

Experimenting With Environmental Materials In The Art Of Painting And Ceramics As An Introduction To Enhancing The Concept Of Environmental Sustainability Among King Faisal University Students

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ABSTRACT

The current research aims to: Open new horizons for experimentation with environmental materials in Al-Ahsa governorate aiming to enhance the concept of environmental sustainability among graduate students at King Faisal University. According to a teaching plan Based on experimentation with environmental materials, for all graduate students at the master's level, numbering (7) Students who represented the intentional research sample. The research followed the descriptive analytical approach and the quasi-experimental approach in conducting a student experiment in the field of plastic arts and another personal experiment in the field of ceramics. The Likert scale was used to clarify the level of students' performance in experimenting with environmental materials on the surface of their artworks, through designing student work evaluation card research samples. The research results show that experimenting with environmental materials in the art of Painting helped raise awareness of environmental materials among master's students and enhance the concept of sustainability in their paintings. Experimenting with environmental materials on the surface of ceramic works, whether before or after firing, resulted in unique and diverse textures and effects.

Introduction and research problem:

Experimentation in the field of visual arts in general and the field of art education in particular has occupied a position of great importance, due to its connection with the philosophy of this era. The contemporary artist has adopted the method of research and experimentation as a starting point for understanding new visual concepts that develop awareness of the logic of artistic formation, which differs from the logic of formation in nature. This has led to the emergence of many artistic trends and schools in pursuit of finding new artistic visions for the different forms of nature, as art is considered a human activity stemming from the interaction of man with the materials of the environment in which he lives (Abdul Razzaq,2018), and that developing environmental awareness and the individual's aesthetic sense towards the environment is one of the main goals of art education. Artistic trends in post-modern Painting have tended to combine different styles of plastic arts through assemblage art, environmental and land art, and others. A single artwork contains various techniques of coloring, embodiment, weaving, pasting, installation, interlocking, and others. This was contributed to using of environmental materials of various types, as an artistic medium that gives Painting works real, innovative dimensions.

“The environment is a rich source of its various materials and multiple relationships, the value of which is clear to the artist who always reveals it. The material is a tangible element for the artist and is an important axis in the fields of creativity in artistic forms, as the material is considered a material medium through which artistic and aesthetic values are embodied. The composition in ceramics is considered an artistic method that depends on the use of more than one different material to reach an artistic work characterized by unity and innovation” (Ibrahim,2022, 860).

“Potters have tended to exploit the environmental data around them and invest it in a way that suits their needs, whether in using it inside or outside the kiln as artistic stimuli for the potter, as it reflects aesthetics and successful formative capabilities to find a way out of the traditional framework of the visual arts and in search of new artistic visions” (Saleh,2022, 250).

The contemporary potter looks at the ceramic form in a new way that differs from the ceramics of previous eras. Therefore, it is logical that the methods of shaping, processing, and composition take on a new dimension and an attempt is made to link these concepts to ceramic thought, which gives it a universal and contemporary character. The contemporary artist has no limits to his desires and innovations. He experiments, modifies, deletes, adds, and merges forms to rebuild them anew.

Ceramics is an art with fluency, movement, and freedom of formation and expression. The artist wants to move away from the traditional form of the vessel to more daring and expressive forms that have their own artistic and aesthetic characteristics, far from restrictions” (Ibrahim,2022, 862).

Thus, the influence of the environment on the vision and creativity of the artwork comes through “awareness of the formative data of the environmental materials surrounding the artist, and also the difference in the artwork from one period to another stems from the influence of the prevailing culture in the philosophy of the era in which the artist lives, as this difference in the visual forms of art is related to the culture of each period and its philosophy” (Al-Husseini,2017, 51).

Many studies have recommended conducting research that enhances the concept of sustainability among students and activating the role of institutions responsible for the environment, and the necessity of studying societal issues in general and the environment in particular to create an artistic vision that is consistent with the philosophy of art education (Amira,2021).

In light of the above, the research problem was defined in the following question:

How can knowledge of processing environmental materials in the art of Painting and ceramics be used to enhance the concept of environmental sustainability among King Faisal University students?

Research objectives:

- 1- Revealing the plastic treatments of environmental materials in a selection of works by artists who employed environmental materials in their artistic creations.
- 2- Opening new horizons for experimentation with environmental materials in Al-Ahsa governorate with the aim of enhancing the concept of environmental sustainability among graduate students at King Faisal University.

