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## A Comparison between Pre-service and In-Service Elementary Teachers' Subject Matter Knowledge of Pattern of Figure

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### ABSTRACT

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The aim of this study is to determine the subject matter knowledge of pre-service and in-service elementary teachers related to pattern of figure and to compare them with respect to their subject matter knowledge about pattern of figure. In this research design of sequential explanatory strategy which is one of the combined strategies has been used. The study group of this research consisted of 30 volunteer in-services elementary teachers working at four different state schools in Adana and Mersin and 30 pre-service elementary teachers who were studying in 4th grade in Çukurova University. Data were collected with "Matter Knowledge of Pattern of Figure Test" whose score reliability measured by KR-21 was 0.78 and structured questionnaire. Obtained quantitative data were analyzed using Mann-Whitney U test whereas qualitative data were analyzed using case study. Based on the results of the quantitative analysis, it can be said that in-service elementary teachers are more successful than pre-service elementary teachers with regard to subject-matter knowledge about pattern of figure. It can be inferred that both groups had difficulty in answering the test items which three dimensional shapes were used. The results of qualitative analysis reveals that in-service elementary teachers appeals to external supports in order to enhance their subject matter knowledge related to pattern, whereas it can be said that preservice elementary teachers met with the pattern in college.

#### Keywords:

pattern of figure, in-service elementary teacher, pre-service elementary teacher

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