not use it to communicate with professors. In addition, some students mentioned “WhatsApp” (a real-time cross-platform mobile messaging system, which allows users to send messages for free, as long as they have a smartphone and data connection) as their preferred application for communicating with classmates. Over half (55.4%) of the students prefer to communicate with their classmates via phone, but the vast majority (87.7%) never communicate with their professors this way. Three-quarters of the students use Facebook or MySpace to communicate with classmates; the majority never use it to communicate with professors. Videoconferencing is also never used to communicate with professors (93.6%). Nearly three-quarters of students report never using videoconferencing systems (e.g., Skype, traditional conference calls or some other platform) to communicate with classmates.

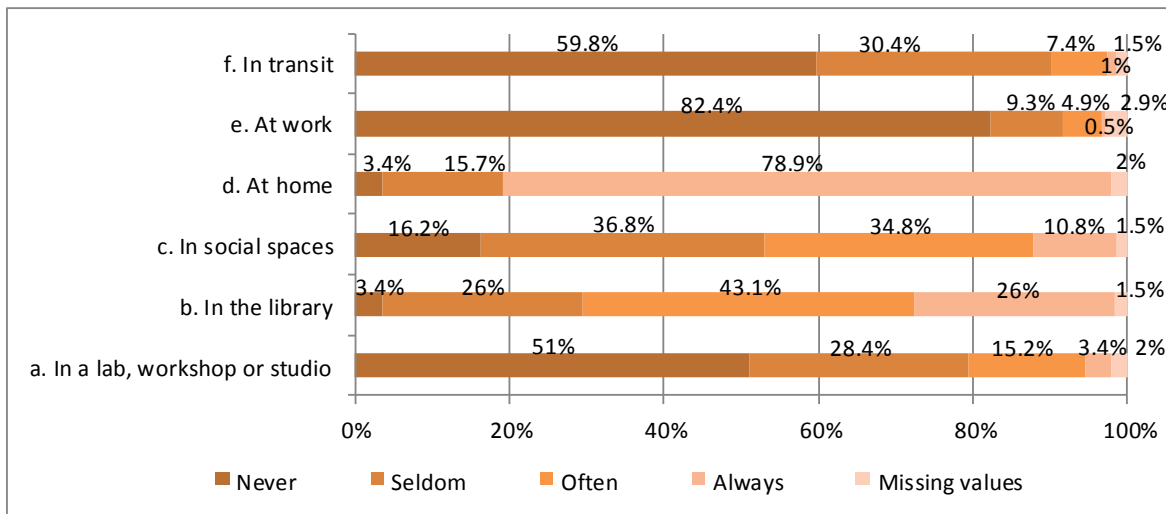


Figure 3. How often students study/work on assignments in different places outside of regular class time.

Students were also asked to indicate how often they study or work on assignments in different places outside of regular class time (see Figure 3). According to their responses, time spent studying outside the classroom is usually at home, often in the library, seldom in social spaces around campus (e.g. auditorium, cafeterias), never in a lab, workshop, studio, at work or in transit (e.g., bus, train).



