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ABSTRACTS BOOK



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Examination of Middle School Mathematics Teachers' Pedagogical Content Knowledge in Terms of two Components: the Subject of Pyramid*

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ABSTRACT

Teacher qualities are one of the important factors affecting the efficiency of the education system. In this regard, it can be said that the teaching strategies chosen in the learning environments by teachers, who are one of the important components of the teaching process, are important. Furthermore, the fact that they are informed about the mistakes students make on the subject taught and about the reasons for these mistakes can prevent students from making probable mistakes or having misconceptions. One of the learning domains in which students have difficulty is the field of learning geometry. Students have many difficulties especially in geometrical solids, one of the geometry subjects. Accordingly, in this study, pedagogical content knowledge of middle school mathematics teachers' on pyramid was examined in line with the components of knowledge of student, and knowledge of instructional strategies. The purposive sampling strategy was used in the study with the design of case study. The participants of the study consisted of 6 (4 Male, 2 Female) middle school mathematics teachers with different periods of service. In the study, data triangulation was made using different data collection methods (interviews, observation and document analysis). Voice and video recordings were taken while collecting the interview and observation data. The data were analyzed by the techniques of qualitative data. At the end of the study, it was determined that most of the teachers performed teaching in the teacher-centered role and that only one teacher benefited from the strategies based on the constructivist approach that actively involves the student in the process. Based on the results on knowledge of student, it was found out that teachers were generally able to identify students' mistakes, but they preferred the strategies based on the traditional approach regarding the elimination of the students' mistakes. In line with these results, suggestions were made for teacher training.

Key words: Pedagogical content knowledge, knowledge of instructional strategies, knowledge of student, pyramid.

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