Research hypotheses:

- 1- There is a positive relationship between studying the methods and techniques of processing environmental materials in the art of Painting and ceramics and enhancing the concept of environmental sustainability among King Faisal University students.
- 2- King Faisal University students can be directed according to a plan to teach experimental Painting using environmental materials in Al-Ahsa governorate in their artistic works.

Importance of research:

- 1- Deepening awareness of the concept of environmental sustainability through experimentation with environmental materials in Al-Ahsa governorate and employing them aesthetically in the fields of Painting and ceramics.
- 2- Providing students with skills, performance methods and intellectual approaches to produce artistic works that carry the Arab identity through experimentation with environmental materials.
- 3- Discovering the expressive, tactile and colour values of various natural and manufactured environmental materials in Al-Ahsa governorate.
- 4- Opening new horizons to enhance environmental sustainability through experimentation with environmental materials in an effort to reach new alternatives to enrich the surface of the painting and the surface of the ceramic form.

Research limits:

- 1- A self-experiment was conducted by the first researcher in the field of ceramics. A group of natural materials were used (iron - glass - straw - sugar - salt - sawdust - copper salts and carbonates - iron chloride - bird feathers - horsetail hair) and a selected group of consumed manufactured materials such as (threads - paper scraps - foam - mosaic - wires).
- 2- A student experiment was conducted in the field of Painting for the second researcher using a selection of natural and manufactured consumed materials such as (kilim - leather - fabric scraps - paper scraps - foam - wood - sponge - and pieces of burlap - wires).
- 3- A selection of artistic trends that dealt with environmental materials in artworks such as (Dadaism - Pop Art - New Realism - Assemblage Art) were studied.
- 4- Selections of artworks from these trends were analyzed to identify their artistic treatments and different formative formulations.

Research community and sample:

The research community consisted of all postgraduate students at the master's level, totaling(7)students, who represented the purposive research sample.

Study tools:

- 1- The methods of plastic treatments of environmental materials were extracted from the art of Painting and ceramics in light of environmental sustainability.
- 2- A teaching plan based on experimentation with environmental materials on the surface of the paintings of graduate students at the master's level was designed.
- 3- The evaluation card for the research sample students' work was designed and presented to art education pioneers.

Statistical treatments:

A Likert scale was used to indicate the students' level of performance in experimenting with environmental materials on the surface of their artwork.

Search procedures:

The research follows the descriptive analytical approach in terms of its theoretical framework and the semi-experimental approach in conducting the first researcher's personal experiment in (the field of ceramics), and conducting the student experiment for the second researcher in the field of plastic art according to a teaching plan to employ environmental materials aesthetically in their artistic works.

Search terms:

Experimentation:

Experimentation is an artistic term that denotes a specific method in formulating an artistic experience. Each experience has its own tools that the experimenter uses to complete his experience. It is defined as an intentional creative performance based on a new conceptual and aesthetic vision through the creation of new artistic works and methods at the level of the mechanism for implementing the artwork and the method of displaying it.(Al-Kaabi and Muslim,2022).

The researchers define it procedurally as the methods, styles, and techniques of formation by which the artist deals with environmental materials aesthetically in the field of Painting and ceramics.

Material:

"Raw material means the raw material that is subjected to shaping and operating processes, meaning that it is treated" (Dictionary of Modern Civilization Terms: p.57).

Synthesis:

It is the degree of coexistence of a material with another material without conflict (Al-Shammari,2017, p. 2), which is the merging or adding of different materials together in a way that achieves unity and harmony between these materials (Ibrahim, 2022, 868).

Sustainability:

The idea of sustainability dates back to the early seventies. It means continuous growth and renewal in a natural and balanced way, and respect for human symbiotic relationships with the environment and the natural cycles of the Earth. It is also the ability of the biosphere and human civilization to coexist in a balanced environment, where the exploitation of resources, the direction of investments, and the direction of technological development are harmonious and enhance the current and future potential of human needs and aspirations. Sustainability is concerned with three basic interactive areas: society, environment, and economy (Omar,2022).

Environmental sustainability:

It is an innovative concept of human performance that defines a lifestyle that ensures the preservation of the environment in all its manifestations.Pavyk, et Al, 2021), and it was defined by the World Commission on Environment and Development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987).

