3rd World Conference on Learning, Teaching and Educational Leadership (WCLTA-2012)

Students' ICT practices at La Laguna University and their influence on learning processes
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Abstract

The following paper provides an insight about how students at La Laguna University (ULL) use the Information and Communication Technologies (ICTs). The main aim is finding out the use of ICTs as well as gathering information about their influence on learning processes. We also intend to discover the main differences about that use according to knowledge, gender or any previous experience with use of virtual classrooms. For developing this study, a questionnaire was provided to 1561 students (where 38.57% of them were men meanwhile the remaining 61.43% were women) with an average age of 22 years old.

The scopes covered in this questionnaire were the following ones: the use of ICTs, the characteristics of the virtual classroom and finally, learning and repercussion of the virtual classrooms over students’ work. This study focuses mainly on the scope about use of ICTs where data are gathered about searching information, development of communication processes (such as checking the mailbox, taking part in forums, instant messaging and use of social networks), performance of tasks (using different programs, image edition software, audio/video edition software), entertainment (downloads of music and movies), learning activities (using collaborative work spaces or access to virtual classrooms) and finally, web related activities (edition of personal websites, administration and dynamization of other sites as well as blogging).

1. Introduction

The use of ICTs in high education becomes wider every time, having virtual campuses as support resources to classroom teaching and development of learning plans based on b-learning methodology. It also comprises the development of qualifications according to traditional university courses taking place on campus. According to Ballesteros et al. (2010) there is a huge trend following development of formative action about e-learning and b-learning at university, as well as a higher availability of resources and a better connection or management of learning systems related to web 2.0 (Lyn, 2011), which set us on a wider teaching context. Keeping this rhythm of development at university is a complex task given the actual budget cuts in public funding to universities (Ike-Elechi, 2012).

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At the ULL, virtual classrooms are used as a support tool for teaching, so there are just a few cases where attendance is combined with virtuality (b-learning) backed up by specific projects oriented towards virtuality, which processes are also an institutional aim. The use of virtual classrooms and other ICTs resources should become available and be integrated as soon as possible for improving the quality of the teaching processes. The transition process towards the ESHE requires the integration of ICTs in university teaching while improving the innovation process at higher learning levels. This implies the need for both teacher and students to acquire the digital competences that will allow them to cope with a changing context which is constantly evolving, coordinating the needed strategies for answering all demands belonging to their professional activity.

Indeed, those professional competences which imply the dominion of knowledge, dexterity and attitudes, are linked to a concrete area (Gisbert et al, 2011), while the digital competence actually means a transverse skill that is present not only present in professional areas but also on academic and personal ones. Area (2010) identifies some of the reasons for working with digital and informational competences in higher education: a) the quick growth of knowledge which becomes something uncovered and that’s why they may acquire whichever strategy is necessary for finding out the information related to their professional field; b) learning to handle correctly those tools which ease the storage and classification of information such as bibliography databases, websites, blogs, etc; c) promoting the constructive learning focused on student, easing his access to guides and resources that allow him working by himself, so it’s necessary that the students articulate informational and digital competences which allow him to choose, remake and build his own knowledge; d) the fact that communication processes at academic level have always been produced over written text; however now there are diverse communication formats which integration is needed for university education; e) the extended use of virtual environments for learning in higher education which demands that both student and teacher acquire the basic digital competences which will allow them to cope with environments such as web 2.0 offering other interesting resources for both students and teachers.

2. Methodological design of study

The actual study is developed under a wider investigation framework where the following scopes are covered through an online questionnaire open to students of La Laguna University: a) Previous experience in use of virtual classrooms, b) Use of ICTs c) Characteristics of virtual classrooms, d) Learning, e) Impact of virtual classrooms in the student’s work. Below we will focus on the ‘Use of ICTs’ scope, aiming for the main practices of university students related to the use of technology and their application over the learning process. In this scope the following sub scopes and items are considered: a) Information search, b) Downloading resources: music and/or movies download, c) Development of specific tasks: use of office computer software, image and video edition, access to virtual classrooms, d) Education resources: Use of resources oriented towards collaborative work and access to virtual classrooms, e) Communication processes: revising emails, taking part in forums, using instant messaging services and accessing social networks.

