

Illuminating Printing as an Input to Add Aesthetic Values to The Clothing of Cyclists

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Introduction: -

Textile printing is one of the important technical fields that can contribute directly to continuous interaction with society, as it is one of the most important areas of application through which it is possible to provide utilitarian products with distinct aesthetic values.

Since printing is an art that is closely related to people and has a great and tangible impact on the lives of individuals. It is the cheapest, easiest and most widely used method for obtaining a design or multiple drawings on the surface of the fabric compared to what can be obtained with dyed threads woven into fabrics (embroidery).

Experimentation in the field of textile printing is one of the most important necessities that achieve the goals of this field, and experimentation comes in two directions:

First: Innovative aspects are achieved.

The second: It is related to technical aspects and one of them is enriching the building of the artwork.

Research problem :

Bikers are exposed, especially while driving at night, to some problems and dangers that sometimes cause accidents while driving. Giving the prevalence of this type of sport as being an environmentally safe and economical means of transportation (its cost is low), the researcher therefore turned to studying the role of clothing in encouraging the practice of this sport and contributing to reducing the risks of traffic accidents while driving at night by formulating the research problem to answer the following questions: -

How can luminous printing techniques be used to support clothes of cyclists?

What is the possibility of adding aesthetic and cosmetic values to the clothes of bikers by using luminous printing technology?

To what extent does the luminous printing technology contribute to achieving the safety factor through the use of clothes of a special nature for cyclists?

Research objectives: -

The research objectives are evident in:

Taking advantage of luminous printing techniques to add new aesthetic formulations to the clothes of cyclists.

The contribution of clothing to achieving safety and security and reducing the risks of road accidents for cyclists at night.

Providing clothes of a special nature by using luminous printing techniques, which contribute to encouraging the practice of cycling on one side and as an economical means of transportation on the other side.

The research importance: -

The importance of the research can lie in: -

Presenting modern clothing proposals that are in line with the requirements of our time.

Providing clothes of a special nature that are illuminated at night to contribute to reducing the risk of accidents for cyclists.

Opening new horizons towards experimentation through the introduction of utilitarian typographic ideas for cyclists' clothes.

Activating the role of clothing and textiles in encouraging the practice of sports by submitting new clothing proposals using modern techniques.

Research hypotheses include

There are statistical evidence differences between the proposed designs and print formulations using the luminous printing technique.

There are differences of statistical evidence between the proposed designs and formulas in terms of the aesthetic symmetry (principles and design elements).

There are differences of statistical evidence in the extent to which the proposed clothing contributes to achieving the functional aspect of cyclists.

The safety factor and the reduction of risks (the functional aspect) are achieved in the clothing formulas executed by the technique of luminous printing.

Procedural steps of the research: -

First, the research methodology:

a. Descriptive approach: -

The research followed the descriptive approach to solicit the opinions of both specialists and consumers in providing clothes of a special nature in luminous print formulas suitable for cyclists. The descriptive approach was used in presenting the studies related to the research as well as the theoretical framework.

B. Experimental approach: -

By introducing new designs with a special character suitable for cyclists.

Second, the research tools:-

a. A questionnaire to solicit the opinions of specialists in the field of clothing and textile, as well as consumers "cyclists" in the group of designs and formulations of the proposed clothing, whether aesthetic or functional.

B. Using Photoshop program, Photoshop cc 2017 in designing clothing proposals and giving them different effects of shadow and light to give them the largest amount of simulation.

C. Printing materials: such as oil pigment colors - phosphorescent powder - stencil printing tools.

Third, the research limits: - they include the following:-

a. Human limits: males - females, ages 15 to 50.

B. Geographical boundaries: within Assiut Governorate, Upper Egypt.

C. The product: Men and women multi-colored cotton T-shirts.

T. Description of the research sample: The research sample included a group of (11) specialists in the field of clothing and textile, while the (24) consumers were divided into two groups.

First: It contains (15) males.

Second: It contains (9) females, whose ages range from 15 to 50 years. They reside in Upper Egypt, Assiut Governorate, in order to get acquainted with their views on the proposed design formulas for cyclists' clothes, as they are considered practitioners of that sport.

Fourth, search terms

Printing: _ It is the coloring of a specific area on the material to be formed later with different designs and drawings using one color or a group of colors and have different methods that suit multiple purposes.

Luminous printing: -

Procedural definition:

It is the addition of decoration and design units to different fabrics in simple ways from traditional printing techniques, using pastes or luminous colors that emit light in the dark.

Formative values: -

These are the foundations that our automatic commitment to them is created in our artistic works when they are formed and when we judge them, and they are related to the relationships of aesthetic values of the design such as line, shape, color, texture etc.

Bicycle rider's clothing: (a procedural definition)

It is all that the individual wears from the vocabulary of his clothing and uses it during the practice of driving a bicycle such as (T-shirt - shirt - pants etc.) which have functional characteristics that contribute to achieving his requirements and has aesthetic aspects of a special character that distinguish the bikers' aerobics.

Application framework

The applied framework deals first with

Preparing a set of proposed designs for the category of (12) bicyclists, divided as follows:

A/ Number of (6) men's designs in front and back, and each design contains a distinctive decorative unit for bikers' clothes.

B / Six (6) women's designs for bicyclists' clothes.



Each design features a distinctive cyclist garment decorative unit. Photoshop was used in preparing the suggested clothing designs and formulations.



Second: The proposed designs were presented to the masters in the field of clothing and textile for arbitration, there were (11) arbitrators.

The questionnaire was also presented to consumers, who are cyclists, who reached the number of (24) divided into (9 females) (15 males) through preparing a referee form to measure the availability of overall and functional aspects in the proposed design formulas that were linguistically judged by displaying the number (9) of the specialists in the field of clothing and textile, to ensure the correct formulation and clarity of its expressions.



The two best designs in each group were chosen to implement the luminous printing technology on the T-shirt, which won the highest acceptance rate for consumers (males - females) and they came as follows:



(i) The pieces executed for the male class

Model No. (1)	
In the dark	In the light
	

Model No 3	
In the dark	In the light
	

B) Pieces executed for the female category(

Model No 7	
In the dark	In the light
	

Model No 9	
In the dark	In the light
	

This was done by using colors of Pigment Oil and mixing it with the luminous substance, which is a fluorescent powder (phosphorous), emptying the executed units and printing them in the traditional stencil method, and then the piece executed by the luminous printing technique was exposed to a hot air dryer for a period of time ranging from 20-30 minutes.

Then the executed pieces were subjected to a 200-degrees heat press for a period of 5: 3 minutes to avoid a change in the color later.

Results

Through the search, the following results have been reached: -

Verifying the validity of the research hypotheses.

Adding aesthetic and utilitarian values to the clothes of cyclists through new visions in the field of textile printing, especially the "luminous.

Presenting executed pieces printed by luminous printing with a special characteristic for cyclists.

Recommendations

The necessity to open new horizons in the fields of clothing and textiles by submitting proposals for utility and functions as a community service.

The need to pay attention to the clothes of special groups that need aesthetic visions and a function that suits their needs and has a special character.

Emphasizing the role of clothing and textile in serving community members, encouraging the practice of sport, and contributing to developing solutions to reduce traffic accidents through new studies.

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