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MOODLE PLATFORM IN A VIRTUAL UNIVERSITY

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Abstract

Virtual education also known as e-learning is a form of distance education that is aided primarily Internet and its many tools. Universities twentieth century saw at the e-learning system, an alternative to start teaching some courses, specialties, and as time has been moving, now offers undergraduate (professional careers) and in more recent years even offer postgraduate education.

Since the beginning of virtual universities in the late twentieth century, the information and communication technologies have evolved exponentially, with changes in the models of teaching, learning and educational management.

Therefore, those models that explained how to work in virtual universities in the twentieth century, are currently facing not only the incorporation of new technologies but also new educational models such as competency-based model and thus the challenges and adequacy of educational elements such as the roles of teachers now called tutors, the student activities and digital administration This article presents the main results of research being done at the National Polytechnic Institute (Mexico) from the early experiences of implementing a Masters online using the Moodle learning platform. We will compare the proposed models for virtual universities and the reality that is lived in a particular online Master of this institution.

Even though the basic elements of any model of Virtual University includes considering the users, production and design courses, equipment / technology, training, among other things, we can mention that despite the decades and technological development, virtual education not only aims to provide online content.

Keywords: Virtual Universities, Moodle, master degree.

1   INTRODUCTION

1.1   Conceptualization of Virtual University System

Designing and planning a Virtual University (VU) or a virtual campus is a very complex task, since not only is to: design content to be worked online, others question by detailed and complex multidisciplinary, must also involve management aspects.

We start from the premise that all VU require network computer equipment, ie telematics equipment, so this can create virtual space to produce symbolic communicative interaction.

Kumiko Aoki, a researcher and professor at Boston University, acknowledges that at the time the term has been overused Virtual hence the phrase Virtual University also has come to apply without really embrace its real meaning. Thus the VU name applied eg when online courses are offered through the Internet, but did not offer universities or has no recognition given by a university.

The term VU, applies when the institutional infrastructure provides students with learning experiences and support services related to complete either a part of your degree program or a whole either online or on a network, and through videoconferencing, teleconferencing and systems telematic interaction, in addition to providing the students of teachers / counselors with resources to teach and do research in cyberspace. [...] The VU must be students, teachers, administrative services, support and resources to provide official recognition of courses taken. [1]

The main features of the virtual universities are:

- Use telecommunications technologies, through Internet and create environments (such as learning platforms) that allow virtualization of educational experiences in cyberspace.

- Implies that subjects working remotely which requires constant previous organization.
- It implies a greater responsibility in their self-learning.
- Modify the traditional roles of teacher - pupil: teacher is no longer the center that provides learning, now becomes tutorial, a tutor. Meanwhile the student changes from a taxable person be an active subject.

So virtualization is used in distance education, but also can be exploited in classroom education systems as an alternative educational tool, for example, most colleges use telematic networks to support their classroom courses through videoconferencing or consultations to virtual libraries, among others.

As indicated Jorge Alejandro Martinez Peniche and Pisanty Baruch:

> The educational telecommunications is a process that is founded on a principle of interaction of the subject with other subjects technology mediated communication and artificial languages. The reference system of this communicative action involves the three worlds and the three modes of existence: 1) the real world of material objects, 2) the social world of behavioral rules for action and, 3) the cultural world of the contents of thought and symbolic relationships. [2]

Do not think that virtual universities fully replace the traditional universities, the VU is an alternative and that is according to the needs of certain social groups that require less physical movement and more flexible time management and the use of digital technologies you may have other educational experiences that support learning.

Pierre Lévy, a professor at the University of Paris, [3] considers that due to these new digital technologies can amplify human cognitive functions: as memory (databases, hyperdocuments), imagination (simulations), perception (telepresence, RV), reasoning (artificial intelligence, modeling of complex phenomena). With these intellectual technologies are favored, new forms of access to information: hyperdocuments, information search thanks to browsers, dynamic maps data and new ways of thinking and knowledge. Now the appropriation of knowledge, not only based on logical deduction or direct experience, but also in the use of simulators or RV.

