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Effective Learner-Lecturer Interaction Working With a Virtual Learning Environment

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Using the Internet to learn a language creates wide opportunities to enhance learning (Association of teachers of English in Catalonia (APAC), 2010). The Internet activities promote learners' self-monitoring ability, encourage the use of multimedia and network technology, and develop students' cooperation and participation. During the latest years, there have been many changes in education as these new technologies, including VLEs **(**Virtual Learning Environments), which have become an important part in the teaching/learning process. According to *Tech Terms Computer Dictionary* (2012), VLE is a virtual classroom where teachers and students communicate. VLEs have evolved as at an early stage, they were only ways of transmitting information: Teachers uploaded the multimedia resources and students read this information. At a higher stage, VLEs have become interactive. This means that students become active. We have designed a virtual environment where students, weekly, must contribute their opinions and comments in response to a required activity uploaded by the teacher. In this paper, we describe this weekly task and analyze students' opinion about this planned activity. The students become an active subject in this field. In this paper, we show how VLEs are no longer a means of transmitting information but a means of interaction as well as a way of motivating our students to be involved in their learning process.

Keywords: VLE (Virtual Learning Environment), computer science degree, multimedia resources, learner-lecturer interaction

Introduction

Our society is constantly changing and consequently education must adapt itself to all those changes in order to respond to all the students' needs. Society and school must face cultural globalization, communications, and the spread of information, so it is necessary to take account of new technologies. Social, economic, and demographic changes require a new type of educational system in which communication between teachers and students is more fluent and competent.

Nowadays, the world is dominated by new technologies. In recent years, there has been an interest in how computers and the Internet can best be used to improve the efficiency and effectiveness of education at all levels. ICTs (Information and Communication Technologies) are a potentially powerful tool for educational change and reform. ICTs have become a very important part in the world of education, and therefore, teachers cannot pay no attention to this important aspect. However, using ICTs is not a synonym of a better learning: If teachers and

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students do not actually learn how to use these media, ICTs can in fact become extremely puzzling. To make a good use of these technologies, teachers should learn how to use these media. Chapelle (2003) said that teachers need to learn how to use computers technology for constructing and implementing materials for teaching and assessing, and they need to engage in innovative teaching and assessments through the use of technology.

Traditional teaching shows some limitations, because all the changes previously mentioned require a bigger involvement in the development of techniques to form students not only in the physical classroom but also in the virtual world (Cardona, 2008). Traditional teaching and virtual learning differ in the way teachers communicate with students and how students are involved in the learning process from the point of view of communication and presentation of learning materials. Virtual learning has created a new paradigm for teaching and learning different from the traditional classroom experience. The students who follow this type of teaching need to be more responsible, because learning depends on their effort and participation in the virtual classroom. In the virtual learning environments, students are in the centre of the learning process, that is not only the teachers must change their role but the students too (Van Beek, 2011).

VLEs (Virtual Learning Environments) are often used in schools and other educational establishments in order to make the learning experience more interactive. It offers a great variety of courses from all areas of knowledge. VLEs help teachers to organize their courses and help students to improve the process of learning and complement traditional face-to-face classroom.

The teacher is not the only source of information. The teacher now facilitates and mediates the formative learning process. The teacher assesses and guides the students through the process. On the other hand, the students are not more passive receivers but they become the main actors of their own learning. However, all participants should be able to feel that they are studying as part of a group, not working in isolation and without support.

Pulford (2011) defined VLEs as computer-based online learning environments that were becoming increasingly common in universities. They can provide not only learning resources such as reading materials, handouts, and powerpoint slides from lectures, but also a discussion forum where students can talk to each other online or post questions for the course tutor to answer. We also find a definition by Wilson (1996); he defined VLEs as computer-based environments that were relatively open systems, allowing interactions and encounters with other participants and providing access to a wide range of resources. VLEs are distinguished from computer microworlds, where the students individually enter a self-contained computer-based learning environment and classroom-based learning environments, where various technologies are used as tools in support of classroom activities. According to Dillenbourg (2000), a virtual learning environment: (1) is a designed information space; (2) is a social space; (3) is a virtual space that is explicitly represented; (4) is where students are not only active but also actors; (5) is not restricted to distance education; (6) integrates multiple tools; and (7) overlaps with the physical learning environment.

