



BLENDED LEARNING THROUGH INTERUNIVERSITY COLLABORATION INTERACTION

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Summary

Purposes:

- To present an initiative of blended learning as an technological innovation introduced by Educational Technology Course , UNLP, Argentina and the CTER , Univ. of Illinois, USA.
- To describe the design and implementation of this on line project of 4 years .
- To discuss strengths and weaknesses of web based tools for virtual collaborative interaction.
- To reflect about “good practices” from the educational interuniversity collaboration experience and the results .

Methodology:

Case Study of an innovation by the introduction of a mix of different instructional strategies and Internet tools (web2.0) within an Open Source program for an interactive, constructivist and collaborative environment, within an Action-research

Conclusions

- There are conceptual and methodological differences between the instructional design and the implementation of virtual teaching in b-learning format in comparison to traditional face to face teaching and the pure virtual/e-learning one .
- Electronic education in b-learning format within a socio-cognitive/constructivist, interactive and connectivist framework , promote strong social, cognitive and metacognitive skills development to produce scientific-technological knowledge , enhance student self-reliance and promote the strength of human higher mind functions and reciprocal solidarity.
- The importance of the physical, cognitive and social presence of tutors in teaching guidance/ modelling collaborative proposals.
- The international collaboration provokes a deepening of research perspectives, needed to build the knowledge society of the XXI century.

Introduction

An experience of a tech innovation by an ITC integration in the curriculum of the undergraduate “Educational Technology” course for education majors will be showed by a case of a blended-Learning within an inter-universities collaboration to adapt, not adopt different concepts, practical procedures and actions of technological mediated actions . Indeed, the motivation was to expand explanations about learning and teaching virtual living several practices in communities, including an scientific-technologic action- research to improve the curricula by bilateral agreements whose trends are to develop in internationalize framework different socio- cognitive and technological competences.

The experience is an innovative case of **Education by Internet** as an application of a mix of different instructional strategies within a socio-cultural and interactive, constructivist and collaborative environment using Moodle as the CMS.

Purposes of the experience done:

- To present an initiative of blended learning as an technological innovation introduced by Educational Technology Course , UNLP, Argentina and the CTER – Curriculum, Technology and Educational Reform, Univ. of Illinois, USA.
- To describe the design and implementation of this on line project of 3years .
- To discuss strengths and weaknesses of web based tools for virtual collaborative interaction.
- To reflect about “good practices” from the educational interuniversity collaboration
- To reflect and discuss the lessons learned through the collaboration and the results of the blended learning course.
 - o To deepen an interuniversity collaboration, providing insights about the strengths and weaknesses of working as a virtual team with members from two different organizations in two different countries.

Methodology

Case Study of an innovation by the introduction of a mix of different instructional strategies and Internet tools (web2.0) within an Open Source program (Moodle) for an interactive, constructivist and collaborative environment. In this context , the aims of the bi institutional project were

- To capitalize wealth and palliate weakness knowing that no media is a panacea in learning in general and in remote environments, in particular .
- To explore instructional design strategies that will help to improve virtual teaching and learning
- To study the pertinent combination & articulation of face to face and virtual educational resources discriminating when, what for, etc they will be used and evaluated,
- To train future professors towards critical reasoning in using ICT by a blended learning vivential experience .

Why to decide about doing this experience?

Knowledge society must take advantages from every learning resource where students will be train, work and live . That means that students now and during their life have to:

- search and analyze relevant information from the net
- develop criteria to judge it with quality indicators

- apply and recreate pertinent information to real situations
- work together sharing and elaborating new information
- take decisions along and in groups, based on contrasted information

The hypothesis of the study was : B- learning is better than traditional proposals of distance education as e-learning . According to that this experience is not only to study the “blending” but also to verify the effectiveness of our instructional design proposal of delivery and the interactivity in learning .

We have to define **Hybrid learning as a** combination of on line teaching with face to face as an educational proposal without replacing f2f meetings **and a Blended learning** as a modification of the class schedule to include online and f2f components

Both are unscripted into the eclecticism and pragmatism framework to show that theories and media are not panaceic : they must be combined to improve teaching quality, which implies re design courses and organizations .

The highlights within this Internet experience was and is to recognize that b- learning is a very complex subject (more than e-learning), which impulses and permits students and tutors of different world regions and cultures to communicate, to develop respect each other and share diverse points of view as well as orientations to build knowledge and achieve to many shared results.

Blended teaching and learning appears as an integrated curriculum, to create opportunities for learning that are not found in a traditional pure face to face classroom model within a specific discipline. The frame work of the study showed that teaching in a blended learning program was into a student centered context where the training was designed within situated and **distributed** scenarios, by appropriating network resources, - today in increasing proposals of the social web2.0 , to facilitate expressions and to guide remote students, during their learning.

Consequently some of the **advantages of b –learning** are linked to select evaluated lots of educational electronic material available in the net to appropriate and process them in order to design didactic activities to share f2f and in remote ways, without printed or copying it. The scalability (Murphy, 2003) which is the ability of these innovations to be applied and to be transfer to other courses, students, etc . are important here, too. Plus a mix of resources (Marsh, 2003) based on didactical objectives where it is possible to analyze *usability* , when the interaction with the content, its structure, navigation map, several resources , graphics, etc. by the student interface interaction.

