Pedagogical Mediation and Virtual Environments of Teaching-Learning

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Abstract: Research in Distance Education has contemplated aspects of credibility, evaluation, evasion, but very little has been done with regard to the movement of actual learning in this modality. The present study proposes to analyze some of the aspects that differentiate the pedagogical mediation in the on-line mode, specifically in Virtual Environments of Teaching-Learning [VETL] and its implications in the learning movement. It is thus understood, how VETL, a Virtual Environment for Teaching-Learning, is organized with different tools of digital communication making it possible to perform synchronous and assynchronous interaction for the purpose of developing a program or a course formally set up and sustained by a pedagogical proposal. This study is to demonstrate the implications of an VETL in regard to its pedagogical concept, its utilization and impact on the process of learning of students that are in the mode of Distance Education. Although this investigation is still in progress, it may be stated already, that the distance modality mediated by an VETL turns the teaching-learning process more fluid, dynamic, transversal and creative, than a face-to-face teaching process. It is believed, that VETL may potentialize time and space, accelerating the movement of learning of the participating students. It is necessary to advance further in the investigation, so as to establish with greater precision the intensity of a learning process that may be generated by an VETL.

Keywords: Distance Education, Virtual Environments of Teaching-Learning (AVEA), Pedagogical Mediation, Digital Communication, Teaching-learning Process
1. Introduction

Distance Education [DE] has attended to a large demand for completing education in the national and international scenarios. Initiating, with the reading of authors like Peters (1999 and 2002), educational procedures based on different models inclusive of a multiplying factor. The evaluation of this author is justified under the consideration that one of the major aims of this modality is to reach individuals that do not have access to face-to-face courses. However, when one assumes and reckons with the certainty that DE is the alternative to resolve educational problems (Dantas, 2001), a very enlightening and idealist value is attributed to this modality.

Since the end of the nineties, especially due to the advances in the area of telecommunications and informatics, the investment in the DE modality at the universities has grown and spread all over Brazil (Rodrigues, 2004). In the last few years the Ministry of Education has given emphasis to this modality, establishing public policies for accrediting, offering and validation of DE courses (Brazil/MEC, 2004). Decree 5.622, published in December 2005 (Brazil/MEC, 2005), was the more recent fact, with regard to the establishment of this modality in this country.

The high cost of the investment necessary for the implementation of DE courses becomes ever more evident, since a great number of professionals and specialists are required, as well as considerable time is needed for qualifying in production of materials, supervising and evaluation systems, setting up infrastructure, academic centers, cost of supporting technologies.

In this study, two relevant points appear in the discussion: the question of pedagogical mediation in DE and the necessity of using in Virtual Teaching & Learning Environments [VTLE].

2. Pedagogical Mediation in the DE Modality

The highlights and quotations made by each of these authors explicit actions and reflections realized in DE. However, the little quantity of studies and research which treat potentially the limits, the challenges and the paradoxical aspects of pedagogical mediation in DE, is preoccupying. Research has contemplated aspects of credibility, evaluation, and evasion, but very little has been done with regard to the complexity of pedagogical mediation in this modality. Mediation “is defined by statements, by means, by conditions and possibilities under which interaction takes place” during the process of teaching-learning (Catapan, Mallmann e Roncarelli, 2005). The potentiality of this mediation reflects the complexity of teaching strategies to be planned by the teacher and at the level of abstraction to be grasped by the student.

Therefore, DE is a modality that differentiates from face-to-face teaching by pedagogical mediation, as much as the process of teaching-learning organized in different modes of communication is no more centralized either in teacher or students. In pedagogical mediation at distance, the didactic materials and technologies communication decentralize and multireferenciate the didactic relation established between teachers, students and knowledge. The conduction of the didactic process by the teacher within time-space, which is immediate in face-to-face, is broken down in the distance mode by the different pedagogical strategies planned beforehand (Aretio, 1994 Peters, 2002; Paulsen, 2002).

In a learning situation organized for DE, the teacher interacts with the student in different ways. Pedagogical interference takes place in a topological space, in synchronous and asynchronous timing, and is potentialized with the possibility of varied language modes: oral [webcam, teleconference, videoconference]; written [printed texts, hypertexts, forums, discussion lists]; visual/esthetic [color, shape, images]; sinestesyc [movement; simulations] and sound [sound, rhythms; videos].

In this perspective, it is seen that the implications of pedagogic mediation are different, in accordance with the technological options, printed matter or online organization. Although DE learning situation, or stated by Maroto (1996), the “treatment of contents and forms of expression” are contemplated in their majority by printed didactic material, the movement of teaching-learning is more intense and complex, whenever pedagogic mediation is transversalized by Digital Communication Technology and, specially, in Virtual Teaching & Learning Environments (VTLE) (Catapan et al., 2005, e Ardura e Ryan, 2001).

3. Virtual Environments of Teaching-Learning

The virtual ambiances have received different denominations such as found in Keegan et al. (2002) and Valentini and Soares (2005): Virtual Learning Environment [VLE]; Learning Management System [LMS ]; Virtual Learning Communities [VLC]. These definitions turn around the understanding of a Learning Management System. These environments are systems developed in
modules based on Digital Communication Technology, also called learning platforms.