According to Mason (1998), there are three models of VLEs:

> Content and support model: where pre-prepared content is delivered in print or online, and support is provided online. Content and support are not integral to one another, i.e., online support is an optional extra and is not integrated into learning activities, relatively easy to establish but does not fully exploit the benefits of online learning.
>
> Wrap-around model: where there is a mixture of pre-prepared content and online learning activities. The learning activities involve online discussion and collaborative activities.

> Integrated model: where most of the learning takes place via collaborative online activities and content is largely determined by the learners, either individually or as a group. Learning is very much student centered and highly collaborative. (p. 23)

In this course, we follow the wrap-around model, where there is mixture of classroom and online activities. Students are collaborative as they interact with the environment and can also take part in online tasks through the forum.

Method

Description of the Virtual Learning Environment

We have designed and developed a virtual environment for students taking this course "English in the Computer Science Degree"; this website was created as a complement and support of the traditional classes.

The Aula Virtual is the virtual environment of the Universitat Jaume I in Castellón (Spain). This environment is a support of the traditional class and allows teachers and students to carry out online activities, tasks, and assignments. All the university staff can create an online course in the Aula Virtual. The Aula Virtual is based on the freeware Moodle (Retrieved from www.moodle.com):

> Moodle is a course management system (CMS)—a free, open source software package designed using sound pedagogical principles, to help educators create effective online learning communities (http://moodle.org/). Moodle is a software package for producing Internet-based courses and web sites. It is a global development project designed to support a social constructionist framework of education. Moodle is provided freely as Open Source software (under the (under the GNU (General Public License)).

Before virtual learning environments were designed to provide the students with all the information related to the course (dossier, articles, links to Internet resources, multimedia…), teachers were the information senders and students were the information receivers. The message only went in one direction: from teacher to student. However, this situation has changed as Internet has. Web 2.0 advocates that users are no longer passive individuals only receiving information; they can now interact, receive, and send information. They are also producers. It is what it is called Web 2.0 (Retrieved from http://es.wikipedia.org/wiki/Web_2.0):

> The term Web 2.0 is associated with web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration on the World Wide Web. A Web 2.0 site allows users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites, hosted services, web applications…

Description of the Tasks

During the course, in the practice part, students are provided with some material in order to practice the four major skills: listening, writing, reading, and speaking. In this paper, we focus our attention on the writing skills. Every week, through a forum, students have to write a text (about 90-120 words). These tasks are not compulsory but the teacher will take them into account for the final mark.

Students, weekly, have to make an activity out of class projected by the teacher, that is, in an autonomous way. They have to fulfil some tasks. These tasks are available in the virtual learning environment (see Figure 1) and they are uploaded every week. All the students can access their classmates' work.

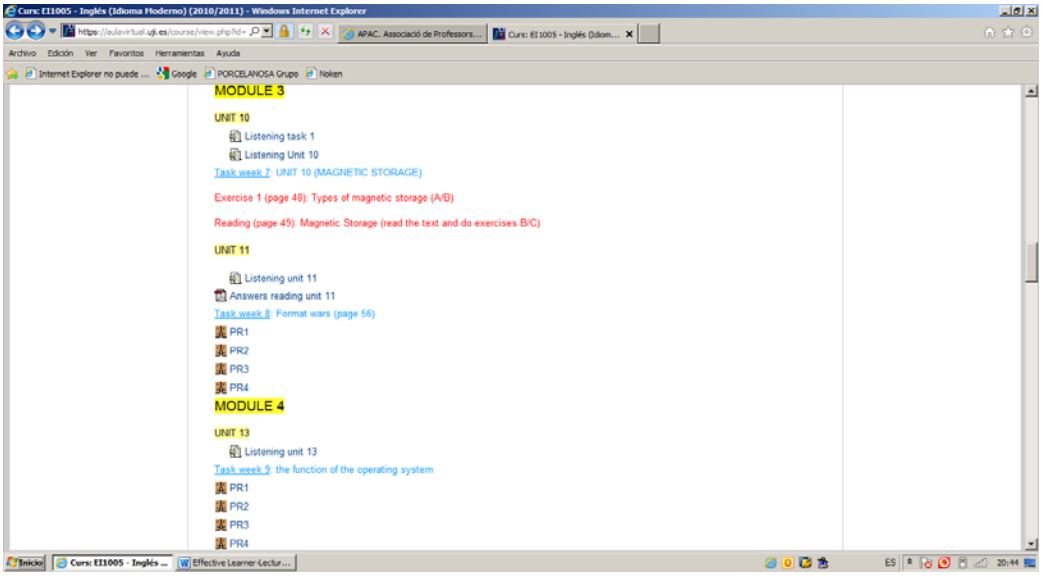

Figure 1. Structure of the forum in the VLE.

