

Sustaining Nubian Symbols through Textile Design

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Abstract:

Digital textile design facilitates the transformation of textile surfaces, allowing designers to explore new ways to perfect their craft. The aim of this study is to investigate how the creation of modern designs inspired by Nubian symbols can retain a special appeal to contemporary audience while preserving the wealth of symbolic meanings associated with the old Nubian heritage. To that end, the research is employing Nubian symbols in the designs and a qualitative methodology through questionnaires. The latter was also used to showcase twenty-four designs and contact participants with specialization and from different cultural backgrounds/ citizenship (i.e. Nubians, non-Nubian), in an attempt to assess whether there is a difference of opinions among experts as far as succeeding to sustain the Nubian symbols by using textile design and computer graphic software is concerned.

Keywords:

Nubian heritage
Semiotics
Textile Design

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Introduction

In this research, a semiotic analysis of forms and meanings is useful in elucidating the significance of Nubian motifs. Deni (2017: 1294) argues that designers still believe semiotics is nothing but an explanatory and analytical method. However, when semiotics is used in the analysis of design products by the designers themselves, it becomes “an instrument chosen among many others available for clarifying and evaluating the significance and the use of a certain material” or design. This paper focuses on forms of Nubian symbols or motifs in the context of Nubian visual culture before the flood and based on the researcher’s artistic practice.

Objectives

The present research paper aims at exploring the incentive for using Nubian symbols in textile design projects, as well as to highlighting certain features of the Nubian heritage, through the use of computer graphic software to create contemporary design.

Methodology

The present study employs a composite methodology including practice-based approach, and qualitative and the quantitative methods. Particularly, the quantitative method includes the use of a questionnaire in order to collect data from participants who come both from different cultural backgrounds in Egypt (Nubian and non-Nubian) and from diverse specializations in Art and Design. These participants were asked to respond to the following survey items:

1. The artist maintains the identity of her heritage by employing the artistic representation of Nubian symbols.
2. The selected colors of the printed designs were chosen in relation to the identity of the Nubian heritage.
3. The use of computer programs enriches the artistic quality of printed design.
4. The visual textures (inspired by Nubian motifs and crafts) achieves the correlation of foreground and background ground of the printed design by using the computer graphics software.
5. The Nubian symbols were addressed to enrich the printed contemporary design?
6. The compatibility of the various Nubian symbols for the composition printed design by using computer programs.
7. The researcher emphasized the Nubian symbols and their cultural significance in her artwork.
8. The artistic synthesis of the Nubian symbols in the artwork was enriched by the use of computer programs in aesthetic and expressive values
9. The unity of the printed design has been achieved
10. The design inspired by Nubian heritage has succeeded in introducing the richness of Nubian heritage.

Hypothesis

The first hypothesis: There is no divergence of opinions on the design by type of citizenship (ethnicity) (Nubian non-Nubian)

Second hypothesis: There are no opinions on the use of Nubian plastic vocabulary when using computer programs by type of citizenship (Nubian non-Nubian)

Third hypothesis: There are no opinions on the use of Nubian plastic vocabulary when using computer programs by specialization in the field of (specialized textile printing and design – not specialized)

The fourth hypothesis : there is no difference of opinions on the printed design by specialization in the field of art and design (specialists in design and textile - non-specialists)

2. Nubian Signs: Icon, Indices and Symbols

Nubia is “an ancient land that stretches from the first cataract of the river Nile in Egypt to a less distinct boundary in the south, typically considered as the fourth cataract” in Sudan to the south (Shinnie, 1996). The long history of Nubia from prehistoric times to today spawned a rich tangible and intangible cultural heritage that embodied Nubians’ way of life and traditions. However, most of this area was flooded due to the construction of the Aswan High Dam. In 1963, Egyptian Nubians were relocated to new areas and lands in Kom Ombo after the construction of Lake Nasser. “Waters of the Nile, backed up by the High Dam, have covered the houses and flood the area where these people lived for hundreds, perhaps thousands of years” (Fernea and Gerster, 1973: 3), hence the loss of Nubian cultural identity. They were removed from their traditional way of life and lived in a new isolated location.

