

Paint 3D digital environment applications as a source for fashion design inspired by the Egyptian heritage

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Abstract:

Technological advances and modern technologies in the digital environment were not limited to replacing information and research but rather planning it and becoming one of the most important means of design, and given their speeds and modern technologies, they are being used in many design programs in general, and fashion in particular. Mixed Media art is used by more than one type of material and more than technology, and this concept has come to be called works of art used for more than one medium where the art of mixed media means that the combination of materials, tools, means and techniques to reach the work of plastic art. Media merging techniques contribute to the artist expressing his ideas in an innovative manner for using unconventional materials, materials and techniques. This research deals with the art of merging media or "mixed media", especially Paint 3D, in designing contemporary clothing that is inspired by the Egyptian heritage and fits with the requirements of society and expresses the artistic direction. The prevailing list is based on the use of a Paint 3D digital environment program, where these designs were designed and drawn using the pen and paper and then put into the computer through the optical imaging device (Scanner) and then put into the program, and color them in digital colors)) using a special pen intended for drawing on electronic boards. The images of popular decorations were inserted to North Sinai (the source of inspiration) (digital), and set them in their places according to the design, and some color frills were applied to them using the same pen. The coloring method used is a manual method with digital techniques, thus achieving the purpose of using digital programs and their applications. These designs are built on two axes which are (the first axis: the extent of achieving innovation in design and includes 6 phrases, the second axis: the extent of relevance to the source of inspiration, which is of 5 phrases (the extent of honesty and consistency has been verified for them and the extent to which these axes are achieved through questionnaires estimated by specialized arbitrators has been deduced from which the two axes in the designs have been achieved and thus the purpose of the research has been achieved which is to employ a mixed media style in designing fashion inspired by folklore and the use of digital environment applications in the field of fashion design.

Introduction:

Technological advances and modern technologies in the digital environment were not limited to replacing information and research but rather exceeded that and became one of the most important means of design, and given their speeds and modern technologies, they have been used in many design programs in general, and fashion in particular.

Some definitions related to the digital environment will be presented, such as multimedia and mixed media, and some applications of the digital environment in the fashion field in terms of computer programs, smart phone applications, and portable panels used in fashion design, especially Paint program (Paint 3D).

Research problem:

Despite the importance of designing designs that are inspired and expressive of folklore and are characterized by innovation and fit with modern art using the applications of the digital environment like (Paint 3D) program with the use of mixed media art which one of the forms of creativity is that it did not receive sufficient academic attention.

The research problem summarized in the following questions:

Can be the digital environment applications of Paint 3D and Mixed Media designed with design so that the design expresses heritage creatively?

Can inspiration be treated with contemporary design?

Research aims:

1- Access to the optimal method for employing digital environment applications like (Paint 3D) app and Mixed Media art to making designs.

2- Making innovative designs that express heritage and fit modern art.

Research importance:

1- Highlighting the importance of using Paint 3D and Mixed Media applications for creativity in fashion design.

2- Highlighting the importance of drawing inspiration from the Egyptian folklore because of its richness in its building designs and decorative units.

Research hypothesis:

The use of Paint 3D digital environment applications and Mixed Media art helps to design inspirational designs that express folklore and are characterized by innovation and suit modern art.

Research Methodology:

The experimental approach - the applied approach.

Procedural steps for research:

Digital Environment	Multimedia	Mixed media.	Mixed digital media	Digital Environment Applications.	Paint 3D.
Fashion design	Inspiration from folklore.	Practical application	Research results	Recommendations	References.

