

ANALYSIS OF THE REASONING SKILLS OF STUDENTS IN
SOLVING A NON-ROUTINE PROBLEM

Mustafa Gök¹, Erdal Beyde²

¹*Yüzüncü Yıl University, Van, TURKEY*

²*Zeve Secondary School, Van, TURKEY*

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Abstract

Non-routine problems have a great significance in developing students reasoning skills. Because students attempt to overcome the situation they are in by associating their existing knowledge to arrive at a consistent objective while solving non-routine problems. Naturally these processes necessitate reasoning. This study aims to investigate the reasoning approaches students used in the solution process of a non-routine problem in a milieu designed in compliance with the Theory of Didactical Situations supporting the reasoning skills of seventh grade students. The study was conducted using the qualitative method. Participants of the study were 24 students attending the seventh grade in a middle school in Van province, Turkey. The implementation lasted for 45 minutes. The analysis of the findings of the study was based on the reasoning levels determined by Brousseau and Gibel[1]. As a result, students were able to solve the non-routine problem by establishing interaction with the designed milieu. It could be stated that the designed milieu supported the reasoning skills of the students.

Keywords: Theory of Didactical Situations, Reasoning, Non-routine problems, 7th grade.

References

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¹First Author's e-mail: gkmstf@gmail.com

²Second Author's e-mail: erdalbeyde@hotmail.com