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The Egyptian Environment as an Inspiring Source for The Design of Handcrafted Textile Fabrics, executed in a Tapestry Style (Applied on Women's Clothes)

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Introduction:

The environment has affected plastic arts in general, and textile design in particular, as one of the fields of arts. Direct environmental influences have been reflected in techniques, materials and tools, as well as textile designs inspired by the elements in the surrounding environment. Among the executive techniques used in textile works is the tapestry method, which is considered one of the techniques that allowed clear artistic effects to simulate nature, except that this method was used only on textile pendants and carpets, as the tapestry technique is characterized by the dominance of colored weft strings over the design, so drawing with strings becomes easy. And expressing the smallest details, through the use of a frame loom, and exposure to the style of wefts that are not extended on the simple loom, in addition to the use of various materials, traditional applied methods and some modern methods, and then take advantage of these textiles by employing them as an additive textile piece to women's clothes. Research problem: The research problem consists of the following questions:

To what extent can the environment be used as a source of inspiration for textile designs? How feasible are the proposed designs to be implemented in a manual tapestry method, using different materials with modern artistic influences?

To what extent can the executed textiles be used as an additive to women's clothing? Research objectives: The research aims at:

Creation of textile designs from the environment, and the production of fabrics with high aesthetic values in the style of hand tapestry, using a frame loom.

Raise the capabilities of designers in making handwoven textiles, and employ them as added textile pieces for women's clothes.

- To develop the design and applied technical skills of the textile designer.

Research importance: The importance of the research is summarized in:

Opening up the space for inspiration from the environment to create textile designs, and to implement them manually in the tapestry style.

Finding new entrances to employ hand-woven fabrics, by employing the produced fabrics as added textile pieces to women's clothes.

Research methodology: The research follows the descriptive, analytical, and then applied approach to provide innovative solutions. The applied aspect was implemented through the teaching of the "Environmental Studies and Sciences" course - the third year - for the academic year 2020/2021 AD, (Higher Institute of Applied Arts - 6th of October).

The researcher taught the theoretical side of the subject by introducing students to the concept of the environment and its relationship with the artist, and how to benefit from the surrounding environment in various applied fields, especially in the field of textile design. The practical aspect was applied in the course for the students, through the work of designs inspired by the environment, which were divided into designs for elements of nature, and designs for decorative units derived from the surrounding environment and heritage, which are suitable for implementation as textile pieces with aesthetic values, using the tapestry method and raw materials from the environment. The students weaved their designs on hand looms, and then these weaves were used as additive pieces to women's clothing.

Key words: environment - tapestry - handwoven fabrics.

Definition of the environment: the environment is defined as all conditions and external factors surrounding a person, which affect the processes that he performs, that is, it determines the general framework in which he lives and is affected by it, as it represents all what surrounds a human, including air, water, soil, mountains, sunlight, minerals in the ground, plants and animals on earth surface or that live in water.

The researchers divided the environment into:

Natural environment: It represents the resources that a human being has no hand in their existence, but God made them available for man to obtain from them the necessities of his life such as clothing, food and housing.

A constructed environment: It consists of the physical infrastructure that people have built, and of the social systems and institutions that have been established.

The relationship between the environment and the artist: The environment is one of the surrounding factors that affect the artist, as it is an inspiring source for many works of art, as human's relationship with his environment embodies a model of belonging to nature which familiar to us, because the nature that is reflected in the human existence in its various aspects is also reflected in the art that depicts the aspects of nature in a certain environment, and the characteristics that characterize this environment make it different from other societies, the relationship between the environment and the artist is a reciprocal relationship, the environment gives the artist the stimuli and motives that help him to show his creative values through being affected by these environmental factors, while the artist repeats formulating the shapes surrounding him in multiple ways that are consistent with his vision and the era in which he lives.

The art of hand weaving is one of the arts associated with the artist's innovation, economic and cultural development, in addition to its strong relationship with the environment and the raw materials it contains, and its customs, traditions, beliefs, and social and economic systems.

Tapestry textiles: Tapestry is considered one of the oldest decorative textiles, tapestry is an English term meaning drawn tapestry, and it is one of the oldest known types of woven

decoration in Egypt.

Tapestry textiles are flat textiles that do not contain closed or open stripes, and tapestry weaving is one of the simplest methods used in making decorative fabrics, and it occurs from the intersection of weft threads with warp threads.

