

The formal and technical capabilities of the ropes in developing handicrafts based on linear relationships

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Introduction to the research:

Calligraphy is the language of art, as it is considered one of the oldest means of artistic expression. It is the starting point for artwork. No person or artist can take a single step in his artistic work without using the calligraphy component. It is the first thing that a person understands of the elements of formation. When he feels the need to express his emotions, hopes fears and beliefs, calligraphy was the first method, and then it became one of the basic elements in plastic art, whether this art is a drawing, painting, sculpture, busy art or other areas of art in which we find creativity by using the calligraphy element as a way to show details of shapes and achieve blocks and volumes through Deranged materials and methods and its multiple.

Each line carries with it the properties of the subjects it expresses (whether straight, curved, refracted, interlaced, sharp or of variable density). The line is a wide range in the expression of personality, so we find the straight line linked to stability and strength, and the refractor is related to excitement and intensity, and the vertical is given developing strength, transcendence, and grandeur or horizontal are status associated with stillness and comfort, and the curved line suggests continuous, effective, and moving motion, and the smooth line achieves movement and rhythm "(19-2) *.

When multiple linear relationships make the line an element capable of performing formal functions in building the elements and vocabulary of the artwork, they are related to length and thickness and the way the line is engineered or organic. It also has capabilities to influence the scenes as it affects the extent of its clarity in the perception and the way it provokes the perception of movement, it is natural that this relationship has an effect on the artistic formulation as it is translated into a plastic work by material, it is exciting in any plastic work, it realizes the artist's idea, during the practice the artist turns stones into sculpture, or to colors in photography, and to everything that his eyes and his fingertips fall on, , he studies the properties and capabilities of the material to reach a greater understanding that helps him to adapt it to his art and makes it more powerful in expression.

The field of artistic works is considered one of the most artistic fields that enables the artist to achieve the greatest degree of experimentation in the materials and tools that he reaches, where he can choose what suits his idea from the various materials, as he studies the properties, configurations and capabilities of each material, so that he is aware of it, in this case the artist turns to raw materials not only as a basic material or as an intermediary, but to invest all its data to the maximum that allow him to benefit from this bid.

Field of technical works through which all the entrances of experimentation can be achieved as it pushes the practitioner to perpetuate research and experimentation to find unconventional solutions and new technologies that enrich the field of dealing with various materials as there is a close correlation among the components of the technical work in terms of material, shape

and content, then the mind cannot realize the technical formulation of one of these components except in the context of the whole, "the material, the shape and the expression depend on each other" (9-217), and everyone melts in the melting pot of the technical work unit, which in turn depends mainly on design and raw materials and the resulting aesthetic variables and formative practices.

The severity of the ropes is characterized by a variety of properties, including flexibility, ductility and ease of formation, as well as its various forms and types, which made it the focus of this research, through which lines can be transformed into blocks and volumes to enrich the artistic work, the luxury of ropes is one of the rich materials in the field of art in general, where the linear rhythm resulting from relationships Sin and the artistic and formalistic values it gives are the primary axis through which formation starts with such a material, as it takes multiple images that give formative values and texture, where "the texture represents an important technical and creative verb that achieves differently occupied surfaces, symbols and occupied spaces, and this Artwork would give more influence and richness in directing and building than traditional painting and traditional materials offer." (21-221).

The linear relationships of the ropes give the sense of movement that results from the distribution of strings and ropes on the surface of the busy artwork that results from a careful and accurate study of the lines relationships, such as juxtaposition, intertwining, interlacing and line characteristics, such as thickness, direction, length, and all this when the material of the ropes translates through the formation process, through which the technical values are revealed. Emerging from the formalities of the linear relationships of the ropes, where "the artist uses it through his creativity and his influence on the material to produce many artistic values such as stability, balance, a sense of movement, impulsivity, and kinetic tension, and in this concept a limit is accomplished" He has innovations and creations in modern art "(5-2) based on the use of calligraphy and his embodiment into an innovative, concrete and solid work by experimenting with the material. Hence the idea of research, which is the study of calligraphy through the material of ropes and experimentation and the search for the formative capabilities of the linear relationships of ropes and the extent of their impact on handicrafts.

Research problem: The research problem is determined in the following question:

How can we benefit from the technical and artistic capabilities of the ropes and the linear relationships they add to the artistic work?

