# Open and Distance Learning Methodologies in Higher Education

Spanish National Distance University (UNED-Spain)

Cacheiro,Mariluz mcacheiro@edu.uned.es
Rodrigo, Covadonga covadonga@lsi.uned.es
Laherran, Gorka glaherran@invi.uned.es
Olmo, Alicia aolmo@pas.uned.es

*Many students in a virtual university simply tend to post their ideas or read others' ideas without engaging in deep thinking processes such as analyzing, evaluating, and synthesizing ideas. (...) Exploration and construction represent divergent and convergent aspects, respectively, of knowledge building.*
(Chung, 2003:42)

## Abstract

The Spanish National Distance Education University (UNED) Model is presented in which traditional distance courses are complemented by CiberUNED services. The methodology used from the teacher's point of view is analysed and an overview of the strategies that has been emphasized using virtual courses are presented. The Avicenna Virtual Campus Research Eumedis Project is presented.

## 1.- Introduction

Distance Teaching Guidelines has been influenced by permanent educational and technological research and development activity. The evolution learning interfaces and usability research reflects the helpful interaction of educational and technological experts in open and distance learning course production.

The new paradigm of the Web Design in Educational Contexts has been integrated in the Blended Learning Model in which traditional distance teaching has an important role for the success of learning process.

From a Pedagogical side Templates to prepared learning modules has been developed to help teachers during the interactive online course design.

## 2.- Open and Distance Learning Guidelines

Distance Education is immerse in the new Information and Communication Technologies (ICT) Society. After a period in which Computer Based Training was considered as the solution for continuing training in enterprises; nowadays the called blended learning approach has been demonstrating the adequacy for self-learning students.

One of the specificities in Distance Education is interactivity that takes place in either synchronous or asynchronous time. ANDERSON (2003:133) presents six types of interaction: Student/Content, Student/Teacher, Student/Student, Teacher/Content, Teacher/Teacher, Content/Content (Figure 1).
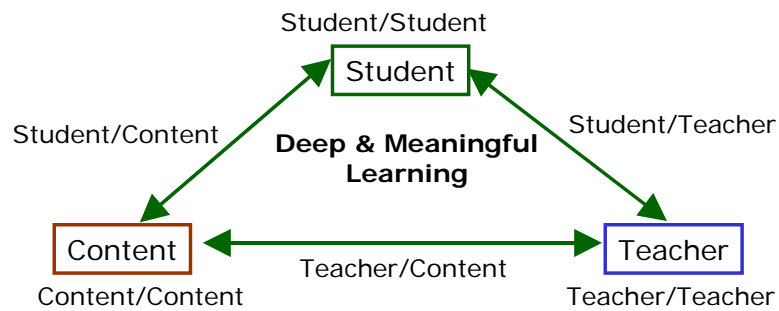
**Figure 1. Modes of Interaction**

A clarification of the different modes of interaction is presented (ANDERSON, 2003:134-139):

- *Student/Content.-* Some virtual forms of interaction of student-media are: linear, support, update, construct, reflective, simulation, hyperlinked, immersive, nonimmersive, etc.
- *Student/Teacher.-* This type of interaction is dependent on the instructional design and selection of learning activities developed for the instructional program.
- *Student/Student.-* This interaction has pedagogical benefits derived from the deeper ideas to formulate to be share to other learners, the motivational component of exposing one's views.
- *Teacher/Content.-* The role of teacher-content interaction is focused on the instructional design process. Teachers has a key role in the creation of learning objects.
- *Teacher/Teacher.-* Interaction between and among teachers is important to take advantage of developments in both their discipline and in distance teaching.
- *Content/Content.-* This interaction has to do with internet search engines that send discoveries back to a central database.

The new paradigm of online learning is characterized by "its ability to create critical communities of inquiry" (GARRISON, 2003:113) composed by three elements: social presence, cognitive presence and teaching presence (Figure 2).
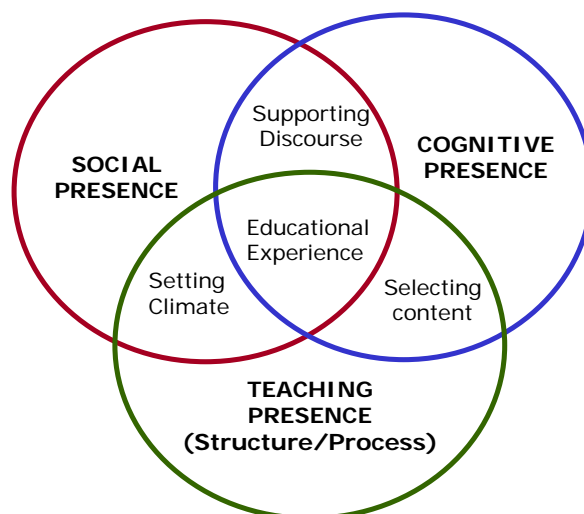


**Figure 2. Elements of an educational experience: Communities of inquiry**

This overlapping elements are important to understand the functioning of this community of inquiry. The Social  presence is defined as "the ability of learners to project themselves socially and emotionally". The cognitive presence is defined as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry. Finally, the teaching presence is defined as "the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Cfr. GARRISON, 2003:115-116).

