

## **Virtual teaching in a society of learning**

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**Abstract:** This article relates a reflexion on the experience of authors as teachers in the E-learning modality of university-level teaching.

Presently we live in the peak of the new technologies of information and communication that has been marked by great changes in our social, cultural and economical routines.

The revolution we've been living through in the past decades has given rise to new ways in the educational context and the permanent development of the technologies of information and communication has given potential to educational strategies, mainly in long distance education.

The use of Technologies Information Communication has contributed towards the transformation of the student. A part of this transformation is related to the application of technologies to the educational resources in long distance education, as a vehicle to reach "new" students and to develop new teaching methodologies that can be used as a complementary or replacement mechanism for conventional teaching.

**Keywords:** E-learning, information and communication technologies and education.

### **1. Contextualization**

In the last few years, learning practices of a cooperative/collaborative nature have been gaining notoriety among educators. In particular in the field of long distance education with the application of new information and communication technologies, witnessing a multiplication of studies and researches that seek to explore new ways for students to interact and learn in both conventional groups and in virtual learning environments.

However, the spread of these practices, conventional or otherwise, doesn't take place without difficulties and resistance. Mainly, it's fundamental to rethink the processes of teacher training, as well as the organization and context of his work. On the other hand, other challenges are presented: the lack of scientific basis of new information and communication technologies and their applicability in both conventional and long distance education; the unfamiliarity of constructive approaches and methods of collaborative work; the way how the teacher's work is thought and structured, isolated from other disciplines involving little or no multidisciplinary and trans-disciplinary collaboration.

If student collaboration has been increasingly studied and given incentives, the same is not true for teacher collaboration. The teacher's work, online or offline, remains almost to a full extent an individual activity, for collaborative teaching is seldom seen or practiced. However, some examples do exist, such

as when a teacher invites another to lecture in his class (shared teaching); or when teachers gather to evaluate a class's performance.

E-learning represents "education and training in the World Wide Web" (Keegan, 2002), although it can also be defined as a type of long distance teaching mediated by computer.

Indeed, long distance teaching is characterized by: "An almost permanent separation between teacher and student during the learning process, and the establishment of bidirectional communication and dialogue (online or delayed)".

E-learning has a methodology underlying to it, based on the assumptions facilitating access to knowledge, that reflect learning mechanisms centred in the student and his active participation in the search for knowledge, not forgetting a permanent incentive to his motivation and interest.

The technological revolution carries with it new challenges for education, in that the effective use of new technologies requires a constructive support environment so that students have to learn the art of thinking, cooperating and learning in a virtual space, just like teachers have to relearn the art of teaching, developing a set of pedagogical strategies and technological abilities adjusted to this new environment of teaching/learning.

The main theories of long distance education brought to pedagogy a new perception of the dimension of learning space and time. In conventional teaching the synchronization required as an essential condition for the realization of processes is re-dimensioned when the same is developed in virtual environments, mainly after the introduction of the internet as a pedagogical tool.

In long distance education the concept of space, in the sense of a physical dimension where the teaching-learning process takes place, demands a new perspective. It's the enhanced classroom, assuming new forms, making knowledge available to distant places where knowledge is of difficult access. New communication technologies, especially the networked computer, brought us a new way of understanding distance, enhancing its relativity.

## **2. Online teaching - an emerging reality**

The use of information and communication technologies has contributed for the transformation of the student. A part of this transformation is related to the application of new technologies with educational resources for long distance education, as a vehicle to reach "new" students and develop new teaching methodologies which may be used as a complementary or replacement mechanism for conventional teaching.

The educational area has seen an improvement in the teaching-learning process with the technological changes that appeared through the internet.

The diffusion of the internet in society has produced an impact in several areas, among the education sector.

The E-learning long distance teaching methodology allows the circulation of information in real time with access to all interested parties, in any place and time, as long as users have a networked computer. That allows for different learning rhythms that aren't possible in a conventional learning structure.