Virtual Learning Communities [VLC] are constituted by electronic interactive auto-defined communication webs, organized around a common interest or aim. This system of communication can include and integrate all forms of expression, as well as the diversity of interests, values or imaginations, including the expression of conflicts, due to diversification, multimodality and versatility. These spaces are used for communication between individuals who have a common objective. Communities may be hierarchical or not, which means, they may have a coordinator for each subject or have free discussions.

The development of virtual communities is supported by interconnection of languages and resources. A Virtual community is constituted starting from affinity of interests, of knowledge, of common projects, Exchange values are established under a process of cooperation. They are not based on institutional places and affiliations (Lévy, 1999 and Palloff and Pratt, 1999).

Generally speaking, it may be stated that LMS or VLE – Virtual Learning Environment - (Valentini, Soares, 2005) include different tools for digital communication and have as main objective the promotion of learning. A VLE, which in Brazil is called Ambiente Virtual de Aprendizagem (AVA), may satisfy several objectives: the discussion of any interest; feed a community identified with a given theme or attend a program of specific education.

In this study we are focalizing the Virtual Teaching & Learning Environment [VTLE] – in Portuguese called Ambiente Virtual de Ensino-Aprendizagem [AVEA] - which differentiates from other environments by aiming at a formally constituted teaching-learning process. VTLE is constituted in the organization and use of different digital communication tools and is developed under a methodological process in line with a pedagogical concept. A VTLE or AVEA is a system addressing an organized teaching-learning process intentionally presented in a formal way. A system which guarantees a structured pedagogical mediation in a differentiated communication mode, which is the digital mode. A VTLE in this study is understood as a system compromised with the teaching-learning process, including the system of supervision, evaluation and certification.

In this study, in order to facilitate the didactic comprehension of organizing a virtual environment, it is proposed to establish a differentiation, calling VTLE all environments addressed to a formal teaching-learning process. The criterion for differentiation is to be considered the nature of the theoretical-methodological approach evidenced by the express pedagogical mediation at distance, between teacher and student. The pedagogical mediation at distance in a VTLE comprehends a teaching-learning process planned and developed under a project that contemplates the congruence between concept, organization, supervision, evaluation and certification.

The distinct nature between LVE and VTLE is not only characterized by the description of operational, technological, or ergonomic functions among the great quantity of virtual environments presently available. It is impossible to say if
any environment is LVE or VTLE in as much as the distinction is made, fundamentally, whenever the environment is analyzed in the context of a specific educational project.

The execution of lecturing in DE may be differentiated and potentialized in VTLE, in so far as the possibilities proportioned by the environment are congruent with the theoretical-methodological aspects. The implementation of pedagogical mediation in these environments may count with a great number of resources and respond to several challenges. E.g., it may serve for accessing materials, exchange of ideas, opinions, discussions, and suggestions. They may be dynamically supervised, repeated and revised, as well as planned beforehand by the teacher and the instructional design team.

This study is based on two different experiences currently being carried out. One in project ATELIER (http://www.ateliertcd.com.br/ead/), which uses VTLE as extension to a face-to-face course. In this case it serves as a complement and extension of face-to-face activities. It extends the dialogue and pedagogical mediation started in the classroom, oriented and supervised by a teacher. Another experience is been realized in the DE courses of Natural Sciences teaching programs in two different aspects: of teachers education in the subject Technology and Pedagogy, and the offer and development of the academic subject “Introduction to DE” for both courses (http://www.ead.ufsc.br/). In both experiences Moodle - Modular Object-Oriented Dynamic Learning Environment was elected for the basic platform, customized for this project. This choice was made due to the possibilities of autonomy and creation offered to the acting teacher.

The purpose of the ATELIER group is to make clear and analyze the importance of an environment that has to reach beyond the systemization of files that include proposed contents, in order to contemplate a project that has the theoretical-methodological concept addressed to a given population with the purpose of a formally constituted course.

One of the objectives of this study is to clarify a myth which frightens many DE projects: which is to believe that only a sophisticated virtual environment can guarantee the quality of a course. These experiences have demonstrated that the quality of a course in the DE modality becomes apparent whenever there is congruence between the purpose of the event, the pedagogical concept, the profile of the population to be reached and the offered teaching-learning conditions.

4. Conclusion

The technological resources, not human participating factors, take their weight in pedagogical mediation. Be it that they are addressed to complement a teaching-learning process in the face-to-face mode, or be it with the purpose of guaranteeing a teaching-learning process in the distance mode. It becomes ever
more evident, that a pedagogical intervention mediated by a VTLE may potentialize in fact, time and space, and accelerate the learning movement of the participants. It is necessary to still advance with the investigations to verify with major precision what intensity can be generated by the teaching-learning movement.

A Virtual Environment is a space organized with different tools of digital communication that make it possible to have synchronous interaction (online, real time, simultaneous form, such as teleconferences, videoconferences, chats, messenger, meeting spaces) as well as asynchronous (offline, temporized, by previous appointment, but accessed whenever desired, creating different types of space-time such as forums, discussion lists, library, e-mails).

In this study, it is proposed to analyze the potentiality of pedagogic interference mediated by VTLE and to integrate two projects for theses and three projects for dissertations, which converge investigations in the following questions: implications of the technology of digital communication on pedagogical processes; internet potential; didactic materials, learning objects in the modality of distance education; the need for a taxonomy to be used in the analyses of quality of VTLE.

Other papers may be developed from this basis to increase the weight of research which deals with the effectiveness of the teaching-learning process in the DE modality.

References

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