## 3.- Open and Distance Learning Methodology for Virtual Courses at the UNED

The blended learning model use by UNED (Figure 3) is based on the complementary elements for teaching and learning purposes taking into account the different contexts in which the educational process take place.
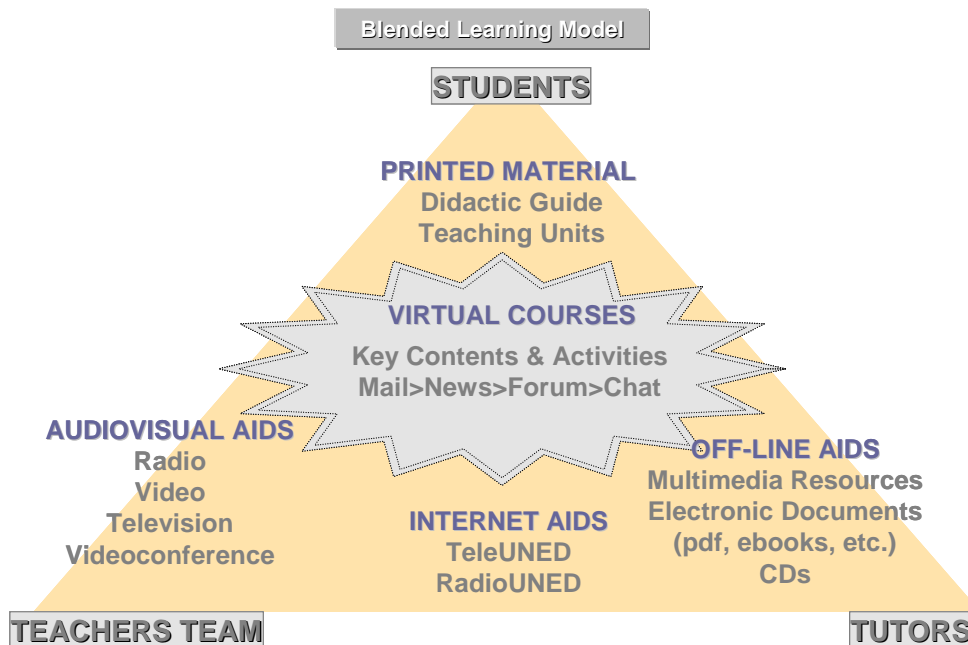


**Figure 3. Blended Learning model at UNED**

In order to manage online course production the "Online Course Production Support Unit" of the UNED offer facilities to teachers to prepare digital contents, services and tools.

Pedagogical guidelines to produce online courses are aslo provided to have a common structure that will benefit students workload and  tutors assessment.

The methodology used combine technical and pedagogical expertise. As shows in the figure the teacher tasks are related with the content selection and design of activities taking into account the platform possibilities and basic common structure (Figure 4).
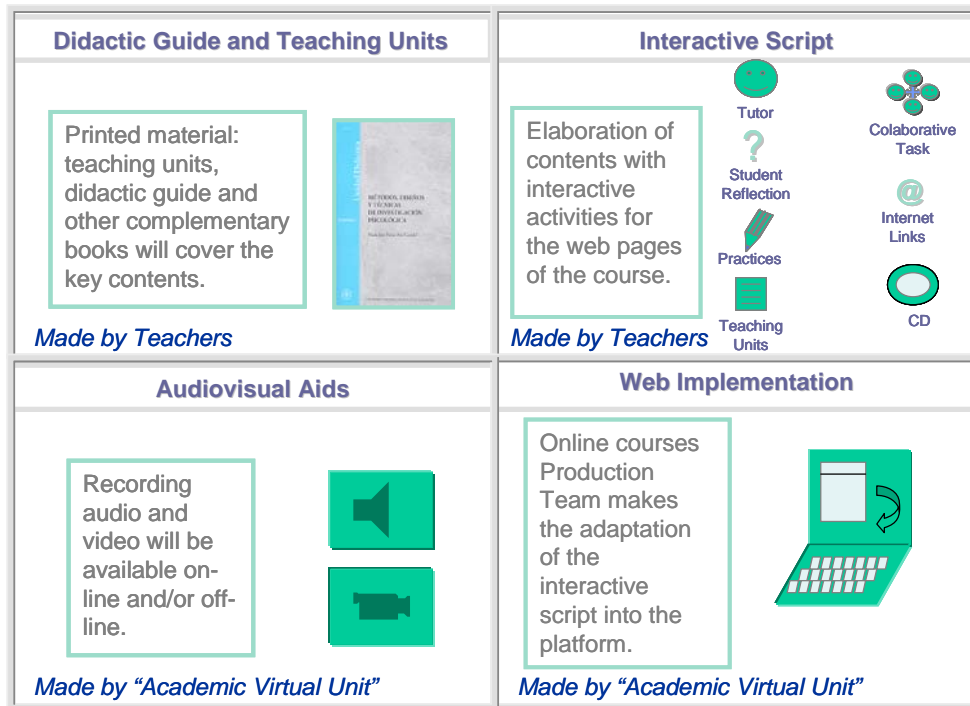
**Figure 4. Teacher's Tasks in the course production**

