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The Effect of an Instruction Designed by Cognitive Load Theory Principles on 7th Grade Students' Achievement in Algebra Topics and Cognitive Load

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Author(s)

Aygil Takir, Meral Aksu

ABSTRACT

The purpose of this study was to investigate the effect of an instruction designed by the Cognitive Load Theory (CLT) principles on 7th grade students' achievement in Algebra topics and cognitive load. A quasi-experimental study was conducted in totally six weeks with 80 students. The instruction designed by CLT principles was used in the experimental group, while the instruction recommended by the Ministry of Education (MONE) was used in the control group. Researchers developed Teachers' Guidelines and Students' Booklets for using in the experimental group. At the end of each unit, the Subjective Rating Scale (SRS) was used to measure students' cognitive load. At the end of the treatment, the Algebra Achievement Test (AAT) was administrated to both of the groups. Both descriptive and inferential statistical techniques were used for analyzing data. Results showed that instruction designed by CLT principles was effective for the Algebra teaching with the limitations of the study.

KEYWORDS

Cognitive Load Theory; Cognitive Load; Subjective Measure of Cognitive Load; Algebra Achievement; Efficiency of Instruction

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