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Do UOC Students Fit in the Net Generation Profile? An Approach to their Habits in ICT Use




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Abstract

Some authors have stated that university students born after 1982 have been profoundly influenced by digital technologies, showing different characteristics when compared to previous generations. However, it is worth asking if that is a current observable phenomenon. Are those students born after the 80s really more familiar with ICT tools than those born in previous generations? Do they show different study habits and learning paths? Different research lines (Kennedy, et al., 2010; Bennett, Maton, & Kervin, 2008; Gros, García, & Escofet, 2012) highlight that scientific data is rarely used when discussing this generation's characteristics; however, none of them have proved in statistical terms that college students do not fit in the Net Generation characteristics and that their habits of ICT use in social and professional activities do not differ from older generations. The international research project, Digital Learners in Higher Education, seeks to develop a sophisticated and evidence-based understanding of university learners in different institutional contexts and the perception of cultures in their use of technology in a social and educational context. Data has been collected from four institutions in Canada and Spain: the British Columbia Institute of Technology, the University of Regina, the Open University of Catalonia (UOC), and the University Rovira i Virgili. In order to develop this project, we used a multi-case study embedded design (Yin, 2009). The UOC's case is deeply analysed in this paper to affirm that the Net Generation is more speculative than real and that includes students' perception about this phenomenon, and guidelines are proposed in an eLearning context.

Keywords: Digital learners; Net Generation; students' habits; ICT; online learning; higher education

Introduction

Nowadays, there is a trend to claim the existence of a new generation that has been brought up surrounded by the mass media and technology (Oblinger & Oblinger 2005; Palfrey & Gasser, 2008; Prensky, 2005; Tapscott, 2009; Bajt, 2011). Some authors assure that this generation's experience with technology gives them a deeper and more intuitive knowledge of ICT. This fact is supposed to affect their learning in that they seem to have different thinking paths (Tapscott, 1998; Jukes 2009).

From this perspective, the vast majority of university students, with an age range from 18 to 30, could be considered within this so-called *Net Generation* as they were born after 1980 (Oblinger & Oblinger 2005).

The Net Generation is supposed to have been in contact with ICT since their early childhood, being capable of adapting quickly to the changes linked to the technological revolution.

Different authors labelled this generation by trying to define their chronological context as well as their characteristics. They have been denominated, for example, as *Millennials* (Howe & Strauss, 1993; Martin & Tulgan, 2001), *Digital Generation* (Tapscott, 1998), and *i-Generation* (Rosen et al., 2010). One of the most known is *Digital Natives*, defined as those native speakers of the digital language of video games and the Internet (Prensky, 2001), in contrast with *Digital Immigrants* applied to those born before 1980. Not feeling comfortable with the label "Generation", and according to their belonging to the educational context, we use the term *Digital Learners* (Bullen et al., 2008; Romero et al., 2011) to refer to them.

Some of the authors mentioned identify a number of features of this generation (Oblinger & Oblinger, 2005; Dede, 2005; Connaway et al., 2008; Barnes, Marateo, & Ferris, 2007): being digitally literate (using technology, communication tools, or networks to search and create information), being continuously connected, and showing a need for immediacy in receiving information, preferring social activities, being active experiential learners together with showing a capacity to carry out several tasks simultaneously, and being involved in the community.

There are some authors that even identify them as neurologically different, processing information differently while using different parts of the brain for learning (Jukes, 2009). These facts are supposed to make one rethink which learning activities do teachers have to offer to them (receiving information quickly, multitasking activities, access to multimedia information, immediate rewards …) (Skiba & Barton, 2006). But, is it necessary to change our teaching strategies to adapt to this way of thinking? Are they somewhat different from other generations? Is generation really the issue?

Some research studies (Kennedy, et al., 2010; McNaught et al., 2009; Bennett, Maton, & Kervin, 2008; Guo et al., 2008; Selwyn, 2009; Salajan et al., 2010, Bullen et al.,

2011; Romero et al., 2011; Gros, Garcia, & Escofet, 2012) show that there is a scientific gap demonstrating the principal claims about this generation. In fact, some of the authors mentioned refute the Net Generation characteristics arguing that they can also be found in other generations: The oft-used example of a young person doing homework while engaged in other activities was also applied to earlier generations doing homework in front of the television (Bennett, Maton, & Kervin, 2008). They also refute its validity: Many studies fail in trying to find evidence to support claims that young students use digital technologies in a radically different manner or have a significantly different set of characteristics (Margaryan, Littlejohn, & Vojt, 2011). In fact, there is "no evidence of fundamentally new learning processes emerging from the so-called Digital Natives' lifelong encounters with IT" (Ellis & Goodyear, 2010, p. 42) nor a shift in the structure of the brain associated with growing up with digital technologies (Jones, 2012).

Empirical studies of university students' actual in situ uses of the Internet as a source of academic information are also surprisingly few (Selwyn, 2008); so it is not possible either to demonstrate that the so claimed Net Generation students are experts using it for educational purposes.

The scientific gap is also visible in the methodology of the studies supporting the Net Generation thesis, revealing some notable mistakes (Schulmeister, 2008).

- Media activities of young people are reviewed from the perspective of entertainment without any regard for other aspects of their lives.
- Research into the actual use of the media shows that young people continue to watch traditional television and listen to music to a great extent and also read print media, in contrast to internet use.
- The studies make incorrect generalizations about the whole generation based on the results of accidental samplings.
- Most Net Generation authors assume that new media determines young people's behaviour; while various surveys show that the use of these media is not transferred to learning preferences.
- Therefore, young people that were part of these studies are far from being highly capable of using technology, being constantly connected, socially linked, and impatient when doing passive learning activities.

