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## Mediation in the Construction of Mathematical Knowledge: A Case Study Using Dynamic Geometry

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### Author(s)

Gilmara Teixeira Barcelos, Silvia Cristina Freitas Batista, Liliana Maria Passerino

### ABSTRACT

According to the social-historical theory, interaction between individuals plays a major role in building the human being. It is through such interpersonal relationships that the individual's psychological development takes place. Therefore, in school education, interaction with teacher and with classmates is essential; in addition, their mediation along the educational process is an extremely relevant factor to achieve goals. Mediation also includes use of tools and signs in the social context, enabling the development of superior psychological processes. This research was carried out using the social-historical theory as theoretical background and considering that digital technologies enable adequate spaces to perform investigation activities. It was performed with a group of students Mathematics teachers and aimed at analyzing a learning situation about Triangle Similarity Cases using a Dynamic Geometry software program. The importance of mediation (tools, teacher, classmates) in knowledge building was evaluated by performing investigative activities aided by the software. Qualitative research, through case study, was chosen and three data collection techniques were used: participant observation, questionnaire and semi-structured interview. Research-related tasks were divided into three stages: preparation; development and analysis of collected data, relating them with the adopted theoretical background. Considering all that was observed and collected through questionnaires and interview, it is possible to state that mediation played an important role during software activities.

### KEYWORDS

Mediation, Social-Historical Theory, Mathematics, Dynamic Geometry

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