The relationship between art and the environment and their impact on society:

The dialectical relationship between man and his environment is as old as man himself. There is no longer any doubt about the decisive influence of the environment on human aesthetic behavior. The environment reveals problems during the practice of daily life, and suggests culture and solutions. Civilization provides the means of implementation, sometimes with science, sometimes with art, and sometimes with moral values, for man to confront environmental problems. The environment and culture, like internal and external stimuli and inputs, are an integrated complex that mixes with motivation that increases with the individual's attempt to discover, perceive, and interact with social reality, and where the environment is the powerful and effective influence that develops the aesthetic sense in man (Anbiyya,2024).

Art education trends towards environmental materials:

Art education in its various fields represents one of the main aspects in building the personality of individuals, and enabling them to express feelings and adapt to the environment, which helps in the self-formation of the individual, and this is evident in its general objectives, and these objectives change according to the objectives of art in each era and according to its requirements.

It seeks primarily to provide the individual with a set of skills that make him adaptable to his environment and capable of its varying requirements. These are basic skills in qualifying for work. It has become the responsibility of art education to work hard to prepare a graduate with specifications and capabilities that enable him to communicate effectively to compete in the global labor market. Among those skills that must be developed in individuals are creativity, innovation, sympathy, inspiration, and the ability to link elements and events to form something new.

According to the previously mentioned skills that are developed by art education, the research is directed towards the environment and what it contains of materials that are at the end of their useful life or are worn out and treating them aesthetically to present innovative visions in the field of Painting and ceramics, and on the other hand, developing the preservation of the environment and creating aesthetic dimensions in it. "The material itself is not what achieves this or that aesthetic concept, but rather its use during the stages of experimentation is what reflects these aesthetic and expressive dimensions according to the different approaches and starting points of formation (Mutawa,2006).

Experimentation in technology and its relation to material processing:

The practice of experimentation is a basic and acquired ability that provides the opportunity for renewal in different models of thinking. With training in the practice of experimentation and finding a set of solutions behind a certain thought, the tendency towards identifying more relationships that in themselves constitute a certain experience in behavior is activated, and it also develops the conscious artistic vision and accurate observation of the variables of phenomena.

It is noteworthy that the continuous experimentation with materials, which appeared in modern and contemporary artworks, in addition to the multiplicity of raw materials and waste in the local environment, made the innovation process not limited to a specific approach or style, and not restricted to any type of traditional materials, which led to the emergence of many aspects of experimentation in the works of most artists, such as the use of metal wires and remnants of tin and plastic, as well as paper and cardboard in various sizes and shapes, and clays in various forms, and other materials that opened the door wide to practice many experimental processes using all materials and in various ways, and creative experimentation is achieved by reaching formative formulas for the material derived from studying its various uses through the expressive, sensory, symbolic, structural and abstract connotations of those materials, whether they are natural or newly created materials (Hamed,2006).

Environmental materials in Al-Ahsa governorate:

Al-Ahsa governorate in the Eastern Province of Saudi Arabia is distinguished by its authenticity and abundant materials from which Arab visual artists have drawn inspiration for their innovations that have distinguished them globally. The aesthetic intellectual trends that call for a return to nature have contributed to the formation of contemporary artistic visions, laden with heritage and keeping pace with the era of globalization. One of the most important trends in post-modern Painting is assemblage art, through which many artists have distinguished themselves globally, as a result of their handling of the materials of the natural environment.

Classification of environmental materials In Al-Ahsa governorate:

Synthetic materials manufactured	Synthetic materials	Natural materials
Use of waste made of (plastic, beads, paper, synthetic threads, mats, kilims, cages and manufacturing leftovers)	Plastic, nylon, synthetic rubber, polyester, burlap, cloth, wire, scrap and manufactured wood veneer	(Agricultural, desert or marine) such as (threads, wool, leather, shells, snails, stones, wood, natural wood veneer, glass, wire, metal, wicker and dried fruits)

The research sample was directed to treat the remains of consumed environmental materials and others with the aim of: -

- Reducing the amount of paper made from trees leads to reducing the amount of trees cut down.
- Eliminating the phenomenon of open burning of environmental raw materials and reducing the proportion of carbon dioxide gas emitted into the air as a result of the burning process.
- Eliminate toxic and harmful gases emitted as a result of burning paper waste containing ink and printing chemicals
- Improve public health and eliminate respiratory diseases.
- Preserving natural resources and not depleting them.
- Obtaining an aesthetic return in the surrounding environment from processing environmental materials and reusing them in the field of Painting and ceramics.

