



The Effectiveness of a Teaching Unit Based on Achieving the Aesthetics of Rhythm by Using Merge Arts from Egyptian Civilizations to Produce Designs Among a Sample of Art Education Students at the Faculty of Specific Education, Ain Shams University

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Abstract :

The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University

Research problem: The research problem is focused on The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University.

Objectives: To reveal The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University

Hypotheses: There is a positive relationship between The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations and producing designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University.

Research Methodology: The research follows the experimental method "introductory design" with a post-measurement of the performance of the research sample.

The research sample: 12 male and female students from the First Division, Department of Art Education, Faculty of Specific Education, Ain Shams University.

The most important results:

1. Quantitative results the percentages of arbitrators' agreement on the scale's items ranged between (90%) and (100%).
2. As for the qualitative results, they can be summarized in:

(A) The results of the students' work in the design subject were based on the ornamental analysis of the shapes with the use of vertical, horizontal, and inclined axes to build the design panel.

(B) The shapes of the spaces of the analyzed elements for each area were selected through analysis and integration of the design elements.

Keywords – Rhythm, reveal , Merge, Specific, agreement

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Introduction:

The Role of Art Education in Student Development

Art education develops students cognitively, mentally, artistically, and physically, preparing them to be effective societal contributors. It encompasses various fields, with design being a crucial area of contemporary artistic activity. Design relies on elements like line, color, and shape, not just for aesthetic purposes but to meet human functional needs.

Design in Art Education

Design is an organized effort involving a sequential and purposeful plan. It integrates elements that serve the final goal into a cohesive unit, revealing the intellectual and planning processes behind it. This approach was used by a researcher with second-year students to design using a teaching unit focused on achieving rhythm by merge arts from Egyptian civilizations to produce designs.

Key Elements of Design

- **Line, Shape, and Color:** These elements are crucial in analyzing color spaces produced by the student. The researcher manipulated these variables to explore their impact on design.
- **Creative Innovation:** Design is defined as creative, innovative work that achieves its purpose. It involves various methods to convey the designer's intellectual and aesthetic message.

Research Focus

The research aimed to evaluate the effectiveness of a teaching unit based on achieving the aesthetics of rhythm by merging arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University.

Conclusion

Art education, particularly in design, plays a significant role in developing students' creative thinking and structural understanding, making them valuable contributors to society.

RESEARCH METHODOLOGY:

Pre-Experimental Designs:

Pre-experimental designs are often used in preliminary stages of research. They lack the rigorous control of variables seen in true experimental designs, which can lead to potential threats to internal validity.

Exploratory Designs

Exploratory research is used when the research problem is not clearly defined. It helps to gain insights and familiarity for later investigation. This type of research is flexible and can involve methods like:

- Literature reviews
- Pilot studies
- Case studies
- Focus groups
- Expert opinions

It's particularly useful for understanding underlying causes and generating hypotheses for future research.

Pre-Experimental Designs

Ali Maher Khattab stated that:

- **Campbell & Stanley (1966)** call them preliminary experimental designs.
- **Lehmann & Meherens (1979)**, and **Isaac & Michael (1981)** call them exploratory designs.
- These designs do not adjust the variables to prevent all the impediments to inner honesty from being affected, and are therefore exploratory designs, as **Jay (1992)** notes.

Examples of Use:

- Studying whether a new method of teaching will increase reading speed.
- Evaluating if a new counseling program helps improve individuals' self-concept.

Research Objective:

Disclosure of The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University.

Research hypothesis:

There is a positive relationship between The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations and producing designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University

Research Sample:

An intended sample of students of the First year, Department of Art Education, Faculty of Specific Education, Ain Shams University, numbering (20) male and female students, was selected to apply the proposed teaching unit, but the number of students who attended all the lessons of the unit in full (12) male and female students and their design work included in the results of the current research.

Research Terms:

1- Teaching Unit:

A teaching unit is a structured sequence of lessons designed to achieve a specific overarching goal. Each lesson within the unit has its own set of procedural objectives, contributing incrementally to the overall objective. By the end of the unit, all lessons collectively ensure the achievement of the general technical goal.

2- Rhythm:

Rhythm in art design refers to the visual or auditory pattern or repetition created by repeated shapes, elements, colors of the design, or even sounds, and movements. Here are the key aspects of rhythm in art design:

A. Types of Rhythm:

- Regular Rhythm
- Flowing Rhythm.
- Progressive Rhythm.
- Alternating Rhythm.
- Random Rhythm.

B. Techniques to Achieve Rhythm:

- Repetition and Variation:
- Contrast:
- Gradation:

- Echo:

C. Applications in Art:

- Visual Arts
- Graphic Design
- Architecture

3- Design:

Design painting, whether decorative, advertising, or otherwise, holds significant importance in art education. It develops the ability to use elements and employ them through repetition and arrangement systems to achieve aesthetic values, which are the criteria for judging good artwork (Mohamed Abdel Moneim Zaki, 1996).

Key Points:

- **Aesthetic Values:** Achieved through repetition and arrangement systems.
- **Judgment Criteria:** Aesthetic values serve as the benchmark for evaluating artwork.

Role of Designs in Education

Mustafa Al-Razzaz highlights that decorative designs can play an essential role in achieving educational goals if well taught. They develop the ability to translate students' ideas through experimentation, which serves as a scientific entrance to innovative activity, allowing multiple results from one variable using design elements (Mustafa Farid Al-Razzaz, 1984).

Educational Benefits:

- **Idea Translation:** Helps students express their ideas through experimentation.
- **Innovative Activity:** Encourages reaching multiple results from a single variable using design elements.