In fact, research is starting to demonstrate that exclusion criteria regarding the Net Generation are based purely on the age factor (Lee, 2005; Hargittai, 2010). However, some studies suggest a great variation in the use of technology in the same age range in selected samples (Kennedy et al., 2008). In consequence, most of the empirical research on the digital divide argued that age seems to be only one of several interrelated factors, rather than the sole factor (Jones & Hosein, 2010; Jones, 2012).

If we focus on higher education, the scepticism about some claims in the literature are more obvious because, firstly, the use of ICT in learning activities does not imply a greater knowledge of it: Exposure to computer information systems at the high school or community college level was found to have little significant impact on student computer literacy (Karsten & Roth, 1998; Selwyn, 2009). And, secondly, the fact of having extensive skills in ICT use has not been linked to their use in academic activities: A transfer of the abilities gained from using the computer to learning does not seem – or at least not to the degree expected – to take place. The use of the computer for school assignments as well as for work done at the university is soberly regarded by users as a means to an end. Possessing a high degree of e-competence does not mean that the wish to transfer e-methods to learning is in the blood (Xiaoqing, 2008). However, there are some studies supporting the claims in the literature about this generation in higher education (Conole et al., 2007).

Most studies show that Net learners do not consider the use of technology at university as something indispensable (Bennett, Maton, & Kervin, 2008). In fact, students that participated in the mentioned studies are far from asking their teachers to change their practices; they seem to agree with traditional pedagogies that use fewer technological tools to show content (Margaryan, Littlejohn, & Vojt, 2011).

Moreover, the conception of digital learners and digital immigrants is changing in that new terms like Prensky's *Digital Wisdom* crop up, which can be defined as a concept that refers to both wisdom from the use of digital technology to improve our cognitive power and from the prudent use of technology to enhance our capabilities (Prensky, 2009).

The international research project, Digital Learners in Higher Education, seeks to develop a more sophisticated and evidence-based understanding of how postsecondary learners in different institutional contexts and cultures think about technology and how they use it in their social and educational lives. This project examines the issue in depth to gain an understanding of what the growing use of new digital technologies means for teaching and learning in higher education.

The Digital Learners in Higher Education project has so far collected data from four institutions in Canada and Spain: the British Columbia Institute of Technology, the University of Regina, Rovira i Virgili University, and the Open University of Catalonia (UOC).

This paper will outline the process of this research project as well as its application at the UOC. We present an analysis of the results of two surveys on the same population with two different courses, thus trying to find out if there is any statistically significant relationship between our student's age and the Net Generation's characteristics and their perception about the use of ICT in academic, social, and professional activities. In order to perform the data analysis, our research sample (1,036 students in the first survey and 398 in the second one) has been divided (according to Oblinger & Oblinger, 2005 and

Oliver & Goerke, 2007) into those who were born before 1982 and those who were born in 1982 and later.

Considering the aforementioned research refuting certain affirmations regarding the Net Generation, our contribution tries to highlight a different perspective of what our students perceive about their use of ICT in different contexts and how they feel about the Net Generation phenomenon.

Research Design and Questions

Digital Learners in Higher Education is an international research project that investigates how postsecondary learners in different institutional contexts and cultures think about ICTs and how they use them in their social and educational lives. The goal is to gain an understanding of what the growing use of the new ICTs means for teaching and learning in higher education.

The research questions driving this study are as follows:

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

We use a multi-case study embedded design (Yin, 2009). This method understands the study of a single case with embedded units in which "data can be analysed within the subunits separately (within case analysis), between the different subunits (between case analysis), or across all of the subunits (cross-case analysis)" (Baxter & Jack, 2008, p. 550). Our research project is focused on a within case analysis of the four units of social and educational use of ICTs that consist of four distinct postsecondary institutional contexts: a Canadian polytechnic teaching institution (BCIT), a Canadian research-intensive university (University of Regina), and two European universities, a face-to-face university (Rovira i Virgili University) and an online university (UOC).

Bearing in mind that the case study method needs a unit of analysis (Miles & Huberman, 1994; Rowley, 2002), this paper addresses and analyses a selected group of students of the UOC. These students can give, in our opinion, a new perspective about the Net Generation debate for the following reasons.

- There is no relevant research about how the supposed Net Generation students use tools and learn in an online environment.

- The UOC students present a wider age range than the traditional university

students. This fact allows us to analyse in more depth the characteristics of older students regarding their use of ICT in academic activities and to demonstrate the empirical gap in the literature claims about the digital literacy of younger students.

- In order to analyse the UOC's case, we are basing the research on more concrete research questions: Do our students fit in the Net Generation's characteristics claimed in the literature?

- What is the perception of students about the Net Generation phenomenon? Do they feel comfortable with this label?

- Is there any significant difference between the UOC's Net Generation students and non-Net Generation ones regarding their perception about their use of ICT in academic, social, and professional activities?

Furthermore, the multi-case embedded different methods that can be applied within the subunits (Scholz & Tietje, 2002, p. 10), so two online surveys were applied in two different phases (with three semesters of difference) as explained in the above sections.