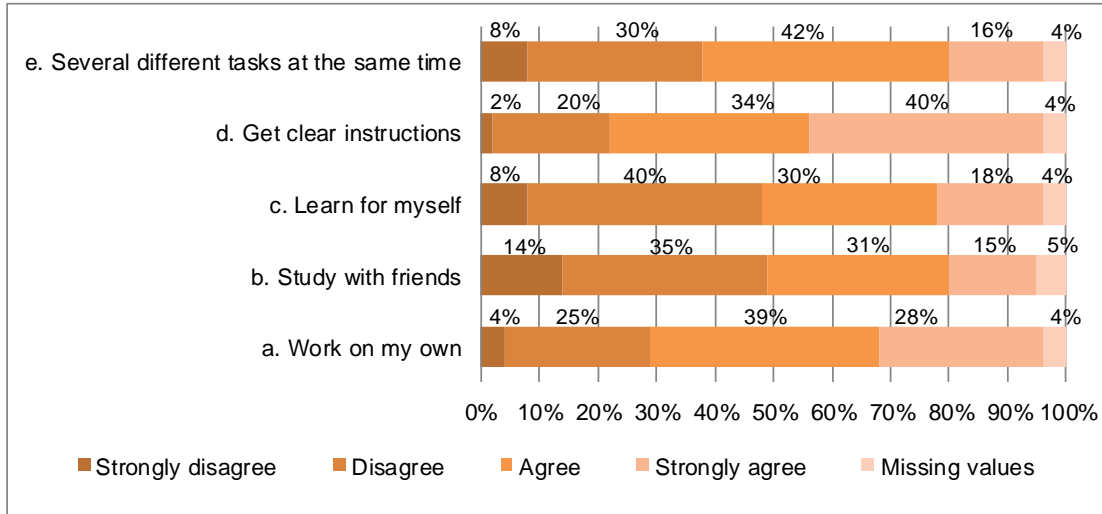


Figure 4. Study habits of university students.

Less than a quarter of students prefer to work on assignments on their own when doing schoolwork (see Figure 4). Around half of students prefer to learn by themselves and welcome the opportunity to study with friends. They are used to doing several different tasks at the same time. Almost three-quarters of students prefer clear instructions before trying something new. Data relating to relationship with peers (see Figure 5), shows that 84.3% of respondents trust other students in this program; 92.6% can rely on classmates to help them, 75% can rely on classmates to respond course questions within a few hours, and 64.7% enjoy discussing their ideas about course content with other students. Most students also feel like they are always connected to friends because of technologies such as cell phones and the Internet.

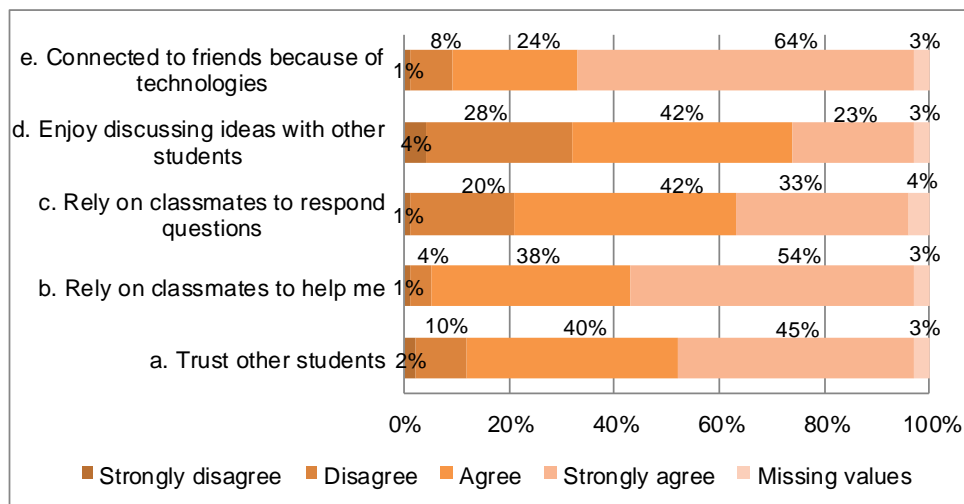


Figure 5. Student's relationship with peers.

For the question “when do students usually study or work on course assignments”, a total of 602 responses were collected from 196 respondents. The most common response was “on weekends” (23.3%) followed by “in the evenings” (20.9%) and “in the afternoon” (20.4%).

When asked about their personal interests, 94.2% of students were comfortable with digital technologies and 89.7% had very clear goals in life. Most students indicated they enjoyed: talking about themselves to people (97.1%), reading (69.6%), and meeting new people (94.6%). Some students (58.3%) got involved in projects and activities that have an impact in society.

### **Discussion**

Our research shows that students at this university are using tools in a variety of different ways (face-to-face interaction, email, Facebook/MySpace, mobile cellphone, instant messaging and text messaging) to communicate with peers and professors. A majority of the surveyed students prefer face-to-face conversation with both professors and peers above any other form of communication. Qayyum (2010) found that students felt that talking in person was a quicker and more effective channel of communicating with professors for course-related issues than using ICTs. Face-to-face communication remains important for general communication, despite the development of much less expensive and more flexible electronic ways of communicating (Winger, 2005). Face-to-face is considered the richest medium for conveying meaning and it supports all the different types of communication cues, such as verbal (e.g. spoken), paraverbal (e.g. intonation, voice), and non-verbal signals (e.g. body language, gestures and facial expressions) (Kira, Nichols & Apperley, 2009; Van der Meijden & Veenman, 2003; Winger, 2005).

