Can Successful Outcomes of Employing the Gardner's Theory in Mathematics Education be Generalized to Creative Skills Among Omani Students?

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Abstract

Creativity in mathematics is a necessary requirement for the twenty-first century, and it is an essential goal for mathematics education. So, the math teacher is well-advised to use modern Theories that develop these for students. One of these Theories is Gardner's multiple intelligences theory, which aims to provide activities able to simplify thinking and increase its effectiveness and allows the learner to move from one thought pattern to another. We hypothesized that Gardner's strategies applied to teaching math would substantially increase the creative skills of students. The study sample was comprised of 72 students in the ninth grade from Manba Alhekma school in Salalah, Oman. Participants in the experimental group (N = 36) received a treatment based upon multiple intelligence strategies, and participants in the control group (N = 36) received an alternative treatment. Data were analyzed using means, standard deviations, t-tests, and effect sizes. Creative skills increased much more for the experimental group. Multiple intelligence strategies were highly effective in developing creative math skills, and various reasons were discussed. It is recommended to consider extending the use of multiple intelligence strategies to the teaching of all the mathematics courses in secondary education and focus on preparing activities that enable students to practice creative thinking skills.

Index Terms

Gardner's Theory; Multiple Intelligence Strategies; Creative Thinking; Ninth Grade; Oman