Methodology

Research Subjects: ICT Competences Course Students at the UOC

The Open University of Catalonia was founded on 6 October 1994. It is an open online university governed by a board of trustees made up of the Generalitat de Catalunya (regional government). The UOC is a leading university in the application of ICT in academic activity and research. It has more than 15 years experience in online teaching. Our university offers an internet-based learning system in a virtual campus, through which students can, at any time or place, create and access a dynamic and personalized learning process.

Our students are generally older than other university undergraduate students: Nine percent are under 25, 33% are between 25 and 30, 40% are between 31 and 40, and 18% are over 40.

Being a fully online university, the UOC students do not attend face-to-face classes. There is one appointment that UOC students can attend in person voluntarily (the opening session at the beginning of the semester) and another that is compulsory depending on the courses they are taking (the exam or validation test at the end of the semester).

Since its foundation, a compulsory course on digital literacy has been offered to students in all programs and has evolved in parallel with students' needs. Currently, this course is aimed at meeting the basic ICT competences outlined in the Bologna declaration (Guitert & Romeu, 2009): searching for information on the Internet, producing digital information, disseminating digital information, acquiring communication skills in an online environment, understanding the basics of digital technologies, planning and managing a virtual project, acquiring a civic digital attitude, and acquiring team-working skills in an online environment.

In order to develop our research, we selected the students of the ICT competences course during the first semester of the 2009-2010 academic course as our research population given that

- all of our new students have to take the compulsory ICT competences course, so it gave us access to a research population of 3,000 students;
- most in their first semester at the UOC have the same experience in studying in an online university.

Our final sample is made up of 1,036 students that completed the first survey and 398 of the first phase respondents that completed the second survey. The margin of the sampling error is 3.11% in the case of the first survey and 5.01% ($p = q = 0.5$) in the case of the second one, both with a 95% confidence margin .

Data Gathering Tools

As mentioned in the previous section, the data-gathering process was divided in two main phases.

Phase 1 first online survey.

The first phase of the project was based on the adaptation of a survey designed by the BCIT partners. The original survey was created in a three-step process: A question inventory was created, then it was reviewed for content validity, and finally it was pilot-tested for usability. The results of the pilot test were used to assess reliability (Bullen et al., 2011).

Later on, the BCIT partners created different items basing them on the research questions. They also synthesized the characteristics of the Net Generation basing them on a review of the literature. That review identified the following characteristics (Bullen et al., 2011): digitally literate, connected, multitasking, preference for experiential learning, need for structure in learning, preference for group or teamwork, preference for images over text, social, community-minded, and goal-oriented. To avoid students' response predisposition about the Net Generation characteristics, the corresponding items were randomly scattered throughout the survey.

It is important to note that the items dealing with the characteristics of the Net Generation were a subset of the survey and were scattered throughout the survey.

The BCIT survey was translated to Spanish and the terminology was adapted to the UOC's educational model and in an online format. The adapted survey was divided into five sections.

- The first section was related to general information about participants, such as gender, year of birth, and which program they were taking.
- The second section analysed their habits relating to who asks for help.
- The third section was related to the tools they use to communicate with peers and instructors.
- The fourth section analysed their communication habits with classmates and instructors and their study habits in individual and group activities.
- Finally, the fifth section took a look at the temporal dimension of studying (time they spend studying one simple course, time to finish their program, time planning, etc.).

All sections were in the original survey except the fifth one that will not be analysed in this paper. A six-point Likert scale was used for all survey questions. Content validity of the adapted version of the survey was reviewed by the BCIT partners and three experts from the UOC. In order to estimate the reliability of the survey's scale, the Cronbach's alpha coefficient was calculated. This coefficient demonstrated that the internal consistency of the scale applied was good ($\alpha = 0.891$).

Our students completed the survey once, and we included a final open text question in which students that would be interested in participating in the next phase would provide us with their email addresses.

Phase 2 online survey.

In order to gather more detailed information regarding students' perception about their use of ICT in academic, social, and professional activities, the BCIT partners designed another survey and an interview to be carried out in person or by telephone.

The survey was shorter than the first one and divided in 3 sections in order to find out students' perception about their own use of ICT. The interview contained 13 questions about their use of ICT at the university and their overall perception about technology (Bullen et al., 2011).

Taking into account that the UOC is a fully online university and the extension of the first survey's sample, we decided to combine both survey and interview in one online survey, taking the most important questions of the interview and converting them to

open text questions in our online form.

The UOC's second survey had three sections.

- Demographic information: Taking into account that the survey was anonymous and in an online form, we needed to gather once again their demographic data.
- General use of ICT: In order to gather information regarding their perception about ICT and how they use it, it had some closed and open text questions.
- Use of ICT in academic, social, and professional activities: In the same way as in the previous section, this one is based on two types of questions, but this section had more open text questions than the other one.
- The last section consisted of only one open text question regarding their perception about the Net Generation phenomenon.

All closed questions of the second survey were based on the Likert scale-items and order list questions. Since the surveys were modified for the UOC case, validity and reliability were reviewed as well. All research partners and four UOC research fellows reviewed the survey's content validity prior to its application and the Cronbach's alpha coefficient was also calculated on the Likert scale-items ($\alpha = 0.734$; the internal consistency of the scale was acceptable).

This survey was administered online to the students that completed the final question of the first phase of the survey.

Data Analysis

In order to analyse the data gathered, we divided the samples of the two surveys into Net Generation students (born in 1982 or later) and non-Net Generation students (born before 1982). In the case of the phase 1 survey, there were 11 items dealing with Net Generation characteristics.

