

MATHEMATICS TEACHING, 20-26. INSTITUTIONALIZATION OF KNOWLEDGE IN THE MATHEMATICS CLASSROOM: A STUDY ON CLASSROOM DISCOURSE

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Taking as a basis a collection of video recordings from a mathematics classroom at the secondary level, this article presents an analysis of several forms of discourse used in the process of institutionalization of knowledge. In particular, the functions and effects of the teacher's interventions in formulating generalizations, synthesis and recapitulations of certain activities in the classroom are analyzed. This study allowed us to identify regularities in the verbal forms, which affect the development of the lesson, either by maintaining the continuity of the discourse, or supporting the institutionalization process.

What the teachers and students express during the collective construction of mathematical ideas? To answer this question we use the concept of institutionalization. This concept is associated with the definition and articulation of the mathematical ideas studied in the classroom. We analyze the institutionalization process through the identification and characterization of the verbal structures used during classroom discussions. We believe that the words used, their meaning and emphasis, have an impact on how the mathematical ideas are defined and structured; but also on how arguments are validated and justified. The methodology used in this study is based on the assumption that the discursive devices can be inferred from observable indicators in the classroom. Furthermore, such indicators have an explicit role in teacher's discourse. These indicators become variables in the institutionalization process, because as explained before, institutionalization is associated with the conclusion or synthesis of ideas in the classroom. We consider necessary to place this study in a school setting, so we could observe the everyday teacher's and students' discourse during the process of institutionalization of knowledge. We claim that this institutionalization process is associated with very specific discursive resources having their own semantics. Thus, our aim in this paper is to analyze the video recordings of the classroom discourse in order to identify empirical evidence indicating the existence of a process of institutionalization. This not only involves identifying phrases or words, but also the effects that the teacher's discourse has in the construction of knowledge.

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