Teachers’ Attitudes and Features of Support Related to Teaching for Creativity and Mathematical Talent Development in The United States

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ملخص الرسالة:

This study further discusses creativity and mathematics gifted education, and synthesizes rational support of a proposed philosophy for teaching mathematics; Teaching for Creativity and Mathematical Talent development (TCMT). It also examined three variables related to teaching for creativity and mathematical talent development in the U.S.: teachers’ attitudes, perceived support, and professional development. The major purpose is to contribute to understanding teachers’ attitudes and enhancing school trends toward nurturing creativity for all students and meeting the needs of gifted mathematics students utilizing broad conception of creativity, and internalizing positive beliefs about student capability for success derived from principles of positive psychology.

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The participants in this study included ninety three mathematics teachers from several states in the United States of America. The findings indicated that teachers hold positive attitudes toward teaching for creativity and mathematical talent development (M=4.02, SD=.45). In regard to the extent of support, responses showed that teachers are somewhat supported to teach for creativity and mathematical talent development; the mean of the overall perceived support was 3.04, SD = .84. The inferential analysis also revealed that overall perceived support did not contribute of a statistically significant proportion of unique variance in teachers’ attitudes toward teaching for creativity and mathematical talent development (R² change < .0001, F change observed (1, 87) = .04, p = .85, α = .05). Professional development, however, was found to be the major variable accounting for a statistically significant proportion of unique variance (10%) in teachers’ attitudes (R² change = .1, F change observed (1, 87) = 9.92, p = .002).

The implications of such support and professional development for teachers are discussed in this study as significant factors on teaching effectiveness and student positive outcomes. Accordingly, it is recommended that educational policy makers and stakeholders should reconsider teachers’ needs beginning with understanding the nature of teaching profession as a process of human development that includes multiple variables of which teachers might not have control unless they receive enough support and ongoing effective development.
Moreover, the researcher emphasized that educational policy and strategic programs should be developed based on a reliable teaching philosophy with consideration of teachers’ needs in a way that ensures prior healthy conditions for successful implementation including a clear mission and vision, continuous professional development, ongoing personality development courses, administrative and supervisory support, trust, respect and encouragement, flexibility, resources, affordable teaching load, and fair evaluation processes that aim not only to improve teacher performance and school environments but also result in a cooperative safe school climate that supports student creativity and effective teachers. Teaching for Creativity and Mathematical Talent development (TCMT) is proposed and recommended to adopt as a philosophy of mathematics education that aims for the best educational outcomes possible for all students based on broad conceptualization of creativity and talent, as well as positive beliefs on student capability for success.