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Which use give teachers at La Laguna University to ICTs?

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Abstract

The following research shows which use is given by teachers at La Laguna University to Information and Communication Technologies (ICTs). The main aim of the study is evaluating how the university teachers use different ICT tools as well as finding out which influence may have that use over the teaching-learning processes. The research will undertake both issues according to the scientific knowledge field of the teachers (Law and Social sciences, Health science, Fine Arts and men science, Engineering and Architecture), gender, age and previous experience in ICT’s use.

For performing this research, an online questionnaire has been performed allowing us to find out the opinion of 206 university teachers which use the virtual classroom for teaching (49.03% women and 50.97% men) with an average age of 47.23 years old. This questionnaire belongs to a wider research, but the actual document deals with the ‘ICTs use’ dimension where the information is compiled according to: Online internet information search, online internet communication and interaction (email, forums, instant messaging, etc.), edition task’s development (office automation packages, audio/video software, etc.), download of contents (music and films download, etc.), development of teaching activities (use of collaborative spaces, University’s virtual campus access, etc.), web participation (personal website, blogs, social networks, etc.)

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1. Introduction

The universities on-campus with on-campus courses of classroom teaching have been transforming gradually their teaching performance adapting to the new context proposed by the European Space for Higher Education (ESHE). This performance have been developed through technological platforms which support learning and have been setting up the blended-learning model of university teaching (Area, 2007; Area et al., 2008; Barbera et al., 2008; Cabero & Llorente, 2009; Gutiérrez et al., 2009).

The blended-learning model is characterized by the hybrid between processes of teaching-learning on attendance spaces with other that take place virtually through the use of computers and virtual classrooms. Through this half-attendance teaching model the teachers have a space available where they may develop and generate many learning settings.

The teachers and university students have an extension of traditional classrooms available through virtual classrooms allowing new methods of learning on their own collaboratively. Indeed, the use of ICTs in university teaching implies innovations in both methodological and didactic process. So it’s quite important that both teachers and students develop skills and ICTs competences for taking advantage of the learning potential that these tools have.

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Several authors (Zabalza, 2007; Imbernón, 2006, Area, 2010) underline the digital competences and use of new technologies as one of the features of a proper university teacher. Carrera and Coiduras (2012) consider that development of the new digital competence in students will only be possible if teachers have enough knowledge and abilities for incorporating them in the teaching-learning processes developed. The following components should be established in teacher’s digital competences:

a) The knowledge about devices, computer tools and online applications as well as the capability for evaluating its didactic potential.

b) The design of activities and both evaluation and learning situations which incorporate ICTs according to their didactic potential, with the students and its context.

c) The implementation of ICTs as well as their ethical, legal and responsible use.

d) The transformation and improvement of the professional teaching practice, both individual and collective.

e) The treatment and efficient management of information gathered online.

f) Online use for collaborative work and both the interpersonal communication and interaction.

g) The help provided to students for acquiring the ICTs seeming competent while using them.

In this study we have focused on finding out which is the control, knowledge and use that teachers of La Laguna University make of ICTs both in personal environment and academic university workspaces.

2. Methodological design of study

This study belongs to a wider mainframe of investigation where the aim is finding out which are the views and practices that the teacher’s staff at La Laguna University has towards virtual teaching. Specifically, the studied dimensions are the following:

- Experience and knowledge over ICT’s use.
- Use and characteristics of the virtual classroom
- Involvement of students
- Impact of virtual classrooms over teacher’s work
- Assessment of ULL’s Virtual Campus
- Assessment of support and education received from the Virtual Teaching Unit.
- Generalization of virtual classrooms

This time we have focused on the analysis related to the experience and knowledge that teaching staff has about use of ICTs in academic, professional and personal environments (first analysis dimension). Inside this dimension, the following subdimensions have been analyzed: a) Search for information, 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 analyzes which is the degree of development of the La Laguna University teacher’s digital competence. Specifically, the aims of the investigation are the following:

- Finding out the knowledge about ICTs from La Laguna University teachers.
- Knowing the activities through ICTs that university teachers perform in both formal and informal environments.

2.2. Sample

The sample is composed by 206 teachers from the five knowledge areas at ULL (Law and Social Science, Arts and Humanities, Science, Health Science and finally Architecture and Engineering) distributed as follows according to gender and knowledge field (Figure 1):

![Distribution according to teacher's gender and knowledge area](image)

Figure 1. Percentage distribution of teachers according to gender and scientific field

3. Results and analysis of study

In the following figures the frequency of use by teachers of ICTs tools is shown. In the first graphic we can check that ICT tools which enjoy the highest use rate (always) are: revising emails (96.12%) and gathering information online (63.59%); besides, both tools are used by all interviewed teachers. In third place, there is bibliographic gathering (44.17%). In the opposite, the less used ICT tools (never) are: writing in my own blog (81.07%),
download music and movies (67.96%), managing and dynamizing other websites (64.08%) and editing the personal webpage (54.85%).

In the next graphic the frequency of use for other ICT tools is shown. The ICT tools with higher use (always) are: word processing (79.13%) and accessing ULL’s Virtual Campus (68.45%). At the opposite range, the less used ICT tools (nothing) are: use of social networks (64.56%), take part in forums (41.75%) and handling image edition software (36.45%).
4. Conclusions

We may affirm that the participant teachers in this study have basic and main competences about use and knowledge of ICTs. They are instrumental competences which ease greatly the use of other ICT tools used for teaching such as virtual classrooms.

The teaching staff has a suitable level about commanding ICTs, allowing their use at personal, professional and academic environments. Amongst the performed activities (those happening frequently or always) we should underline the following: managing files in several formats through different processors, generating documents, web surfing for gathering information and bibliography as well as emailing.
However there are certain shortages about more complex activities related to use of programs for image, audio or video edition which are relevant aspects to new communications languages. It’s also remarkable the lack of use about spaces such as Web 2.0, social networks, debate forums and blogs. We regard the improvement of this teacher’s competences as necessary, because they will imply upgrades in the didactic models used for integration of ICTs in teaching-learning processes. It will be necessary to educate and promote among the teachers all use of this new ICT tools which improve the teaching processes. If teachers use different material and multimedia resources for education, this will develop their digital competence in their teaching practice besides offering the students resources which have been adapted to technology evolution and professional demands.

As well as use of different online tools and Web 2.0 resources, the Internet will also allow integration of interesting social communicative and collaborative strengths in education.

References