The Practical application:

Using one of the Digital Environment (Paint 3D) app with the art of mixed digital media in designing contemporary clothes inspired by the Egyptian heritage and compatible with the requirements of society and expressing the prevailing artistic direction as follow:

- 1-Putting the idea to design and draw these designs by hand using pencil and paper
- 2-Inserting the designs to the computer through the optical imaging device (Scanner).
- 3-Inserting the designs into the program from the (Insert) menu and coloring them in digital colors using a special pen intended for use on portable electronic boards.
- 4-Inserting (digital) pictures of popular motifs from the Insert menu for one of North Sinai women's dresses (source of inspiration, as shown in the system).
- 5-Adjust the popular motifs (Motifs) in their places according to the design using the program's 3D shapes and using the pen.
- 6-Design the color and put the color frills with the brush using the pen.

The coloring method used is a manual technique with (digital) techniques, and thus achieves the purpose of using digital programs and their applications, as well as the purpose of employing mixed media design with design.

These designs are built on two axes:










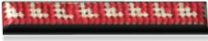
The first axis: the extent to which innovation is achieved in design,









the second axis: the extent of relevance to the source of inspiration.







Verification done of the extent of honesty and consistency for them and verification of the extent to which these axes achieved through questionnaires estimated by specialized arbitrators.



The first axis: the extent of achieving innovation in design:	The second axis: the extent of relevance to the source of inspiration:
1- Can be the design used in more than one style?	1- Does the design reflect the motifs with the source?
2- Does the design meet the requirements of society?	2- Does the design reflect source constructs?
3- Are the design characterized by creativity?	3- Does the design clearly reflect or express inspiration?
4- Were the digital programs and applications are illustrated in the design?	4- Did the design processed the source of inspiration in a contemporary way?
5- Were the mixed media style used in the design?	5- Does the design express the heritage creatively?
6- Does the design create a consistent set?	

Designs:

Design Name	Design order	Percentage	Motif	Design
Design One	Third	99.5 %	Name of the decorative unit: piasters	
				
			Name of the decorative unit: Vein	
				
Design Second	Ninth	97.67 %	Name of the decorative unit: Cat's heel	
				
			Name of the decorative unit: Brides and wings	
				
			Name of the decorative unit: Bakri-Bakari	
				
Design Three	Fifth	98.17 %	Name of the decorative unit: Hani Ajafah	
				
				

Design Name	Design order	Percentage	Motif	Design
Design four	First	99.59 %	Name of the decorative unit: piasters	
				
			Name of the decorative unit: Shanaf	
				
Design five	Fourth	98.17 %	Name of the decorative unit: piasters	
				
			Name of the decorative unit: Sycamore tree	
				
Design six	Eights	97.75 %	Name of the decorative unit: Lupine	
				
Design seven	seventh	97.75 %	Name of the decorative unit: Lizard sweat	

Design Name	Design order	Percentage	Motif	Design
				
Design Eight	Second	99.59 %	Name of the decorative unit: Combs	
				
			Name of the decorative unit: Cross	
Design Nine	Sixth	98%		
			Name of the decorative unit: Flowers, trees and leaves	
	Tenth		Name of the decorative unit: Hoopoe	

Design Name	Design order	Percentage	Motif	Design
Design Ten		96.42 %		

Research results:

There are statistically significant differences between designs in the evaluation aspects (according to the opinions of specialists). To verify this assumption, the percentage of estimates for each design calculated for each axis separately.

Table (4) Calculating the percentage of estimates for each design in: The first axis: the extent of achieving innovation in design

Design	Excellent	Very good	Good	Acceptable	Poor
١	%١٠٠	%٠	%٠	%٠	%٠
٢	%٩٨,٣٣	%٠,٨٣٣	%٠,٨٣٧	%٠	%٠
٣	%٩٨,٣٣	%٠	%١,٦٧	%٠	%٠
٤	%٩٩,١٧	%٠,٨٣	%٠	%٠	%٠
٥	%٩٨,٣٣	%١,٦٧	%٠	%٠	%٠
٦	%٩٧,٥	%٠	%٢,٥	%٠	%٠
٧	%٩٧,٥	%١,٦٧	%٠,٨٣	%٠	%٠
٨	%٩٩,١٧	%٠	%٠,٨٣	%٠	%٠
٩	%٩٦	%٣,٣٣	%٠,٦٧	%٠	%٠
١٠	%٩٥,٨٣	%٣,٣٣	%٠,٨٤	%٠	%٠

