

Chapter 20

Consensual Concept Maps in Early Childhood Education

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ABSTRACT

The study described here was designed to demonstrate the sociocognitive benefits experienced by preschool children, specifically 5 year-olds, when they participated in a collaborative activity whose central task was the production of consensual preconcept maps. This task required oral interaction throughout the process of meaning negotiation and the selection of the precepts required by such a task. Therefore, the objective of the author's research was twofold: (1) on one hand, to investigate the educational relevance of collaborative work to an early childhood classroom (with 5 year-old pupils), and (2) to explore the possibility of using consensual preconcept maps at this level, analysing the implications for the development of children's competence.

INTRODUCTION

In our earlier research (Mérida, 1999) we conducted a pedagogical adaptation of the concept maps devised by Novak and Gowin (1988), which in turn are based on Ausubel, Novak & Hanesian's (1983) theory of assimilation. We adapted these maps to the sociocognitive competence of 5 year-olds participating in an early childhood classroom, understood to be a social context for learning. In this study we intend to demonstrate the sociocognitive benefits

experienced by young children, specifically 5 year-old children, as they participate in the production of consensual concept maps.

We rely on a concept of collaborative learning understood to be a carefully designed system of interactions that organises and leads to reciprocal influence among members of a team (Johnson and Johnson, 1989). Collaborative learning develops by means of a gradual process in which each and every participant feels mutually involved with the learning of the others, generating a positive interdependence that does not imply competition.

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WHAT DO WE MEAN WHEN WE REFER TO COLLABORATIVE LEARNING? SOME CONCEPTUAL CLARIFICATIONS

The terms collaborative vs. cooperative learning appear repeatedly in the literature. Although some authors (Woods, 1989) tend to collapse these terms, our own understanding is more in line with those who claim the existence of a difference between the two concepts (Edwards 1992). The latter notion maintains that collaborative learning derives from a sociocultural perspective, while cooperative learning corresponds to a Piagetian approach to constructivism. The essential difference between these two learning processes is that in the first, collaborative learning, it is the pupils who design their interaction structure and maintain control over the various decisions that will have repercussions on their learning, while in the second, cooperative learning, it is the teacher who almost entirely designs and maintains control over the interaction structures and the results to be obtained (Panitz, 1995). Therefore, each paradigm represents an extreme of the teaching-learning process, which ranges from being highly teacher-structured (cooperative) to leaving the responsibility for learning primarily with the pupil (collaborative).

Despite these important differences, the two models should be seen as part of a continuum based on constructivist epistemology as well as the theory of social interdependence proposed by Lewin (1948), which situates collaborative learning as an interdependent social activity where

common goals are established with others in such a way that each person's results are affected by the actions of the others (Johnson & Johnson, 1989). In sum, we understand collaborative learning in an educational context to be a model of interactive learning that invites pupils to share efforts, talents and competencies by means of a series of transactions which permit them to achieve a shared goal together.

Is Collaborative Work Useful in Early Childhood Education?

Until very recently, the capacities of young children (below the age of seven) to really engage in collaborative work has been underestimated, perhaps due to the paucity of empirical evidence and to the effect of Piagetian developmental stage theory, which points to interactional difficulties stemming from the egocentrism of young children and their limitations in terms of adopting another's point of view and carrying out a process of cognitive decentring.

The results of some studies, such as those conducted by Azmitia and Perlmutter (1989), suggest that benefits are limited when interactions take place among preschool-aged children. They argue that children of these ages offer fewer verbal explanations than older children. In addition, Azmitia (1988) found little evidence that five year-old children learned a model-copying task by means of discussion; instead, the children tended to rely either on observational learning or on the advice of a peer who was more expert at the task. This position is supported by the contributions of Tudge and Rogoff (1995), who after reviewing research based on pre-schoolers' shared activities, concluded that "it may be that the benefits of social interaction among equals, as a specific result of discussion and coordination of perspectives, are not usually apparent until children are able to simultaneously defend their own point of view and that of another person" (p. 117).

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