E-learning allows the use of asynchronous communication, which itself allows for greater reflexion and maturity of knowledge, and synchronous communication, like chats, that may help promote a sense of belonging and the feeling of being in a classroom.

One of the main obstacles that stop students from undertaking an investment in learning is related with the "25<sup>th</sup> Hour" cultural attitude. Students generally lack the self-esteem and self-reliance necessary to recognize themselves as holders of enough potential to learn by themselves.

It is usual to restrict moments of learning to a determined place or time, and all that goes beyond that notion is considered of inferior quality. The very model that sustains the new paradigm more focused on the student, suggests that learning takes place with several incremental steps, building and adapting new mental models as learning occurs.

Current E-learning methodology is too connected to the repository of learning objects and there are still under-defined strategies to bolster learning in a context where social space assumes all its virtue and significance.

Indeed, as long as there isn't a community area for the transfer of knowledge and social sharing, the dropout rates of the teaching/learning system will continue to rise.

It's necessary to meet the real demands of students. It's necessary to invent new ways to accompany students that allow for a better degree of surveillance of the students' degree of motivation and satisfaction.

One obstacle to motivation identified by students is the volume of work and contents predicted for exams that cast aside concentration and effective learning, for the absence of immediate goals doesn't bode well for reflexion and planning from the students.

The need to rethink learning models that use the web not only as a tool to access and transmit information, as well as a means for the construction and transformation of information into knowledge, is a priority in professional teaching, forcing the use and implementation of comprehensive education and training in E-learning and B-learning modalities.

For Gonçalves (2006), an E-learning system represents a learning environment where the distribution of multimedia contents, social interaction and learning support are based on the internet.

Students study in the place that is more convenient to them and at their own rhythm and can more easily conciliate their studies with their professional commitments.

In our days, information and communication technologies are being transformed by the emergence of multimedia technologies for mobile communication and the diffusion of several systems of wireless networks. The integration of the computer world in mobile voice and data communications enables new models of interaction, communication and collaboration. The limitations of space are getting reduced, as well as the cost of accessing the internet in any place in the globe, whether through a normal or wireless communications. Mobile devices are a part of the new computer model that promised to revolutionize the world of information technologies, ever since the introduction of the PC in the early 80's.

Computer mediated communication, an event historically dated in the second half of the XX Century, possible thanks to the numeration of information, inaugurates a new environment and redefines established relations between those who use it. In this new environment, people can interact with one another, forming virtual communities, in which the human dimension may flourish and manifest itself, including those communities of teaching and learning.

Otto Peters (2004) by discussing concepts and models for long distance education, makes clear all the differences between this modality and conventional education (face to face), in a classroom. "It's a totally different approach, with different students, objectives, methods and above all, different methods in educational policy (Peters, 2004). After distinguishing and characterizing some models of long distance education, he makes reference to a global online long distance teaching system" (Peters, 2004).

Since the decade of 1970, educators understood the potential to teach and learn online, through the use of learning networks, based on the possibilities of the community mediated by computer. Since then, Linda Harasim (1990) defends the idea that online education is "another domain" different from the domain of traditional education and also distinct from the domain of long distance education in general.

In conventional education, interaction is dependent of time and place. Traditional long distance education doesn't depend on time and place, but the interaction takes place in "one on one" format (teacher-student) or "one for all". Online education, however, doesn't depend of time or place and the interaction is of the "all for all" type.

The key attributes of this new environment are its asynchronous nature, the non-physical aspect and interactive communication. This combination of attributes defines the specifics of online education.

Education is a social practice historically placed and goes beyond all human activity, spreading to the network of relations that takes place in the social fabric, mediated or not by some kind of technology. Online education – that is, computer mediated communication – for educational purposes carries with it questions relative to its teaching and the overall nature of online learning. Online education constitutes a new professional configuration, a possibility of the effective use of teaching and the effective construction of knowledge from another spatial-temporal logic, without losing sight of the objective conditions of social networks, in particular new forms of social connections brought out by wider social changes, strongly marked by a technological presence.

