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## A PREPARATION OF AN EDUCATIONAL PROGRAM TO DRAW THE BASIC PATTERN FOR SKIRT BY USING MARVELOUS PROGRAM

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### **Abstract**

*Information and communication technology is one of the most basic foundations for countries and governments to build their future in the rapidly expanding information and technology era. Scholars agree that the information revolution is the most important technological achievement that has been achieved, as man has been able to achieve great development in many fields, including industry and production. The use of the computer has been employed in production processes, including the field of the clothing industry, as it contributes to giving the product the ability to compete through the use of many application programs that are used in the clothing industry.*

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### **Keywords**

*Educational Program, Drawing, Basic Pattern, Skirt, Marvelous Program.*

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## **Introduction**

The production of clothes gives the product the ability to compete and many application programs have appeared that are used in the field of industry Clothes, and among these systems the use of the computer as an aid in the CAD design process, "Computer Aided Design", which includes the design of the style (model), the foundations of pattern preparation and pattern grading, the planning of the cutting process, as well as his role as an assistant in the manufacturing process. This includes the individual plan for the material Lay Planning, and the automatic circulation of the fully-cut parts during the operation process inside the production lines, as the path became open to complete the whole apparel factory mechanism in the CIM "Computer Integrated Manufacturing" process by linking the computers that control and operate automatically in various Production processes in an integrated network, so materials can be examined, design determined, models made, scaled, engaged and conducted The cutting process, operating stages, storage and distribution are all under the control of the computer and in the presence of flexible administrative control, which gives high-quality production in a short time, less effort and greater profit.

In view of many previous studies, the importance of using computer systems in the garment industry is evident, such as a study (Shaima Bahjat Al-Anatoli: 2004) which dealt with the role and importance of a computerized product data management system to easily obtain product-specific information in the garment industry and determine the technological foundations through analysis Product design data to clarify the details of the production plan and to know

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the extent of benefit from the application of data management systems in the ready-to-wear industry, and a study (Emad Zayed: 2011), which clarified the role of the computer in managing operations inside ready-to-wear factories by analyzing some integrated production management systems to be used in Preparing the proposed system using the computer network, as well as preparing an integrated production management system suitable for application in garment factories. One of the most important findings of the study is the effectiveness of these systems using computers in industry.

With the rapid development of technology and systems used and their success in the manufacture of ready-made garments, many programs and systems have emerged, including a 3D simulation system for a piece of clothing such as "Marvelous", which are new and diverse systems that allow designers and producers to generate a model of the shape of the human body or the design to be produced using Three-dimensional (3D) pattern, as well as the three-dimensional systems and programs for preparing clothing models. Through these programs, patterns are drawn in two dimensions, designs and decorations for models are presented, and then displayed in three dimensions.

It is simulation technology as an innovative means to create virtual models in the stage of refining and creating the design in the process of producing clothes, where designers need to visualize ideas in the shape of the body (3D) and identify problems before the production of actual models, and then the models are developed and evaluated before approval of the final design, mass production and from Then manufactured and delivered to the consumer market.

This required raising the efficiency of workers in the field of clothing industry to use these systems and programs, which called for the scientific department (clothing and textiles) to seek to identify the real needs of the work order to update educational programs to achieve compatibility between the graduate and his skills and the requirements of the labor market through communication between the educational institution represented In the department, factory owners and ready-to-wear companies, where the current research tends to try to update educational content to keep pace with all that is new in computer technology from modern systems complementary to the specialized programs in the pattern industry as a system to simulate the piece of clothing, where the study recommended (Shadia Salah Hassan Metwally et al .: 2017) ) By updating the curricula that teach students clothing and textiles to face the constant development of solutions to problems in the production and implementation of clothes and paying attention to measuring the effectiveness of electronic programs in drawing products. The research went to preparing an educational program for drawing the basic pattern of jonala using the "Marvelous" program.

### **Research Problem**

The research problem is determined by the following questions:

- 1- What are the opinions of the experts about the educational program prepared in drawing the basic pattern of jonala using the "Marvelous" program?
- 2- What is the effectiveness of the proposed program on the level of cognitive achievement, skill performance, and trends for the research sample in drawing the basic pattern of jonala using the "Marvelous" program?
- 3- What is the effectiveness of the proposed program on cognitive achievement, skill performance, and trends of the research sample in drawing the basic pattern of gonala using the "Marvelous" program according to the research variables (type of education - and the estimate of the second group)?

### **Research Terms**

1- Program:

It is a set of organized activities that are planned and managed together to achieve a set of other interrelated goals and results.

2- Educational Program:

A set of experiences and skills, which in turn focus on the learner, his needs, abilities, personal characteristics and the process of balance between the subject and the learner and the other components of the program and between knowledge, skills and values within the educational institution for students, which leads to the growth of personality in all its cognitive, emotional, and skill aspects, and with what is consistent with the objectives Educational ".