In this investigation the researcher attempts to revive her Nubian heritage using CAD by creating contemporary designs packed with Nubian motifs. Afterwards, participants from different cultural backgrounds were invited to look at the work using an online questionnaire. The aim of using semiotics in this paper is to analyze the functions and values of using Nubian signs before the resettlements in the sixties and to learn if Nubian generations know the meanings of symbols associated with their culture or they have already sunk in oblivion.

Fiske (2010: 40) notes that “[t]he study of signs and the way they work is called semiotics or semiology”, whereas Barthes calls it the “science of forms”. Peirce illustrates the function of the sign in stating that “[t]he Sign can only represent the Object and tell about it” (1986: 6). Semiotics helps illustrate how “in the broad sense (language, images, objects) generates meanings or the processes by which we comprehend or attribute meaning” (Curtin, 2006: 51). Deni postulates that “semiotics has been used both by designers and semioticians to analyze what has already been

produced and is involved in everybody’s social life” (2017: 1294). Any semiological system involves a correlation between two terms, a signifier and a signified (Barthes, 1972). The signifier represents the signified and they “together constitute a sign” (O’Sullivan, 1994: 288). The correlation between them is arbitrary according to de Saussure’s theory. Guiraud notes,

[t]he sign, therefore, is based on a conventional relation (which may be a stronger or a weaker one) between the signifier and signified. Two main types of relation can be distinguished according to whether the relation is motivated or unmotivated (the latter is also known as arbitrary). (1975: 25-6)

On the one hand, the signifier is the physical form of the sign which could be a photographed, drawn, painted, or a computer-generated image or even an artifact of a different category (Barnard, 2001).

Therefore, in this paper, the signifier is the material aspect of the sign, that is, images or drawings of Nubian woven baskets or motifs such as trailanges, stars, crescents, plants or Nubian houses. On the other hand, “the ‘signified’ is the mental image or the recipient’s perception of what the object/sign represents” (Vladimir & Ludmila, 2018: 25) that can be understood as “thoughts that come into one’s head on seeing the signifier” (Barnard, 2001: 146). Icons, indices and symbols are examples of the form of the sign. They are the method through which the relationship between the signifier and signified manifests itself (Rose, 2002).

The first form of the sign is the icon. It looks like its object, that is, it possesses some of its qualities (Chandler, 2002: 37). The iconic sign is similar to the indexical sign but is unlike the symbolic sign. In symbolic signs, the signified controls the signifier, which is organized/constrained by the signified (Chandler, 2002). Peirce (1986) explains that the icon, unlike the index, has no dynamic correlation with the object that it characterizes. Its visual qualities bring to mind those of the object, and bracing similar feelings in the mind (Fiske, 2001). The signifier resembles the signified.

Peirce (1986) argues that “every picture (however conventional its method) is essentially a representation of that kind” (where “kind” refers to “icons”). He also gives an example of the use of “likeness” in design, describing it as “the design an artist draws of a statue, pictorial composition... by the contemplation of which he can ascertain whether what he proposes will be beautiful and satisfactory” (12).

The second form of the sign is the index. As

Peirce notes, an index is physically linked with its object. He adds that “the interpreting mind has nothing to do with this connection, except remarking it, after it is established” (1986: 18). The signifier, in the indexical sign, “is not arbitrary but is directly connected in some way (physically or causally) to the signified” (Chandler, 2002: 36-7). Smoke is an index of fire which has “a direct existential connection with its object” (Fiske, 2001: 47-8).

Barnard postulates that

[t]he Eiffel Tower is an indexical sign of Paris and Gaudí architecture is an index of Barcelona: both are indices in that they are existentially linked with those cities. In art, brushstrokes may be thought of as indexical signs of the artist’s presence: they are caused by the artist. There is a sense in which all photographs are indexical as all photographs are caused, at one level, by the action of light on sensitive paper (2001: 147-8).