Associate studies:

These studies are commented on and the extent to which they are useful in the current research.

First: Studies on the effectiveness of the teaching unit in the field of art and design

1- (Engy Emile Helmy Aziz, Hamdi Mohamed Morsi, Omnia Mohamed Ibrahim, 2023)

"Using the Imaginative Teaching Strategy in Teaching Art Education to Develop Some Artistic Concepts for Preparatory School Students"

Research Aim: Develop technical concepts for middle school students using the imaginative teaching strategy.

Research Procedures:

- **Theoretical Framework:** Prepared on imaginative teaching strategy and technical concepts.
- **Research Tools and Materials:**
 - List of 9 technical concepts.
 - Teacher's guide using the imaginative teaching strategy.
 - Testing technical concepts.

Results:

- Statistically significant differences at the 0.01 significance level between control and experimental groups in the post-test of technical concepts.
 - **T-value:** 39.71 (significant at 0.01 level).
 - **Effect Size (ETA squared):** 0.954.
 - **Effect Size (d):** 8.99.

Comparison with Previous Study:

- **Agreement:** Both studies applied a teaching unit to develop technical concepts.
- **Difference:** The current study uses the analysis of shapes and innovative rearrangement of design elements to develop students' ability to analyze and process harmony. This involves merging arts from Egyptian civilizations to produce designs.

Methodological Insights:

- Utilize the methodology from the previous study, adapting it for different age and academic stages.
- Address potential challenges researchers may face during the application of the teaching unit.

2- (Yara Sayed Ibrahim Morsi, Hamdi Mohamed Morsi, Zakaria Jaber Hinnawi, 2023)

"The Effect of Using the Circular House Shape Strategy in Teaching Engineering to Develop Visual Thinking Skills among First Grade Preparatory Students"

Research Aim: Investigate the impact of using the circular house shape strategy in teaching engineering to develop visual thinking skills among first-year middle school students in the "Engineering and Measurement" unit for the year 2022/2023.

Comparison with Previous Study:

- **Agreement:** Both studies applied a teaching unit to develop specific skills.
- **Difference:**
 - The previous study focused on developing visual thinking, not shape analysis and innovative rearrangement of design elements to develop student ability to analyze and process harmony. This involves merging arts from Egyptian civilizations to produce designs..
 - The current study involves university students, not school students.
 - The material in the current study is design in art education, not engineering.
 - The current study uses shape analysis and innovative rearrangement of design elements.

Methodological Insights:

- Utilize the methodology from the previous study to avoid teaching problems faced by researchers during the teaching process or in the use of materials.

3- (Ahmed Mustafa Abdel Aziz, 2021)

"A teaching unit based on the analysis of nature shapes through the Geometric Grid to prepare design panels for a sample of art education students, Faculty of Specific Education - Ain Shams University."

Research Objective: Reveal the potential of the teaching unit inspired by nature based on shape analysis through the geometric grid to prepare design artwork.

Research Hypothesis: There is a positive relationship between teaching the unit inspired by nature based on shape analysis through the geometric grid and the preparation of design artwork.

Research Methodology: This research follows a semi-experimental design where the teaching unit is the independent variable, and the design panels are the dependent variable.

Research Sample: 13 third-year art education students from the Faculty of Specific Education, Ain Shams University.

Key Results: The teaching unit as an independent factor achieved a positive change in the behavior of the research sample members, enhancing their ability to perceive elements of nature and form geometric grids in design panels.

Comparison with Previous Study:

- **Agreement:** Both studies used a teaching unit to develop university students' skills.
- **Differences:**
 - The previous study involved direct drawing from nature and used geometric grids to repeat elements within decorative designs.

- The current study focuses on shape analysis and innovative rearrangement of design elements to develop students' analytical skills and achieve harmony in their design artworks.

Methodological Insights: Utilize the methodology from the previous study to avoid teaching problems faced by researchers during the teaching process or in the use of materials.

Second: Studies on Rhythm in the field of design

1- (Manar Hosny El-Deeb, 2021)

“Possible Design Solutions in Mural Painting on the Rhythm of Contradictions”

Research Problem and Philosophical Vision in Mural Painting

The research problem focuses on implementing Hegel's philosophical vision of harmony through the unity of contradictions in mural painting on architectural surfaces, both internally and externally. This involves devising design solutions based on the formative values of rhythm contradictions in the language of form. The study aims to use concepts of contradiction in constructing mural artwork, drawing from examples in modern and contemporary art. The analytical study will identify how these contradictions enrich the plastic, aesthetic, expressive, and creative aspects of the artwork. The goal is to produce artistic works that align with scientific discoveries of new materials and techniques, reflecting current ideologies. This vision will be used to formulate multiple treatments based on the rhythm of contradiction, enriching the aesthetic values presented in the artwork through the formal employment of architecture and mural painting.

Comparison with Previous Study

- **Previous Study:** Focuses on tracking equilibrium as an analytical survey study, not an applied study of the concept of equilibrium on undergraduate students. It can be used in the theoretical framework to define equilibrium as a comprehensive, descriptive, and analytical concept.
- **Current Study:** Applies the results to mural painting on architectural surfaces, inspired by the rhythm and aesthetics of the artwork through the tension between contradictions. It emphasizes that conflict is the basis of all development and beauty is represented in the unity of contradictions. The study draws from the works of artists in modern and contemporary art.

Application and Inspiration

The previous study can inspire the current research by showing how to study rhythm in works of art, apply design elements through it, and understand the stages of that application in artworks. This approach will help in interpreting contradictory formal relations in different forms in the production of mural artworks, using the vision of rhythm contradictions to enrich the aesthetic values in the artwork through architectural and design employment.

