

**The interaction between the two types of electronic training (synchronous/asynchronous) and the two types of electronic project strategy (individual/group) and its impact on developing the skills of building adaptive electronic tests and the power of control among educational technology students.**

**Abstract:**

This research aims to develop an e-learning environment based on employing two types of e-project strategy (group and individual) and two types of e-training (synchronous and asynchronous) and their impact on developing both the cognitive aspect, the skills of building adaptive electronic tests, and the strength of cognitive control among educational technology students, and to reach... For this goal, the required tasks related to the educational needs of educational technology students were identified in the Virtual Learning Environments course, and the tasks for constructing electronic tests were produced by employing a typical electronic project strategy (group and individual) and two types of electronic training (synchronous and asynchronous) in the form of training videos to explain The Class Marker, and the research used an experimental design based on four experimental groups for two independent variables, each presented in two patterns. The research sample consisted of 200 male and female students for the basic research experiment, from the first-year educational technology students, who were randomly divided into equal four groups according to the strategy pattern for individual and group electronic projects, and the training pattern. Synchronous and asynchronous electronic, and the two researchers prepared the following research tools: an achievement test (pre/post), and a card. Note to measure the performance aspect of the skills of constructing adaptive electronic tests (pre/post), and the measure of the strength of cognitive control (pre/post). The validity, stability, and validity of these tools were confirmed, and a number (9) hypotheses were formulated to answer the research questions.

The results of the research revealed the effect of the individual electronic projects strategy pattern with the synchronous electronic training pattern on cognitive achievement and the strength of cognitive control among first-year educational technology students, and the effect of the group electronic projects strategy pattern with the synchronous electronic training pattern on the practical performance of the skills of building adaptive electronic tests, and this result is consistent with many studies, and in light of this, the researchers presented appropriate proposals and recommendations.

**Keywords:** Electronic project strategy - electronic training - skills for building adaptive electronic tests - the power of cognitive control.