Nubian houses in designs 1, 2, 4 and 6 use examples of indexical signs of old Nubian land. Finally, there is the symbol. It is a form “in which the signifier does *not* resemble the signified but which is fundamentally arbitrary [unmotivated sign] or purely conventional” (Chandler, 2002: 36-7). Fiske notes that it can only be used for interaction and communications “because people agree that it shall stand for what it does” (2001: 46). The symbol is enclosed to its object by a principle of the symbol-using mind and it cannot exist without this type of connection (Peirce, 1986). Symbols can have significant associations and a multitude of characters of meaning linked to the traditions and values of viewers. The symbol is a means of creating a joint set of customs or tradition. For instance, the image of Nubian houses in designs 1, 2, 4, 6 and 11 held a symbolic

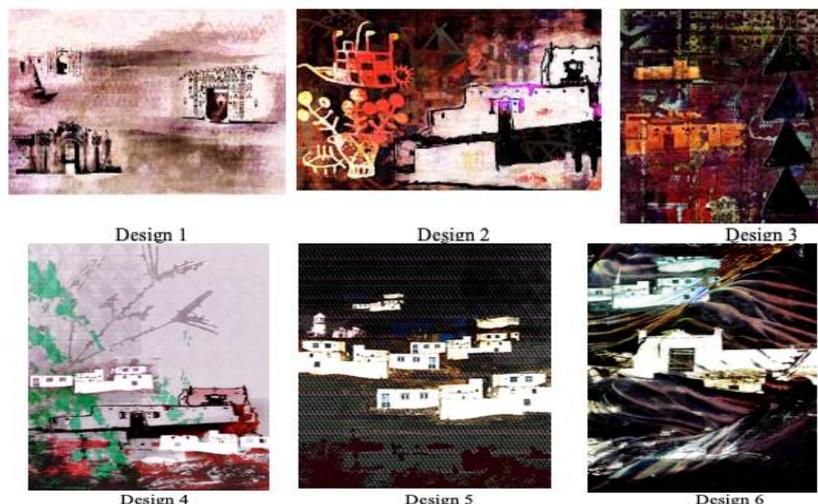
meaning for Nubian participants, as it reminded them of both past and present Nubian villages in southern Egypt. The meaning, as Barthes notes, “suggests a kind of knowledge, a past, a memory, a comparative order of facts, ideas, decisions” (1972: 117).

Finally, by looking at the results of the questionnaire, we shall see if the cultural background of the participants can change the function of the Nubian sign, based on whether they consider it an index, an icon, or a symbol.

1. Practice: Using CAD for Modern Nubian Designs

Digital textile design offers novel techniques for transforming textile surface patterns. It allows designers to explore numerous design possibilities, without restricted color palettes as in conventional textile printing methods. As Ujiie suggests, “[d]igital textile printing expands the concept of design aesthetics by its ability to allow for more creative outcomes in the domain of textile printing” (2006: 338). The potential of the techniques offered by computer-aided design (CAD) with “repeatless imaging in printed textile design is immeasurable”. Moreover, this technique “has stimulated the interest of artists, who visualize the images printed on textiles in the same way as paints on canvas” (Ujiie, 2006: 349).

The aim of this part is to explore the potential of using computer-aided design (CAD) software to create a new aesthetic for textile modern designs inspired by Nubian motifs and images. These motifs and images carry a symbolic meaning for the researcher because she has a Nubian background herself. In these designs, the researcher aspires to use CAD for the aesthetic approach, but without dramatically altering the form of the original motifs so as to preserve the Nubian cultural identity she grew up with.



Designs 1-6 depict different visual interpretations of old Nubian houses

This collection of designs introduces different portrayals of Nubian landscapes before the relocation. Design 1 portrays different types of traditional Nubian old houses. It utilizes repetitions of zigzag and triangular patterns in different sizes. The designer uses brushstrokes to create depth and recreate the texture of the land. The textures and brownish color and its gradation were used to showcase layers which represent “the past”. White undertones with a stroke of light red and purple were added to induce a sense of comfort and nostalgia to the ancestral land. Design 2 merges images of houses that stand on the banks of the Nile with layers of symbols and drawn motifs such as the boat, scorpion and potted plant. There are other symbols in the background too, that is, fish and flags. The color palette of this design consists of brown, black, yellow, orange, purple and off-white gradations. Using contrasts and dark colors in this design stress the value of the Nubian house.

