

# USE OF MULTIMEDIA TECHNOLOGIES IN THE DEVELOPMENT OF INTELLECTUAL SKILLS OF STUDENTS OF PEDAGOGICAL HIGHER EDUCATION INSTITUTIONS

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*ANNOTATION. The use of multimedia technologies in education has enabled teachers to simulate final outcomes and assist students in applying knowledge learned from textbooks, thereby compensating for the deficiency of traditional teaching methods. It is important to examine how effective these technologies are in practical use. This study developed online learning-teaching resource platforms using Flash multimedia, providing interactive and integrated features in an easy-to-use user interface, in order to discuss Computer-Aided Drawing (CAD). The study utilized a teaching experiment with a non-equivalent pretest-posttest control group design to test and discuss students' professional cognition, operating skill cognition, and level of learning satisfaction during the learning process. No significant differences emerged between the groups in regards to professional cognition or operation skills cognition. However, a significant difference in learning satisfaction was noted, indicating that the coursework with multimedia Flash produced greater satisfaction than with traditional learning methods. Results are explained in detail and recommendations for further research provided.*

**KEY WORDS:** *technology, diligent, issue, economy, computer, recognize*

**INTRODUCTION.** In the current scenario of educational institutions, multimedia has dug up its own kind of space in some or the other way as a tool of educational technology. Multimedia has overcome the barriers of time and space and provides evidence to be accepted as an anytime and anywhere tool for educating multi-disciplinary masses. The process of knowledge acquisition becomes more efficient when the learners experience an event through a multimedia simulation. Multimedia technology empowers the educational process by means of increased interaction between teachers and the students. Apart from the fact that multimedia can provide educators and students with endless possibilities of quality teaching and learning, taking vital considerations of the pedagogical strengths and limitations of Multimedia, it can be used to its fullest potency, and reach the eminence of 'New Educational Technology tool'. This paper presents a comprehensive study of selected papers that are pertinent to the use of Multimedia in Education, as well as lists down the various proposed multi-disciplinary educational frameworks and tools for the same. In this paper, a study of most commonly used methods and issues related

to the use of Multimedia as a new education technology tool has been carried out and reported. It also presents a categorized listing of such papers, accompanied by annotations that describe the content of the papers and their relevance to the use of Multimedia in Education

**METHODOLOGICAL UNITS.**Mainstreaming the technological media within what is called “Multimedia” is the pattern which led to infinite applications of computer technologies. The concept of this technology came into being with the appearance of sound cards, then compact disks, then came the use of digital camera, then the video which made computer an essential educational tool. Nowadays, multimedia expanded to become a field on its own.

The concept of multimedia technology is broad & it has infinite usage fields; it is a profound element as an educational technology in addition to its use in medical & statistical domains & in establishing databases. Moreover, the entertainment sector is one of the sectors that has the lion’s share in using this technology. Interaction is the main element in multimedia technology as most of its applications are characterized by interaction. Consequently, multimedia programs may provide a more effective & more influential experiment than using each technology separately.

The researcher thinks that multimedia is one of the best educational techniques because it addresses more than one sense simultaneously, as it addresses the senses of sight & hearing. Multimedia programs provide different stimuli in their presentations which include a number of elements some of which are

Texts,  
spoken words,  
sound& music,  
graphics,  
animations and  
still pictures.

These elements were mainstreamed in a comprehensive presentation so as to provide effective education, which in turn will support the participation of the different senses of the learners in diverse syllabi.

Some of the advantages of these programs are:

They make the reading process a dynamic one instead of the written presentation of the texts printed in the book/

Presenting different drawings & pictures supports the clarification of ideas & communication of information.

Moving easily from a presented subject to another provides a good chance for questions & discussions.

Using different presentations like video clips along with maps or other kinds of presentations help to get the information closer to reality. Adding music makes the idea clearer and it attracts the attention of the learners.

They rise the attention & interaction between students & the educational subject.

They comprise the elements of amusement & suspense.

They are graded according to the learner’s abilities from easy to difficult ones.

