

THE EFFECT OF EDUCATIONAL SOFTWARE ON ACHIEVEMENT IN MATHEMATICS AND THE DEVELOPMENT OF MATHEMATICAL THINKING AMONG NINTH GRADE STUDENTS IN JORDAN

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Abstract: The current study aimed at identifying the effect of an educational software on the achievement of ninth grade students in the analysis of algebraic expressions, and the development of mathematical thinking. It was randomly divided into two groups, the first was an experimental group, which amounted to (51) students, who studied using the educational software, and the second group was control, which amounted to (51) students who studied using the usual method. Two tests were applied and their psychometric properties were verified, and they were applied before and after. The study found that there were statistically significant differences in the achievement of ninth grade students in the analysis of algebraic expressions, the level of mathematical thinking between the control and experimental group due to the experimental group that studied using educational software. Study recommended that the Ministry of Education hold training courses for mathematics teachers regarding how to employ educational software in the educational process,

Keywords: Educational Software, Achievement, Mathematical Thinking, Ninth Grade Students.

Introduction

Today, we are experiencing a massive technological influx resulting from the information and communication revolution. This has led to a transformation in teaching methods and tools. The computer has emerged and become essential in all educational institutions. It has also become a valuable tool for creating a flexible and supportive learning environment for students within the educational setting, thus increasing the possibilities and diversifying learning methods, such as collaborative, individual, and self-directed learning.

Many developed countries have begun using effective educational programs, and teachers in many of these countries have started to rely heavily on computers. Some studies have shown that students learn more effectively through computer software than through traditional education, and that students can learn the required material in less time than traditional methods. Therefore, companies have competed to produce various educational programs, and students have increasingly embraced learning through these programs. However, there is an obstacle hindering the optimal use of computer software in education; This involves meeting the actual needs of students by providing educational programs that can deliver appropriate