2- (Sharma, Y. P, 2021)

“Visual Rhythm in Krishna Prakash Shah's Abstract Paintings.”

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Integration with Current Study

The previous study on Krishna Prakash Shah's abstract paintings can be used to draw inspiration for addressing and describing rhythm in artworks. It provides insights into rhythmic patterns and styles that can be applied to the current study's focus on Design.

3- (Locher, P., Gray, S., & Nodine, C. ,1996)

"The Structural Framework of Pictorial Balance"

Rhythm in Architecture

Rhythm is one of the most essential means of coordination in architecture because it guarantees the orderly distribution of forms and spaces. Consequently, the research problem was: "The lack of a comprehensive understanding of the origins and applications of rhythm as a recognized phenomenon in architectural design." The research aims to "understand the phenomena of rhythm in the formation of architectural products and to identify their types and orientations. The research adopts a descriptive-analytical methodology to clarify the phenomenon of rhythm in architecture by constructing a cognitive framework, followed by a comprehensive theoretical framework extracted from the architectural literature and embodied in its final form as three main terms: Types of rhythm in architectural design, its determinants, and its trends. The study's most significant findings are that rhythm in architecture refers to the repetition of elements such as lines, shapes, and hues, which results in an organized movement through space and time.

Types of Rhythm in Architecture:

- **Rhythmic Alternation:** Alternating patterns to create visual interest.
- **Rhythmic Gradation:** Gradual changes in elements to guide the viewer's eye.
- **Rhythmic Contrast:** Using contrasting elements to highlight differences.

Conclusion: Rhythm in architecture is crucial for creating aesthetically pleasing and harmonious designs. By understanding and applying different types of rhythm, architects can achieve a balanced and dynamic architectural composition.

The previous study differs from the current study in several ways:

1. **Methodology:** The previous study adopts a descriptive-analytical methodology to clarify the phenomenon of rhythm in architecture by constructing a cognitive framework.
2. **Aims:** The previous study aims to understand the phenomena of rhythm in the formation of architectural products and to identify their types and orientations.
3. **Application:** The previous study can be used in the method of defining rhythm and addressing it in the artworks in the study.

The previous study can be used in how to deal with rhythm in describing works of art and in deriving some rhythm patterns and using them in students' artworks

Third: Studies on Arts in Egyptian Civilizations in the field of design

1- (Rehab Mustafa Sharaf Al -Din, 2019)

“The Ancient Egyptian Origin of Some Architectural and Artistic Elements in Coptic Christianity”

The objective of the paper is to introduce an overview of Coptic architecture and art, its development, and its connection with ancient Egyptian civilization. The research highlights the ancient origin of the most important Coptic architectural and artistic elements in Coptic churches. A historical analysis of these elements and their functions was introduced to understand the connection between different civilizations and how it is normal for any civilization to adopt from the previous civilizations. The descriptive method was used in this study, which was useful in describing different architectural and artistic aspects related to the topic. The research also analyzes the different factors that helped in this adoption, the ancient Egyptian origin of some architectural and artistic elements in the Coptic Church, and the differences between ancient and Coptic beliefs, which make the use of each element in Christianity serve another purpose.

Comparison with Previous Study:

Previous Study: The previous study differed from the current study in that the previous study shed light on the emergence of Coptic art in Egypt and the most important arts for which it is famous, such as architecture, inscriptions, and Coptic icons.

Integration with Current Study:

This study can be used to inspire some Coptic inscriptions and drawings that help students design inspiration from some elements in their paintings

2- (Baines J, 1994)

“On the Status and Purposes of Ancient Egyptian Art”

Aesthetically organized structures and artefacts constitute the majority of evidence from Egypt, a legacy created mainly for a small élite. The genres of these materials, all of which had functions additional to the purely aesthetic, are similar to those of many other cultures. They constitute a repository of civilizational values, related to the system of hieroglyphic writing, that was maintained and transmitted across periods. Civilization and artistic style are almost identified with each other. Funerary material constitutes one central context for artistic forms; others are temples and such poorly-preserved locations as palaces. The importance attached to artistic activities in Egypt, high-cultural involvement in them, and idiosyncratic developments can be illustrated from many periods. Egyptian art is a typically inward-looking and almost self-sustaining product of a professional group.

Comparison with Previous Study:

Previous Study: The previous study differs from the current study in that the previous study shed light in a theoretical way on what is the importance of Aesthetically organized structures and artefacts constitute the majority of evidence from Egypt, Funerary material constitutes one central context for artistic forms; others are temples and locations as palaces,

Integration with Current Study:

The previous study can benefit from the current study in how to benefit from some architectural works and designs in the formation of design for some artworks in the current research

3- (Georgy, D, 2019)

“Identity and its reflection on the design and forming in Islamic design”

This study explores how contemporary Islamic art, rich in elements and vocabulary, provides a fertile ground for designers to create diverse and rich designs. These designs help establish a technical identity for buildings. Egyptian architecture can be developed by incorporating elements of Islamic art, which have

been part of the Egyptian environment for centuries, and remodeling them in a contemporary manner. This approach is based on foundations, standards, and methodologies that help solve problems and create innovative designs. The research aims to develop the best models of units that can be designed in a contemporary way, creating a rhythm between buildings and spaces to confirm the visual bond with the unit diversity and the concept of quality of life, varying with time and place.

Comparison with Previous Study:

- **Previous Study:** Focused on the theoretical importance of Islamic architecture in developing modern architecture.
- **Current Study:** Emphasizes practical application by developing new designs inspired by Islamic art elements, aiming to create a visual and functional harmony in contemporary buildings.