The distance learning systems, have some advantages over the traditional classroom:

- Flexibility in time and place to study because students can access educational materials at any time and any place.
- Interaction between the different actors.
- Good feedback. Good in the sense that it is almost custom (revision single task) and co-assessment (through comments of her classmates eg discussion forums).
- Use of technology to generate more communication and educational experiences.

These educational options - communication are changing the old paradigm of education on-site to move to distance education on-line, and / or virtual. As the user / student, there are two main groups: 1) those students who prefer classroom to consider them as the best educational alternative, and therefore looking for a mixture of experiences face to face and online education, recognizing the advantages selecting your rate and hours of study.2) the other students, especially those who are already working, prefer opportunities offered online education by allowing them to have the flexibility they need, regardless of their geographical location and even have your schedule.

Aoki (Boston University) and Pogroszewski (Educational Technology Service), consider that in the higher education level, there is a growing interest in online education and is mainly due to three factors: 1.-The institutions are looking to increase their enrollment by attracting students not resident in the universities (ie no classroom) 2. - There is a growing need for adults who want to learn and develop new skills, crediting materials in schools, overcoming the limitations of time and space, 3. - the development of new technologies that can provide for distance education courses more attractive. [4]

The current context of higher education is changing dramatically internally and externally. There was an increasing interest on the part of educational institutions to examine the potential of virtual learning and thus the changes that tighten the roles of educational environments. It also seeks to respond to individuals who expect educational alternatives according to their needs, yet affordable. In the external context of higher education institutions, society lives with greater competitiveness by occupation.

Today people have more than one career and are required to be up to date on their area of specialty.
In all this context, the use of technology is evident.

On the other hand a VU is not just a virtual classroom, also implies having all the different services
that a traditional university offers its students. Note that these services should also be provided
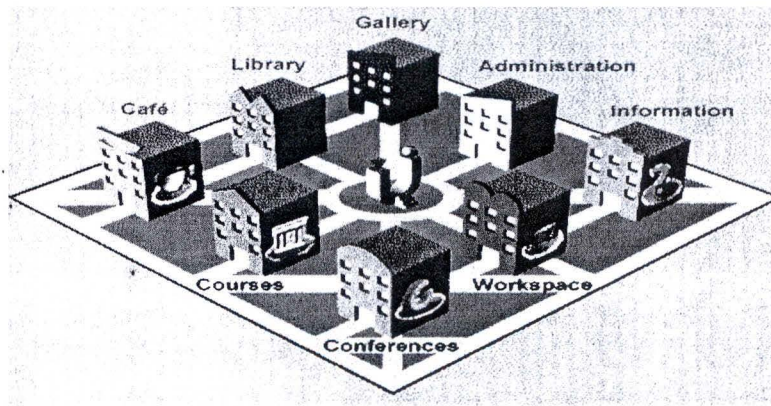virtually (fig. 1).

FIG. 1. SERVICES THAT CAN PROVIDE THE VIRTUAL UNIVERSITIES
Source: http://www.uson.mx/unidon/educadis.