When considering technology and education, especially education based on technologies, one cannot lose sight of the necessary contextualization for that social practice and the different forms in which it manifests itself, aiming for the limits and possibilities within the wider social processes in which they are inserted.

It's increasingly frequent to find, in literature, references to case studies about the great acceptance of combined pedagogical methodologies by universities.

With the enhancement of the pedagogical possibilities of the internet, the emphasis is placed ever more on the importance of the formation of collaborative learning communities in a context populated by multimedia and the adoption of varied combined learning methodologies.

Thus we see the appearance of blended learning, also known as B-learning that not only offers new and innovative combined pedagogical methodologies, but also became a very effective and motivational approach for students.

B-learning is the combination of several pedagogical methodologies and learning contexts (online and conventional).

Universities have already begun studying ways to reach their audience with strategies that combine the versatility of E-learning with the personalization of face to face contexts, mixing activities based on the resolution of problems, physical presence sessions, online events of synchronous and asynchronous nature with independent studies, all so that a flexible learning context may be achieved, allowing for different publics to respond to the same work proposals, but without constraints of time or space.

The relation between online moderation and students brings down dropout rates of institutions and stimulates those who don't think themselves capable of finishing their courses for whatever reason. Reality led some institutions to understand the importance of student support teams, whose objective is to offer all necessary information as well as getting students involved in the course. It's fundamental to form a monitoring team for combined activities, facilitating the creation of links of belonging, an affective connecting of the students towards the course, and consequentially, of greater motivation for proposed activities.

Online collaborative teaching is a teaching modality that uses information and communication technologies, making full use of its resources, potential and advantages. In the same way that online education devices favour flexible collaboration and distance among students, they may equally favour the collaboration among teachers.

### **3. Final thoughts**

The development and use of information and communication technologies in several areas of social activity, and mainly in universities, comes to offer a challenge to teachers and programmers and educational products, thus being necessary for all to understand, especially teachers, that the difference is not in resorting to new technologies, but in the way those technologies are used to construct knowledge. For that, it's necessary to offer teachers adequate training, that allows them to fully understand the technological tools they are given, so that they feel the necessary confidence for the good performance of the important missions entrusted upon them (Coutinho, 2007).

Teachers, although conscious of the full potential of E-learning and B-learning methods, are still unaware of many of the functions of information and communication technologies, as well as revealing some concern that students will use their computers in an excessive way towards simple leisure activities.

In the traditional university context, it's already visible that beyond the role of "guardians of knowledge" that's traditionally been reserved for them, universities have begun to assume other roles within their areas of competence. The perspective of an open university to all citizens interested in "education throughout life" (Lagarto, 2002) is starting to become a reality. "The university, beyond simple initial education of its students" may also "offer complementary education that enables students to face the evolution of the world".

The sharing of information and professional collaboration that takes place at the level of networked machines – the technological dimension – creates a necessary condition, albeit not sufficient, so that the educational dimension may emerge, ensuring the diffusion, collaboration, interactivity and trust among participants of a learning community, primordial role of the teacher.

Online education expands rapidly, especially through the internet and corporate networks, in a new modality that demands a specific pedagogical approach capable of best using new technologies, applied towards education.

If the differences between conventional education, long distance education and online education aren't clearly understood, equivocal decisions will continue to take place. If it's inadequate to treat long distance education based on the criteria of conventional education, likewise it's equivocal to confuse traditional long distance education with online education, for it is a new environment in which educational processes assume new forms of organization and are based in other didactic-pedagogical foundations.

We currently live in a moment of transition in which both old and new concepts are confused, each fighting to prove its worth. However, only time, research and more intensive use of innovative practices, supported by the most recent possibilities offered by information and communication technologies and based in new pedagogical approaches, will constitute a body of knowledge capable of founding a process of operating a true online education.

These are the teaching challenges for the next decade, to those intervening falls the role of writing history through the elevation of the potential of human knowledge.

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