The Patterns of Panoramic Cooperative Learning Strategy (Horizontal-Vertical) Based on Diagnostic Assessment and QR Codes and Their Impact on Developing Digital Photography Skills and Visual Closure among Education Technology Students

This research aims to develop an e-learning environment to employ the two patterns of the panoramic cooperative learning strategy (horizontal-vertical) based on diagnostic assessment and QR code and its impact on the development of digital photography and visual closure skills among educational technology students. To achieve this goal, the required tasks related to the educational needs of educational technology students in the digital photography course were identified. The tasks related to digital photography were produced through diagnostic assessment in an e-learning environment based on the panoramic learning strategy supported by QR code in the form of presentations and panoramic videos. The research used an experimental design based on two experimental groups for one independent variable presented in two patterns: the first: a proposed strategy for panoramic cooperative learning, horizontal style, based on employing diagnostic assessment and QR code, and the second: a proposed strategy for panoramic cooperative learning, vertical style, based on employing diagnostic assessment and QR code. The research sample consisted of 250 male and female students for the basic research experiment, from educational technology students, who were randomly divided into two equal groups according to employing diagnostic assessment in an e-learning environment based on the panoramic learning strategy supported by QR code. Rapid response and e-learning. The researchers prepared the following research tools: an achievement test (pre/post), a product evaluation card for digital photography skills and a visual closure scale. The validity, reliability and suitability of these tools were confirmed.

The research results revealed the effect of employing a proposed strategy for horizontal panoramic cooperative learning based on employing

diagnostic assessment and a quick response code on developing both digital photography skills and the visual closure scale in favor of the first experimental group, which studied using a proposed strategy for horizontal panoramic cooperative learning based on employing diagnostic assessment and a quick response code, compared to others, which relied on employing a proposed strategy for vertical panoramic cooperative learning based on employing diagnostic assessment and a quick response code. This result is consistent with many studies, and in light of this, the researchers presented appropriate proposals and recommendations.