Chapter 11
Pedagogical Mediator as the Strategic Competence at University Professors Building in Constructionist Online Environment

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ABSTRACT

The rapid dissemination and integration of the World Wide Web (also known as Internet), and its related technologies, has resulted in major growth of the educational field through the Internet in such areas as e-learning and e-training. In August 2002, the Ministry of Education established the rules for distance education courses at the university level (Portaria nº 2.253) allowing up 20% of the total course hours to be administered through distance education. At the same time, the Comitê de Educação a Distância from the Distance Education Secretary – SEED/MEC published the Distance Education Quality Indicators, which presents pedagogical guidelines that are clearly constructionist, consistent with those adopted by the Brazilian informatics in education program developed during the 1980’s and 90’s. However an important question remains: how to prepare university professors to be able to function in highly interactive constructionist learning environments? How to develop competencies as planning, designing and implementing such constructionist courses? This research has simultaneously investigated two aspects: developing, implementing and evaluating the characteristics of a constructionist environment and, at the same time, the use of this environment as part of an introductory on-line course to prepare a group of professors from Universidade Cidade de São Paulo (Brazil) to be able to function as mediators in the constructionist online learning environment. The findings indicate that it is possible to create a constructionist learning environment and to prepare university professors through online courses based upon Inverted Symmetry concepts and upon the in-service course based on the estar-junto-virtual (“virtual being together”) approach, to build what we called In-visible Reflective Network, thus allowing the professors to assume new roles not only in the online environment but in the face-to-face education situation as well. This course is the first step for continuous long life learning to be a “ciber teacher”.

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1. INTRODUCTION

In Brazil, since the 1980s, the use of technology in the education has been based on a more pedagogical approach rather than a technological or a technical one. Chiefly since the settlement of the Programa de Informática na Educação (ProInfo - IT Program in Education) in 1997 up to the present moment, the groups of researchers from private and public universities have been guiding their projects from social–interactive learning / teaching assumptions: the development of educational software or educational actions with the use of technology. The results of this research continue to be the basis of the main policies articulated by the Ministry of Education and Culture (MEC), the institution in charge of the follow-up, feasibility, and the implementation of the decisions nationwide.

In the Brazilian program, the role of the computer is to provoke deep pedagogical changes instead of the making the learning process unconscious or preparing the student to work with Educational Technology (Valente, 1999). The challenge of the past, today a more disseminated practice, was to develop a pedagogical approach that could motivate ICT use in an encouraging environment. In this environment, the student could develop meaningful activities mediated by the computers and with the help of teachers, so that it could reflect her/his understanding on what she/he would be doing, and the student would also be conscious of her/his constructive process that being the only way through which students could learn to learn.

With the increase of internet connection rates, an approach called “virtual-being-together” (Valente, 2001) was developed which favors high interaction among students and students and facilitator, producing a stimulating, challenging and highly reflective environment that can allow increased learner awareness in relation to his/her learning process.

To adapt such environments in accordance to the “virtual-being-together” approach, competences and knowledge are required from the teacher and/or from the team involved in its accomplishment that are not rapidly developed in order to create a mediator-designer. The mediator-designer will be the responsible for the shape of the environment from its pedagogical purpose with clear learning goals, based on social-interactive theories and on the students’ own needs and their context of origin. These dimensions result in a guiding-concept that leads the invisible reflective network (Rezende, 2004) which ensures the raise of consciousness by the student of his/her meaning-making process.

Modifying teaching practice (from knowledge transmission by the teacher to the construction of the knowledge by the student) has required, and still does, that the teachers transform their ways with “teaching” whether they work with children or adults in universities. In order to do so, they should learn how to use the technology to enhance their pedagogical action and the process of meaning production of their students.

Since 2004, the Universidade Cidade de São Paulo (located in eastern São Paulo) has been preparing the faculty to work within the distance education paradigm thought the virtual–being-together approach. This preparation process has caused an impact in the bricks-and-mortar classroom translated into different uses of the ICTs and increased meaningfulness in the learning/teaching processes.

It is possible to say, from these experiences and other, that the transformation towards an active and reflective education that develops autonomy and contribution among students and teachers is possible and feasible as long as the instructional environments, both the one where teachers are trained and the ones resulting from their practice, is coherent with the virtual-being-together approach and with its methodological principles oriented towards the construction of an invisible reflective network.
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