The tapestry is one of the methods rich in artistic and plastic values, as well as the possibility of using it in the implementation of pieces full of movement, and these artistic and



(Figure -1) illustrates the tapestry weaving method (non-stretched wefts)

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plastic values of shade, light, embodiment and a sense of movement can be achieved by using strings of different types, colors and tracings, depending on the design.

History of the emergence of tapestry textiles: The tapestry fabric is considered one of the textiles that have been used since ancient times, it has existed in Egypt since the Pharaonic era, and it continued to develop into the Coptic era and then the Islamic era, and remained until now in the modern era, and the West later called this type of textiles Many names, such as "Joplan" and "Opison".

Tapestry textiles in the Coptic era: The Arabs called the tapestry textiles (the un-stretched weft) the tapestry, and it was attributed to its people the Copts, and this name continued until the Europeans called the Qabati later on the name Tapestri.

In the Coptic era, Egypt was famous for its Coptic fabric. (Fig. 2) shows a

piece of woolen fabric in the Coptic Museum from the fifth century AD. Its decoration was woven in the Coptic method.

Tapestry textiles in the Islamic era: The production of Qabati

textiles continued after the introduction of Islam, due to the continuing work of the people of arts in their artistic works and handicrafts, and the Arabs called the

textiles of the Qabati (the un-stretched weft) the drawn fabric. The Muslim artist used a variety of methods in the manufacture and decoration of Islamic textiles, and weavers used horizontal and vertical looms, and multiple weaving methods were used, and among the most important of these methods is the non-stretched weft, which was used in the Qabati weaving that the Egyptians were famous for before the introduction of Islam, which continued until the end of the Fatimid era, and among the most important decorative elements that appeared with Islamic art were Arabic calligraphy.

The prevailing use of weft fabrics was silk or wool, while the warp materials were linen, (Figure-3) consists of five pieces of wool, with decorations woven in a non-extended weft manner (Qabati) from the Tulunid period.

Tapestry textiles in the modern era: the development of the art of weaving in the second half of the twentieth century, and as a result of this development, new colors, techniques and textures of textile surfaces appeared, and unfamiliar forms such as classical, realistic, romantic and abstract images appeared, in addition to modern techniques that appeared through the influence of modern materials.

Modern weavers have made use of many new materials of various shapes, types, and thicknesses, as well as many other materials such as leather, wood, fur, feathers and rubber, for the purpose of renewal and diversification, and these materials helped to show modern technologies, and the implementation was carried out on horizontal, vertical or similar weaving looms. The pedals, and tangents were used as a way to highlight the modern technological influences.

Tapestry textiles in Europe: The tapestry textile (non-stretched wefts) moved to the West and was known as tapestry, joplan, or obesion, and had a role in giving textiles the status of works

(Figure -2) shows a piece of Qabati tapestry



(Figure-3) Wool with woven motifs in a non-stretched weft manner - The Islamic Museum in **Cairo - Tulunid period**

of art, as it was limited to palaces and salons, including themes from landscapes, hunting trips, and scenes from novels and literary stories.

Tapestry textiles began abroad in France, and the oldest piece was found in Western Europe dates back to the eleventh or twelfth century AD, and the most famous factory was the Joplin factory.

In the middle of the fifteenth century AD, nearly 15,000 weavers were working in weaving centers in France, using a horizontal loom or a vertical loom, and it is considered the finest European furnishings made by the Royal Joplin factory in Paris.

It is evident from the foregoing that this type of textiles was called by names associated with its production centers, as it was called: (Qubati, Joplan, Obeson, Kilim).

The applied method used in the production of handmade tapestry textiles (the research topic):

There are many features and styles through which tapestry textiles appear, and simple structural compositions were used in the production of this type of textiles. These textile compositions were used to obtain different textures and silhouette gradients, to show the subtle details of the various decorative subjects, and multiple color values were obtained.

Hand-drawn tapestry weaving: the non-stretched weft style is used in its weaving style, in which all colored wefts are adjacent in the area specified for them in the decorative design, and the warp threads are completely covered, while the wefts appear only on both sides of the woven, and the warp appears in the form of light ribbons in both aspects, the tissue structure used is a mastery of 1/1 that works on two or four shades at most, and it is the most widespread and used tissue structure in these tissues.