The research aims:

- 1- Study the technical and plastic values and the linear relationships through experimenting with the raw materials.
- 2- Monitor the fine values and technical effects of the ropes, and the linear relationships and tangible effects they add.

The research importance:

- 1- Reaching technical and artistic solutions that enrich the artistic work by creating the relationship among the line, its plastic features, the material of the cords and its plastic properties.
- 2- To shed light on the lines, their types, relationships and their formative capabilities through studying them through the material of the ropes.

- 3- Shedding light on the ropes' materials, their types and their plastic and technical capabilities.
- 4- Contributing to enriching the visual vision and the artist's thought of finding new and innovative experimental approaches in the field of artistic works.

Research imposition:

- It is possible to reach various written linear formulations by forming the raw materials of the ropes to enrich the artistic work.

The search limits:

- 1- The research is limited to conducting an applied experiment on a sample of the fifth year students - College of Art Education - Minia University - the academic year 2017-2018 and they are 21 male and female students, as they have some previous experience appropriate to apply this experiment through the (Art Workshop) course.
- 2- The application period lasted six meetings with four hours per meeting per week.
- 3- Using the natural material of ropes as a basic material of all kinds (fiber, cotton, linen, etc.).

The Research Methodology:

- The research follows the quasi-experimental approach to conducting the applied aspect of the research sample.

Search terms:

Line:

The calligraphy is defined in the brief glossary as drawing its mark (17-202) and it is "an element of design with an important and major role in building artwork. It is defined geometrically as the effect resulting from the movement of a point in a path, so it may be seen that it is a sequence of its group of contiguous points" (1- 144).

In its name, Mahmoud Mustafa defined that "a point is moving and moving in every direction so that it is a wavy line vertical or horizontal, but rather proceeds to infinity" (8-176).

Abdel-Fattah Riad defines it as "an important element of design in general and has its constructive and expressive values in artistic designs. The perceptual and aesthetic effect of the font varies according to the way it is in a design, so it may exist united with other elements in a specific image of flat shapes or stereoscopic bodies and the space confined between them, or as a component of its internal details, it may also exist individually to play the full constructive and expressive role, in which case such configurations are described as linear configurations "(14-146).

It is procedurally defined that the line has length and width and has depth, which is a physical medium (material) that has thickness, and type that is formed by it, whether direct formation or according to a prior design to produce contemporary art works (suspended).

Linear relationships:

Piet Mondrian says, "The formula was found to create relationships, that forms create relationships, and relationships create forms" (22-178).

They are the formative relationships from which the area arises that shows "the movement of the line (in a direction contrary to its own direction) and forms an area of length and width that does not have depth and is surrounded by lines and defines the outer limits of any size" (1-164).

It is procedurally defined as the formal relationships, areas, and shapes that result from perpendicularity, penetration, entanglement, interlacing, juxtaposition, overlapping, and

touching lines with each other, forming an integrated entity consisting of a group of parts that earn the character of the work.

Fine capabilities:

Are the successful organizational relationships of the elements and the values and foundations they demonstrate in achieving the business unit in accordance with its content and idea. It is the material aspect that can be chosen, measured, and evaluated, in the work, as it is directly related to the formulation of form and material (elements of work). (24-28http) *

Procedurally defined as the ability to form ropes by direct formation or pre-design for them and to take advantage of the properties of the rope material of thickness of multiple types, and technologies commensurate with each type and synthesis between them to subject them to the process of formation and production of artistic work and the link between the parts of artwork and harmony between the linear relationships and types of lines (As the vertical and horizontal (curved - twisted - spiral)) that emphasize the properties of the rope material, such as flow and flexibility.

Technical capabilities:

"It results from the artist's distribution of his skills and innovations to the structural elements of the work and the foundations of artistic formation, as well as in what he chooses in terms of new content and formulations. It comes from the value of the plastic work with its quality and internal construction (such as shape, color, movement, rhythm and formation" (15 - 75).

Procedurally defined as the creation of surface and tangible values through the use of the rope material and the multiplicity in the use of levels between the prominent and the groove and the achievement of the depth that emphasizes the dimension in the artistic work as well as the feeling of movement and the achievement of balance and the formal linear rhythm and diversity in the use of the rope material of lengths and directions and thickness and the achievement of unity and contrast.

