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## Teachers' Creativity in Posing Statistical Problems from Discrete Data

PDF (Size: 63KB) PP. 1380-1383 DOI: 10.4236/ce.2012.38201

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### ABSTRACT

Choosing a quality problem in mathematics is a challenge for many teachers. Teachers cannot rely on textbooks for good problems. They have to be able to pose their own problems in order to promote mathematical thinking among students. This study was conducted to explore the creativity of 175 teachers in terms of fluency, flexibility, and originality in posing statistical problems. Participants consisted of secondary school teachers from twenty schools in Peninsular Malaysia. Teaching experience was ranged from 1 to 33 years. The features of the problems posed by these teachers were also studied. The participants were provided a stimulus, which was a set of ungrouped discrete data, and they were asked to pose as many problems as they could. The posed statistical problems were supposed to promote mathematical thinking and to increase students' understanding. Findings showed that participants were able to pose a total of 270 (74%) statistical problems within the time given. The mean of the creativity score was 11.08 (s.d. = 6.76). Analysis showed no significant difference in creativity between gender and the value of  $t = -.346$ ,  $p = .73$ , where  $p > .05$ . Analysis showed significant differences in the teachers' creativity scores for three groups of teachers:  $F(2,172) = 6.83$ ,  $p = .001$ ,  $p < .05$ . The results also showed that 115 (31.5%) posed problems focuses on the statistical content measure of central tendency. The study provided exposure to the teachers to pose problems that can trigger students' thinking in solving statistical problems.

### KEYWORDS

Statistical Problems; Creativity; Fluency; Flexibility; Originality

### Cite this paper

Zakaria, E. & Salleh, F. (2012). Teachers' Creativity in Posing Statistical Problems from Discrete Data. *Creative Education*, 3, 1380-1383. doi: 10.4236/ce.2012.38201.

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