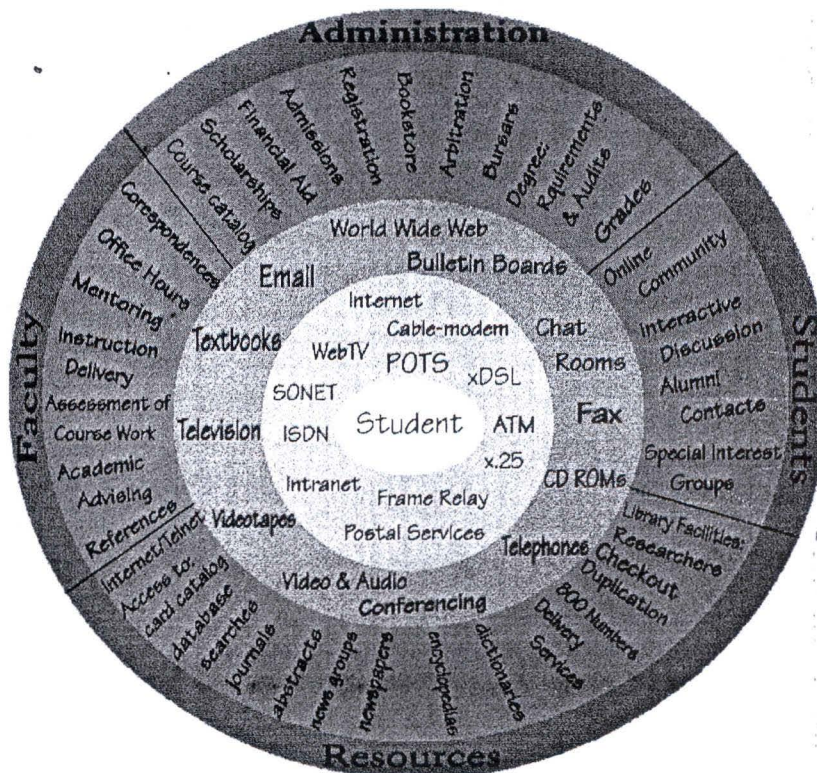Therefore, Aoki and Pogroszewski, propose the following scheme ideal VU (Fig. 2)

FIG 2. - THE FOUR AREAS OF VIRTUAL UNIVERSITY
Source: Aoki & Pogroszewski.

These authors consider that a high degree VU virtualization should be integrated by 4 levels or rings, the center of all the rings will be the student, each ring is divided into 4 areas or components:

1. Administrative component
2. Student component
3. Support resources
4. Faculty

1.2 Educational Model

We comment that while there is a growing interest adults seeking skills upgrading and continuing education. Most UV's tends to offer updated programs.

These elements interrelate according the proposed educational fundaments the general pedagogical model based institutions providing ODL. The educational paradigm that underlies virtual education is the "modern" brings a paradigm shift in traditional working in higher education, UNESCO indicates that these changes are characterized by:

- In a teacher-centered teaching to learning-oriented and student resources.
- The mass educational work of the individualized labor.
- From closed systems to open-systems without formal parameters.
- The provider-based curriculum to one based on the user.
- The classroom and performance work based learning contexts.
- From isolation to grid environments.
- From teaching to the interactive way.
- In Educational Management resistant to change to a proactive management. [5]

This educational paradigm is not entirely new, it is a pedagogical movement that was born long ago, but in the absence of the features of new communication and information technologies, the model remained relegated.

The interactive multimedia and NTCI making this change possible control information because you can now find educational software in many stores as well as CD's, self-learning, in turn NTCI for distance learning, such as the Internet, are available to the learner.

Changing the learning model (model centered on campus and / or teacher) to a student-centered model, is accelerating.

In this student-centered model also arises because there is a confrontation with the traditional school, where the educational system tends to focus on the acquisition of facts and concepts as basic forms of learning. While constructivist teaching trends and competency considered important it is not only the student knows, for example, add, subtract, multiply and divide, but also know to use and apply that knowledge in real contexts and situations and under certain reflections of behavioral significance (ethical sphere). In this way you can reduce the gap between theory and practice, between knowledge and action.

1.3 Moodle Platform

Moodle is an acronym for: Modular Object - Oriented Dynamic Learning Environment. Moodle is an Open Source Course Management System (CMS), also known as a Learning Management System (LMS) and / or a Virtual Learning Environment (VLE).

It is a very useful tool in the educational field, allowing teachers the management of online courses through the Internet to students, teachers facilitating the management and development of the courses. It has its roots based on constructivist theories of social construction of learning. Therefore requires the broad participation of the student for self-study.

Among the main features of the Moodle learning platform include:

- Promotes the construction of learning (collaboration, activities, interaction, critical thinking, etc..).

- Appropriate for online learning to supplement classroom learning.
- It has a simple browser interface, lightweight and efficient.
- Offers a range of activities for the courses: readings, presentations, forums, glossary posts, wiki, among others.
- Let's have a complete record of user access, their assignments, assessments and messages.