Forming with raw materials in the field of Painting and ceramics:

The formation of materials in the field of plastic arts in general and the art of Painting and ceramics in particular is considered a state of fusion between the different fields of art. The work may include the use of color in addition to replacing the traditional material with other non-traditional materials such as natural, consumed or ready-made materials to produce an artwork based on the idea of composition and assembly. In this case, the artwork combines more than one technique and artistic experience and sometimes the angles of vision are multiple. This style in art expresses a state of development in the field of plastic arts with the introduction of alternative or non-traditional materials such as ready-made materials. This entrance to expression in art also expresses a stage in which the laws separating the different arts have disappeared in many recent works of this era. Gypsum, cement, sand, and others were found, as were scraps of paper, pieces of burlap, and waste materials, and the image became more like a bas-relief. (Yassin,2005).

The artwork in this case based on the use of many materials and techniques within the framework of a single artwork, which has a direct impact on the form and content of the work, and also consequently imposes a certain type of performance and techniques. The formation with materials is a type of combination of formal and semantic contradictions, where the artwork turns into a state of research into new and innovative visions for a constructive aesthetic by formulating an unconventional material that achieves a state of uniqueness among the different styles of art.

Artistic trends whose artists employed environmental materials in their artworks:

Dadaism

The Dadaists used materials in a different sense than the Cubists, based on rebellion not against form but against traditional ideas in art and society. “The Dada artists resorted to using various materials that hardly occur to a human mind due to their extreme strangeness. The artist cut and pasted newspapers, advertisements, book covers, gold and silver paper, net threads, pieces of fabric, and real models of children’s toys on the surface of the artwork, in addition to human shoes and color spots. These ready-made materials represented a relationship of mystery and astonishment in the course of artistic movements. The Dadaists found that the posters suited them and were consistent with their tendencies.” (Smith,1997).

Dada's treatment of environmental materials in the field of Painting:

“Marcel Duchamp is considered the detonator of modernist movements in the twentieth century by inventing the trend known as prefabricated works, because the artist uses ready-made objects and reuses them in a new

context. The artist's role in the posters was to find relationships between objects, and he called them "the art of installation," so objects were placed next to each other" (Gharib,1997).

This was followed for a period by the artist Picasso. Picasso, who produced paintings in which he used pieces of wood, cloth and newspaper glued together, as seen in the paintings of Kurt Schwitters and Max Ernst (Ismail, 1883).

Pop Art

Pop Art "appeared in the early sixties and was a half-serious, half-sarcastic attempt to create high art extracted from the values, attitudes, and characteristics of mass culture in consumer society. The word "pop" is an abbreviation of the words (Popular Culture), meaning popular or mass culture, or the culture of the man in the street. The artists of this school borrowed their drawn elements from street advertisements, canned goods, various consumer goods, and store fronts" (Al-Basyouni, 1983, p. 66).

Pop artists' treatment of environmental materials:

When looking at the "formal features of Pop Art, we find that they are the destruction of the results of wars of all the beautiful and moral values that the artist believed in to correct society, so the idea prevailed over the formative content and the idea of distortion and destruction prevailed. Collage, installation and embodiment techniques were used to search for subjective standards that contradict the prevailing aesthetic values, in addition to using ready-made objects in constructing artworks to bring the artist and the connoisseur closer together so that he becomes a participant in artistic creativity. The formal symbols used in the works of Pop artists were distinguished by their choice of materials used by the general class in society and represented in consumer products and famous figures, relying on industrial waste – paper scraps – leather – fabrics – wood – machines – and other materials" (Atiya,1996, p. 178).

Assembly

The composite artwork or the assemblage artwork is one of the arts that appeared in the era of modernity and played an effective role in changing the concept of aesthetics and the role of art in society, as this type of art coincides with the idea of melting the gaps between the different fields of art. Sculpture- painting - drawing - architecture, and the abolition of the old traditional classifications of these arts that dominated the visual arts movement for many decades. The composite artwork is not a trend or an artistic school like realism or surrealism or other art schools, but rather it goes beyond that as it was included in the works of many Dadaism, surrealism and pop art artists, and its historical beginnings and the beginning of its appearance on the visual arts scene go back to the Dada artists in their exhibition held in 1917 in Voltaire.