The ANOVA test was conducted to test for the significance of group differences between generation (independent variable) and specific generational characteristics (dependent variable). This test was chosen because it is commonly used for assessing statistical differences between groups..

Given the magnitude of the sample (1,306 students), the size of the effect was not calculated for the already mentioned test.

In the case of the phase 2 survey, data was analysed using frequencies. Three hundred and ninety-eight of the 1,036 students that completed the first survey also completed the second survey.

All tests were calculated using the Statistical Package SPSS in its 20th version and the responses of one of the second survey's open questions were quantified (Bardin, 1997) in order to determine their perception about their belonging to the Net Generation;

however, some of the students' written testimonials were used to complement the quantitative data.

Results

If we take into account the age distribution of our students during the two phases of the research, some differences between the two can be observed.

A total of 1,036 students completed the first project's survey which was approximately 35% of the students in the course, thus having a representative sample of the population. The percentage (279) of those born in 1982 or later was 26.9, and 73.1% (757) were born before. This first part of the sample could be classified as the Net Generation and the rest as the non-Net Generation.

During the second phase of our research, 398 students (of the 1,036 of the first phase) completed the second survey. Thirty-four percent (135) of these were born in 1982 or later and 66% (263) were born before. So, the distribution between the two generations is more equal than the subjects that completed the survey in phase 1.

Net Generation Characteristics and the UOC Students' Perception about the Net Generation Label

If we analyse the responses of the different items of the phase 1 survey, we can see that most of our students do not fit in those claims in the literature regarding Net Generation characteristics.

As can be seen in Table 1, a comparison of the two groups on the 11 items revealed some differences in a few items, but most of them were not statistically significant. The following is a summary of the results for each of the 11 items, grouped based on characteristic and expressed in terms of each corresponding item in the survey.

Table 1

Items of the Phase 1 Survey Regarding Net Generation's Characteristics: Comparison Between the Two Groups

Item/Net generation characteristic	Mean (Net gen. students)	Mean (Non-Net gen. students)	ANOVA (F)
I am comfortable using computers, the Internet and other information and communication technologies for a variety of purposes. / Digitally literate.	5.26	5.38	2.957, p>0.05 Not statistically significant
I feel like I am always connected to friends because of technologies such as cell phones and the Internet./ Connected.	3.91	3.64	4.606, p=0.03. Statistically significant
I am used to doing several tasks at the same time. / Multitasking.	4.47	4.50	0.853, p>0.05 Not statistically significant
I prefer to learn by exploring and trying things out by myself. / Preference for experiential learning.	4.22	4.42	4.363, p>0.05 Not statistically significant
I prefer to get clear instructions and information before I try something new. Need of structure in learning.	4.35	4.55	3.612, p=0.04 Statistically significant
I prefer to work in groups when doing my schoolwork. / Preference for working in groups.	4.72	4.60	1.803, p>0.05 Not statistically significant
I enjoy reading. / Enjoy reading.	5.13	5.26	3.753, p>0.05 Not statistically significant
I enjoy meeting new people. / Being social.	5.06	4.83	6.886, p=0.009 Statistically significant
I have clear goals in life. / Goal-oriented.	4.87	4.95	0.875, p>0.05 Not statistically significant
I get involved in projects and activities that make a difference to society. / Community-minded	4.35	4.23	0.578, p>0.05 Not statistically significant

As can be seen in the results presented above, our Net Generation students only present a little more predisposition to be connected and to meet new people than the non-Net Generation ones. Otherwise, there are some characteristics that seem to be more evident in non-Net Generation students, contrary to what the literature claims.

Analysing the open question regarding students' perception about the Net Generation phenomenon in the second survey, we can see that it has not had so much impact on them.

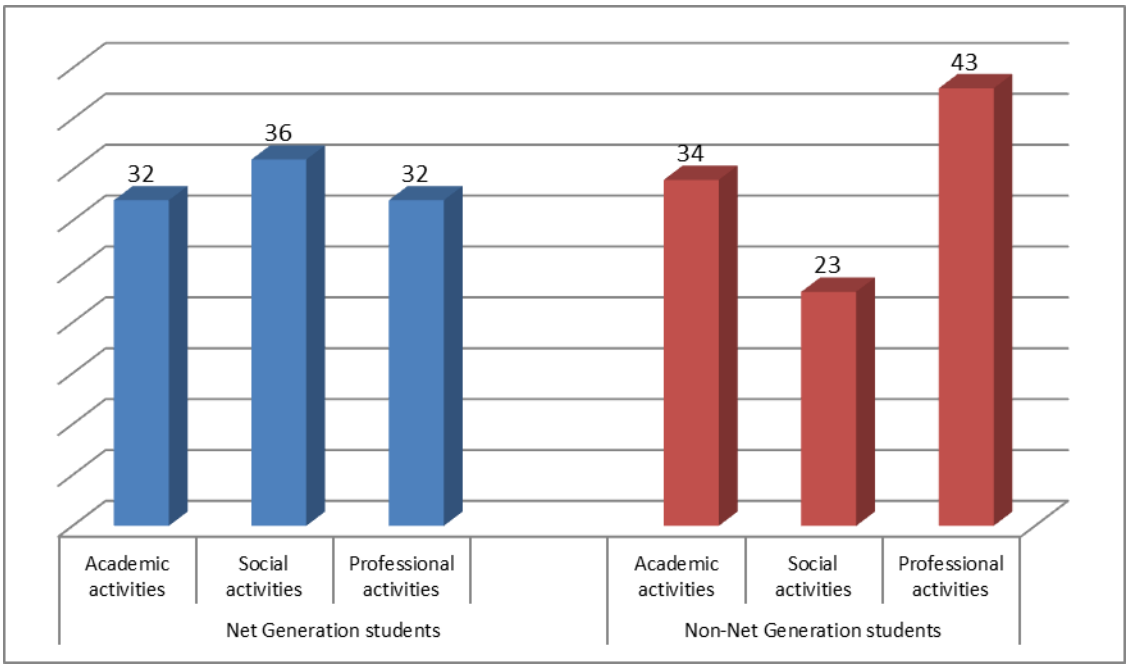
Only 37.64% of non-Net Generation students that completed the second survey know the meaning of this term (99 students from the 263 non-Net Generation students that participated in phase 2). Otherwise, 51 of the students that know the term don't agree with it: "I don't agree with the Net Generation label; I'm 44 years old and I'm using my smartphone and the Internet every day…"; "That term is irrelevant: I'm using ICT since I was 15 years old and I don't feel like a digital immigrant at all!"; "… since I'm studying at the UOC, I'm using the Internet daily, so I don't feel excluded from the digital era".