More than ICT and artifacts....

The experience showed that invisible technologies , cognitive styles and metacognitive strategies , among others,are more important that equipments. Because it is not only to learn more but in a different way with the development of information management and collaborative teams to evaluate resources, to elaborate knowledge based by contrast.....

That and more implies to research the field of the Educational Technology – from a critical perspective and its practice mediated by technological projects and materials within the rationality of practical, communicative, and critical actions.(Habermans, J)

That means to deepen the Appropriated and Critical Educational Technology field as an special technological discipline whose object of study is the technological educational mediations, as historical, socio-cultural, pedagogical, and semiological tools, produced and distributed in diverse supports, in order to promote different commands for higher functions

of thoughts, because learning takes place at diverse scenarios of face-to-face and distance teaching practice.

To respect cognitive styles, multiple intelligences and self pace within the electronic mix in the collaborative learning using ICT with the Open Source of Moodle and LCMS (Learning and content management system) , in an action-research to rescue “good practices”, were the challenges of this experience.

How do we have reached to incorporate ICT in the course for the b-learning proposal?

Following the criteria to Interface Design taking into account different perspectives to integrate ICT from economic-financial, organizational, pedagogical, psycho- sociological, technological points of view within mediated actions, emphasizing the importance of sociocultural approach : situated and distributed learning, collaborative teams, participative role, etc. to develop communicative and *mediatic skills*, on line interaction among students and tutors, continue evaluation with feedback , an exact interpretation of economic and social costs of the experience and the continuity of the help and technical assistance of CTER of Illinois University during the project.

Findings

Beyond the achievement of a friendly and productive direct relationship between university context and the instructional designers for virtual education and the rredefinition of the educational organization and the professor roles within a reflective practice, in this kind of tech innovation , we were interested to verify the “effects with and of ICT technological interaction” in training. We have to remember two different forms of their impact in students abilities, that we contrasted during the formative evaluation:

1) Changes in the student achievement: the interaction with ICT and programs shows that the contact with an intelligent artefact marks what the students does and when, as well its processes and results quality. This possible product are called by Salomon as an *effect produced with the technology*.

2)Lasting changes and transformations, which we can observe in the student cognitive development in the long term as a consequence of the interaction with intelligent technologies. These ulterior effects belong to the knowledge domain and to the deep comprehension showing different competences, beyond the student interaction with ICT. These results are called as an *effect by the technology*.

Both observable during the achieved contrasted coherence between theoretical and practical productions and approaches ; the physical, cognitive and social presence of tutors in teaching guidance and modeling collaborative proposals and, the preparation of self tailoring interactive materials, tools and spirit designed to guide the students ´s in the b-learning experience..

But there are not definitive findings about the inclusion of MI / cognitive styles, towards indications to combine f2f and virtual teaching: we implement the proposal eeclectically and pragmatically by empirical and contrasting practice ways, with the application of cognitive , socio-constructivism and activity educational theories in the design.

Evaluation of learning and the program

Two directions accompanied by an action research to evaluate the experience:

1: *regulation and adjustment of communicative* circuits, appropriation of tech tools, comprehension of content subjects and work methodologies , reconstruction of meta-cognitive achievement and weaknesses by using e- *portfolio* , *diaries*, etc.

2: formative *evaluation of the implementation process of b-learning by quantitative tools, ethnographic observations, feed back to students which sent in time and shape their individual and collaborative production by Wiki and Webquests productions, among other didactic activities.*

We could see “strengths and weaknesses of the virtual collaborative interaction” by the issues of student’ s satisfaction, learning effectiveness, the blended environments, and the results of the action-research to contrast -within the ICT medited practice- the “comprehension” teaching with the development of higher functions of mind by situated, significative, interactive, distributed and collaborative learning situations.

Conclusions

- There are conceptual and methodological differences between the instructional design and the implementation of virtual teaching in b-learning format in comparison to traditional face to face teaching and the pure virtual/e-learning one . Significative increasing in an active commitment in teaching and learning process –separately- towards a student oriented model: the more activities we prepare, the more they will interact, understand and transfer....

- Electronic education in b-learning format within a socio-cognitive/ constructivist, interactive and connectivist framework , promote strong social, cognitive and metacognitive skills development to produce scientific-technological knowledge , enhance student self-reliance and promote by cooperative works, the strength of human higher mind functions and reciprocal solidarity: it is done in an irreversible way and seen by step by step during the student increasing in exploiting the hugh material available in Internet, by a simultaneous teaching of comprehensive and critical reading of it.

- About the Interuniversity virtual collaboration experience and good practices, we can say that it provokes a deepening of research perspectives, needed to build the knowledge society of the XXI century. **But b-learning courses do not reduce costs but it improves the quality of education with innovative strategies. But ii is not easy to determine it :** a lot of research is necessary to underline the benefits of b-learning looking to an increasing of productive results . Education- technological innovations are enterprises/ investments for a long term which implies strong cultural, organizational , curricular and mentalities changes.

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