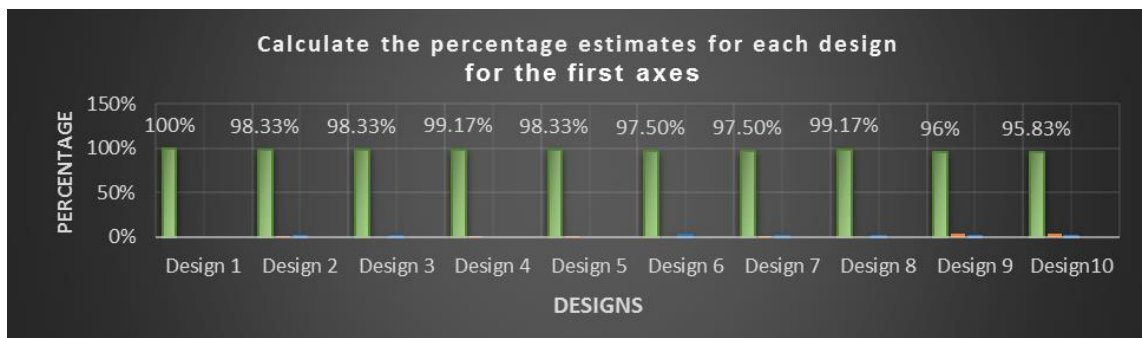


Diagram (1) Calculation of the percentage estimates for each design for the first axis (The extent of achieving innovation in design)

Table (5) Calculating the percentage of estimates for each design in:

The second axis (the extent of relevance to the source of inspiration):

Design	Excellent	Very good	Good	Acceptable	Poor
١	%٩٩	%١	%٠	%٠	%٠
٢	%٩٧	%٢	%١	%٠	%٠
٣	%٩٨	%٢	%٠	%٠	%٠
٤	%١٠٠	%٠	%٠	%٠	%٠
٥	%٩٨	%١	%١	%٠	%٠
٦	%٩٨	%٢	%٠	%٠	%٠
٧	%٩٨	%١	%١	%٠	%٠
٨	%١٠٠	%٠	%٠	%٠	%٠
٩	%١٠٠	%٠	%٠	%٠	%٠
١٠	%٩٧	%١	%٢	%٠	%٠

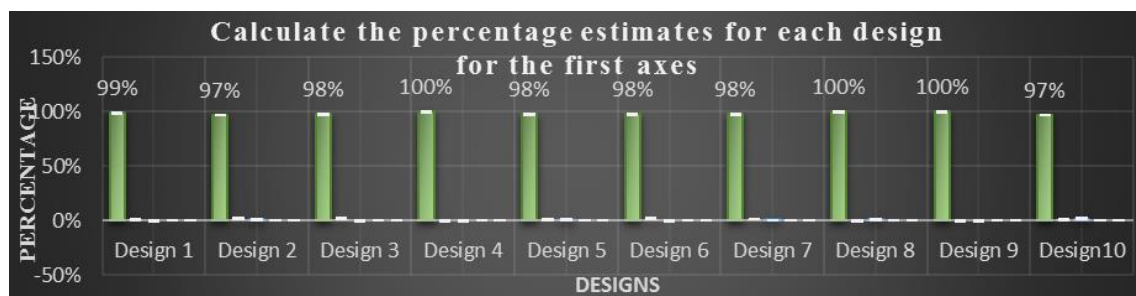


Diagram (2) Calculation of the percentage estimates for each design for the second axis (The extent of relevance to the source of inspiration)

Table (6): Design Quality order in each axis: the first axis: The extent of achieving innovation in design:

No .	Design	Order	Percent
١	First	First	%١٠٠
٢	Fourth	Second	٩٩,١٧ %
٣	Eights	Second	٩٩,١٧ %
٤	Fifth	Third	٩٨,٣٣ %
٥	Third	Third	٩٨,٣٣ %
٦	Second	Third	٩٨,٣٣ %
٧	Sixth	Fourth	%٩٧,٥
٨	Seventh	Fourth	%٩٧,٥
٩	Ninth	Fifth	٩٦,٦٧ %
١٠	Tenth	Sixth	٩٥,٣٣ %

Quality order of designs in
The first axis

PERCENTAGE

DESIGNS

Percent...