In the case of Net Generation students, only 20.74% (28) that completed the second survey have heard the term; 79.25% (107) of them did not know the meaning of the Net Generation label. We can see a very low impact of this terminology among them, because 20 of these students did not feel identified with the term: "I use the Internet but I'm not using it 24/7, so I don't feel like a part of this generation"; "I think I'm not part of this generation. When I was at high school, I looked up information in the encyclopaedia and, sometimes, I still go to the library"; "… I only search the Internet when I need information for my courses at the UOC."

Use of ICT in Academic, Social, and Professional Activities

Analysing the data of the second survey, no significant differences between the two groups regarding the devices they use to study at the UOC can be perceived; most used a desktop computer and a portable computer. Nevertheless, it is possible to appreciate some differences in the distribution in the use of these devices: Net Generation students distribute its use more equally (48.7% of them use a desktop computer more and 47.1% a portable computer) than the older ones (59.7% of them use more a desktop computer and 36.71% a portable computer), so it is possible to deduce that the older students feel more comfortable using a desktop computer to study.

In order to find out their perception about their use of ICT for academic, social, and professional activities, we asked them to arrange in order their use of ICT according to these three types of activity. In Graph 1, the distribution according to their age can be observed.

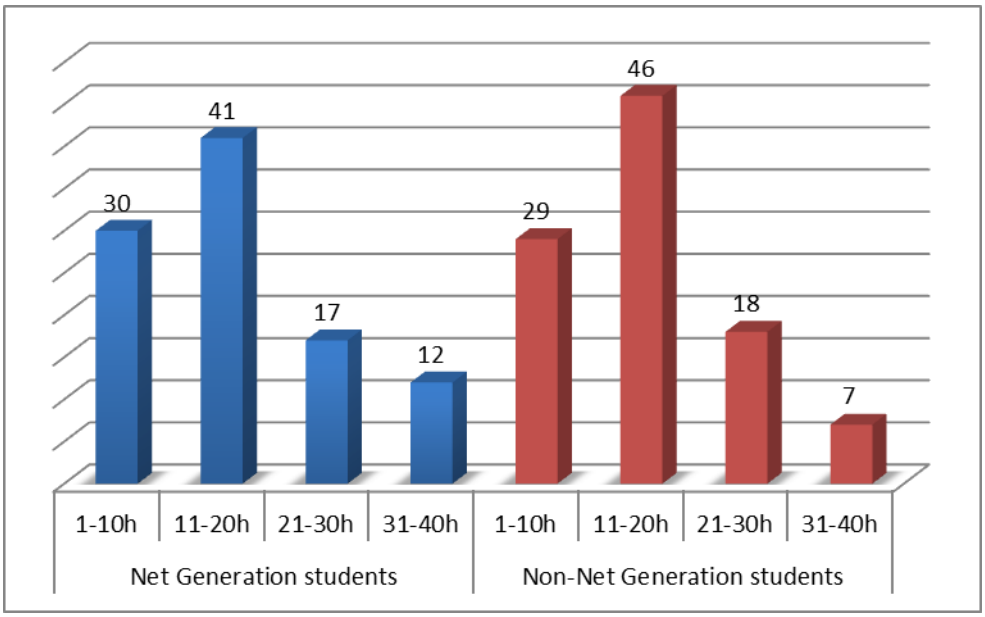


Graph 1. Percentage of use of ICT in academic, social, and professional activities.

As can be seen in Graph 1, Net Generation students arrange in order the use of ICT equally regarding the three types of activities, so we can say that they have an integrated vision of the use of ICT.

The only remarkable difference between the two groups can be seen in the case of the use of ICT for professional activities. This difference can be explained with respect to their professional status: It seems obvious that the older students are more professionally established than the younger ones, so the professional use of ICT is more important for them.