- They provide teachers with a new educational style & encourage curiosity.
- They help teachers & learners look into topics from a broader perspective as each topic comprises enormous information.
- They guide learners to peer learning .
- They are concerned with providing simultaneous feedback.
- They help learners remember & transfer their knowledge.
- They support the user's work & innovation, which makes the possession of a computer a necessity for both the student & the teacher.

As a result of the efficiency the multimedia programs achieved in the educational domain, the researcher sought to subject these programs to research in order to find out the best style for presenting & applying them in a way which ensures their optimization in education.

### **1.1. Study problem**

The study problem is focused in finding out the influence of using multimedia in teaching computer & its uses in education on the female students' academic achievement, especially the female students of the Education College at King Saud University, in comparison with their colleagues who benefit from this curriculum through traditional education. This problem is made more specific in the following question:

What is the impact of using multimedia in teaching "computer & its uses in education" curriculum on the female students' academic achievement?

### **1.2. Study objectives**

The study aims to find out the impact of using multimedia on the female students' academic achievement in the "computer & its use in education" curriculum through knowing the difference of academic achievement between the female students who were given the lecture by using multimedia program (the experimental group) & those who were taught by using traditional methods – teacher, discussion & dialog (the control group).

### **1.3. Study significance**

The importance of the subject study is a result of the following issues:

- It allows reaching a simplified strategy which leads to easy understanding on the part of the female students.
- It raises the female students' academic achievement in computer subjects.
- It develops the female teachers' abilities of using multimedia in teaching computer subjects.
- It encourages the use of multimedia in the University environment of the colleges of theoretical bases.

### **1.4. Study questions**

The subject study provides an answer for the following main question:

What is the impact of using multimedia on the female students' academic achievement in "computer & its use in education" curriculum in the Faculty of Education at King Saud University?

This question can be subdivided into the following questions:

Are there any statistically-significant differences between the average marks of the experimental group & that of the control group in the pre measurement of the female students' academic achievement in the "computer & its use in education" curriculum?

Are there any statistically-significant differences between the average marks of the experimental group & that of the control group in the post measurement of the female students' academic achievement in the "computer & its use in education" curriculum?

Are there any statistically-significant differences between the average marks of the experimental group & that of the control group in the pre & post measurements of the female students' academic achievement in the "computer & its use in education" curriculum?

### 1.5. Study limits

The study limits are confined to the following:

#### 1.5.1. Spatial limits

The category of female students who study the 250 NHG "computer & its use in education" curriculum comprises 400 of them from different branches of the College of Education. A sample, consisting of 40 female students distributed on two educational branches of the curriculum taught in the College of Education at King Saud University – Riyadh.

#### 1.5.2. Temporal limits

Studying starts by the beginning of the first semester of the University year 2010–2011 & it wraps up by its end.

#### 1.5.3. Educational stage

University stage – level four.

### 1.6. Study variables

The study involved the following variables:

1.

The independent variable: represented in using multimedia in teaching the "computer & its use in education" curriculum to the experimental group.

2.

The dependent variables: represented in the students' academic achievement.

3.

The variables controlled before the experiment:

(a)

The faculty to which the female students belong.

(b)

The female students level (level four).

(c)

The previous academic achievement depending on the students' marks.

(d)

The teaching location used.

(e)

The teacher.

### 1.7. Study terminology

1.

**Multimedia:** They represent the consolidation of all elements of technology as they combine sound, image, video, drawing & text with a high quality in addition to the interactive environment

2.

**Student's academic achievement:** It is the result of what the students learn after the learning process.

3.

**The “computer & its use in education” curriculum:** It is one of the obligatory syllabi provided to the students of the Faculty of Education by King Saud University with two credit hours. This curriculum is designed especially for male and female teacher students and for all those who want to use the computer applications in the teaching process. It is considered a practical entry to the use of computer and software in education. It focuses on mainstreaming the modern computer applications (like the text editing software programs, presentation programs, Excel & internet) and computer technology within the educational fields on the one hand, and how to use them in learning and education processes.

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