

Efficiency of an Educational Robotic Computer-mediated Training Program for Developing Students' Creative Thinking Skills: An Experimental Study

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Abstract

This research aimed at detecting the efficiency of a computerized training program based on programming the educational roboticists to develop creative thinking skills for the eighth grade basic education students at Manba'a El-Hekma School in Dhofar Governorate. Also, it investigates the nature of the proposed program, the efficiency of the program, and the significance differences between the two groups. The researcher used the experimental curriculum with the two groups; controlled and experimental to achieve the aims of the research and to test its hypotheses. The sample of the research consisted of 30 Students during the first term of the school year 2018/2019 and they were selected intentionally. Each group included 15 students. The experimental group students were trained to program the educational robotics using the computerized training program. Torrance test of creative thinking was applied before and after on the two groups, in addition to an evaluation card to the projects of the Students. The results showed that there are differences with statistical indication on the level of 0.5 between the two averages of the degrees of the experimental and the controlled groups, before and after the application of the creative thinking test and in the evaluation card of the Students' projects in the experimental group. By implication the research recommended to merge the techniques of the educational robotics and the artificial intelligence in teaching and education and training for provide the female teachers on using that technology and encouraging them to employ it in the process of teaching, using the electronic program prepared in this study.

keywords: Computer-mediated Training Program, Creative Thinking Skills, Educational Robotic

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