Theoretical framework:

The first axis: the line:

It is "the effect of a moving point, so it has length and does not have width or depth, but it has a location and direction, so it may be straight or curved, or it may be refracted." (1 - 133) The line can be considered as a continuous series of points that show a position or direction, and speed is an important factor of activity The line in a vacuum becomes apparent during its movement in a horizontal, vertical, oblique or refractory form, as well as the thickness of the line forming its strength and stability as the length, thickness or both changes give a distinct tone with rhythms imposed by its shape.

The calligraphy is considered an element of design with an important and main role in building the designer artwork, as there is hardly any design work devoid of the font element, albeit in varying degrees, as well as the font in nature there are many and varied images in most of its forms, and "the line determines movement and direction The extension of the void, as the nature of the line is the transmission of movement directly and followed, as it includes suggestions of rhythm, unity and balance "(5-2).

One of the important characteristics of the lines is that the designer can be used during creations that evoke many meanings that extend from stability, and balance to a sense of movement, impulsion, tension and dynamism, as the font in design is not limited to being an external line

that identifies representative forms but rather has an independent value that can be employed, utilized, and emphasized. "(5-2)

Bernard Myers states that "one of the simple means is at the same time more important and beneficial among the materials and elements used by the artist, as it is the most complicated thing as it may be a delicate thing and yet it does a lot of work and may be surrounding a specific area or shape or a tool for identification and also determines the direction of movement and the extension of the void "(7-237).

Line artistic effects using ropes formation:

From the foregoing, it is clear that there is a close relationship between the line and the material of the ropes, where they share many characteristics such as straightness, length, flexibility, foldability, thickness and texture, but the material will continue to have its only taste as it is exciting for the creations of any artist, as the rope material is unique in embodying most of the characteristics of the line such as thickness, texture and depth, not only that but It is more effective and influencing the embodiment of linear relationships such as constant or varied repetition of ropes that depends on the difference in (length, movement, direction, interfaces, or proportions) which is "as a process that leads to confirming the aspects of extension and discretionary movement on the surface, and it appears in variable times between the repeated lines which differ according to the formative characteristics "(12-55), and the linear relationships are also embodied and translated by the overlapping of the rope or the twisting component of it, whether the overlapping is partial, half or almost total, and this leads to the awareness of the lines in multiple directions without a specific center visibility then runs through overlapping paths, and these paths may be regular or irregular, and other relationships that can be translated from the line and embodied by the material of the ropes, such as interference, juxtaposition, solicitation, synergy and intertwining, in addition to the many types of rope material that put the artist in a permanent conflict with the material to know its components and its secrets and techniques appropriate to each type and methods of synthesis between it and the auxiliary materials such as burlap, beads, wood, etc.

Technical and technical capabilities of the rope material:

The practitioner of artistic works must strive in his experience of the materials as the material is the medium through which the artist expresses what is simmering with expressions and emotions, and experimentation here is behavior that helps the growth of thinking, creative performance, and formative relationships, by presenting the aesthetic aspects of the subject and the various solutions to it, and choosing and setting the most appropriate form for the integration of the content, as the field of technical works is one of the fields most dependent on the experimental trend, due to the employability of experiments and synthesis, in search of new methods and techniques that enrich the field of dealing with these materials, as they are an inspiration for him in the same time, the artist is not subjected to the material and makes it dominate him. Rather, the researcher sees that the artist's interaction with the material comes first by understanding its characteristics and features and then containing it and being able to control it, then to expand his knowledge of it and its capabilities and methods of dealing with it by continuous practice and experimentation, which enables the artist to solve the problems that he faces in his dealings with the material.

Hence, the artist must be in control of his materials and not only be able to practice and form, but must "be able to experiment and uncover methods of change and formation"

The research results:

- 1- The use of ropes of various kinds has a great role in achieving various tactical and written values in the artwork.
- 2- The relationship between the use of the rope material and the linear relationships was enriched by the artistic surface.
- 3- To take advantage of the technical and artistic capabilities of the linear relationships of ropes in developing artistic works.
- 4- Taking advantage of the capabilities of the aesthetic and plastic lines as design elements and studying them through the material of the ropes increases the ability of art education students to harmonize the vocabulary of the art to create contemporary art works.

Recommendations:

- 1- Continuing research and experimenting with natural and industrial raw materials, identifying their technical capabilities and investing them technically and formally
- 2- Paying attention to the functional and expressive direction of calligraphy and studying it through raw materials, because of its importance in creating artistic and aesthetic values in the artistic works.
- 3- Searching for new approaches and solutions by linking the line and its fine elements to the aesthetics of the material in developing teaching of artistic works.

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