2.1 Aims

The actual study covers the degree of competences belonging to ICTs linked to different scopes about the use of technologies in the academic, personal and professional environments. So, these aims are oriented towards knowledge and analysis of indicators in digital competence such as: kind of resources, services and IT activities. The study is comprised in a wider investigation which approaches mainly the student’s attitudes and opinions about the use of ICTs in learning processes.
2.2. Sample

The sample of students that took part in the study was a total of 1561 students with a 22 years old average. Most of them were women (61.43%) while 38.57% of them were men. The distribution according to each knowledge field is the following: Architecture and Engineering (329), Health Sciences (259), Sciences (143) Arts and Humanities (39) and finally Social and Law Sciences (791), Across every knowledge field the women participation is higher than men’s excepting for Architecture and Engineering where there were quite more men than women (228 male students opposite 101 female students). At Social and Law Sciences the difference of participation between men and women is also remarkable, 542 women opposite 249 men.

Most participants were studying degrees in their first (699), second (262) or third (246) course. According to the levels of previous experience using technologies for development of academic activities and specifically about use of virtual classrooms at university, most students assured having an experience ranging between one (789) and two years (462) using those resources.

3. Results and analysis of study

The purpose of the study is to analyze how university students perform the following tasks, defining the profile of the students’ community and their skills about the use of this technology below user’s level.

![Figure 1. Information search and download of music and movies.](image1)

The search engines are a functional resource which is used frequently or always by 89.1% of the students. However, over half of the students (56.63%) affirm that they rarely use applications for downloading music and movies or they don’t even use them at all.

![Figure 2. Development of specific tasks.](image2)

The university students are used to office, word processor and presentation software, etc. Also 62.58% of the students use these applications oftenly or almost always. However the students who use audio, image and video edition software are just a few. About image edition programs, the 19.86% of them use it very oftenly meanwhile the audio and video software is used most of the time by the 14.15% of students.
At the ULL the virtual classrooms are used as a resource to support classroom teaching, becoming an important tool as the teaching staff addresses the students towards the virtual space of the subject where material is uploaded, the activities are proposed meanwhile there are also many forums available about the subject. From this point of view, the access to virtual classrooms has a huge importance. The 85.9% of students confirm that their access to virtual classrooms happens very frequently or almost always.

The institutional virtual campus is developed through Moodle as this platform allows development of collaborative activities. These kinds of activities have been promoted through official announcements which have tried to strengthen the integration of ICTs at university level as well as the associated methodological processes. However, the students consider that this kind of tasks is still underused. Only 26.26% of students affirm having performed collaborative tasks a lot or very oftenly.

The email is the most used communicational resource. 90.27% of students use it frequently or always. However, online forums have less use as just 13.52% of students use it quite oftenly. The instant messaging resources and social networks have been used a lot by over 60% of students.
Beyond the presence of social networks is the public participation on websites through online publishing spaces. These sorts of processes are quite uncommon across the student community since less than 10% take part in websites of their own or belonging to others as well as blogging.

4. Conclusions

The profile of the student taking part in this study shows enough skills for managing the ICT resources at user’s level, however there are certain shortages linked to the management of image’s language (less than 20% use image, audio or video edition software), the use of collaborative workspaces (used by less than 25% of students), the participation on specialized forums (less than 15%) and web publishing (less than 10%). It’s necessary improving these competences aiming to improve adaptation and learning of students for facing their academic and professional activities answering the social demand caused by change and evolution of technology.

The online search for information is the most basic activity and one of the most used by the students. It makes possible not just gathering information but also applications that answer their needs. It’s necessary having in mind that technology changes are constantly updated, which increases the complexity of the adaptation process to the technology context. It’s a continuous work which demands adopting a learning attitude having in mind the specific academic and professional needs.

The learning processes have been traditionally focused on the text language, however using other kind of formats such as images means a relevant process of alphabeticization. Learning to manage these kinds of contents allows creating contexts and developing specific skills related to digital competence. As pointed out previously, less than 20% of ULL’s students have competences related to edition and management of this kind of contents.

The university virtual campus is the most used resource as it’s linked to materials provided by teachers, the learning activities and the evaluation processes which are key elements to identify how useful is this priority resource for the students.

The email is the communication resource which is most commonly used. The virtual campus notifications as well as those from other resources such as social networks also have a relevant use amongst students and all of them take place through emails.

The communication and interactivity are both the most interesting online functionalities, and that’s why the social networks and instant messaging services are both the students’ resources of choice. However, whenever the students may take part online publicly trough blogging, their participation decreases dramatically.

References