The designer also employs symbols associated with the house, such as the boat (*falouka*), which was an important means of transportation, and the scorpion which was used for protection from evil. Design 3 portrays houses highlighted by orange

and geometric patterns that showcase their uniqueness. Layers of textures, shades of tress, repeated triangular and diamond patterns were added to accentuate dimensions. Designs 4, 5 and 6, on the other hand, showcase a different interpretation of the relationship between houses and the environment in old Nubia and use different color schemes. In terms of the color palette, Design 4 is dominated by light gray and light purple. It makes the house stand out by painting the façade a different color and using a recurrent diamond pattern and also using other Nubian plant and flag. Design 5 features the same house designs as Design 4, but with a different placement of the house and a focus on the contrast between white houses and the horizontal repeated triangular pattern in the darker background, which gives depth. Finally, Design 6 also marks a different view of the Nubian house and the mountain, as it couples multiple layers with a scanned wavy fabric background, which gives it a unique aesthetic appeal. This piece is more dramatic, thanks to employing wavy lines and contrasting the dark background color and white houses in depicting the old land.



Design 7



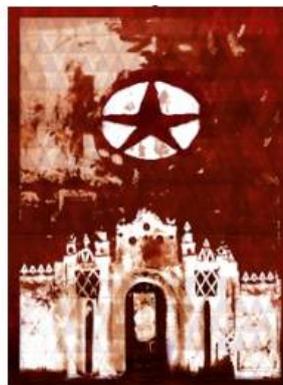
Design 8



Design 9



Design 10



Design 11



Design 12

Designs 7-12 particularly highlight the aesthetics of old Nubian house facades

Design 7 employs a wholly different color scheme, where blue symbolizes the color of the house beneath the Nile after the flood. This design also features other powerful symbols, like the

crocodile hung on the door, which was commonly used to expel evil spirits. It also features repeated triangular and diamond geometric shapes on the house façade and the door, which were common style elements in this area of the south of Nubia.

Employing blue, red and black and their grades draws the viewer's attention to the entrance of the house. As for Design 8, the researcher utilized an old photograph of a Nubian house. Residents sometimes wrote the name of the owner on the top of the house front door. This piece is also using wavy lines, on top of the door employing a blue-green sandy effect with purple, yellow, red and off-white undertones.

The house façade in Design 9 mimics the look of fabric, specifically cotton and has a dark turquoise color which accentuates the beauty of the drawn interior door. Traditional Nubian doors were decorated with triangular and diamond patterns. Nubians also added other ornaments like dolls, ceramic dishes and other decorations. The door in Design 9 is unique because it pays tribute to shrines common in Coptic art. Design 10 utilizes unique decorative elements in portraying the old house, including the flag, zigzags (which stand for the Nile), circles and stars located on the door of the house. Repeated triangles and diamonds were used to paint the façade of the house as well. This piece utilizes an off-white, black, red and blue

color palette and employs contrast in using different grades of these colors to draw the viewer's attention to the unique Nubian ornaments and the door.

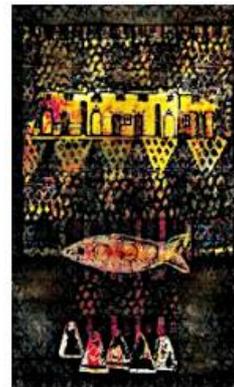
Design 11 features a photograph of a Nubian house with its decoration of the diamond shapes, crossed lines and circles. The design element of triangular shapes on the wall are inspired by Islamic art. The design also employs a "star" on the top, a symbol associated with protection from the evil eye and evil magic as well as repeated triangular shapes. The color palette used in this design consists of off-white and brown grades, which are meant to reflect the natural colors of the environment in this area. Design 12 merges two layers: an image of an internal Nubian decorated door and a wavy transparent dyed silk fabric manipulated with a "cracked" effect. The color palette utilizes shades of white and red and the design is full of drawn triangles with dots and thin lines that are meant to stress the rectangular shape that lies at the top of the door.



