The Effect of Using the Teaching Method from the Perspective of Metacognitive Thinking on Academic Achievement in Specialized Mathematics

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Abstract

The effect of using teaching method of perspective of thinking over cognitive upon academic achievement in Specialized Mathematics subject. The study aimed to search the effect of using teaching method of perspective of thinking over cognitive in teaching Specialized Mathematics subject for students of the third grade "Science Section" in the secondary schools, in their achievement of the scientific concepts and developing their thinking skills compared to traditional method. The problem of the study was formulated as follows: What is the impact of the teaching method of perspective of thinking over cognitive in their achievement of the scientific concepts and developing their thinking skills compared to traditional method. The study sample consists of "120" students of third grade "Science Section" at Omdurman area in the second term of academic year 2020-2019, the sample was distributed into two groups, experimental group consists of "60" students taught by using teaching method of perspective of thinking over cognitive, and controlling group consist of "60" students taught by using the traditional method. For the study purpose, the researcher applied the following tools: First: Pre and Post Achievement Test Second: Pre and Post Questionnaire. The researcher used many statistical methods in analyzing and processing data such as: Arithmetic mean, standard deviation, variance, relative weight, Likert scale and Alpha kronbach coefficient in addition to the coefficient of honesty and consistency. The main findings of the study reveal that: there is a statistically significant difference in the academic achievement between "males" of the two groups in the post test in favor of the experimental group. There is a significant difference in the academic achievement between "males and females" of the two groups in the post test in favor of the experimental group. There is a significant difference, in the academic achievement between "males" of the two groups in the post test in favor of the experimental group. There is also a significant difference in the academic achievement between "females" of the two groups in the post test in favor of the experimental group. In light of the findings of the study, the researcher was able to come out with the following recommendations: -the necessity of using the strategy teaching of perspective of thinking over cognitive by teachers, supervisors and students to achieve many expected educational goals among which is devolving skills of perspective of thinking over cognitive and systemic innovation thinking of learners, -reorganizing the content of mathematics, by employing models such as using teaching practices related to thinking over cognitive, -encourage teachers to use teaching practices associated with thinking over cognitive.

Keywords: metacognitive thinking, specialized mathematics