Integration with Current Study:

- The previous study's insights on inspiring new shapes and units can be utilized to build student designs, integrating theoretical knowledge with practical application.

4- (Fewella, L.N., 2021)

"The Nubian Woman's Lifestyle and Traditional Jewelry as Inspiration for Contemporary Furniture Design"

Integrating Nubian Folklore in Contemporary Design

By reviewing the nature of southern life and studying it in the field, this research delves into the elements of Nubian folklore and human interaction with these elements in Egyptian jewelry. It extracts what distinguishes Egyptian symbols between ancient Egyptian and Nubian art. The research presents a pictorial vision for integrating design elements from folk jewelry and the lifestyle of the Nubian woman as an inspiration for designing contemporary furniture pieces. The aim is to present models for integrating folklore and the essence of life in Nuba into contemporary home furnishings. These designs are integrated with colors that easily merge with any space, making the furniture an ambassador of Egyptian culture and heritage both globally and locally.

Comparison with Previous Study:

- **Previous Study:** Focused on the theoretical importance of Egyptian Nubian folk art, particularly from its jewelry and symbols.
- **Current Study:** Aims to practically apply these elements in contemporary design, creating a visual and functional harmony that reflects Nubian culture.

Integration with Current Study:

- The previous study can be used to teach and explain the concept of Folk Egyptian Nubian art to students, enhancing their practical performance and understanding of famous Nubian artworks.

5- (Fewella, L.N., 2024)

"The Aesthetics of Combination Traditional and Modern Materials in Contemporary Egypt Furniture"

The research aims to develop crafts inspired from the heritage of Egypt, and presents an overview of the most important traditional Egyptian crafts in the south. As such an overview is presented of the most important features of traditional Egyptian furniture, the most important traditional Egyptian crafts, and the materials incorporated into the manufacture of furniture and its accessories through the ages. The shadow casts on a type of folk art that can be incorporated into the furniture design concept, which is the (Shadow Imagination) style as a type of Egyptian expressive folk art, where folk art is considered a source of sustainability for the Egyptian heritage. By presenting models for integrating non-wood materials into the furniture industry through the ages with traditional wooden furniture, a historical overview of the Egyptian methods of integrating wood and other materials is formed. The research moved to present an

attempt to sustain heritage by merging some folk crafts with their traditional materials and folk arts associated with them with contemporary furniture and modern materials to present a model for trying to revive these crafts and materials and to integrate them recently.

In the end, the research presents some examples of contemporary pieces of furniture spread in the Egyptian market in addition to modern and heritage materials. Which it is proposed to integrate into contemporary Egyptian furniture designs to keep pace with the general taste in the Egyptian market. With the aim of presenting samples of contemporary furniture designs proposed by the researcher inspired by the Egyptian character by merging traditional materials and techniques with modern materials. In addition to presenting design models as applications of integrating modern technology in manufacturing with the heritage style in furniture design.

Comparison with Previous Study:

- **Previous Study:** Focused on Egyptian folk art furniture and the "Shadow Imagination" style to produce modern furniture inspired by Egyptian folk art.
- **Current Study:** Expands on this by integrating simple folk ornaments and shapes into contemporary designs, ensuring they comply with modern aesthetics.

Integration with Current Study:

- The previous study provides insights into dealing with simple folk ornaments and shapes, aiding in their integration into contemporary designs.

The procedural aspect of the research:

The procedural aspect of the research deals with the steps followed by the researcher to reach the design of the teaching unit among a sample of first-year students , Department of Art Education, Faculty of Specific Education, Ain Shams University, which is entitled A teaching unit based on the effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University

Factors taken into account by the researcher during the application of the teaching unit

- 1- Training is conducted on how to use design elements (as in this academic year is the student's first interaction with design elements and students have not previously dealt with them before).
- 2- Training is conducted on how to distribute the design elements within the shape and to analysis the elements of the nature and artworks in the museums and how to distribute the tone, which is the extent of the amount of light and dark, and how to achieve Rhythm by distributing these elements in the design, to train the student on how to solve the problems they will face during the grading and how he will be able to find proportional shifts during the grading process.
- 3- Realizing what Rhythm is, what are its types, what its usefulness is, and how to use it.

Second: The Practical steps of the teaching unit

- 1- Students conducted small-sized design experiments as prototypes as training on how to use design elements.
- 2- Then the student applied what was trained in the experiment lesson, where they went to The museums (Islamic, Coptic, Egyptian folk Museum, or any historic area in Egypt), and draw directly a good shot that display ornaments of this Artworks or a part of Icons or a ceramics or paintings, doors and the curvings on it, the student have the ability to choose the best 5 shot (draw 5 shots or more as a fast sketching) to draw in his skitch.
- 3- After that in the lecture at the faculty, every student have to translate what he draw in the museum into illustrated ornaments, but they have to be careful in this process, because they have to transform it to give the same inspiration of the same art that this ornament belong to, not to illustrate it and make it an ornament unreadable or not belong to a known Egyptian civilization or Egyptian historic era.

4- Students have to try to combine two or more Egyptian Civilization with the process of the illustration with combining the ornaments.

5- The empty geometric and organic shapes created by the students in the process of illustration were used in that the students placed some textures , points, lines and shapes inside them.

6- Then the students finish the design on a Canson 300 grams of 1/4 sheet, and an interior of 45×35 cm. It insulates the margin around the design to preserve it, and the elements and spaces are selected according to the rules and foundations of the design throughout the design process. Considering also highlighting the shadows, light and gloomy,

Through the previous presentation, we can reach the lessons of the teaching unit, which depends on the application of Rhythm as a basis of design on configurations of design elements and the production of new designs.

