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## **The Impact of Learning Support Pattern in Infographic-based Learning Environment on Developing the Skills of Producing Digital Graphics among Technological Education Students**

A Thesis submitted For The Fulfillment Of Master Degree In Education  
(Curriculum and Methodology Of Instructional Technology)

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**ملخص البحث  
باللغة الإنجليزية**



## **Introduction:**

This research seeks to address the shortcomings in the skills of producing digital illustrations for students of Educational Technology by studying the impact of the pattern of learning support in the learning environment based on the infographic of students of Educational Technology.

This research is based on teacher support through this mode, the teacher provides support to the student in a learning environment based on the infographic, while studying content, and also, while conducting the activities that are required within the environment. As for the pattern of peer support, peer – to – peer support when a learner asks for support either while studying content or performing activities within the environment.

Therefore, the current research seeks to determine which teacher support mode or peer support is best in the infographic environment.

## **The problem of The research:**

The problem of research has crystallized in the existence of a clear lack of level of students in the Technology of Education in the skills of producing digital illustrations, which are indispensable for the technologists, and then the current research try to answer to the following main question:

**What is the impact of the different types of support in the infographic environment based on the development of the skills of producing digital educational fees for students of Educational Technology?**

This question is divided into the following sub – question which the research tries to answer:

- 1- What is the proposed scenario for the learning environment based on the infographic according to the pattern of support (teacher – peer) to develop the skills of producing digital illustrations?

- 2- What is the impact of the use of the model (teacher support) on the development of knowledge and skill in developing the skills of producing digital illustrations among students of Educational Technology?
- 3- What is the impact of the use of the model (peer support) on the development of knowledge and skill in developing the skills of producing digital illustrations among students of Educational Technology?

### **Research Aims:**

#### **The current research aims to disclose:**

- 1- The effect of the pattern of teacher support in developing the skills of producing digital illustrations among the students of the Educational Technology.
- 2- The effect of the pattern of peer support in developing the skills of producing digital illustrations among the students of the Educational Technology.

### **The Importance Of The Research:**

#### **The current research is may be Important For:**

- 1- The designers of infographic programs have some of the special basics of infographic design and development to develop digital illustrations design skills.
- 2- Providing the most important skills required for students of Department of Educational Technology, Faculty of Specific Education to design the production of digital illustrations to attract the attention of researchers interested in research in the field of infographic and employment in the educational process.
- 3- Assisting faculty members to recruit support in learning environments based on the infographic in the educational process.

### **Limits Of The Research:**

The current research will be limited to the following limits:  
 Students of the fourth division, Department of Educational Technology, Faculty of Specific Education , Fayoum University, 2017-2018, due to the availability of the pervious requirements of the learners in terms of computer skills and the internet, and they have studied some online.

**Research methodology:**

**The current research is based on:**

1- Descriptive approach:

The researcher will follow the analytical descriptive research approach in relation to the study of literature and previous studies which deals with the patterns of educational support, technical infographic, and digital illustrations.

2- Semi – Experimental approach:

The researcher followed the semi – empirical approach to experimenting with the educational environment, comparing the experimental groups, and measuring the effect of the support patterns in the environment of the infographic in its development on the skills of producing digital illustrations for the students of Educational Technology.

**Research sample:**

The research sample consists of students of Educational Technology, Faculty of Specific Education, Fayoum University, and the researches will select and randomly distribute them to two experimental groups, as illustrated by the following experimental design:

<b>Experimental Groups</b>	<b>pro Tools</b>	<b>Experimental Processors</b>	<b>post Tools</b>
The first experimental group	√	The teacher`s support patterns in the environment of the infographic	√
The second experimental group	√	The peer`s support patterns in the environment of the infographic	√

**Research variables:**

First: The independent variables:

Pattern of learning support in the infographic environment:

- 1- Teacher support pattern.
- 2- Peer support pattern.

Second: The dependent variables:

Production of digital illustrations.

**Research hypotheses:**

- 1- There are statistically significant differences between of the first experimental group in the pre and post – application to develop the cognitive aspect of the skills of producing illustrations and digital for the post application.
- 2- There are statistically significant differences between of the average scores of the students of the first experimental group in the pre and post – application to product rating card illustrations and digital for the post application.
- 3- There are statistically significant differences between of the average scores of the students of the second experimental group in the pre and post – application to develop the cognitive aspect of the skills of producing illustrations and digital for the post application.
- 4- There are statistically significant differences between of the average scores of the students of the second experimental group in the tribal and post – application to product rating card illustrations and digital for the post application.
- 5- There are no statistically significant differences between of the average scores of the students of the first experimental group and the second experimental group in the post application to develop the cognitive aspect of the skills of producing illustrations and digital.
- 6- There are no statistically significant differences between of the average scores of the students of the first experimental group and the second experimental group in the post application to product rating card illustrations and digital.

**Research tools:**

Current search tools are:

First: Tools for experimental processing:

- An electronic learning environment through the web based on the infographic in the presences of teacher support. **“from the design of the researcher”**
- An electronic learning environment through the web based on the infographic in the presences of peer support. **“from the design of the researcher”**

Second: Measurement tools:

- An achievement test to measure the cognitive aspect of the skills of producing digital illustrations. **“prepared by the researcher”**
- Product evaluation card for measuring the performance side of the skills of producing digital illustrations. “prepared by the researcher”
- A list of educational and technical standards for producing digital illustrations.

**“prepared by the researcher”**

### **Research steps and procedures:**

First: Analytical study of the theoretical framework.

- Review and analysis of literature and previous studies related to the field of research and its interlocutors, which is in (the patterns of educational support, infographic, skills of producing digital illustrations).
- Design of the infographic environment for digital illustration production skills.
- Determining the specifications of learning in the infographic environment in accordance with the patterns of educational support.

Second: an experimental development study:



The research went through a series of procedural design steps to design experimental processors and study tools, to test them, to collect and interpret the results, through Mohammed Ibrahim El Desouki's model for designing learning environments.

### **Research results:**

- 1- There are no statistically significant differences between of the average scores of the students of the first experimental group and the second experimental group in the post application to develop the cognitive aspect of the skills of producing illustrations and digital.
- 2- There are no statistically significant differences between of the average scores of the students of the first experimental group and the second experimental group in the post application to product rating card illustrations and digital for the second experimental group.

The researcher confirms that this result applies primarily to the nature of the content is the skills of producing digital illustrations, and similar scientific content, and may differ in the result of the provision of other scientific content.

In conclusion, after observing the students of the two experimental groups through the application period, the researcher confirms that the second experimental group based on peer support style was more enthusiastic and motivated to learn, more interactive, and showed better results in the skill side of the skills of producing digital illustrations, this is due to peer support.

### **Research recommendations:**

In the light of the findings of the research results, recommendations can be presented in:

- 1- Taking advantage of the current research results in the design of learning environments based on the infographic and to use the appropriate support pattern.
- 2- Using the support with its patterns in the learning environments based on the infographic to develop the skills of producing digital and illustrations.

- 3- Dependence on learning environments based on the infographic in the teaching of different educational courses, whether computer or any other curriculums.
- 4- Taking advantage of the standards and design learning environments based on the infographic.
- 5- Employing learning environments based on the infographic to develop some learning outcomes.

**Suggested research:**

- 1- Conducting research to interact between support patterns and different learning methods on the development of different learning outcomes.
- 2- Conducting research to the impact of different groups participating in learning environment based on the infographic for the development of achievement and self – efficacy.
- 3- Use support patterns not used in current research and focus to teach people with learning disabilities.