A date for these features mentioned Moodle is used in 233 countries, with nearly 70 million users. [6]

2 METHODOLOGY

We now present the first results of use of the Moodle platform in the first online master's National Polytechnic Institute, highly recognized institution of higher education in Mexico.

This master "scientific Teaching and Technology" was first opened in 2012, its headquarters is the Center for Economic Research, Administrative and Social (CIECAS) in Mexico City, Mexico. As the first master that was offered online decides to start with a small group of students who passed the admission process and interview (22 students). While it is a distance masters in this first release all students in turn lived in Mexico and sometimes (beginning and end) were asked to attend introductory lectures and evaluation face end of the semester.

Its general objective is: Being able to perform in teachers teaching with a scientific, technological and social, with fundamentals and teaching skills in the pedagogical-didactic, supported by innovation, research and the use of information technologies and communication, with emphasis on building and knowledge management, collaborative work and mentoring role, linking students to society through projects aimed at solving real problems and needs.

Each student had his doubts and senior advisor for academic support. Months prior to the start of expertise worked with multidisciplinary design teams of the subjects to cover aspects of subject content, pedagogical assistance, visual design, consulting Moodle activities, evaluation forms.

3 PRELIMINARY RESULTS

Here are the first results, in the sense that mastery is still in progress and evaluation.

According to the authors analyzed previously, this expertise does not have a high degree of virtualization, in the sense that Aoki & Pogroszewski comment that should have 4 main areas:

1. Administrative Component
2. Student Component
3. Support resources
4. Faculty

For administrative procedures, they were asked to physically attend unity, because these services are not available in the virtual system.

As for the student component, while they had opportunity to interact via messaging, forums, friendship was observed outside the Moodle platform, as there were groups of friends who looked and talked in person. Sometimes when they had doubts platform applications, they communicated with students to exchange views, then already communicated with the assessor or general coordinator.

Support resources. As the first half especially in technology support, there was a little delay in solving questions of both students and teachers, as they used to the platform. For academic support resources, if cover the expectations. The Moodle platform worked well but there is a need to master the technical and materials for teachers, all handling capabilities assignment due dates, grades, among others.

The faculty, comprising teachers, continued face meetings to observe the development of the course, problems, situations of students, organization. Sometimes if there were problems with a student progress, was requested in person to speak with the teacher and / or counselor.

This indicates that even though the system was remote, it was actually in mixed system (blended), under which was the first half. Evaluation will continue to review whether the program is virtualized or

otherwise more becomes face. It also will continue to evaluate whether this model realize this technology generates more skills or competencies in students.

The virtualization of a program is not given only by the use of the Internet in this case Moodle platform, one can not call virtual university to provide some materials online. Virtualization covers as mentioned above, different services. So far on the present case, failure to provide more online services. Sometimes question for all stakeholders is difficult, it always has worked most of the time presential systems and therefore is considered to be the best option to work.

REFERENCES

[1]   Maldonado, N. (2002). La Universidad Virtual en México. ANUIES, México. p. 69

[2]   Amador, R.. (1998) "Democratización Virtual de la Universidad. Un ejercicio de Imaginación". En Didriksson, A. (Coord). Escenarios de la Educación Superior al 2005. México, CESU-UNAM. p. 46

[3]   Lévy, P. (1998). "La cibercultura y la educación". Ponencia presentada en la Conferencia: La Universidad en la Sociedad de la Información. Sao Paolo, Brasil. 23-25 Oct. 1998. http://www.infoage.ontonet.be/levy

[4]   Aoki K. & Pogroszewski, D. (1998). "Virtual University Reference Model: A guide to Delivering Education and support Service to The Distance Learner". Online Journal of Distance Learning Administration. University of West Georgia. Distance Education Center. Vol. I, Num. 3, Fall 1998. En: http://www.westga.edu/~distance

[5]   UNESCO, Higher education for a new society: a student vision. World Conference on Higher Education.Paris. (Document ED-98/CONF.202/14) En: ww.unesco.org/education/educprog/wche/index.html

[6]   https://moodle.org/stats