

## **Implicit theories of preschool teachers and their relationships when learning and teaching mathematics. Preliminary results**

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### **Abstract**

The objective of this research is to investigate the representations that preschool teachers have about the learning and teaching of mathematics. A justified multiple-choice questionnaire of 10 questions was applied to 70 preschool teachers. Additionally, a semi-structured interview will be applied to 16 of them, based on their responses to the questionnaire, with the purpose of identifying the explicit and implicit theories that are manifested in them based on their representations. It is based on a review of the epistemological beliefs about the learning and teaching of mathematics and its link with the implicit theories that Pozo raises: Direct Theory, Interpretive Theory and Constructive Theory. In a preliminary analysis of the results obtained, statistically significant differences are detected in the choice of the participating teachers, in 9 of the 10 questions of the applied questionnaire. The preliminary advances of the results obtained are presented in order to identify binding conclusions with the research questions and generate discussion for further studies. This study is part of the study program that the author sustains to obtain the degree of Doctor of Pedagogy at the National Autonomous University of Mexico.

**Keywords:** Implicit Theories, preschool teachers, learning, teaching, problem solving, mathematics