

FOCUS ON MEDIATION OF ACTIVITY TO DEVELOPING CLASSROOM DISCOURSE

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Abstract. In this work is endeavoured to contribute in the search of significant tools to learn mathematics (significant in the sense that they necessarily alter the character of knowledge, in according to Confrey, 1993). We are presenting the results of some empirical observations about performed activity of a group of 18 student's 14-aged, who were working on certain scenarios of learning. The pupils were mainly handling certain cultural artefacts for the elementary geometric transformations learning. Here, our main concern was to analyze, using a communicational learning approach (Sfard, 2001), the way that learners approach to mathematical terms using scripts for the activity and describing their accomplished tasks.

INTRODUCTION

Some recent research results show that in sessions of practical work, secondary pupils, using recent processing development, are acting to access to notions, properties or mathematical procedures that were previously subjects of access for no one but professional Mathematicians (Hoyos, 1999; Hoyos, Capponi and Geneves, 1998; Moschkovich, Schoenfeld, and Arcavi, 1993).

On the other hand, theoretical expectations and alternative approaches in didactics of mathematics (Bartolini, 1998; Bartolini and Boero, 1998; Boero et. al., 1997; Mariotti et. al., 1997) argue for introducing “voices” or historical contexts of recreation of scientific experience in the classroom, as a way to generate ideas or complex mathematical notions.

Here, we attempt to contribute further information in a perspective of research related to the use of computerized scenarios and the introduction of historical contexts in the search for significant tools for mathematical learning. Particularly, it was interesting to analyze the different descriptions that pupils are effected at the end of performed activity. The analysis of the advancement of students was based in a communicational approach to learning (Sfard, 2001). From our point of view, those pupil descriptions reflect how they coordinate obtained experiences.

Acknowledgments: The work presented here was based in a research partly supported by the National Council of Science and Technology (CONACyT) of Mexico, No. 30430S.