MATHEMATICS TEACHING AND LEARNING PRACTICES IN TRANSITION

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From the perspective of the socio-cultural approach, learning is predominantly seen as the transformation of social practices and of individuals. This view raises three issues of particular importance: the relationship between knowledge and the value certain social groups attach to it, the positioning of the learners and the importance of contextual factors in learning (Bliss and Saljo, 1999).

Empirical research carried out so far within the socio-cultural tradition has been mainly focused on the understanding of skills in everyday use, paying very little attention to issues of valorisation of knowledge and conflict or resistance. However, these issues are essential, especially in understanding the difficulties encountered by both pupils and teachers when new learning frameworks, which make possible novel kinds of learning interactions, are introduced.

Recent research has shown that both children and teachers find it hard to adopt changes in the classroom. For example, in a study that set out to explore scaffolding strategies of primary teachers in mathematics among other subjects, it was found that scaffolding either did not exist or did not work in classrooms (Bliss, et al., 1996). The teachers interpreted or translated pupils' contributions into their own thinking often in line with the task goals, thus requiring pupils to 'ignore' all they know or believe, thus minimising the role of pupils' contributions.

The study reported here focuses on the transformations in teaching and learning practices, following the introduction of a new approach to teaching mathematics in a number of Greek primary schools. The activities introduced were mainly of an investigative character, and the teachers were asked to adopt a role that would keep them on the periphery of the learning process, providing support to the pupils only when necessary. The results of the study so far indicate that the majority of the teachers were unaware of many aspects of their practice and tended to fall back on traditional strategies, particularly when considering that the mathematical meaning constructed by the pupils was 'at risk'. Pupils, on the other hand, tended to pay little attention to the instructions provided in the activities, often looked for the teacher's approval of their work and were unable to see the overall mathematical scope of the activities.

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