Table (6)

Diagram (3) Design Quality order in each axis: the first axis: The extent of achieving innovation in design

Table (7): Design Quality order in each axis: the second axis: the extent of relevance to the source of inspiration

No.	Design	Order	Percent
١	Fourth	First	%١٠٠
٢	Eights	First	%١٠٠
٣	First	Second	%٩٩
٤	Ninth	Second	%٩٩
٥	Seventh	Second	%٩٩
٦	Third	Third	%٩٨
٧	Sixth	Third	%٩٨
٨	Fifth	Third	%٩٨
٩	Second	Fourth	%٩٧

Quality order of designs in
The second axis

PERCENTAGE

DESIGNS

١٠	Tenth	Fourth	%٩٧	
Table (7)				Diagram (4) Design Quality order in each axis: the second axis: the extent of relevance to the source of inspiration

Table (8): Quality arrangement of designs in the two axes combined: the first axis: (The extent of achieving innovation in design) and **the second axis:** (the extent of relevance to the source of inspiration)

No.	Designs	Total					Percent age	Design Order
		Excellent	Very good	Good	Acceptable	Poor		
١	First	1.99	0.01	-	-	-	99.5%	Third
٢	Second	1.95	0.03	0.02	-	-	97.67%	Ninth
٣	Third	1.96	0.02	0.02	-	-	98.17%	Fifth
٤	Fourth	1.99	0.01	-	-	-	99.59%	First
٥	Fifth	1.96	0.03	0.01	-	-	98.17%	Fourth
٦	Sixth	1.955	0.02	0.025	-	-	97.75%	Eights
٧	Seventh	1.97	0.02	0.02	-	-	97.75%	Seventh
٨	Eighth	1.99	-	0.01	-	-	99.59%	Second
٩	Ninth	1.96	0.03	0.01	-	-	98%	Sixth
١٠	Tenth	1.93	0.04	0.03	-	-	96.42%	Tenth

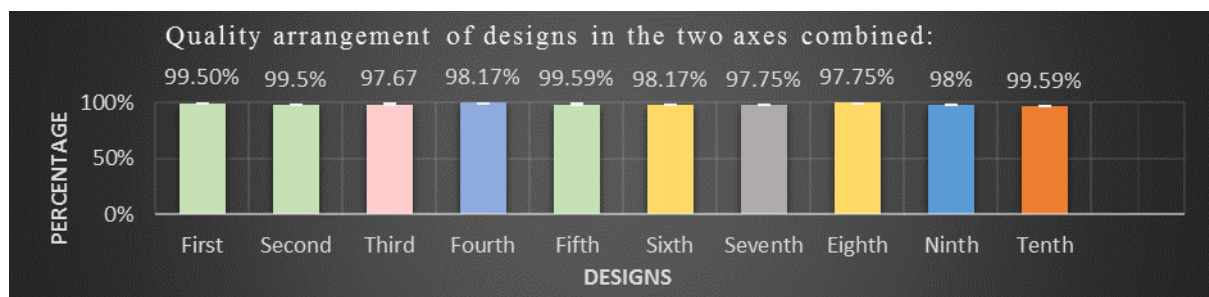


Diagram (5) Quality arrangement of designs in the two axes combined

Table (9): ordering the quality of the two axes in all designs grouped: the first axis: (The extent of achieving innovation in design) and **the second axis:** (the extent of relevance to the source of inspiration)

