USING WEBINAR IN POSTGRADE COURSE

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Abstract: In the current environment there is significant training demand and the training offer is also abundant in many areas. Thus, being able to innovate in the training of professionals is a key aspect in order to attract students to postgraduate courses. Simultaneously it is essential to be able to improve the results obtained with training in case the demand falls. An innovative alternative to meet this demand in education is presented in the webinar (web seminar).

Thus, this article presents a webinar teaching experience in a postgraduate course through the program Policonecta (Adobe Acrobat Connect Pro). The main features of the program are that it allows the theoretical teaching, user participation and evaluation of students. It describes the experience in the postgraduate course about lean production at the Universidad Politécnica de Valencia. It highlights how the use of this technology opens new possibilities for professors by providing a framework where they and their students can perform the same activities of the traditional classroom without geographic restriction.

The advantages and disadvantages of that experience are indicated by presenting the conclusions and some possible options for resolution. Note that students, professors and professionals have evaluated this new approach very positively. Webinar allows combining professional life with the completion of the course.

Keywords; Webinar, Teaching On-Line, Postgraduate courses, Adobe Acrobat Connect

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1. INTRODUCTION

The European Higher Education Area (EHEA) was launched along with the Bologna Process' decade anniversary, in March 2010, during the Budapest-Vienna Ministerial Conference. The EHEA considers harmonizing the different systems in the European Union and provides an effective way of exchange among all students. This EHEA wants to give dimension and unprecedented agility to the process of change undertaken by European universities.

EHEA requires a continuous reflection on the teaching model that has existed until now. Many changes occur, such as application of new technologies, and changing perspective of the student, who becomes the protagonist of his own learning process. This new
situation must be addressed so that changes may not be traumatic for those involved: teachers and students (Canos-Daros and Ramon-Fernandez, 2010). Also, it must be considered, when introducing a new technology that reproduces dominant teaching models and simply uses to "doing business as usual, but on new media", that this new technology acquires an undeserved aura of modernity that adds nothing to its didactic function (García-Sabater et al., 2011). So, the mere use of any new technology, does not guarantee the more effective education itself. Since it is not enough integrate technology into the classroom, but there is a need to appear reflected in the establishment of new approaches (Adell Segura, 1997). The professor has got the responsibility to obtain the maximum use of new tools used. For this, the professor is often required to receive continuing education to address knowledge, both didactic and pedagogical, that the efficient use of new technology requires. Thus the use of any new technological resources must be part of a comprehensive program of action consistent with the educational framework (Santoveña Casal, 2007).

These considerations are perfectly valid for teaching in graduate courses. In these courses students have special features such as mobility restrictions that require consideration. Therefore those elements related to virtual education are useful tools in the teaching organization. An innovative alternative education in this area is presented in the webinar (Areitio and Areitio, 2007). The webinar (web seminar) or Web conferencing tool is one of the most advanced computer-mediated communication (CMC) systems (Wang and Hsu, 2008). The webinar refers to a service that allows conferencing events as meetings or classes to be shared with remote locations by Internet technologies. The webinar facilitates real-time communication and enriches the interactivity in an online learning environment. In Wang et al (2008) the pedagogical issues underlying the use of the webinar tool in online learning and training are developed. There are a lot of webinar tools such as Adobe Acrobat Connect, Microsoft Office Live Meeting, Elluminate, Anicam Live, Interwise. In the literature there are references about different experiences with different tools. For example: Chen et al (2005) implemented Anicam Live at the Cyber University of Taiwan, Ng (2007) adopted Intervise at the Open University of Hong, Kohorst and Cox (2007) employed Elluminate Live! for a tablet PC at a Murray State University of Kentucky and Wang et al (2008) used Elluminate at a northeastern university in the United States.