The general objective of the teaching unit:

Producing a set of designs based on achieving Rhythm properties and applying them to design elements to extract ideas for those designs through it.

Lesson one

Subject	Explain what design is and basics of what are the design elements		
Domain	design		
Time	Lecture (3 hours) in the first week		
Age Group	First Year (18-20 Years)		
Teaching aids	Materials & Tools	Basic concepts	Goals
- Pictures of some of the artists' works - Photos of some models of nature as an example of design inspiration - Identify some terms in local and foreign expression.	- Sketch - pencil - Ink pens - Ruler - Aristotle's Triangle	- Rhythm - Line - Point	- Reworks design elements - Be able to analyze initial forms. - Maintain texture
Strategy used		Lesson Progress	
Brainstorming		- At the beginning of the lecture, the researcher throws some interesting questions to motivate students to the topic of the current lesson through brainstorming. - A general explanation is made of what design is and what are the basic concepts and elements of design. - Then what is the line, explained as an element of design, by displaying the works of some artists. - The types of Line and how to formulate them are presented and explained from the perspective of Rhythm. - Some terms for Rhythm are explained. - Each student is required to apply Rhythm in the sketch of the design material by implementing it through the line and Point elements.	

It occurs whenever the student issues a desired behavior, and the reinforcement will be material and moral	Strengthening
What difficulties did the student face while doing the lesson and how to overcome them	Correction

Teaching Unit:

(1) Philosophy of the teaching unit: The philosophy of the teaching unit means clarifying the main ideas that guide the teaching unit and determine its paths to achieve the goal for which the teaching unit was established, which crystallized in the basic problem, which is the preparation of design panels for the study sample.

It is within the philosophy of the teaching unit to rely on the design course for the first year of art education (Faculty of Specific Education - Ain Shams University), and the philosophy of the teaching unit depends on the ability to form ideas, the ability to use materials, and the ability to respond well to visual effects.

(2) Objectives of the teaching unit: Among the objectives of the teaching unit is the ability to reformulate shapes innovatively, and the ability to form designs taking into account the foundations of design, especially Rhythm.

(3) The content of the teaching unit: The teaching unit contains four lessons, which are presented below so that the presentation of these lessons is accompanied by samples of the results reached by the research sample.

The sequence of lessons came as follows

Lesson Two

Subject	A museum visit to draw ornaments		
Domain	design		
Time	Lecture (3 hours) in the third and fourth week		
Age Group	First Year (18-20 Years)		
Teaching aids	Materials & Tools	Basic concepts	Goals
Photographs of Art work in Museums in different Egyptian civilization that shows and describes the design principles and elements clearly	- Sketch - pencil - Ballpoint pens - Ruler - Aristotle's Triangle	- Balance - Shape	- To be aware of the relationships between the Rhythm and the design element - To be able to analyze different kind of shapes. - To have design solutions from the drawing of ornament directly in the museum. - Maintaining Rhythm
Strategy used		Lesson Progress	
Innovative thinking		- At the beginning of the lecture, the researcher asks some questions about the topic of the previous lesson. - The meaning of Rhythm and what its relation with the design elements. - Give a fast tour in the museum with the student to give them some information about the subject they see. - Let every student the ability choose what he/she want to draw. - How to manipulate space within artwork is explained - The difference between types of organic and geometric Shapes is explained. - explain how to illustrate the ornament, - Each student is asked on the sketch page to make 5 fast skitch to 5 shots to ornaments or more, to illustrate it again in the lecture next week.	
It occurs whenever the student issues a desired behavior, and the reinforcement will be material and moral			Strengthening
What difficulties did the student face while doing the lesson and how to overcome them			Correction

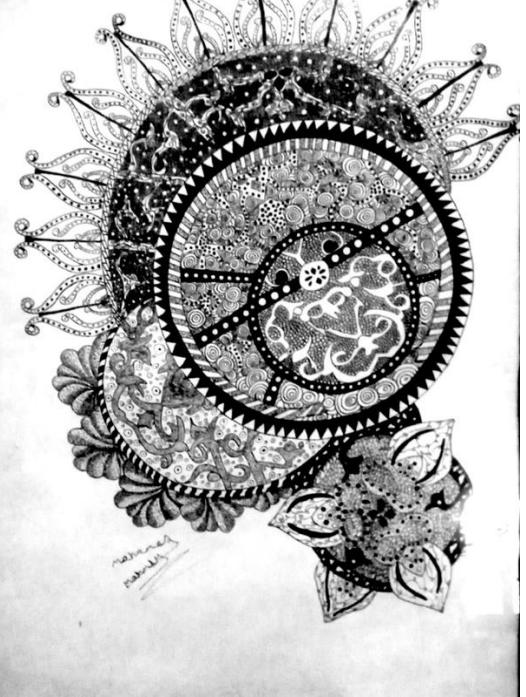
Lesson Three

Subject	Illustrating drawings into ornaments using design elements		
Domain	design		
Time	Lecture (3 hours) in the second week		
Age Group	First Year (18-20 years)		
Teaching aids	Materials & Tools	Basic concepts	Goals
- Images of museum illustrated artworks. - Realistic texture models and how to turn them into design models. - Identify some terms in Arabic and foreign color	- Sketch - pencil - Ink pens - Ruler - Aristotle's Triangle	- Rhythm - texture	- Find out how to illustrate drawings. - Be able to analyze texture. - To consider the appropriate texture in the shapes
Strategy used		Lesson Progress	
Brainstorming		- At the beginning of the lecture, the researcher throws some interesting questions in order to motivate students to the topic of the current lesson through brainstorming. - Follow-up explanation of what design is and what are the basic concepts and elements of design. - Explain what illustration is and how to use it within the design artwork. - That students make solutions of how to transform every drawing that they draw in the museum to illustrated ornament. - During the work of the contactor, the student can use some natural texture. - The student can create an unrealistic textures, i.e., not real. - The student must consider the light and dark in his design solutions in the adjacent spaces	
It occurs whenever the student issues a desired behavior, and the reinforcement will be material and moral			Strengthening
What difficulties did the student face while doing the lesson and how to overcome them			Correction

