

## STRUCTURED PROBLEM POSING CASES OF PROSPECTIVE MATHEMATICS TEACHERS: EXPERIENCES AND SUGGESTIONS

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### ABSTRACT

In problem posing, students are faced with complex situations or events and they feel responsible from these situations or events. It is stated from this perspective that it is necessary to carry out problem posing studies and teachers should have a strong perspective for problem posing activities. In this sense, the aim of this study is to evaluate structured problem posing cases of prospective mathematics teachers about Ratio and Proportion Subject', to determine the experiences (for instance; difficulties) of the prospective teachers during problem posing process and to elicit suggestions regarding the experienced difficulties (if any).

For this purpose the data was collected by the researchers through a data form. This developed data form was conducted to 42 primary school mathematics prospective teachers. Prospective teachers were given 40 minutes to fill in this form. In data analysis, 'Problem Posing Evaluation Form (PPEF)' which was developed by the researchers for the first part of the data form was used. At the end, the results of the evaluation were presented on the basis of frequency (f) and percentage (%). The content analysis was used for the analysis of the data obtained from the second and third parts. The obtained themes were presented on the basis of frequency (f) and percentage (%) through digitalizing the data for the interpretation of the findings. NVivo 10 software was used in content analysis.

In conclusion, it was concluded that prospective mathematics teachers posed clear and understandable problems which were compatible with the mathematical principles and which were in the form of simple and exercise type. Besides, it was concluded that posed problems had solvable problem features. The experiences/difficulties faced during problem posing process were determined as; having difficulties in deciding the numerical expressions that will be given in problems, in ability to construct a different problem other than stated in the example, in ability to construct the text of the problem, inability to recognize the cognitive levels of students and inability to correlate problems with daily life. The solutions which were proposed for the difficulties faced were determined as in the following; solving before the problem which is considered to be posed, constructing problems by using daily life, analyzing similar problems which are considered to be posed and taking them as example, carrying out activities for creating more meaningful problem texts by focusing on how to construct a problem and gaining experience about problem posing.

**Key Words:** Structured problem posing, experiences, difficulties, suggestions.