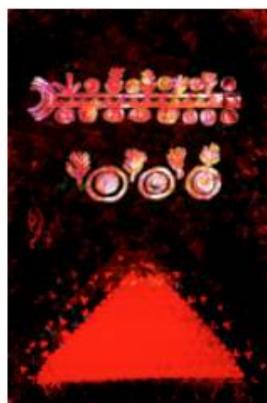
Design 13



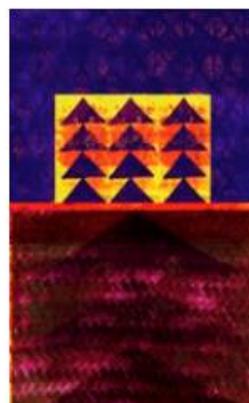
Design 14



Design 15



Design 16



Design 17



Design 18

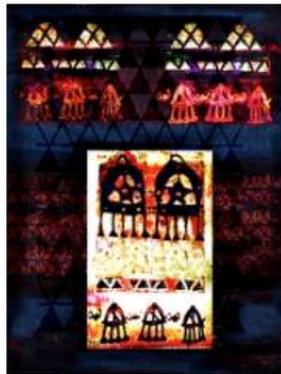
Designs 13-18 are inspired by decorative symbols, icons and objects commonly used in interior and exterior Nubian house decorations

The ornaments in Design 13 include a Nubian woven basket and a collection of assorted items, that is, a plant, a flag and a crescent, with

emphasis on zigzag and dot patterns. The design also features a lion carrying a sword, known as the Ballana lion (an old Nubian village) and a drawing

of crescents, triangles and circles. The background is marked by a shade of repeated triangles to add texture and to connect the motifs together. A color scheme of gray, white, red, blue and off-white grades was used. Design 14 is a complex design, as it combines the shape of a star with a section of a photograph of an old house. The old house itself is decorated with stars and scorpions, which are symbols traditionally used to ward off evil. The design is full of zigzag patterns, plants, and circles. Finally, it features a woven basket and the popular Nubian rectangular shapes. The star on the top of the design is orange with yellowish hints that allow it to blend with the other patterns in the background. The background is packed with triangular and rectangular textures and the woven baskets add balance to the design. The color combination of green, shades of brown, red, orange and black also creates harmony and balance. Design 15 combines a silverfish pendant and a set of triangles commonly used in Nubian ornaments and symbolize wealth and blessings. The design also features a drawing of an old house and utilizes the texture of decorative beads and divided triangles. The color palette

contains yellow, fuchsia, red, off-white, green and brown with different grades of black. The “burn” effect is used to accentuate the contrast and give depth. Design 16 features a triangle (made of plastic and beads) commonly used for protection from the evil eye. It also employs unique ornaments decorating the old house, like circles that look like Nubian woven baskets, plants and lines. This piece stresses the color contrast by using red, orange and off-white against the dark background, a contrast which highlights the exceptional character of Nubian ornaments. Design 17 is dominated by repeated triangles and is saturated with the texture of woven bags made from the reeds and leaves of doum palm. This design offers a modern interpretation of Nubian patterns and textures, where yellow, red, blue and brown grades are employed. Lastly, Design 18 utilizes the common Nubian triangle, here made of plastic and beads. The triangle, too, is traditionally meant to ward off evil and protect the residents. This triangle was also repeated but in a smaller size in the background. The color palette here consists of red, yellow, brown and gray.



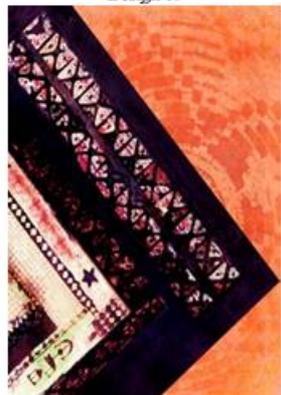
Design 19



Design 20



Design 21



Design 22



Design 23



Design 24

Designs 19-24 experiment with different uses of decorative objects and motifs

Decorative ornaments inspired by jewelry with an emphasis on triangles and stars were used in Design 19. Triangles and rectangles with dots are used to divide the upper and lower sections of the

design. The background consists of repeated colorful triangles and have the texture of a woven mat. Scorpions were also used in both the foreground and background. A palette of orange,

off-white, black, blue, and touches of purple and yellow were employed here. Design 20 is unique in its utilization of traditional motifs, thanks to its abstract style and the fact that it was made by a Nubian woman. She drew circles which stand for the plate, woven basket and ceramic saucer as well as and lines and plants. In the middle, a large circle was drawn which could represent the sun. This design accentuates the contrast by using yellow and orange against a background full of dark triangles and zigzag patterns. Design 21 demonstrates the ingenious quality of local Nubian women's handcrafted products, such as beaded wall hangings, Nubian *marwaha* (handmade fan) made from palm tree reeds and colorful cotton yarn. White, yellow, orange and light brown grades were used with fabric textures and repeated triangular patterns in specific areas.