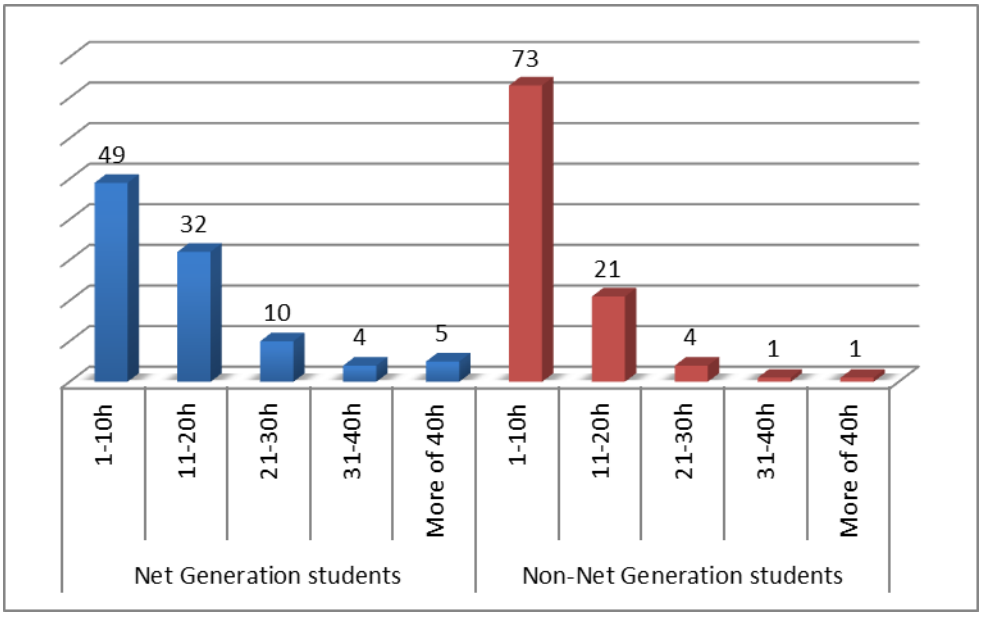
We can get more information if we analyse how much time they spend using ICT in these three types of activities.



Graph 2. Differences between the two groups in percentage of hours spent using ICT for academic activities.

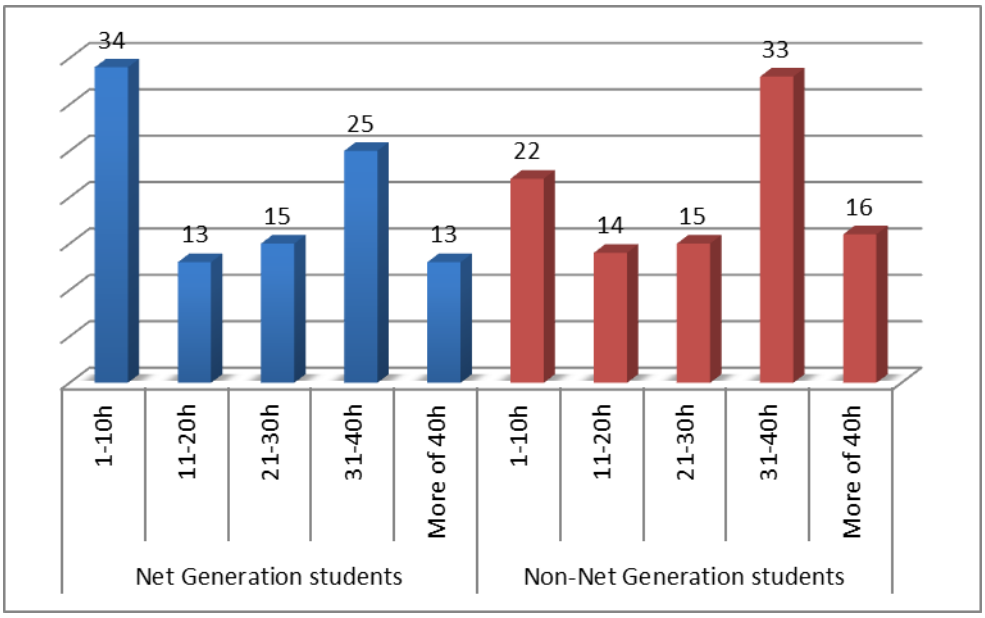
As Graph 2 shows, the two groups spend mostly the same time using ICT for academic activities, showing very few differences between them. This can be explained by the fact that they are studying at the same university with the same ICT based methodology, but it seems to reject the claim about increasing the use of ICT for studying in the case of Net Generation students.

Turning to the use of ICT in social activities, the distribution is shown in Graph 3.



Graph 3. Differences between the two groups in percentage of hours spent using ICT for social activities.

