
THE USE OF OPTICAL ILLUSIONS DESIGNS IN THE WORK OF TWILL TEXTURED STRUCTURES WITH COLOR SCHEMES AND IMPLEMENTATION SUITABLE FOR THE EGYPTIAN HERITAGE

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Abstract

Optical art illusion depends on the use of mathematical laws to create artworks that inspire the aesthetic values of movement, stillness, depth and prominence, even though they are on a flat surface. Optical art illusion is one of the arts that represents the modern artistic trends that appeared in the early fifties of the twentieth century. A generation of pioneering artists emerged such as Victor Vasarely and Konchiler M.C. Esher. They have all used different types of visual phenomena that occur constantly in our daily perceptions, except that they are usually overlooked or neglected and not perceived. Whereas, we find the Egyptian heritage, especially in the cities of Upper Egypt, very rich in the field of textiles, with handcrafted artworks, which are carried out on weaving looms in the city of Akhim and Al-Kawthar district in Sohag Governorate, which needs attention and care in order not to become neglected and extinct. It also needs continuous development in order to bring it to the highest levels of sophistication in the industry, while preserving the Egyptian originality in design and production method. The research aims to shed light on the Egyptian heritage in the field of textiles in the cities of Upper Egypt and by using hand-woven looms to produce sheets and covers that preserve the distinctive and well-known designs of Akhmeem and Al-Kawthar neighborhood. By utilizing the resources available in these cities and achieving effective economic development that benefits the people and the Egyptian economy .

Keywords

Optical Illusions, Designs, Twill, Textured Structures, Colour Schemes, Egyptian Heritage.

Introduction

Textile designers have found in the various yarns and technical processing possibilities a wide field for experimentation, as the fabric designs were produced without blueprints and without a sense of rhythm. Until the textile designers used scientific and technical methods in creating their textile designs. Among these ideas is the art of optical deception. Textile designers found in the phenomenon of optical illusions an element similar to the many textures they used to weave, and even classified them as textural structures characterized by optical illusions. Among them, for example: the application of ordinary files to obtain embossed or wave designs - decorative file tissues - rubber tissues - diamond cut tissues ... and others.

These tissue structures, which have the property of optical illusions, were exploited in creating designs that could be implemented using a hand-loom method in the regions of Akhim and Al-Kawthar.

Whereas handicrafts are considered an important part of the history of human existence with its benefits for mankind, and textile handicrafts represent one of the prominent artistic forms in our important handicrafts, which has now become one of the most important Egyptian folk

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arts distinguished with its local originality, its roots spanning thousands of years in the history of Egypt.

These small projects are an important component of the economic reform program undertaken by the Egyptian government, which is required to improve product quality in terms of shape, color, material and function in order to find its prominent place in the local and global market, expressing the Egyptian heritage with high quality.

Research Problem

1- How to preserve the Egyptian heritage and its handicrafts to stand in front of the great technological developments in

The Industry Field, and to achieve competition with him while preserving the distinctive character of the Egyptian heritage.

-How to train manual weaving workers to upgrade the heritage product in terms of design and production.

2- Creating new job opportunities in the field of textiles to preserve the Egyptian heritage.

Providing textile formulations inspired by the arts of optical illusions to improve the quality of textile formulations used in Akhim and Al Kawthar district in Sohag.

Research importance:

1- Making use of modern artistic phenomena such as the phenomenon of optical illusions in the production of textile designs that have a characteristic Egyptian heritage.

2- Training workers to raise their scientific level in addition to the skill level, to ensure a distinct Egyptian product.

3- Developing the equipment and machinery used in the field of handicraft textile industry, while preserving the heritage and environmental aspect.

4- Shedding light on the economic and social aspects after the proposed developments.

Research Methodology

The research is based on methods of investigative analysis and practical application

Research results:

The strengths, weaknesses, and areas of opportunities and threats facing the weavers of the Akhim and Al Kawthar districts in Sohag Governorate were recorded through this research, and the observations were as follows:

Strength point :

1. The presence of a hand loom in a separate room in each house helps the worker to be active and to go out to work without being lazy.

2. The presence of a hand loom in every home helps the worker not to be bound by certain

working hours. Rather, it weaves at times of the whole day.

3. The textile work is the basis of the life of the whole family. The wife and children help the man in the weaving process by filling the weft pipes with threads or moving the shield.
4. The constant presence of the "weaving" factor next to the loom helps to the emergence of innovation and creativity in making new designs.
5. Fair competition between different families in making good products.
6. Weavers' observation of each other's products encourages them to develop their own products.
7. The use of cotton, linen and silk yarn materials available in the Egyptian environment, which makes them relatively inexpensive, which is reflected in the competitive price of their products.
8. The remaining yarn material from the finished product is not wasted, but it is used in making the new product.
9. The "weaver" worker has a very high skill in completing the tissue process, which is not available in other places.
10. The designs of covers and sheets, made with zardkhan or Atlas textures, have their own beauty. As this combination is not available in sheets and covers products elsewhere.
11. The presence of such places contributes to preserving the Egyptian heritage in the art of weaving.

Weaknesses:

1. Woven designs are produced for sheets and covers with a woven structure, made of pink or satin only. Although other textural overlay can be shown, such as the decorative texture.
2. Choosing black or non-homogeneous colors. This weakens the influence of the product on the buyer.
3. The appearance of defects stressed with some threads and loose with others. This requires the worker to ensure that the stresses are equalized regularly throughout the tissue process.
4. The appearance of defects in the beginning and end of sheets and covers. Where good finishing is not done adequately, in the form of sanding or making flames and furnaces on both sides.
5. Lack of diversity in tiger strings used in warp or weft. And it is sufficient to apply the thread only as thicknesses of 16 or 20 filament filaments. And so on ..
6. The use of a very weak shield consisting of two wood and a yoke of relatively thick threads, which affects the life of the woman in use. And not to use shield and metal yoke.
7. Using a force to throw the shuttle from leather and wood, which causes a loud sound when throwing the shuttle. It is recommended to use stronger beech, counter or oak wood.

8. One type of finds. And the unwillingness to change to other types.

Recommendations

The recommendations of the research are summarized in the following points:

1. Focusing on the strengths in the areas of Akhmeem and Al Kawthar district, and trying to push them further. And represented by the presence of a weaving loom inside the weaver's home, working for long periods of irregular hours, and helping the weaver's family to complete his work.
2. Trying to reduce the weaknesses of the place, which are represented by the weakness of many designs, the lack of materials used, the potential of the weak looms, and the lack of marketability of products.
3. Eliminate the fears of weavers from the merchants who deal with them, and try to find a way to improve the standard of living of these weavers and improve their mental and physical condition.
4. Expanding the training of textile workers in remote locations, especially in making designs and choosing colors.
5. Training weavers to dye their materials with environmentally friendly natural dyes so that their products will not be rejected in the European Union countries and America.
6. Acquainting the various media with the importance of these products in preserving the Egyptian heritage, and pushing citizens to acquire them instead of similar imported materials that are less efficient and quality.
7. Trying to train technical education students in schools on traditional crafts that preserve the Egyptian heritage and prevent it from disappearing.

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