Characteristics of tapestry fabric: Tapestry fabric is characterized by the possibility of multiple wefts and colors depending on the design, so each area of the design is woven in its own weft color independent of the neighboring threads of the remaining threads.

1- It needs a large percentage of the weft impregnation, in order to be able to cover all the warp strings.

2- Weaving in a plain weaving method, and the decoration is identical to it on both sides of the weave, while the warp threads completely disappear and did not appear.

3- The presence of longitudinal cracks between the straight vertical parts of the decoration, when the mutual cohesion between the adjacent decorative spaces is not used.

4- Small holes appear at the meeting points of colors, which appear clearly when the piece is exposed to light.

5- The presence of effects called saw-tooth when using the method of color exchange between adjacent colors, and the weaving of the two adjacent weft on one warp.

6- The presence of stair-like effects in designs with beveled or curved lines.

Aesthetic values of tapestry textiles: Tapestry textiles are considered a valuable art that has an aesthetic and practical function, but it is characterized by the difficulty of implementation and accuracy of expression, it may take a long time to produce a single piece of it, it is more close to the work of photography.

The tapestry has great and varied plastic capabilities that give it exclusivity in strings expression and executive performance, and by studying the technique used in tapestry textiles, colors, lines and textures, it can be used to develop tapestry weaving and produce innovative textile pieces.

Textile design: Weaving is an applied method that requires an artistic process that begins with a design work, and weaving pieces are carried out by using design elements to achieve aesthetic values, and the artist deals with the appropriate material and the appropriate tools and the proposed textile design to form that material, and the textile design must have the harmony of the threads' colors, and that the colors of the units and components that make up it are suitable for the purpose of using the executed textile piece. Many expressive and figurative artworks have been carried out through textile design, as in the Joplan and decorative textures, where the weavers used many shades of strings, to achieve the silhouette gradients and a sense of embodiment, as a perspective for use and movement in the design.

The tapestry style is one of the applied methods used in the implementation of hand woven designs. Through the color effects resulting from the affinity of each of the warp wicks with different colors, and by using various types of decorative threads that differ in thickness, the design elements of tapestry are evident.

Textile design elements: the textile design process, like any other design process, that includes a set of elements and variables, through which the designer can complete the design process, to express it into the implementation, which are represented in: strings, textile compositions and techniques, the type of design.

Decorative threads: Decorative threads are any textile yarn that is unusual in its composition and is used in the production of fabrics with innovative effects. Decorative threads are threads of different types that are used in hand weaving as well as in knitting and crochet work.

Practical applications: Through the subject of Environmental Studies and Sciences - Fourth Division - Fashion Department - Higher Institute of Applied Arts - the academic year 2020-2021 AD, the concept of the environment and its impact on the artist was studied, and how to take advantage of the environment to inspire designs in the field of drawn textiles, known as weft weaving, non-extended "tapestry".

The old textile techniques "tapestry" were used, and directed to a new field aimed at employing manual weaving works as added textile pieces to women's clothes, by using elements from the surrounding environment, and reformulating them in accordance with the textile technology used.

The students made several designs inspired by the landscapes in the surrounding environment, or from the geometric, animal or plant motifs, lines and people, that are derived from the Egyptian heritage, with the aim of arriving at plastic art formulations in line with their implementation using the non-extended weft "tapestry" method manually.

The following is an introduction to some practical applications for students, and an analytical description of them:

A- A piece of textile whose designs are derived from nature:

1. The source of inspiration: natural elements from the Egyptian environment and heritage.

2. Area of weaving that is cut, designed and executed: 35X 50 cm.

3. Description of the work: The design of this piece depended on the elements of nature from water, sky and the sun in addition to the boat, so the design came in the form of a painting that represents a view of the sea and inside it a compound at sunset, and the sun appears as if it disappears into the water, and the white color helped to show the reflection of sunlight on the surface of the water, as the reflection of the colors of the sky appeared on the surface of the

water, and the colors were used in harmony, so the lines and colors within the weaving piece coalesced into a harmonious unit to form a single interconnected entity, and through the use of contrasting colors between light and dark, hot and cold, illuminations created color in design, which achieves aesthetic values, and the textile piece represented a realistic landscape, where shadow, light and a sense of embodiment were achieved through textural effects with colored strings in horizontal lines and converging color gradients, so 16 color shades were used to highlight the smallest details, which enriched the piece to be artistically and aesthetically pleasing, and its realistic sense is emphasized.

