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Case Study: Blended Learning Through Interuniversity Collaborative Interaction

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Objectives

- To present the blended learning initiative as a technological innovation introduced in the Universidad de La Plata, Argentina, with the CTER of Illinois University.
- To describe the process that led through the design and implementation of this 3-year project via online mediated communication between the people involved.
- To discuss the strengths and weaknesses of Web-based tools for virtual collaborative interaction.
- To reflect and discuss the lessons learned through the collaboration and the results of the blended learning course.
- 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.

1- Introduction to an international collaborative proposal.

This presentation introduces the experience of a technological innovation by ITC integration in the curriculum of the undergraduate “Educational Technology” course for education majors at the Faculty of Education Sciences in Universidad de La Plata, Argentina. The building of a knowledge society determines as necessary new relationships, based on new strategies of inter-universities collaboration in order to adapt different concepts, practical procedures and actions of technological mediated actions. One of these is the case that we are presenting of a blended-Learning proposal.

CMC and Internet provides great opportunities of inter and transnational collaborations to expand learning and practice communities (Slavin, 1990), including scientific-technologic action-research. This kind of proposal has the goal of improvement of the curricula by bilateral agreements whose trends are to develop internationalized socio- cognitive and technological competences depending on connectivist and socio-constructivist communication, teaching and learning models.

The aim is to work and build together towards an evaluation /accreditation system for virtual higher education which includes technological innovations. Every university should be invited to participate and contribute to this articulated and convergent international inter-university program. To internationalize should mean to deepen democracy. Education for democracy (from Dewey to Giroux) means pointing out an ethical event that enhances human values and rights in order to compensate the increase of material and symbolic violence all over the world.

2- Process description led through the design and implementation of this 3-year project via online mediated communication.

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 in the Moodle open source software, which in connectivity terms, uses Internet language and tools.

The configuration of teaching in a blended learning program in a student-centered context (Khan, 2001), where the training was designed within situated (Welsh, 1997) scenarios, by appropriating network resources, is to guide remote students.

Among different features, the intercultural communication was and is important to highlight Internet experience which impulses and permits students and tutors of different world regions and cultures to communicate, respect each other and share diverse points of view as well as orientations to build knowledge processes and achieve many shared results.

The blended learning proposal determines many effective curricula decisions to select, combine, implement and evaluate diverse and articulated technological media and ICT mediations within the course instructional design (Fainholc, 2004). This blended-learning implementation was completed by a qualitative action-research in order to monitor and contrast the combined teaching strategies, selected by the designer team and the professor.

It is easy to understand the technological mix for this socio-educational mediated work, which means nothing by itself. The main point is to help to understand technology as a great accelerator of conceptual and methodological proposals when they work well. To articulate technologies in deficient socio-educational environments that run on anachronistic or traditional models, without update or evaluation, making technology not better but worse.

The process of collaboration for the design, implementation and evaluation/ research of this 3-year project consisted of different stages:

The first stage –during 2004- was concentrated on the design of the blended learning course, the training of the faculty member and assistants in the use of the content management system (Moodle), the analysis of the content management system applications and the pedagogical decisions that motivated their inclusion/ exclusion into the course. We have included many interactive sessions by teleconferencing to achieve self-reliance on the technical system, the use of “Diaries” in order to strengthen the metacognition skills development and so on during the study and application tasks. This was very important to be taken into account because the users of the course will be future professors.

The second stage –during 2005 – focused on the course itself: to improve *quality*. We understand by “education quality” the integration into the educational practice, of different strategies, products and services that are useful, valuable, viable, accurate, realistic, intelligent, and ethical from the point of view of instructional and technological design and implementation. They have to demonstrate improvement by its articulation into conceptions and pedagogic practices during the interaction of the ICT hardware, software and mindware selected.

In this stage it was essential, in consequence, to reformulate the content and its didactic sequence and the instructional design as well. The selection and combination of communicative strategies as well the asynchronous/synchronous ways of interactivity and the competences evaluation, related to the learning objectives of the course within the hybrid modality, were the chosen operations.

In the third stage – during 2006- different moments of the technical assistance from the American university was covered, which continues today, in order to adjust the Moodle systems depending of the instructional, cultural and linguistic (the course is in Spanish) local requirements.

The fourth stage –during 2006 and the present 2007- shows a reflection of the lessons learned during the experience with the adjustments that the designer and faculty team have done, and it makes suggestions to introduce future developments in other university blended learning projects.

Finally and as a consequence we can see an improvement of the planning and application of ICT in the learning activities, in format and time, by doing the exercises, solving problems by collaborative elaboration, by individual and group assessment (portfolio) done on line and by forum discussions, etc, mixed with face-to-face activities, specially to make clear some doubts about Wiki and webquests, reinforce emotional communication, to deepen and strengthen some concepts related to formative evaluation, promotion of metacognition skills and independent habits of study/ resolution, to prepare the assessments to enhance the self awareness of the student's own learning path.