Another mode of communication that students prefer is institutional email, which they use with faculty advising them to set academic goals. To Bulut and Rabab'ah (2007) "the nature, goal and frequency of it may depend on various factors such as the teaching traditions, technological facilities and specific-course requirements" (p. 50). According to Biesenbach-Lucas (2007), the academic purposes for which students use email with their professors are: "getting information/advice about course materials and quizzes, addressing late work and missed classes, challenging grades, showing interest in and understanding of course material..." (p. 61). According to Bullen et al. (2011), students use email with professors in situations that demand more formality, or where it was desirable to maintain a certain distance. In principle, faculty expect students to have the ability to write email messages characterized by features that reflect greater formality (e.g., politeness, carefully editing, good grammatical content without lack of punctuation) (Biesenbach-Lucas, 2007; Duthler, 2006). This is consistent with the findings of Li, Finley, Pitts and Guo (2010), who observed that actual communication between faculty and their students is "largely limited to formal and structured situations such as classroom lectures" (p. 4). The social distance dimension can refer to the degree of familiarity and frequency of interaction between the student and the professor (Biesenbach-Lucas, 2007; Duthler, 2006).

To Roussel, Elliot, & Feltman (2011), help-seeking "combines aspects of academic and social engagement, as it is both a learning strategy and a form of social interaction" (p. 395). Our results suggest that learners are seeking help from formal and informal resources (searching online, talking to a classmate, and trying to address it by themselves). According to Qayyum (2010), possible reasons could be program design, trust of peers, the quality of students' relationship with instructors, the course content/knowledge domain, course design and existing institutional supports. It is unclear why they are seeking help more from classmates than other sources, but institutions and educators need to acknowledge that students are using informal help-seeking options more than formal/institutional channels (Qayyum, 2010).

Students are comfortable with digital technologies and using technology for communication as part of their lifestyle. A possible reason for this could be that “the free and readily available Internet access around the university campus makes university students the heaviest users of the Internet and other web-based applications” (Neo & Skoric, 2009, p. 628). The Internet tools most used by the students to communicate with classmates are Facebook and MySpace, followed by personal email. Results also indicate that students do not use Facebook and MySpace to communicate with professors. Hilton III & Plummer (2012) found that professors are reluctant to use these social networking sites to communicate with students because they consider that an entry into the social world of their students, which may undermine their credibility as qualified professors.

Besides Facebook, MySpace and personal email, students use SMS and IM to connect to peers. They can have private one-to-one real-time conversations and, one-to-many conversations, satisfying two major needs: forming and maintaining individual friendships, and belonging to peer groups (Boneva, Quinn, Kraut, Kiesler & Shklovski, 2006; Neo & Skoric 2009). According to Leung (2007), students are motivated to use SMS because of “its convenience, its low cost, and its utility for coordinating events” (p. 115). By offering fast-paced, inexpensive, online communication, texting provides individuals the opportunity to remain connected to their social network from virtually any place or situation where this technology is supported (Bryant, Sanders-Jackson & Smallwood, 2006; Skierkowski & Wood, 2012).

The university uses Adobe Connect as its institutional videoconferencing system, and it is used for teaching activities in undergraduate and postgraduate courses, and to provide richer visual support for students. However, use of audio/video conferencing systems is not common between the students because it is an institutional service available only to professors. Students' learning is influenced positively when faculty are comfortable with presenting via videoconferencing, with their course material, and with using appropriate technology in class (MacIntosh, 2001; Tipton, Pulliam, Allen & Sherwood, 2011). This does take some practice because it requires the faculty to divide attention among teaching the class, responding to students' questions or needs, and operating the videoconferencing equipment (Tipton et al., 2011). To Hedestig and Kaptelinin (2002), “successful teaching and learning in a videoconference setting is found to be associated with special types of arrangements and expertise” (p. 179). For example, the technical issues that could occur during a videoconferencing would demand the expertise of a videoconference facilitator/coordinator/professor.