One important aspect for designing virtual courses is to have a methodology that provides Pedagogical Design Templates for open and distance learning modules. The pedagogical templates will offer several prototypes to organize learning activities.

## 4.- Avicenna Virtual Campus

The Spanish participation on the Avicenna Virtual Campus (Figure 5) has been concentrated in different aspects: the pedagogical model; the virtual library and the production of a web accessibility module.
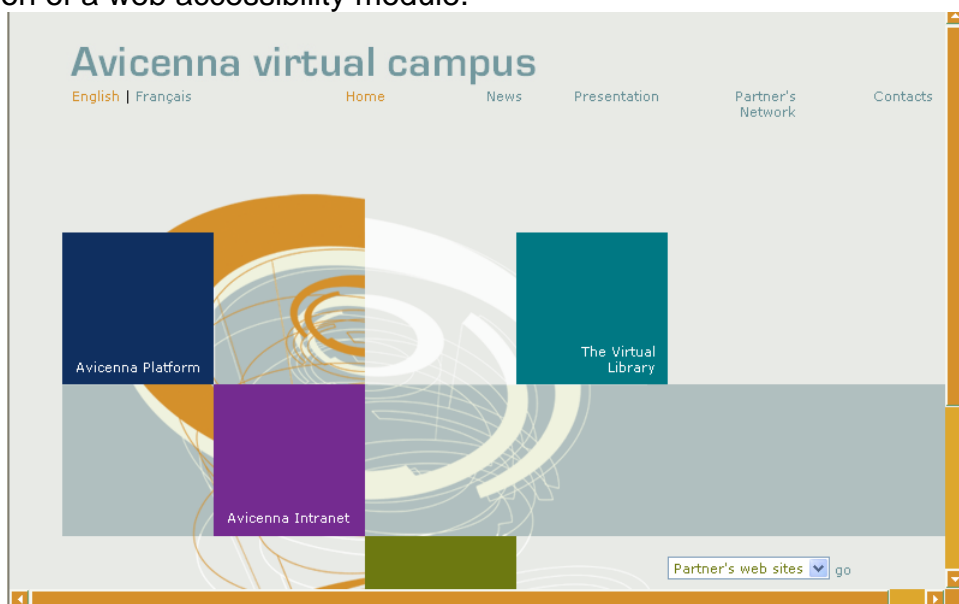


**Figure 5. Avicenna Virtual Campus**

A General Structure for online courses has been defined among partners to be applied and adapted in each University Model. Items selected at this level are: I.- Introduction II.- Sessions III.- Resources IV.- Evaluation (Figure 6).

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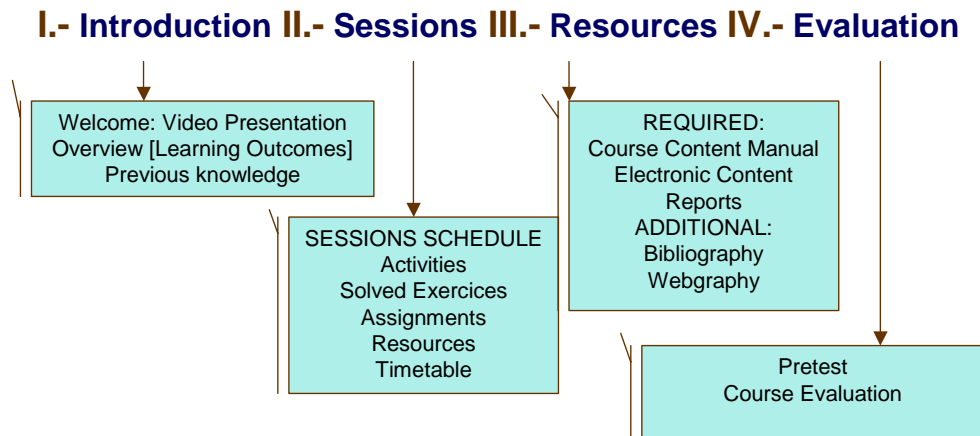


**Figure 6. Avicenna Pedagogical Model**

For each learning session activities, exercices, etc. has been prepared to promote the interactivity between students and contents. Communication services has been used to share reflexions about the practices. A continuing evaluation based on the eportfolio has been proposed.

## References

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