

Turshan, Thikrayat, M. A. * The impact of learning method based on the merging between the cognitive theory of Piaget and active theory in the understanding of scientific concepts and the self-concept of eighth graders in science. Faculty of Education, Al-Quds University, Jerusalem, Palestine. (Master Thesis - January 14, 2015).

Abstract

The study aimed at investigating the effectiveness of using the learning method, based on the merging of Piaget's cognitive theory as well as active theory, in the understanding of scientific concepts and the self-concept of eighth graders in science. To achieve this, the researcher developed a scientific concepts test and a self-concept questionnaire consisting of five domains: psychological, social, academic, self-confidence and physical. The study used a sample of 70 eight grader female students at Arroub Basic Girls School that classified them from low to high, as pre-achievers in science. In one class, which consisted of 34 students as a controlled group, the educational science content was taught by means of the traditional method, whereas the other class of 36 students, assigned to be the experimental group, was taught the same content, but according to the method based on the merging between the cognitive theory of Piaget and active theory. Following the collection of data, they were statistically processed using the Statistical Package for Social Sciences (SPSS).

The results obtained from the study showed that there are significant differences in understanding the scientific concepts' total scores in favour of the experimental group, due to the two pre-achieving levels, in favour of the high level students. However, there were no significant differences in understanding the scientific concepts' total scores due to the interaction between groups and the pre-achieving levels. Additionally, there were significant differences in the self-concepts' total scores in favour of the experimental group due to the two pre-achieving levels, in favour of the high level students. However, there were no significant differences in the self-concept due to the interaction between groups and the pre-achieving level.

As for the self-concepts' sub-scales, there were significant differences in the psychological, social, and academic domains in favour of the experimental group, whereas there were significant differences due to the pre-achieving level, in favour of the high level students in the sub-scales of academic, self-confidence, and physical. However, there were no significant differences in the self-concepts' sub-scales due to the interaction between groups and the pre-achieving level.

In the light of the current study and its discussion, the researcher recommended that this method should be employed in teaching Science by preparing an in-service training program for Science teachers by using integration between the cognitive theory of Piaget and the theory of activity as method in their teaching. More studies should be conducted in terms of the other factors that play a role in the different subjects.

Key words: Cognitive theory, active theory, self-concept.

Additional information

Qubaja, Ziad. Committee President, Faculty of Education, Al-Quds University, Main Campus, Jerusalem- Abu Dies, Palestine.

Adas, Mohsen. Internal examiner, Faculty of Education, Al-Quds University Main Campus, Jerusalem- Abu Dies, Palestine.

Asali, Aliaa. External examiner, Faculty of Education, An-Najah National University, Nablus, Palestine.

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*MA Educational sciences, Faculty of Education, Al-Quds University, Main Campus, Jerusalem- Abu Dies, Palestine. Teacher of Science, Arroub Basic Girls School, UNRWA, Hebron, Palestine. thikryat.turshan@gmail.com