According to Košir, Sočan and Pečjak (2008), the two most frequent and important forms of social relations that students form and maintain are to peers and to teachers. Our data show that the majority of students “trust other students”, “can rely on classmates” and “enjoy discussing their ideas with other students”. Trusting each other is one of the most important constituents of a society because trust helps facilitate smooth interactions between individuals, groups, and organizations (Bilgic & Gumuseli, 2012; Lount & Pettit, 2012). In education, high levels of trust among classmates contribute positively to promoting social action and relationships (Bilgic & Gumuseli, 2012; Farini, 2012). According to Qayyum, trust has three main dimensions “affective; perceived utility; and reliability” (2010, p. 70). The “affective” dimension is evidenced in the level of emotional comfort students feel about communicating with classmates. According to Qayyum (2010) how students communicate with classmates also

depends on whether they trust their classmates. The “utility” dimension is shown when students have confidence working with peers because: (a) it helps them with their course content (b) they do high-quality work, (c) it keeps them motivated and (d) they feel that they save time. The “reliability” dimension is evidenced in terms of time, when students trust their classmates can provide a quick response when needed.

### **Conclusions**

Despite the popularity of digital technology, the results of this study show that students prefer face-to-face communication over all other methods for both academic and social communication. Most of the students feel comfortable with digital technologies and they see Facebook and MySpace as more about connecting and interacting with friends than academic communication. Using technology for communication is part of students’ lifestyles, and the results show that if they are going to use technology, they prefer synchronous communication. While email, instant messaging, text messaging, Facebook and MySpace are part of their daily routine, videoconferencing use (e.g., Skype, traditional conference calls or some other platform) is less frequent. Face-to-face interaction, Facebook, MySpace, personal email, text message and mobile cellphones were the preferred modes of communicating and connecting with others.

The findings also indicate that students used publically available ICT applications far more than they used the university-supported applications for communicating with classmates. Students are using applications that they use in their everyday life, beyond their role as a student. IM and SMS, which are technically asynchronous, but can facilitate the immediate back and forth of real-time communication, play central roles as well. Connectivity with professors via other asynchronous communication methods such as texting, instant messaging, Facebook and MySpace are much lower than with classmates.

Students prefer to learn by themselves, work independently and to study at home. This finding is in contrast to the prevailing “net generation” discourse which suggests students prefer collaborative approaches (Prensky, 2010). Most students in this study are comfortable using computers, the Internet and other ICT for a variety of purposes; and they are used to performing various tasks simultaneously. Whether they are able to perform these simultaneous tasks effectively was beyond the scope of this study.

The results of this study are consistent with findings in the UK (Benfield, Ramanau & Sharpe, 2009; Conole, de Laat, Dillon & Darby, 2006; Lea & Jones, 2011; Luckin, Clark, Graber, et al. 2009; Margaryan, Littlejohn & Vojt, 2011), Australia (Kennedy, et al., 2008), Canada (Bullen et al., 2008, 2009, 2011; Qayyum, 2010), South Africa (Czerniewicz, Williams & Brown, 2009) and Spain (Romero, et al., 2013).

### **Implications for Practice and Policy**

One major implication of this study is that educators and institutions need to consider ways to help foster and support informal channels of student communication. For example, it would be useful to learn what factors affect students’ decision to seek help through informal channels and if formal/informal help-seeking is improving student achievement (Qayyum, 2010). In regard to digital technology, the authors consider that it is essential to design good instruction

based on the students' learning needs by using technologies that are program-relevant (Bullen & Morgan, 2011).

### Limitations and Future Study

This study faces some limitations. First, it assumes that the participants provided honest answers, and were able to provide meaningful insights into their own habits. Second, this study assesses a specific group of first-year students within a specific discipline (education), attending a public university. This homogenous and convenience sample is therefore only generalizable to those with the same traits. These findings may not generalize to other students, especially those who are not college-bound, or to university students at different types of institutions. Third, this study's reliance on quantitative data alone limits development of an in-depth understanding of students' reasons and motivations underpinning digital technology use. Acknowledging this, the authors are aware of the limitations of this study in making any definitive conclusions. This study was a first attempt to address these issues and a vast amount of work remains to be done in this area.

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