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Prospective teachers' conceptions about teaching mathematically talented students: Comparative examples from Canada and Israel.

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Summary: In this paper we analyze prospective mathematics teachers' conceptions about teaching mathematically talented students. Forty-two Israeli participants learning at mathematics education courses for getting their teaching certificates, and fifty-four Canadian pre-service (K-8) teachers participating in mathematics didactics course were asked to solve a challenging mathematical task. We performed comparative analysis of problem-solving strategies, solution results and participants' success. Based on the discussion with 25 Israeli participants we composed an attitude questionnaire, in which prospective teachers were asked to express their degree of agreement with statements expressing different beliefs about education of mathematically talented students. The questionnaire was presented to 56 Canadian and 28 Israeli prospective elementary and middle school teachers. We describe similarities and differences between the attitudes of the two populations and suggest their possible explanations. Based on the results of this study we make several suggestions for teacher education programs.

Classification: B50 C40

Keywords: challenging tasks; teacher preparation; mathematically promising students; special education (gifted); teacher beliefs