

The effect of using the self-regulated problem-based learning strategy in developing Mathematical Connections and Habits of mind with the 7th grade students

Dr. Nasser Helmy Aly Youssef

Lecturer at Curricula and Methodology Dept.

Faculty of Education – Fayoum University

nha02@fayoum.edu.eg

Abstract:

The research aimed to study the effect of using the self-regulated problem-based learning strategy in developing the mathematical connections skills and the habits of mind with the 7th grade students, To achieve this objective, the researcher prepared a manual for teaching chapter VIII of the seventh grade mathematical book part II based on the self-regulated problem-based learning strategy, and also he prepared a test in the mathematical connections skills and a habits of mind scale, the manual and the two tools were showed to a group of jury members with the aim of judging. Then the validity and reliability of two tools were checked.

The research used the experimental method using the pre-post design on two groups: the experimental and the control group. The research sample consisted of 65 of the 7th grade students in Dammam, the experimental (33 students), the control (32 students). Before application of the self-regulated problem-based learning strategy on the experimental group, the equality of the two groups in, the mathematical connections skills and the habits of mind was verified.

The results of the research indicated the effectiveness of using the self-regulated problem-based learning strategy in the development of the mathematical connections skills and the habits of mind, and the results also indicated that there is a statistically significant positive relationship between the habits of mind and the mathematical connections skills.

Based on the results the researcher recommended that: using the self-regulated problem-based learning strategy in teaching mathematics to intermediate stage students, the importance of improving the mathematical connections skills and the habits of mind with intermediate stage students, and make more researches to investigate the ways to merge self-regulated learning strategies in teaching strategies.

Keywords: Problem-based learning strategy, Self-regulated learning strategies, Mathematical connections, Habits of mind, intermediate stage.