Design 22 places a section of the image of an old Nubian house in a unique warped position and combines with a Nubian woven basket. This design of the house uses drawn decorative objects inspired by jewelry as well as stars and geometric shapes. A color palette that consists of red, blue and purple grades was used. Design 23 centralizes the star symbol and combines it with a drawn image of a Nubian potted plant and repeated vertical triangular patterns. A yellow background with repeated triangles was used to highlight the contrast with the darker purple shades. Lastly, Design 24 employs a boldly-shaded triangle filled with textures and repeated colorful nested triangles. There are also zigzags and a beaded decorative wall hanging with the famous Nubian potted plant full of triangles. A color palette of white, green, yellow, orange and blue was used in this design. In Nubia, these colors were used to decorate the newly-wed bride's room and it used to be filled with boldly-colored ornaments thought to protect against the evil eye.

Creating designs using photoshop (computer graphic software) demonstrates the richness and diversity of Nubian motifs. The designs employ a range of aesthetic values and use rhythm, movement, contrast and balance. Stylistically, they combine merging layers and images with textures, repetitions of decorative patterns or traditional ornaments with a combination of contrast complemented by bold colors to convey the essence of Nubian heritage and symbols.

2. Questionnaire and Respondents' Feedback

An online questionnaire was used as a quantitative tool, and the survey audience, primarily, was divided for the statistical purposes of this study into two groups related to their citizenship

(ethnicity), i.e. Nubian and non-Nubian. Furthermore, the participants were classified according to their specialization. On the one hand there was a group of experts specialized in textile printing/design or graphic design, whereas the second group came from the field of art education, painting, product design, and various other areas of design. Finally, the artworks were divided into two categories: Category A including Designs 1 to 12 that is called 'Nubian houses' and Category B involving Designs 13 to 24, entitled 'Nubian motifs.'

The questionnaire consisted of ten (10) questions that for the purposes of this study were divided into two groups in order to efficiently address the hypothesis.

The first group of questions (Q1, Q2, Q5, Q7, Q9 and Q10) is associated with the design and identity of the Nubian symbols.

- Q1:** The artist maintains the identity of her heritage by employing the artistic representation of Nubian symbols.
- Q2:** The selected colors of the printed designs were chosen in relation to the identity of the Nubian heritage
- Q5:** The Nubian symbols were addressed to enrich the printed contemporary design
- Q7:** The researcher emphasized the Nubian symbols and their cultural significance in her artwork.
- Q9:** The unity of the printed design has been achieved
- Q10:** The design inspired by Nubian heritage has succeeded in introducing the richness of Nubian heritage

The second group of the questions (Q 3, Q4, Q6, Q8) is related to the computer graphic software and textile designs.

- Q3:** The use of computer programs enriches the artistic quality of printed design
- Q4:** The visual textures (inspired by Nubian motifs and crafts) achieves the correlation of foreground and background ground of the printed design by using the computer graphics software
- Q6:** The compatibility of the various Nubian symbols for the composition printed design by using computer programs
- Q8:** The plastic synthesis of the Nubian symbols in the artwork was enriched by the use of computer programs in aesthetic and expressive values.