4. Type of dress code employment: Part of a female suit.

5. The used tissue technique: the tapestry method (non-stretched weft), using the tissue composition of masters 1/1.

B- Textile pieces whose designs are derived from the heritage:

1. The source of inspiration: engineering and decorative units from the environment and folklore (Nubia).

2. Area of weaving cut, that is designed and executed: $35 \square 50$ cm.

3. Description of the work: The design of this piece was based on the combination of some decorative units derived from the Nubian folklore, which are represented by the shape of the fish, the palm and the crescent, in addition to the shape of the triangle, which is one of the geometric decorative units in folk art. The design floor was divided into color spaces. Overlapping takes the form of curves, and the decorative units are distributed through those spaces, and like (the palm) the center of the design, and it was executed using the technique of untrimmed papyrus lugs, while the tapestry technique was used in the rest of the palm, and the triangle was repeated inside the design in an alternating position, and the fish was used as a decorative unit in a horizontal row, in an opposite position at the bottom of the design, while the fish, and the crescent appeared in an incomplete circular shape at the top of the design, and this piece was distinguished by its curved, streamlined lines, in addition to the interconnectedness of its elements, and the richness of the texture resulting from the diversity of colors, which are combined in a harmonious unity to achieve rhythm and diversity.

4. T-shirt employment type: The front of a women's blouse can be worn over a winter wool shirt.

5. The tissue technique used: - The tapestry method (non-stretched weft) using the plain tissue composition 1/1 - stripes and untrimmed wild.

Statistical analysis:

An exploratory study was conducted to measure the extent to which the research objectives were achieved through a number of design ideas derived from the environment, which were implemented in a hand-made tapestry method, to be used as textile pieces added to the fabrics of women's clothing, and this exploratory study was presented to a group of specialists in the field of clothing and textiles, to get acquainted with their opinions about aesthetic and functional aspects of the designs and the method of implementing the textile pieces. The questionnaire criteria (evaluation items) included the following:

The aesthetic aspect:

1. The creation of sources of inspiration is achieved in the implemented design, which imparts the values of originality, uniqueness and innovation.

2. There is harmony and unity between the basic elements of the design, and the color group is distinguished by harmony.

3. Decorative elements and units inspired by the environment have added aesthetic value to the executed design.

The functional aspect:

1. The eco-inspired design is suitable as an additive textile piece for ladies' clothing.

2. Making use of the tangible values resulting from the diversity of strings types and their effects to show the aesthetics of the executed piece.

3. The appropriateness of the manual tapestry method for the implementation of modern and innovative textile pieces, which is a new addition in the field of textiles.

4. The executed textile piece corresponds to the general taste of the purchasing community.

The criteria were presented in the form of an opinion questionnaire, and the questionnaire was prepared electronically through Google Drive, and the link was sent electronically to (15) arbitrators in the field of specialization, to arbitrate 10 textile pieces executed in the tapestry style, their designs are derived from the natural environment and heritage, and in the end the analysis was carried out. The results of the study were derived statistically.

The most important results:

1- The possibility of developing handmade textile pieces executed in the traditional manual tapestry method, through the creation of artistic effects using natural and synthetic threads with distinctive properties, in addition to some textile compositions and other techniques, with the aim of creating new artistic effects on the structural design of textile pieces, which increases the artistic value and its aesthetic.

2- Through the diversity of thread materials and the techniques used in the implementation of textile pieces, multiple artistic effects can be obtained.

3 - The importance of studying the environment as a source for designing innovative textile pieces that suit the changes and developments of the era, while achieving the aesthetic and functional forms, bearing a national character, preserving the identity, and combining originality with contemporary.

The most important recommendations:

1- The importance of contributing to the revival and development of the art of weaving drawn in the modern concept to take a place among other arts, and in line with the spirit of the times and satisfy the needs and demands of contemporary life in terms of progress and development, through the renewal of concepts, style and materials associated with this type of creativity, and deviating from the recognized traditional scope.

2- The necessity of making use of old textile techniques, adding modern capabilities and techniques to them to enrich them from the formal point of view, and directing them to new areas that are not limited to being employed in pendants and wall paintings, but extends to their use in clothing, fashion supplements and accessories.

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3- Employing textiles in a variety of and new forms in the field of clothing and dress accessories.

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