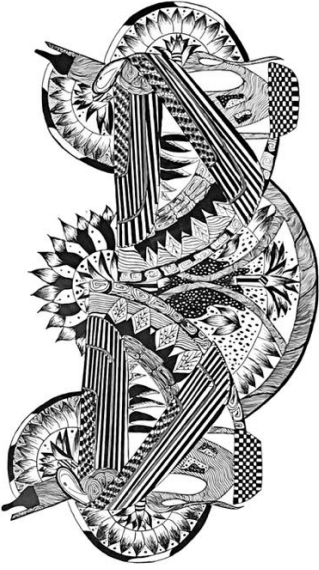
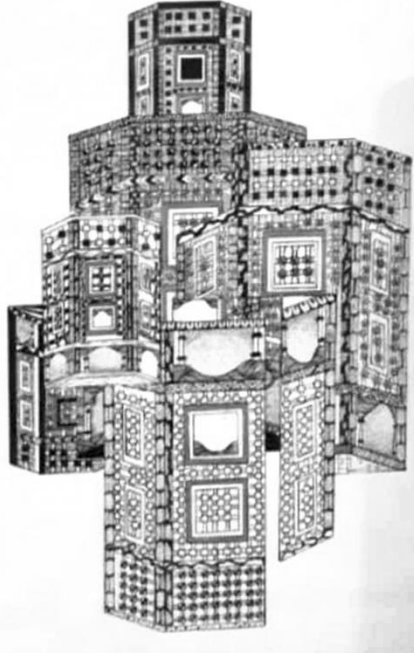
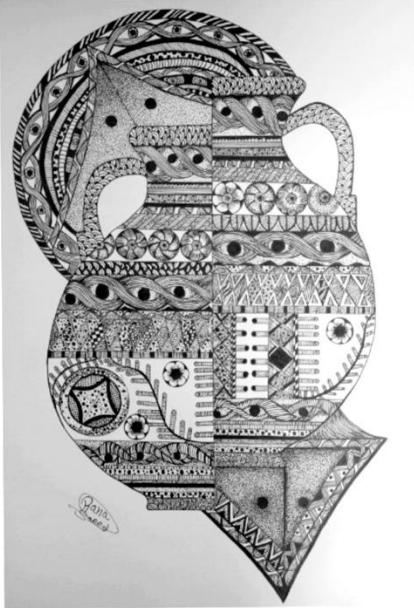
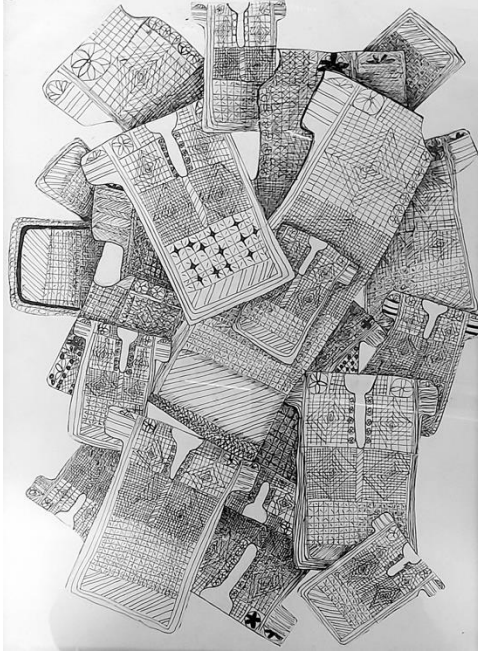
Lesson Four

Subject	Final Design stage		
Domain	design		
Time	Lecture (3 hours), lecture (3 hours) in the ninth and tenth weeks		
Age Group	First Year (18-20 Years)		
Teaching aids	Materials & Tools	Basic concepts	Goals
Photographs of works by artists who used to blend the four design elements (point, line, Shape, and texture)	- Sketch - pencil - Ink pens - Ruler - Aristotle's Triangle	- Rhythm - Point - Line - Area - Texture	- Recreates shapes in an innovative way. - Be able to analyze areas
Strategy used		Lesson Progress	
Innovative thinking		- At the beginning of the lecture, the researcher asks some questions about the topic of the previous lesson. And see what the students have accomplished from the previous lecture until the current lecture. - Some questions are thrown as a brainstorming technique on what design and contemporary designs is as well, and students also present their personal opinions. - How to solve and combine the four design elements into the same palette (point, line, Shape and texture) is explained. - Each student determines what types of arts or subjects they want to mix. - Each student makes various initial designs around moving and designing merging two or more illustrated ornaments from the museums within the frame of the design, provided that the external area of the design is not specified. Then the works are discussed to agree on the final form of the design work. - Each student coordinates, distributes and implements the four design elements within the design spaces from his design point of view, considering the general foundations of design.	
It occurs whenever the student issues a desired behavior, and the reinforcement will be material and moral			Strengthening
What difficulties did the student face while doing the lesson and how to overcome them			Correction