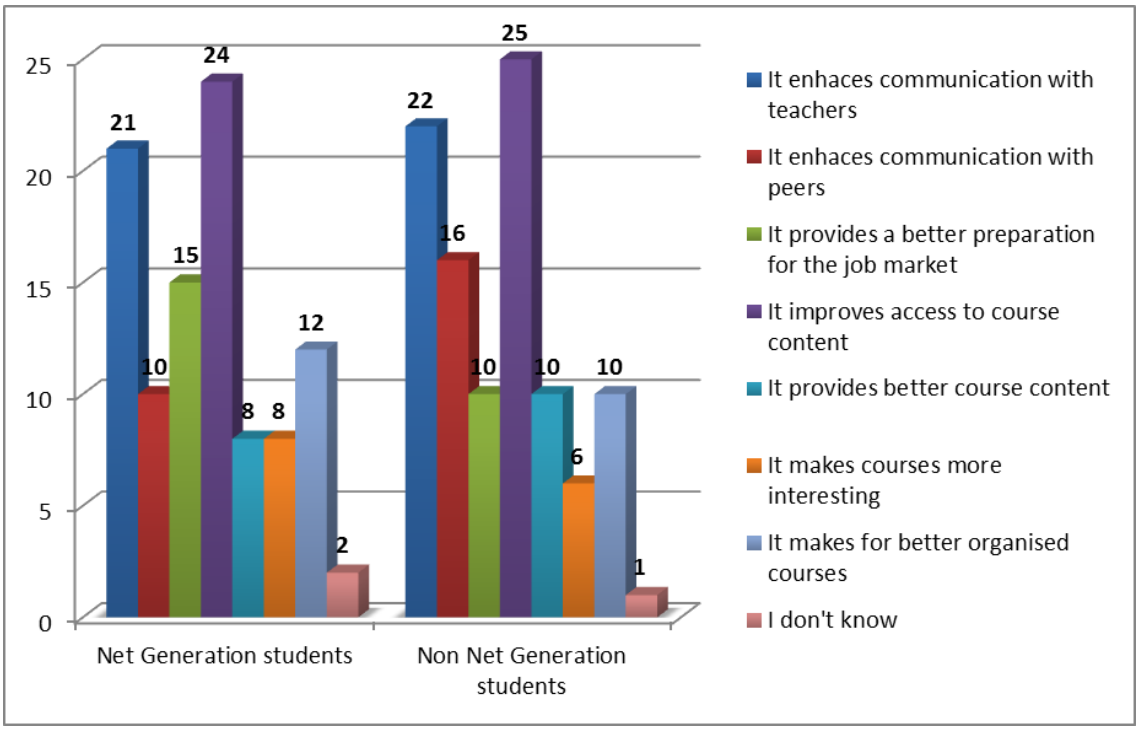
As can be seen in Graph 3, the two groups are not intensive users of ICT in social activities, because few of them use it more than 20h per week. But the results are less dispersed in the case of non-Net Gen students: They seem to use less ICT for social activities, but the difference is not clear enough to support the literature claims about how intense the Net Generation's social use of ICT is.



Graph 4. Differences between the two groups in percentage of hours spent using ICT for professional activities.

As can be seen in Graph 4, there are some differences in the use of ICT for professional activities. In the case of non-Net Generation learners, the most rated period of time is 31-40 hours per week which is the same as a 40 hour a week job. This can be explained with the more established job situation of the older learners that we explained earlier.

If we analyse the reasons why our students use ICT for studying at the UOC, we can see the following results.

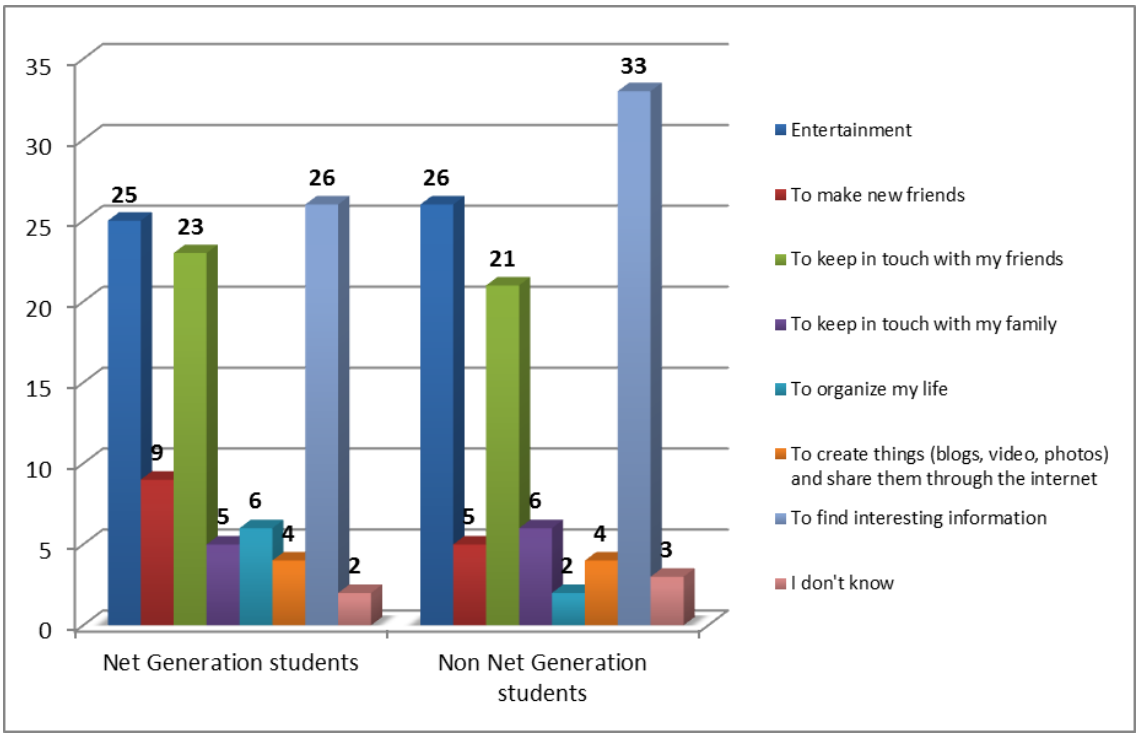


Graph 5. Reasons why our students use ICT for studying at the UOC in percentage.

As shown in Graph 5, both groups think that the main reason for using ICT to study at the UOC is the improvement of access to course content, so they find that access to the content is essential to study at the university.