Processing of materials in the assemblage artwork:

"Duchamp. M in his works what is called ready-made, directing attention to the artistic beauty that lies in non-artistic material such as metal remains - glass - Ready Made Object taken from the remains of daily consumption, so that this waste itself becomes a work of art. Duchamp. M used this new concept with the aim of rebelling against the prevailing concepts in the plastic arts movement in an attempt to attack the aesthetics inherited from the Renaissance. The composite or assemblage artwork has been described as an art that expresses the philosophy of consumption in daily life, where the artist presents a special point of view to express a social content by combining elements or vocabulary with symbolic connotations (Edward, 1992, p12).

One of the most important artists who introduced this concept in their artworks in the global plastic arts movement is G. Gohns, who presented many complex artworks, the most important of which was an artwork entitled "Plaster Target and Forms" which he produced in 1955, in which he expressed a social content related to man and his relationship with the events of the world around him. Among the most important artists of complex artwork is R. Rauschenberg, who is one of the founders of the (Art and Technology Experiments) movement. In his work which he presented in 1960 entitled "Landing Jump", in which he combined pictorial formulations with ready-made materials represented by rubber, a car tire, and an electric lamp, this work shows the method of assemblage in terms of combining pictorial formulations and ready-made materials. There are many artists in the global visual arts movement who had innovations in this field, including D. Spoerri - T. Wesselman F. Arman - O. Marisol - J. Dine - E. Keinholdz (Tharwat, 2000, p. 87).

New Realism

In Europe, the equivalent of neo-Dadaism appeared in America and was called New Realism, as an artistic trend, was founded in 1960. Among the artists who belonged to this trend were (Yves Klein - Arman - Daniel Spoerri - César - Mimmo Rotella) (Smith, 1997, p. 94). New Realism expresses the reality of the city in a post-industrial society, in a new way of seeing reality with the tremendous developments in various fields of knowledge and science.

Treatment of environmental materials by artists neorealist:

The use of collage by the neorealists was completely contrary to the artistic concepts and expressive content of Cubism and Dadaism, as the collage technique of the neorealists did not depend on paper and magazine scraps with the aim of creating a tactile value on the photographic surface, but rather their use of collage stemmed from a formative concept, which is to elevate the value of the element. One of the performance methods that neorealist artists relied on in their treatment of materials is assemblage, and the assemblage technique of the neorealists depends on the material. Ready Made Object, Found Object, and the placing of objects next to each other in a highly skilled performative manner to express some observations about everyday life in all its contradictions. Among the neorealist artists who used the assemblage technique are Daniel Spoerri, R-Rauschenberg, and Arman.

Processing of environmental materials by some artists in the field of Painting and ceramics:

Artist Kurt Schwitters 1973

German artist Born in Hanover, He was trained at the Dresden Academy. a job Kurt Schwitters was certainly the odd man among all the German artists because he lived, not in Berlin like the others, but in Hanover.

Artist Joan Miró 1893 – 1983

He is a Spanish painter who used during the year 1932 In his huge collage works, catalogue and newspaper clippings, he excelled in bringing out his art within other materials such as bronze sculptures, drawing on cowhide, Figure (2), and engraving using the method of lithography on paper. This method produced works with expressive capabilities, most of which were in black and white, and their magnificence reached its peak when he introduced glass between the paper and the stone in the printing method to obtain, through friction, a new technique that was unprecedented.

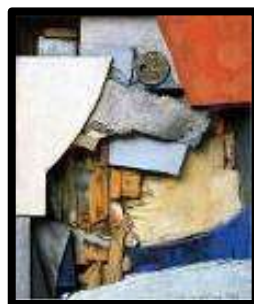


Figure (1) Work of artist Kurt Schwitzer



Figure (2) Work of artist Joan Miró

Artist Alberto Burri 1915- 1995

He is an Italian artist who dealt with art from a standpoint of Form and space and he was interested in creating harmony and balance between the original primary vocabulary of the concept of element and void or form and space. This artist was famous for his innovative compositions that include elements such as tar, burlap, stones, metal pieces and charred wood that protrude from the surface of the painting in the form (3) so that his pictorial work appears as a three-dimensional work. Then he later moved on to what is known as Land Art, in which the artist deals with the natural environment directly outside the walls of the exhibition halls and far from the usual borders and framework of the painting, exposing his work to all the factors and variables of the atmospheric environment.

Margaret Mellis Artist 1976

A Scottish artist influenced by the work of her contemporaries such as Ben Nicholson and Naom Gabo, Millis has turned to the idea of assemblage and composition in her work. In this work, which is made up of pieces of various types of wood, such as mahogany and pine, she has collected from the coast of South Africa.4) She moved there in 1976, some of the pieces were already painted when she found them and some she painted herself.