3- The Pattern:

It is an engineering drawing or layout of straight, curved and diagonal lines on paper that is drawn on the basis of two dimensions to match and match the three-dimensional human body (height, width, depth) and uses in its work the accurate measurements of the body dimensions.

4- The skirt:

It is a robe worn by women and girls that covers the lower body to the foot. The longest of them varies according to the design.

5- Marvelous designer program:

They are multiple and varied new systems that allow designers and producers to generate a model of the shape of the human body or the design to be produced using a three-dimensional (3D) pattern, as the three-dimensional systems and programs for preparing clothing models, where through these programs the pattern is drawn in two dimensions and the designs and decorations of the models are then View it in 3D. It is also simulation technology as an

innovative means to create virtual models in the stage of refining and creating the design in the production process of clothes, where designers need to visualize ideas on the shape of the body (3D) and identify problems before the production of actual models, and then the models are developed and evaluated before approval of the final design and mass production. It is then manufactured and delivered to the consumer market.

**The Research is Based on the Following Hypotheses:**

- 1- Experts' opinions regarding the basic pattern drawing tutorial for gonala using the "Marvelous" program are positive.
- 2- There are statistical significant differences between the mean scores of the students in the achievement and skill test (pre-post) in favor of the post test.
- 3- There are no statistically significant differences between the mean scores of the students in the achievement test according to the two variables (type of education - and the grade of the second group).
- 4- There are no statistically significant differences between the mean scores of the students in the skill test according to the two variables (type of education - and the grade of the second group).
- 5- There are no statistically significant differences between the mean scores of the students in the students' attitudes according to the two variables (type of education - and the grade of the second group).

**Research Procedures**

The process of preparing the educational program went through a set of stages, depending on the following:

- 1- The design and preparation stage.
- 2--The testing phase.
- 3- The implementation phase. The following is an explanation of these stages:

First: Design and Preparation Stage: This stage contained a complete conceptualization of the educational program by selecting the program topic, general and specific objectives, then determining the program's content, method and style of learning.

Second: Determining the topic of the program: The subject of the proposed program was drawing the basic pattern of the jonala using the "Marvelous" program.

Third: Determining the objectives of the program: This stage is considered the basic on which the steps of preparing and organizing the content of the program are based. General objectives for the program have been formulated, and detailed procedural goals in the form of cognitive, skill and emotional objectives that determine the resulting behavior to learn the basic

information and skills necessary to draw the basic pattern of the immobilization within the program.

The following is the final version of the procedural objectives of the program: Cognitive objectives: At the end of the program, the learner can:

1- Defines the concepts of mobile. B- Defines the components of the main interface of the program. C- Get to know the mannequin measuring tools d. Learn the tools used to draw a pattern on the 2D interface. ... get acquainted with the tools used to place the pattern details and identify the tools used to place the pattern on the pattern.

2- Get to know the tools used in knitting the pattern parts.

3- It explains how to save the implemented project. Skill goals (psychomotor):

At the end of the program, the learner can:

a. The mannequin measures the pattern.

B. Uses the tools for drawing the basic pattern of jonella.

C. Uses pattern placement tools.

Dr.. Patterns are used on the pattern. ..

E - Uses the tools for knitting pattern parts within the program.

And - saves the project in different ways.

Affective goals: At the end of the program, the learner can:

A- It follows the instructions contained in the program.

B - He is keen to practice what is required within the educational program.

C- Abide by the rules inside the computer lab.

D- He works in a team.

E - Have a positive trend towards computer learning

Determine the content of the program:

The content refers to the scientific material that is intended to be taught to students through the program, and the link of the content has been taken into account with the educational goals to be achieved, as well as the inclusion of its information in order for students to respond to it and increase their experiences, and it is organized in a logical manner, taking into account the interconnectedness between its parts. The content that has been determined within the learning topic is presented to a group of experts in the field of clothing and textile specialization to determine the importance of learning the items that have been identified within the program, and the following table shows the percentage of agreement on the importance of the program's content as made by experts:

## Results

- 1- Experts' opinions regarding the educational program for drawing the basic pattern of jonala using the "Marvelous" program are positive, with an agreement of 100%.
- 2- There are statistical significant differences between the mean scores of students in the achievement and skill test before and after using the program at a significant level of 101. In favor of the dimension, which indicates the effectiveness of the proposed program in education.
- 3- There are no statistical significant differences for students according to the type of secondary education, technical (three years), and technical (five years) in the achievement and skills test, and trends towards learning.
- 4- There are no statistical significant differences for students according to the estimate of the second group (acceptable, good, good grandmother, excellent in achievement and skill test, and trends towards learning.

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