Axes	The first axis	The second axis
	The extent of achieving innovation in design	the extent of relevance to the source of inspiration

	Excellent	Very good	Good	Excellent	Very good	Good
١	100%	0%	0%	99%	1%	0%
٢	98.33%	0.83%	0.84%	97%	2%	1%
٣	98.33%	0%	1.67%	98%	2%	0%
٤	99.17%	0.83%	0%	100%	0%	0%
٥	98.33%	1.67%	0%	98%	1%	1%
٦	97.50%	0%	2.50%	98%	2%	0%
٧	97.50%	1.67%	0.83%	98%	1.00%	1.00%
٨	99.17%	0%	0.83%	100%	0%	0%
٩	96%	3.33%	0.67%	100%	0%	0%
١٠	95.83%	3.33%	0.84%	97%	1%	2%
Total	980%	12%	8%	985%	10%	5%
Average	98%	1%	1%	98.5%	1%	0.5%
Percentage	٩٨%			٩٨,٥%		

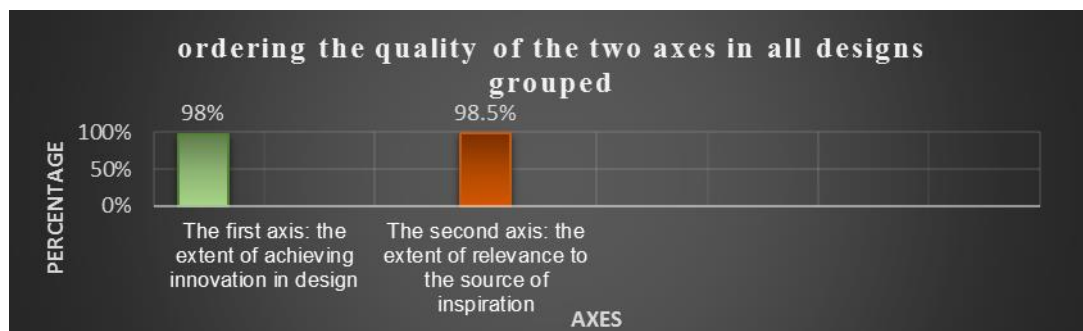


Diagram (5): ordering the quality of the two axes in all designs grouped

Results of practical application:

The percentage of arbitrators' judgments (20 arbitrators) for the (10) designs of the two axes, **the first axis** (the extent of achieving innovation in design), includes (6) axes, **the second axis** (the extent of relevance to the source of inspiration), and includes (5) questions, concluded that:

- 1-The upper limit for the design of the first axis (the extent of achieving innovation in design) is 100%, the minimum is 95.83%, the upper limit for the second axis (the extent of relevance to the source of inspiration) is 100%, and the minimum is 97%, a good percentage that serves the purpose.
- 2-In the first axis (the extent of achieving innovation in design), the first design and the fourth design obtained the first order for the quality of design in the axis and their percentage is 100%, and the tenth design got the last order for the quality of design in the axis and its rate of 95.33% and its fourth order. For the second axis (the extent of relevance to the source of inspiration), the fourth design and the eighth design got the first order for the quality of designs in the second axis, and the ratio for both of them is 100%. The second design and the tenth design got the last order for the quality of designs in the second axis and the ratio of each of them is 96% and their fourth ranking. Thus, designs have achieved the purpose of the axes.

- 3- The fourth design got the first order in the arrangement of the quality of designs in both axes, with a rate of 99.59%, and the last design is the tenth design and its tenth order, with a percentage of 96.42%, which is a good percentage to achieve the purpose of research.
- 4- The arrangement of the quality of the two axes in all designs combined. The second axis with 98.5% higher than the first axis, which is 98% and thus achieved the purpose.

Recommendations:

- 1- Academic interest and urge students to use the digital environment applications, merge them with different media, and apply this in practice, will increase students' creative capabilities.
- 2- Not only being inspired from the folklore of fashion design, but also must be adapted according to the prevailing art and modern technology.

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