

Chapter 4

Three Contexts Methodology: Strategies to Bring Reality to the Classroom

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ABSTRACT

The main objective of this manuscript is to propose a methodology called the Three Contexts Methodology based in the situated learning paradigm. It attempts to integrate three contexts related to the process of learning: 1) the context of the community of professional practice that created the content; 2) the school classroom; and 3) the context in which what is learned is going to be applied. Through this the 3CM strives to improve learning transfer and the integration of technology. To give a theoretical base to the 3CM, first an analysis of how human cognition is naturally intertwined with our social activity is done and how, in this way, professional communities of practice are generated. Then, these ideas are contrasted with the type of cognition that the traditional school promotes and some learning problems are identified. Using these antecedents as a base, the Three Contexts Methodology is described and finally, a set of results are described and analyzed when this methodology was applied to a group of students from a local junior high school.

INTRODUCTION

Given our intellectual ability to reflect on how we think, as human beings we have been asking ourselves about the nature of knowledge and we have come to answers that have produced multiple and different postures. From the rationalists and empiric postures of Plato and his disciple Aristotle to the

current discussion related to consider human cognition as an individual phenomenon of processing information or as something social and integrated with the context where it occurs. In fact, Ceci, Rosenblum and DeBruyn (1999) establish that the study of human cognition can be reduced to two paradigms whether we consider or not the context in which things happen.

This categorization of the human cognitive phenomenon, that is to say, individual or social, makes

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use of two different units of analysis to study it. On the one hand, is the approach that takes only the cognitive processes of the individual as a unit of analysis, and on the other, the approach that also includes historical, cultural, and contextual factors. A lot of the scientific work of cognitive psychology may be categorized in the first approach; that is to say, with every intension, and to simplify their work, the scientists working in this field of knowledge leave out of their analysis the emotional and cultural factors (Gardner, 1987). In contrast, the second approach establishes a larger unit of analysis to explain human cognition, because it also includes the social and objective context in which cognition occurs, and in fact, assumes that it is this same context that explains it (Baquero, 2002). Driscoll (2000) expresses it as a change of approach from the individual to the socio-cultural and to the activities of people and Baquero (2002) expresses it as a displacement of the focus toward the situation where people carry out their activities. This change of analysis unit has given rise to the paradigm that establishes that cognition is contextual and culturally situated.

In order to understand this paradigm of situated cognition better and to analyze its pedagogical implications, it is relevant to relate it to the constructivists' concepts of human learning. As we know, various types of constructivism exist. McGregor (2007) speaks of three; the individual constructivism of Piaget, social constructivism represented by the socio-constructivist position of Vygotsky, and socio-cultural-constructivism that went beyond the ideas of the Russian author. The author, analyzing the pedagogical aspects of the three types, establishes that: 1) teaching with the constructivism of Piaget basically directs the students to develop their own meanings (schemas) in an individual way; 2) teaching with Vygotskian socio-constructivism directs the students to build knowledge through social interaction and by means of a process of negotiation between expert and novice in the zone of proximal development; and 3) teaching with socio-cultural constructivism

directs the students to build knowledge by interacting in real communities in such a way that at the beginning they are considered legitimate peripheral participants (Lave & Wenger, 1991) and little by little, interacting with other more expert members, as full participants of that community. According to this categorization, we can say that the paradigm of situated cognition belongs above all to the third type, that is to say, to socio-cultural constructivism.

In education, the perspective of socio-cultural-constructivism has produced very innovative conceptions related to learning such as situated learning, legitimate peripheral participation, and the student as apprentice (Hendricks, cited in Díaz Barriga, 2003). In situated learning, the knowledge construction process during an educational experience is intricately related to the context of practice where it takes place. For this reason, according to this approach, models have been proposed like the Atelier Model of Learning by John Seely Brown (2006), in which it models the type of learning that occurs in workshops of artists and architects, where a group of apprentices develop tasks to become experts under the strict supervision and guidance of a teacher.

In spite of the fact that situated conception has been present in the educational area for more than a decade (for example see Brown, Collins & Duguid, 1989, Brown & Duguid, 2000; Díaz Barriga, 2003, 2005; Greeno, 1998; Lave & Wenger, 1991; McLellan, 1996; Rogoff, 1991; Wenger, 1998), the majority of teaching strategies currently employed still continue to be very grounded in the conception of individual cognition concerned above all with facilitating the processing of information received by a student in an individual way. I consider that this lack of situated vision of human learning is negatively affecting the quality of learning for our students, mainly because the knowledge that they are building, which lacks social elements and contexts, remains stored in an inert way within them with few possibilities of being transferred to other situations of their

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