Thus, the purpose of this paper is to examine our approach to deploying and providing training on a postgraduate course using the Policonecta tool at the Universidad Politécnica de Valencia (UPV) in Spain. The structure of the paper is as follows: in section 2 describes the webinar tool used Policonecta, in section 3 describes the experience, to complete with section 4, in which conclusions are presented as the advantages and disadvantages of this type of training and a possible way of dealing with problems.

2. **POLICONECTA: TECHNICAL REQUIREMENTS AND APPLICATION UTILITIES**

The corporate tool of the Universidad Politécnica de Valencia (UPV) for the launch of the webinar is called Policonecta. Policonecta rests directly on the Adobe Acrobat Connect commercial tool. Policonecta tool is hosted on a server conference call. In UPV are ten classrooms equipped for use Policonecta tool. These classrooms are located in the Permanent Training Center. At this Center the major part of the services
are focused on distance learning, and all classrooms are being equipped for webinar. Also through the Permanent Training Center it will provide training courses for the use of these resources (Martinez Rubio et al., 2010).

It should be considered that from the technical point of view Policonecta requires the following items in the classroom to run adequately:
- Video cameras Interconnected
- Wireless Microphone System
- Internet connection quality
- Computer to connect to the server conference

The following figure 1 shows a schematic of the system Policonecta:

![System schematic](image)

Figure 1. System schematic webinar "Policonecta" modified from (Martinez Rubio et al., 2010).

The Figure 2 shows a screenshot of the application Policonecta, sharing documents and interactive two-way communication.

![Screenshot](image)

Figure 2. Webinar system, with video, document sharing and chat.

The different components are observed:
• Camera and voice, where you can access the webcam and microphone user’s computers, allowing visual and oral communication among participants.
• Attendee List: Displays users connected and category (hosts, speakers, participants).
• Chat: allows written communication between users of the room.
• Share: wider is the window where the professor can show the students their own screen (screen sharing), a document incorporated into the living room (shared document), or a whiteboard that allows text / drawings.

So, the utilities of Policonecta seem to be many. Firstly, audio and videoconferences, where participants can discuss in real time using a microphone and a webcam. Secondly, document sharing, to allow remote displays of slides in the student’s devices and document distribution and software application sharing. And finally, chats to allow synchronous text-based conversation.

3. DESCRIPTION OF THE EXPERIENCE

3.1. Postgraduate Course
The postgraduate course in which the experience Policonecta webinar is developed is named ”Specialist degree in Lean Manufacturing”. The course is a non official title of UPV that requires a final year dissertation. The Specialist degree in Lean Manufacturing objective is to provide a highly practical training in the implementation of tools from the Toyota Production System (Monden, 1998). The course is based on the real application of the methodologies studied, with a lot of hours of theoretical and practical classes and workshops for implementing them. The theoretical classes are imparted by Policonecta webinar tool. The presentation of the methodology of the course was made through the blog http://lean.blogs.upv.es/ by a Policonecta recording, as shown in Figure 3.

Figure 3. http://lean.blogs.upv.es/2011/09/16/metodologia-de-los-titulos/

3.2. Experience

The experience involves all students registered in the course of “Specialist Degree in Lean Manufacturing”. The webinar classrooms Policonecta of the Permanent Training Center of the UPV has allowed the student to attend by connecting via remote or in person in the classroom. To do this, students have simultaneous access to remote and classroom presentations and professor applications are used to teach the class. Likewise, students have a chat to communicate with the classroom.

Classes are taught in a classroom at the Permanent Training Center equipped with Policonecta tool. Basically, there are three modes to attend classes according to:

- Pure Webinar: The student of the course is connected to the webinar link previously provided by the professor from the remote location. In this case, each user must have computer, video / audio capture devices, and broadband network in remote location. This method is used for the 40% of the students of the course.

- Mixed Webinar: The student is connected to the webinar link. The professor must provide the link from the classroom. In this case, each user must have computer, video capture devices. The audio device (microphone) and broadband network are available in the classroom. This method is used for the 60% of the students of the course.

