© 2019 FIZ Karlsruhe

ZMATH 2016e.00196

Sağlam, Yasemin; Dost, Şenol

A qualitative research on example generation capabilities of university students.

Int. J. Sci. Math. Educ. 14, No. 5, 979-996 (2016).

Summary: Examples which are used in exploring a procedure or comprehending/concretizing a mathematical concept are powerful teaching tools. Generating examples other than conventional ones is both a means for research and a pedagogical method. The aim of this study is to determine the transition process between example generation strategies, and the factors affecting success of the students in generating examples in a Real Analysis course. The participants of the study consisted of 27 undergraduate mathematics students. At the end of the study, it was observed that some of the participants used especially the trial and error strategy as an effective step in the transition to the transformation strategy. Definitions were used by participants as a trigger for example generation and to reflect on concepts during this process in order to reduce cognitive demand.

Classification: C45 C35 I15
Keywords: example generation; example space; university students; real analysis
doi:10.1007/s10763-015-9624-7