These are 12 tasks, as mentioned, which are not compulsory but controlled by the teacher as they are downloaded in the virtual learning environment: (1) Task 1: Students have to choose among four different areas: cars, entertainment, schools/universities or factories, and industrial processes. Then, they have to write a text discussing what they can do with computers in that area; (2) Task 2: Students write a text about the features of the computer that they would most like to have. They can get help from these words: CPU (Central Processing Unit), speed, optical disc drives, wireless connectivity, minimum/maximum RAM (Random Access Memory), monitor, ports and cards memory slots, and hard disk and software; (3) Task 3: Students have to write a text answering the following questions: (a) What are the benefits of speech recognition software? (b) What kind of tasks would you find speech recognition useful for? (c) Who would benefit most from the advances in speech recognition technology? and (d) What is the future of this kind of technology? Do you think it will ever be possible to control your computer using only your thoughts?; (4) Task 4: Students have to describe their digital camera, webcam, or video camera answering the following questions: (a) What do you use the device for? (b) Why did you buy that particular make/model? (c) What are your favourite functions? and (d) What improvements would you make to the device?; (5) Task 5: Students have to write an email to a friend with the following premises: A friend has sent an email explaining he/she has just lost all of the information on his/her PC (Personal Computer) because of a head crash. Students have to reply explaining the followings: Why the head crash happened; what precautions she should take with his/her new PC to avoid similar problems in the future and what steps he/she could take to back up his/her files; (6) Task 6: Students write about the types of magnetic storage; (7) Task 7: Students have to give their opinion about the topic of “Blue-ray versus HD-DVD”; (8) Task 8: Students discuss what an operating system is; (9) Task 9: Students write about the uses of the Internet; (10) Task 10: Students have to answer the following question: What do you use the Web for?; (11) Task 11: Students describe a blog; and (12) Task 12: Students write 10 acronyms which have been seen during the course.

Below, we can see a contribution of one of our students’ answer to Task 8: “What is an operating system?” (see Figure 2).

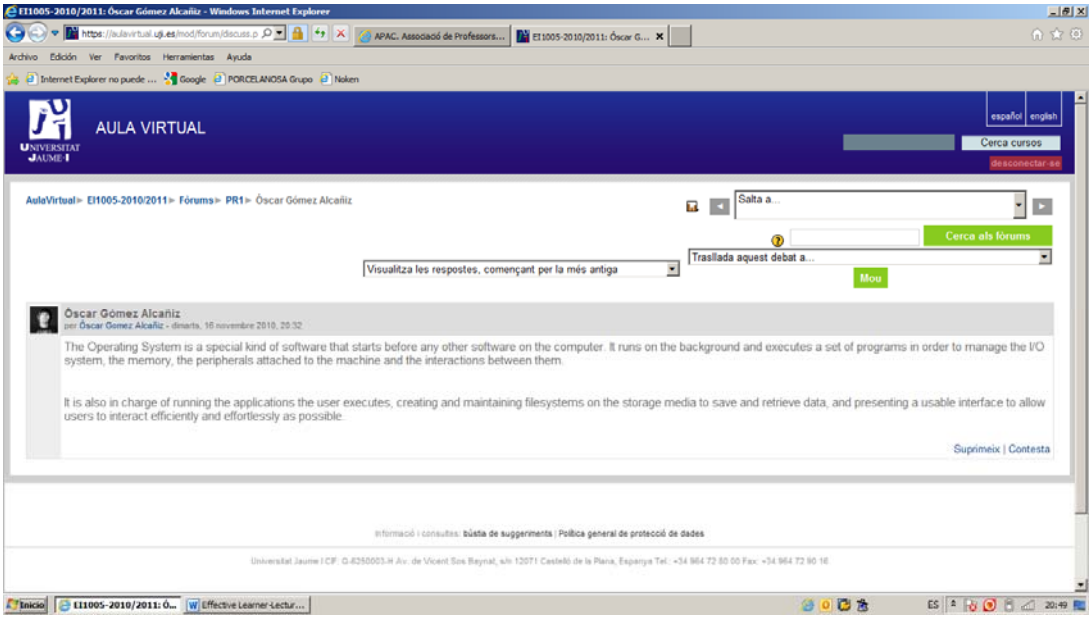

Figure 2. Screenshot of a student's contribution.