- Face to Face: Students attending the course in person to the classes by just going to the classroom. To ask questions in class they will use the audio device (microphone) available in the classroom. This method is only used on special occasions.

Thus, the teaching method of lectures by webinar allows tracking of the classes both in person and on-line and synchronously or non-synchronous. It thus offers synchronous classroom training for students attending from the class in the classroom webinar (webinar mixed and face to face). It also provides a synchronous online training for students who are connected at the same time from a location other than their own classroom webinar (pure webinar). In addition, it records the session for those students who can not connect to the classroom by their schedule incompatibility, thus giving also a non-face teaching and asynchronous.

![Figure 4. Group work in the Mixed Webinar](image-url)
In the lectures with Policonecta, all participants used their webcams and audio, either by pure webinar or mixed methodology webinar. The program made it possible to share both the presentation of items (in power point, doc and / or pdf) and interactive programs hosted on websites and with which professor and students could work simultaneously. Moreover, when students work in groups there are cameras recording the area of the classroom in question, so that you can follow on-line, as shown in figure 4 above.

In class sessions students have different ways of participation: audio or via chat. In both cases it is possible to register the participation. On the one hand, the session can be recorded in its entirety, which can be reused by the students. In addition, written records of the chat are sent to the email address of the professor. Both options allow the professor to assess the development of the session after being given.

Besides Policonecta tool, Polireunion tool is also available in UPV which is basically Adobe Connect-based online service (Fita et al., 2011). To access the professor should make previously a virtual classroom booking through the link, https://polireunion.upv.es/, from its remote location as shown in Figure 5.

![Figure 5. Group work in the Mixed Webinar](image)

In this case the professor must have the computer, video / audio capture devices, and broadband network in the remote location. This tool is used for tutoring the course, without having to go to the classroom of Permanent Training Center.

3.3. Evaluation of the experience
Students, professors and professionals have valued very positively this new methodology to combine professional life with the completion of the course. This assessment was done through surveys of the course, and comments and conversations between students and professors. Mainly according to the results of the survey conducted by the Permanent Training Center it seems that the current schedule of the course is tailored to their availability (93%) and the teaching methods used seems appropriate to the type of course (91%).
4. CONCLUSIONS

It can be summarized the following advantages of the methodology webinar on this experience with Policonecta. The use of webinar methodology eliminates the waste of transportation, time and cost (this being one of the 7 wastes of lean). For this, corporations have widely adopted the webinar tool (Britt, 2006). Attending classes Policonecta is affordable. Users can participate in a webinar session with a computer, video/audio capture devices, and broadband network in remote location. The student-professor feedback is immediate, but the professors can set the level and timing of participation of each student. Professors and students can share their applications without having them hosted locally. Also, by integrating tool Policonecta and complementary devices (video interconnected and microphone wireless) in a classroom in the UPV is also possible for students who wish to follow a traditional classroom (face to face) they can do it. In these cases, they share time and place to attend the webinar. Webinar also allows easier recording of classes so they can be viewed by students anytime, thus offering an online training distance and asynchronously.

On the other hand there are some major problems that have arisen in the course of the experience in the classroom. They can be summarized as following:

- Shortness of practice of professors, a fact which is emphasized by the fact that much of the teaching is done by external lecturers and outside the new methodologies.
- Difficulties in the development of the classes, the professors should be aware of the class itself and the cameras to transmit.
- Issues with participation of external students, although they may take action through the keyboard or via audio.

We propose some ideas to exploit the full potential of the tool Policonecta minimizing its drawbacks:

- A little training is recommended for the professors before the courses.
- It would be useful the presence of a support person in the classes that can assist the professor in using the tool: The support person controls the cameras, so the student connected on line can see the professor during all the class. The support person controls the activities of the students who are connected online.

It should be noted that these improvements will be incorporated in subsequent editions of the course.

5. AGREEMENTS

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