The first hypothesis: There is no difference of opinions on the design based on the citizenship of the audience (ethnicity) (Nubian non-Nubian) (0*1) (1,2,5,7,9,10) Hyp 1

Table (1): The extent of the difference of opinions on the design according to the citizenship/ethnicity

	NB	Descriptive Statistics				T-test (d.f)	Sig.
		Mean	S.E	CI for mean with 95%			
				L.B	U.B		
1-12	0	4.668	.060	4.5449	4.7900	1.174 (42)	0.247 P>0.05
	1	4.508	.131	4.2051	4.8103		
13-24	0	4.611	.068	4.4730	4.7492	0.552 (42)	0.584 P>0.05
	1	4.525	.160	4.1538	4.8955		

(Nubian non – Nubian)

The results as presented on the above table confirmed that statistically there were no significant differences according to the kind of citizenship (Nubian non-Nubian), as indicated by the values of the T-test for two independent samples (P> 0.05) as well as the statistical

description of each.

Second hypothesis: There are no opinions on the use of Nubian artistic vocabulary (symbols) when using computer programs based on the citizenship (Nubian non-Nubian)

(0*1) (3,4,6,8) Hyp 2

Table (2): Differences of opinions on the employment of Nubian artistic vocabulary based on the (Nubian non-Nubian)

	NB	Descriptive Statistics				T-test (d.f)	Sig.
		Mean	S.E	CI for mean with 95%			
				L.B	U.B		
1-12	0	4.610	.064	4.480	4.739	0.531 (42)	0.598 P>0.05
	1	4.535	.125	4.245	4.825		
13-24	0	4.560	.074	4.407	4.716	0.283 (42)	0.778 P>0.05
	1	4.512	.165	4.132	4.891		

The results of this table confirmed that statistically there were no significant differences based on the citizenship (Nubian non-Nubian), as confirmed by the values of the T-test for two independent samples (P> 0.05) as well as their statistical description.

Third hypothesis: There are no opinions on the use of the Nubian artistic symbols when using computer programs by specialization in the field of art and design (specialized textile printing and design – not specialized)

SP (0*1) Hyp 2

Table (3): The extent of difference of opinions on the employment of Nubian artistic vocabulary by specialization (non-specialized specialists)

	NB	Descriptive Statistics				T-test (d.f)	Sig.
		Mean	S.E	CI for mean with 95%			
				L.B	U.B		
1-12	0	4.6083	.06605	4.4720	4.7446	0.284 (42)	0.778 (P>0.05)
	1	4.5757	.09930	4.3670	4.7843		
13-24	0	4.5833	.07599	4.4265	4.7402	0.566 (42)	0.574 (P>0.05)
	1	4.5055	.12210	4.2490	4.7620		

The results of this table confirmed that on the basis of the statistical analysis there were no significant differences among the specialists in art and design (non-specialists). The values of T-test for two independent samples (P> 0.05) and the statistical description of each were confirmed.

(non-specialists). The values of T-test for two independent samples (P> 0.05) and the statistical description of each were confirmed.

The fourth hypothesis: there is no different opinions when it comes to the printed design among the specialists in art and design (specialists in design and textile printing- non-specialists)

SP (0*1) Hyp 1

The results of the previous table confirmed again that statistically there were no significant differences among the specialists in art and design

Table (4): Extent of the difference of opinions on the design according to the specialization in the field (specialized and non-specialists)

	NB	Descriptive Statistics				T-test (d.f)	Sig.
		Mean	S.E	CI for mean with 95%			
				L.B	U.B		
1-12	0	4.6356	.06630	4.4987	4.7724	0.016	0.987

	1	4.6338	.09537	4.4334	4.8341	(42)	P>0.05
13-24	0	4.6289	.07091	4.4825	4.7752	0.618	0.541
	1	4.5468	.11240	4.3106	4.7829	(31)	P>0.05

The results in the previous table confirmed that there were statistically no significant differences of opinion among the audience regardless from their specialization. The values of T-test for two independent samples ($P > 0.05$) and their statistical description were confirmed.

Conclusion

The main aim of this research paper was to evaluate the use of computer graphic software for producing a variety of modern Nubian designs in the hope of reviving their symbolic value, a value that was held for a long time but specifically before the sixties. To this end, this paper used a quantitative research tool (questionnaire) in order to evaluate the symbolic significance of different artworks among different respondents. It is difficult for any designer to create modern designs without dramatically altering the essential character of the concerned tradition. Computer graphic software could thus help in this respect by giving designers new visual trajectories for their art, thus opening up new trajectories to promote the making of a wider range of artworks that represent Nubian symbols approved by different groups and audience.

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