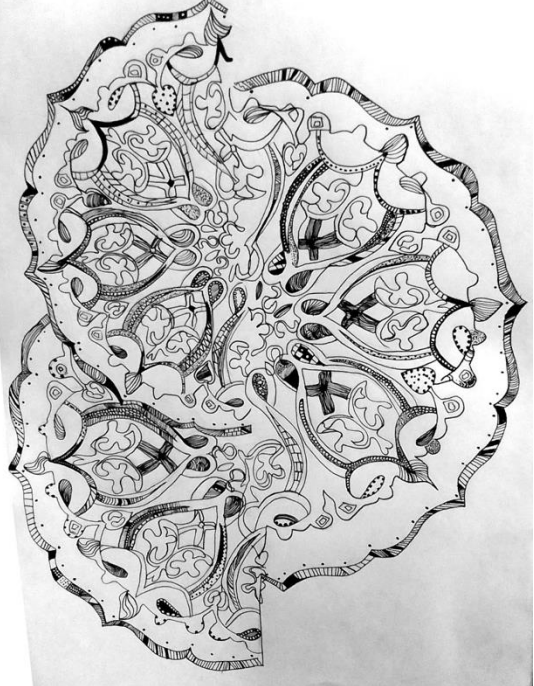
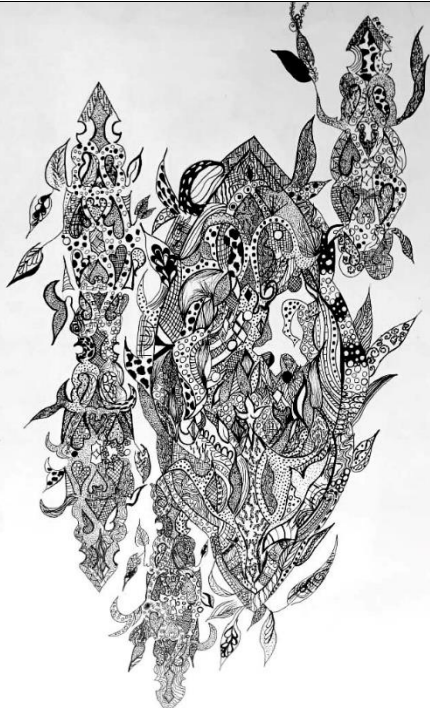
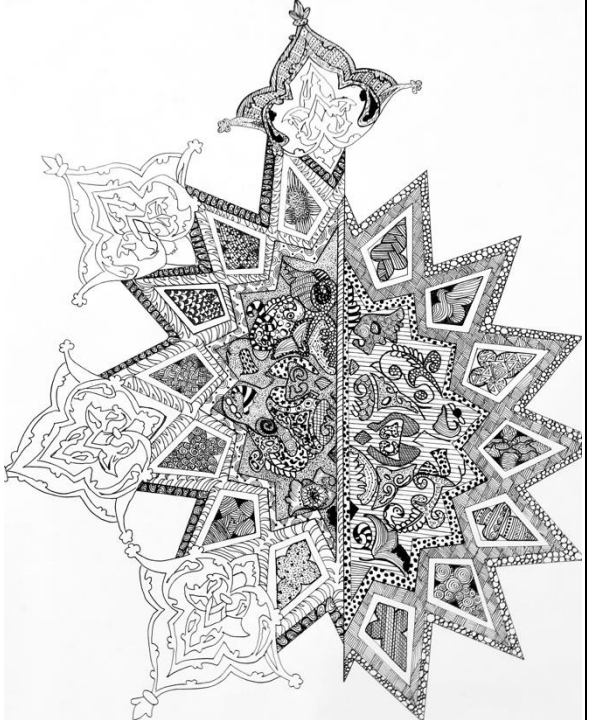
Teaching unit results

Final Design Art	N	Final Design Art	N
	2		1
	4		3

Teaching unit results

Final Design Art	M	Final Design Art	M
	6		5
	8		7

Teaching unit results

Final Design Art	M	Final Design Art	M
	10		9
	12		11

Teaching unit results Comment	
Rhythm	The students used Rhythm by taking into account the distribution of the four design elements in the spaces they created through the manipulation of two or more Egyptian illustrated ornaments of different civilization or art, and the elements were distributed in the initial spaces taking into account the Rhythm in the distribution of each design element by analyzing the areas consistent with the context of the composition of each Design for students separately
Point	Very few students used the dot element during the implementation of their design paintings, but they inserted it while merging it with the instruction of the design, and one student, student No. (3,4,5,7,12), used it because they wanted to show depth in some of its spaces.
Line	The students used the Line element in all their work, with the types of geometric lines and the organic line, while the straight geometric line and the organic line are the two most types that students used in their designs
Shape	The students used geometric and organic spaces, and also introduced organic shapes with geometric shapes in a harmonious manner, whether in the construction of design or within the treatment of shape areas.
Texture	The texture varied between the real and realistic textures in our daily lives, and the unrealistic textures that are inspired by the imagination of the students, and the students took into account the gloom and openness in the distribution of their textures significantly. Which resulted in most paintings showing some depth in the designs
(Numbers 1-12 symbolize the number of 12 Students of the 20-research sample)	

Design Art's Information

Student Number	Student Name	Ink pen size	Colors used	Material	Work Size	Design principles	Design element	Design Printing
1	Mariam Mohamed Abdel Rahman	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
2	Manal Mohsen Abd El Fattah	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
3	Muhammad Alsayed Mahdi	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
4	Iman Ahmad Muhammad	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
5	Mennatullah Amr Ramadan	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
6	Balkees Mahmoud Muhammad	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
7	Salsabeel Walid Mahmoud	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
8	Rana Saeed Ibrahim	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
9	Nourhan Mahmoud Mohamed	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
10	Rahma Zakaria Ismail	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper

11	Mariam Khaled Mohammed	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper
12	Bismillah Muhammad Hassan	2/4/6	Black and white	Canson paper 300gm	35x45cm	Rhythm	Point, line, shape, texture	transparent paper

Results and Recommendations

The results were presented to a committee of arbitrators* in the exact specialization, to answer the questions** A scale consisting of (6) questions revolving around the availability of six characteristics and the answer was (yes) or (no) and the following is a presentation of the ratios of the arbitrators' agreement on the availability of the six characteristics.