The same happens for the second reason: Both groups perceive the enhancement of communication with the teacher as a core reason for studying online; this last statement is coherent with our university's teaching methods, based on the continuous communication between students and teachers.

Regarding our students' use of ICT in their social and private lives, our research is consistent with the following results.



Graph 6. Percentage of use of ICT in their private/social lives.

As can be seen in Graph 6, the three highest rated uses of ICT are the same in the two cases, but the difference between them is higher in the case of the non-Net Generation learners in that the most highly rated use is the search of interesting information. The data shown seems to reject the fact that Net Generation students are more interested in social activities than the others, and, surprisingly, non-Net Generation learners seem to use the Internet more to create and share multimedia information.

Conclusion

Nowadays, "the new generation speaks ICT" trend is openly questioned. There are many studies that seem to refute the claims about this generation, and, as the years go by, even many of the labels used are changing, and "the distinction between digital natives and digital immigrants will become less relevant" (Prensky, 2009, p. 1).

Our research supports the necessity to break the generational line between our students: Based on the analysis of the data, we can generally affirm that there is very little difference between the characteristics of Net Generation and non-Net Generation learners at the UOC. In fact, we did not find consistent evidence to support most of the claims about the Net Generation's special characteristics. So, our findings are consistent

with the conclusions of other researchers (Kennedy et al., 2008; Bennett, Maton, & Kervin, 2008; Guo et al., 2008; Bullen et al., 2011, 2012; Selwyn, 2009; Margaryan, Littlejohn, & Vojt, 2011; Schulmeister; 2008; Karsten & Roth, 2009).

The only statistical evidence found about Net Generation characteristics was the case of being connected and showing a preference for social activities, but if we analyse the data, we can see that these differences are not significantly great (the means of the two groups in these items are 0.27 and 0.23 respectively). In fact, we have just found some evidence that seems to contradict what the literature claims with regard to some of the Net Gen characteristics (need for structure in learning, for example). One of the main characteristics mentioned in the literature is digital literacy, and this can be refuted as a Net Generation characteristic in our research as well: The fact that the very little difference between the two groups is not statistically relevant reveals that there is almost no difference in their digital literacy and it could be caused by other factors. This finding seems to be supported by students' opinion since 70% of our students had no idea of the Net Generation label and 56% of the students that knew about it do not feel comfortable with this label.

Taking into account the difference between the UOC's Net Generation students and non-Net Generation ones regarding their use of ICT in academic and social activities, our findings seem to support the irrelevance of the age factor: We could not find any general and significant difference between the two groups in the vast majority of items. This does not occur in the case of professional activities: There is 11.30% more of non-Net Generation students that use ICT for professional activities and spend more than 30 hours using it in this context. This result can be explained due to the fact that young students are less integrated in the labour market. In fact, some of the older students' statements regarding their feelings about the Net Generation label in the survey point to their intensive use of ICT in their professional activities: "I don't feel like I am part of the Net Generation, but I use ICT a lot in my job; I don't know how it could be done without ICT". In our opinion, the intense integration of ICT in the labour market could be one of the factors that helped the overlapping of the digital divide. While some students learned to use ICT in their social and academic activities, older students had to be retrained in order to use ICT in their professional activities. Then, when older students had to use ICT to study at the UOC, they were sufficiently digitally literate to carry out online learning activities.

The analysis of the data gathered demonstrates that the difference among our students is produced more by their use of ICT than by their age. In the UOC's case, student use of ICT improves during the ICT competences course, in which students get introduced to a specific competence of our university: ICT use and application in an academic and professional context. Taking into account that digital literacy is an important part of the ICT competences course and it helps to overcome the digital divide, we have to focus, due to these findings, on students' other characteristics and their preferences about learning online.

Some authors (Oblinger & Oblinger, 2005; Prensky, 2009; Ferreiro, 2006) highlight the need of a new educational paradigm to train Net generation students: "they need new learning environments due to their multidirectional communication processes; a reformulation of the curricula is needed, using Web 2.0 tools and collaborative learning as a way to help these new students to build their own knowledge" (Ferreiro, 2006, p. 50). Our findings directly refute these claims; in fact, all of our students (Net Generation or not) are able to develop the same kind of activities in the same learning environment. Neither the survey results nor our teaching experience give us an indication that an age distinction is needed. In our ICT competences' course, all students learn to work collaboratively using Web 2.0 tools and we have not encountered any age-related differences. We agree that universities have to redesign their learning activities, but not to train students with particularly new characteristics, but to adapt to information and knowledge society needs.

In order to improve our course, and based on our students' preferences in the use of ICT in academic activities, content has been redesigned in a more innovative and accessible way and we have improved teacher communication strategies.

The results of this paper and other findings of the Digital Learners in Higher Education research project (Bullen et al., 2012) support the need for a deeper analysis of student profiles in the use of ICT, moving away from the Net Generation discourse. Taking into account this fact and being aware of the limitations of our research, we are planning the following further research.

- To determine if there is any significant difference between face-to-face and online universities regarding Net Generation characteristics, we plan to increase the research sample with our institutional partners.

- Based on BCIT's findings (Bullen et al., 2012), to determine a paradigm of student profiles in the use of ICT. This research will be based on the literature review about the use of ICT in higher education contexts and the design of a common data analysis method, in order to extract similar information that allows the combination of each partners' findings.

Finally, we can affirm that our students do not fit in the Net Generation profile. In fact, older students show the characteristics of this generation claimed by the literature because, on analysing their habits, they can be labelled as ICT users more than digital immigrants.

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