3-Strengths and weaknesses of different Web-based communicative technologies for virtual collaborative interaction, shows:

Strengths

- a) *Reinforcement of independent study habits* and autonomous pedagogical organization of time and place by structured material and activities, in asynchronous/synchronous communication among students and professors - tutors,
- b) *Increase of the interactivity* (Thornton, Jefferies, Jones, Alltree, & Leinonen, n.d.) and the communication by encounters off/on line towards the completion of collaborative tasks, which involves a great socialized possibility to develop respect, solidarity, diversity and socio-emotional skills
- c) *Broadcasting wide access* has facilitated speed and technologic convergence.
- d) *Methodological strategies and technological resources* facilitate cognitive and self-monitoring skills¹ development of students during the pedagogical and technological interaction, face-to-face and virtual, synchronous and asynchronous. It was observed and registered during the interaction and inferred by the qualitative action-research
- e) *Commitment and enthusiasm*. Traditionally, the course of E.T. has a high prestige in the local university: the students are very committed to it: they come on time to the classes and study a lot. Nevertheless, the dropout rate is high at university courses in Argentina. Different reasons can explain this: from socioeconomic ones to low independent study habits shown by the students. But not in this course as they approach their graduation. Their enthusiasm, which was satisfactory, increased the further the courses continued in the experience.
- f) *Use of Moodle software* showed richness, usability and flexibility in the didactic functionalities of its environment according to the modular design because it supported the use of different strategies of teaching through its interface.
- g) *Students' participation increased in this b-learning proposal*, by the conceptual and technical features; comprehension of the site; the practical exercises with high achievement in the tests; the increase of the identification and feelings of belonging, etc. because they take part in a learning community; within a high and frank interaction with the professor. Related to the role of the professor, we observed a demystification phenomenon due to the fact that she/he works to facilitate in a deformed context, the learning processes together with the students. The students also enjoy the interaction with the new ICT applications overcoming fear and enhancing self-confidence/self reliance by participating in discussions of real problems.

¹ The cognitive and metacognitive skills were: a) search stored information, researching how it is produced, to formulate questions, to use libraries, Internet, and other reference material; b) information assimilation and retention by listening in a concentrated way to increase comprehension, more attention to have understanding and remembering of how and where is the information to be codified to increase the configuration of mental representations; c) to learn by establishing priorities, etc. d) Inventive and creative skills developing inquiring attitudes, inductive reasoning, to generate ideas, hypothesis and predictions, to anticipate new perspectives, to use analogies, to explore interesting facts, to avoid rigidity by the problem solving, etc.

Weaknesses

We could see:

- a) At the same time and in contradiction the *professors do not assume their role changes as whole because* they, in some of the classes, return to the prior expositive or traditional way of delivery.
- b) It was seen how the *screen took the attention of the students (distraction)* including the fact that many of them used the PC for checking emails and it is necessary to repeat many times the instructions concerning to the class.
- c) *Technical problems* during the course made it impossible to access and interact with Wiki and this frustrated the students to experience and take advantage of this collaborative and creative work.
- d) *Students virtual production*. Although 80% of the students could send exercises in time and format, a lack of conceptual comprehension of technological-didactic activities to be done was visible, as well as the achievement of deepening the semantic relationships, and so forth, maybe because of a prior lack of prerequisites, motivation or independent habits of study.

Conclusions

This experience in blended learning shows: (a) It is an important strategy to improve the quality of learning processes and results towards new models within the knowledge society, which requests universities to train specialized professionals and producers of scientific and technological knowledge; (b) it is not better than e-learning or other distance teaching strategies with ICT: its advantage is given by a good technological and educational design, pertinent selection and combination of electronic and conventional resources and a good management of the university organization that monitors high formative results with the satisfaction of the users (students and professors), because it satisfies in the best way their needs and possibilities as actors of social uncertain scenarios; (c) the rescue of good practices of this virtual interuniversity collaboration experience by members from two different universities and countries only was achieved because they supported themselves in the communicative rationality² with their pillars of participation, negotiation and respect, more than the use of equipment by an instrumental rationality, which emphasizes the media-ends equation; (d) it appreciated and took into consideration social, cultural and linguistic needs; (e) it led us to believe that a definitive quality concept doesn't exist everywhere and is accepted for distance educational programs with ICT; and (f) it served to identify technical, academic, pedagogical and ethical requisites concerning the decisions to build self-regulated virtual learning environments.

Several questions provide insights into the b-learning proposal from the point of view of the faculty during the experience. Some of them, but not final answers, could be:

- To achieve friendly direct relationship between university context and curricula/instructional designs for virtual education,
- To contrast coherence between theoretical and practical approaches,
- Increasing interactive spirit and materials emphasizes actors' social commitment for the continuity and evaluation of the program,
- The electronic strategies and displays have to be specially designed to help and to guide the students' learning and professors' teaching. The teaching experience is important to be accompanied by and action-research as an evaluating experience of the program.
- It takes time to build tutors' training for the facilitation, guidance and orientation of the content and activities of the virtual program and the same referred to the academic and critical attitudes to improve the educational project and achievements.

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