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**EXPERIENCES IN COMMUNICATIONAL INTERACTION IN MATHEMATICS**

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**Abstract**

The analysis of content and communication interaction in mathematics is a valuable tool, since we can extract relevant information from its processes that effectively contribute to the optimization of teaching performance in the classroom.

By being able to identify the processes of interaction existing in the classroom, between teacher and students, as well as how the acquisition of knowledge is generated, allows us to contribute with relevant data, to fine-tune existing pedagogical methods.

Certain that the structuring and exploration of contents, which happen in the dynamism of mathematical communication, in the classroom, are processes in constant change, it is our objective to be able to identify the process that generates obstacles in mathematical communication.

Our research focused on two classes of basic education in Portugal, one at the pre-school level and another at the 1st cycle of basic teaching, where we tested new analysis tools, which allowed us to extract information that complements very effectively the classic models of content analysis.

In this article we present the main guidelines of the tools used, exemplifying with the information already obtained, serving these as unique structures for the development of a future innovative model of content analysis.

**Keywords:** Research Methodologies, Communication in Mathematics, Classroom dynamics, teaching analysis tools.

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