Results and Conclusions

The participation of the students (110 students) in each weekly task was the followings: (1) Task 1: 56%; (2) Task 2: 66%; (3) Task 3: 70%; (4) Task 4: 62%; (5) Task 5: 72%; (6) Task 6: 72%; (7) Task 7: 72%; (8) Task 8: 74%; (9) Task 9: 70%; (10) Task 10: 71%; (11) Task 11: 65%; and (12) Task 12: 71%.

As we can see in Figure 3, the participation of the students started with 56% and ended with 72%. This means that not only did the students leave with the tasks, but the number of participants also grew from the beginning to the end. This result shows the acceptance of these online tasks.

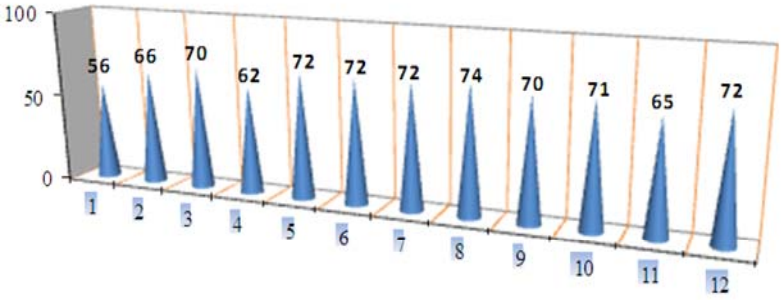

Figure 3. Percentages of the students' participation (12 weeks).

By means of a questionnaire, we asked students for their opinions and comments. They all agreed that they would not change a thing about these weekly activities and they would not add anything. Their impressions were good and they thought they were well monitored and tracked by the teacher. They affirmed that the feedback they received during the course was excellent and they had taken advantage of the English course.

Working on a weekly task is advantageous for both students and lecturers. We keep a continuous interaction and connection with our students.

The main advantages for the students are: (1) They review concepts in class; (2) There is continuity in class

work; (3) They can keep on practicing English out of class; (4) They keep in touch with English; (5) They practice English writing and they also acquire new specific vocabulary; (6) They get weekly feedback from the teacher; and (7) They work in an autonomous way.

The main advantages for the lectures are: (1) We keep track of students' work; (2) We keep record of students' work (as students' work is kept in virtual environment); (3) We can interact with our students' providing feedback; and (4) We get our students involved in their English learning process.

With this research, we want to show and conclude that VLEs are no longer unidirectional. Teachers are the administrators but not the only contributors to these virtual environments. Students play an active role; they contribute dynamically in the teaching/learning process. Students receive information not only from the teacher but also from their classmates (as all the weekly task form all the students are available for the whole class), and they receive immediately feedback.

In this study, we have followed the three types of learner interaction: learner-content, learner-instructor, and learner-learner by Moore (1996): (1) In *learner-content* interaction, learners effectively "talk to themselves" about the information and the ideas they encounter. In our study, students have to face a task and deal with new information and ideas; (2) In *learner-instructor* interaction, learning effectively takes place from a "sage on the stage", and the instructor supposedly imparts knowledge and wisdom to the students. In our study, learners and instructors are constantly in touch by exchanging information; and (3) In *learner-learner* interaction, students help themselves to learn by sharing ideas and discussing problems, often in a real or virtual group setting. This is clearly the least common and least conventional of the three modes of interaction, but one of the most exciting for those who are interested in online delivery, since the use of online forums and email lists generally enable group discussion to a far greater extent than being possible in a conventional lecture/tutorial environment. In our study, learner-learner interaction has been possible through as all the tasks are accessible for everyone and all of them could express their ideas, comment, and ask.

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