

The Effectiveness of Using Multimedia in Interactive Education to Teach a Science Course for the 6th Grade Primary School

Haitham Mohamed Nagieb Mostafa

Assistant Professor, Printing, Publishing and Packaging Dept., Faculty of Applied Arts, Helwan University, Egypt, haithamnagieb@gmail.com

Neven Abd El Aziz Saleh

Professor, Printing, Publishing and Packaging Dept., Faculty of Applied Arts, Helwan University, Egypt, vena20022000@hotmail.com

Abdelazia Ibrahim Abdelazia,

MSc. Reseracher, abdelaziz.ibrahim@nahdetmisr.com

Abstract:

Multimedia-enhanced e-learning represents an integrated educational system consisting of a set of elements that integrate and interact with each other functionally in an educational program to achieve its objectives, these media rely on a well-organized sequence that allows each student to progress in the educational program according to their unique characteristics, actively engaged positively throughout their journey, The research aims to measure the effectiveness of teaching the science curriculum for the sixth grade using interactive multimedia in the e-learning system compared to traditional methods supported by non-interactive multimedia, The importance of the research lies in establishing visual design guidelines for the multimedia used in educational design to enhance curriculum teaching methods, The research problem is summarized in answering the question of the impact of employing multimedia in the electronic Learning Management System (LMS) for teaching the science course on the academic achievement of sixth-grade elementary students, The researcher assumes that the standard use of interactive multimedia with an integrated system for educational management on e-learning platforms achieves effectiveness for the targeted learning outcomes according to Bloom's taxonomy levels of remembering, understanding, applying, analyzing, and evaluating, Students who took all or part of their class through interactive learning performed better, on average, than those who received the same content through traditional face-to-face teaching, The validity of the hypotheses has been verified by following the practical experimental approach in building a model for interactive multimedia by adhering to instructional design principles and employing user interface with usability standards in the educational management system (application - website), Then, conducting an experiment of enhanced e-learning with interactive educational media on a sample group of students and using traditional teaching with the control group, followed by measuring the results of a standardized test on the targeted learning outcomes for both groups.

Keywords:

Learning management system (LMS), E-Learning, Multimedia, Interactive Education, User Interface (UI)

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