Quantitative results

1. The judges agreed 100% on the availability of the property "that the teaching unit as an independent variable brought about a positive change in the behavior of the members of the research sample, which was reflected in their ability to illustrate and reformulate the Shapes included in the design panels."
2. The judges agreed 89% on the availability of the property "that the members of the research sample were able to formulate the shapes in an rhythmic way."
3. The judges agreed 90% on the availability of the property "that the sample members are able to form merging Egyptian civilization designs."
4. The judges agreed 91% on the availability of the property "that the subjects are able to achieve Rhythm through shapes."
5. The judges agreed 93% on the availability of the property "that the sample members are able to achieve the analysis of design shapes".
6. The judges agreed 92% on the availability of the feature "Achieving the foundations of building the design panel".

Results How to:

1. The results of the students' work in the design subject were based on the formal analysis of the shapes with the use of vertical, horizontal, and inclined axes to build the design panel.
2. The shapes of the spaces of the analyzed elements for each area were selected through analysis and integration of the design elements..
3. The numbers from 1 to 12 symbolize the number of 12 members of the research sample (the 20 individuals).

* See research appendices.

** See research appendices.

Recommendations:

In light of the results of the current study, the researcher made a number of recommendations and suggestions that may be useful in the field of design.

1. The researcher recommends making more teaching units in various other fields.
2. The researcher recommends in-depth technical knowledge closely because of its stock that develops the visual aspect for students to draw inspiration from many designs that enrich the field of design.
3. Opening channels of communication between all artistic fields -digital or traditional- can lead to new artistic creations with an innovative aspect and expand the perceptions of art teachers and students.
4. The results of the current research can be employed in future research that uses computer or Artificial intelligence programs in design formulations.
5. Allow students to experiment to analyze three- and two-dimensional ornamental shapes.
6. The need to deal with basic geometric shapes, for example, circle, triangle and square to reveal a lot of solutions that are not without design.

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Research Appendices

Appendix (1) The final image of the questionnaire and the scale of judging the availability of some characteristics in the design panels.

Appendix (2) Stages of calculating the percentage of the arbitrators' agreement on each of the characteristics included in the scale.

Appendix (1)

The final image of the questionnaire and the measure of judging the availability of some characteristics in the design panels.

Prof.

Greetings.

Prof. Ahmed Mustafa Mohamed Abdel Aziz, Professor of Mass Communication, School of Humanities and Creative Arts, University of Hertfordshire – Hosted by global Academic Foundation - Egypt, is conducting research entitled: On The effectiveness of a teaching unit based on achieving the Aesthetics of Rhythm by using Merge arts from Egyptian civilizations to produce designs among a sample of art education students at the Faculty of Specific Education, Ain Shams University

The research requires the establishment of a scale to judge the availability of six main characteristics that achieve the objectives of the research, and the role of the arbitrator is to answer b (✓) if the property is available, and answer b (×) if the property is not available, and the following is the form of the scale (the final form after modification).

Student Number	characteristics Name	Availability	
		✓	×
1	Their ability to illustrate and reformulate the Shapes included in the design panels.		
2	that the members of the research sample were able to formulate the shapes in an rhythmic way		
3	that the sample members are able to form compatible geometric and organic design shapes		
4	the subjects are able to form merging Egyptian civilization designs		
5	that the sample members are able to achieve the analysis of design shapes		
6	Achieving the foundations of building the design panel		

- Please review the items of the scale and express an opinion on their appropriateness in light of the objectives of the current research.

Thank you.

Researcherppendix (2)

Stages of calculating the percentage of arbitrators' agreement on each

One of the properties contained in the scale

The first stage: Each arbitrator shall judge the availability or non-availability of the five characteristics in (12) design representing the results of the current research through the following form:

Student Number	(Numbers) Plates and their judging (availability of characteristics)									Total feature availability in the 12 designs
	1		2		3		4		To the end of the 12 Design	
	Yes	No	Yes	No	Yes	No	Yes	No		
1										
2										
3										

4										
5										
6										

The second stage: reaching the percentages of the arbitrators' agreement on the availability of each of the five characteristics through the following model, which aims to reach the percentage of arbitrators' agreement for one student only and repeats the use of this model to reach the percentages for each of the five characteristics on the scale.

Arbitrators*	Availability or unavailability of the feature						% Arbitrators Agreement	Average Arbitrators Agreement	Total number of ✓ per arbitrator
	Design (1)		Design (2)		To the end of the 12 design				
	✓	×	✓	×					
First Arbitrator									
Second Arbitrator									
Third Arbitrator									

From the previous model can get:

- 1- The total number (√) of each arbitrator on each property.
- 2- Finding the average agreement of the arbitrators on the availability of the property by dividing the average agreement of the arbitrators by the number of arbitrators (3 arbitrators).
- 3- Finding the percentage of arbitrators' agreement on the availability of a property by dividing the average agreement of the arbitrators by the number of plates, which is 12 design, and then multiplying the quotient $\times 100$ to avoid fractions.

The result (percentages) were then rounded to avoid fractions as well.

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