Figure (3) Work of artist Alberto Burri



Figure (4) Work of artist Margaret Mellis

Artist Wegwerth Lukas 2019

Appearance (6,5) Crystallization vases The materials used are ceramic clays, glass coatings, and a crystalline chemical compound. The combination of ceramics and the crystalline chemical compound from environmental materials resulted in a crystalline crystal after firing. The artist combined the aesthetic effects of the glass coatings with their distinctive colors and cracks and the irregular crystal shapes as a result of the technique used by the artist Lucas, which produced a unique ceramic work due to the difficulty of the artist controlling the shape of the resulting crystals and the difficulty of repeating it in ceramic works.



Figure (5)



Figure (6)

Artist's works Wegwerth Lukas

<https://www.eclectictrends.com/ceramicist-of-the-month-lukas-wegwerth/>

Artist Belz Steve

The artist's works are distinguished by Belz Steve with glazes that imitate nature in multiple colors and by combining a group of environmentally friendly metal materials such as copper and stainless steel. The work is shaped like (7) in the shape of a leaf or similar to the shape of a caterpillar, bound by several rubber threads and copper wires glazed with low-temperature oil and orange paint. The name of the work is bound or tied. The work is shaped like (8) and is glazed in blue and yellow. A group of textures appear on the surface of the ceramic work from the outside due to the rubber threads and stainless steel rings. It is clear from the description of the works that the color group, treatments, and materials that the artist was influenced by are all inspired by nature and show the artist's skillful ability to use glazes to simulate color and texture and employ the materials and combine them with the ceramic work. This effectively enhanced the technique and helped the artist express the philosophical content.



Figure (7)



Figure (8)

Artist's works Belz Steve

<https://www.stevebelz.com/?lightbox=dataItem-j79atwnw1>

Artist Abd El Salam Eid

Abdul Salam Eid uses many of the remains of factories and workshops, and he tries to reveal the aspects of beauty in them. This beauty does not have to have traditional concepts. He also tries to reconstruct these remains and coordinate between them, so that in the end we have a product that is the product of harmony between art and technology, as in the form of (9- A, B, C).

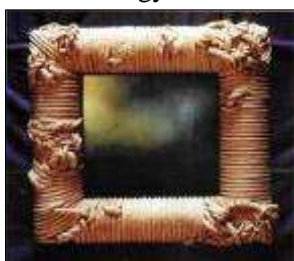


Figure (A)



Figure (b)



Figure (c)

Figures (9- A, B, C) From the works of the artist Abdel Salam Eid

Where he explores the aspects of existence in lace fabric and rope knots with ostrich eggs and wood fragments that are scattered with great awareness and aesthetic sense, so that he establishes a dialogue between the light of their colors and their three-dimensional light in different compositions and employs materials including three-dimensional shapes, lines, textures and colors. He does not place them on a smooth surface as is customary, but rather shapes them in the folds of the petrified fabric due to strong adhesive materials and textures derived from different methods of pasted weaving such as mesh, lace, carpet, rugs and others. He also deals in his works with braided ropes in their natural or dyed linen color, creating extremely rich formative relationships.

Then he returns to dialogue with the worn paper material in the form of (10- A, B) where he treats it by removing, adding, deleting, scraping, erasing, wrinkles, and re-smoothing, then adding what he sees of shapes from other parts of previously torn papers, thus revealing some of these performances and concealing others, creating a beautiful contrast between the spaces within his artwork.



Figure (A)



Figure (b)

Figures (10- A, B) From the works of the artist Abdel Salam Eid

Artist Farghaly Abdel-Hafiz

The Egyptian artist Farghali Abdel Hafeez used many different materials, such as “bean plants”, “palm leaves”, “sand”, “ropes”, and “paper pulp in the form of (11- A, B, C), to express the effects of mashrabiya in Islamic buildings, and expressed spirituality with mixed techniques between sand, silt and treated acrylic colors. The doll also accompanied the artist in the different stages of his development, as flat models appeared with the environmental materials that he was famous for, which are reeds, forest, palm fronds and palm leaves, treating them with scratches, scratches, straw and wool rolls, sand and stickers like mud brick molds as if they were seals for old shrouds and dry plant stems. The artist was distinguished by combining the fields of sculptural ceramics and Painting in his contemporary innovations using elements and materials inspired by folk art.



Figure (A)



Figure (b)



Figure (c)

Figures (11- A, B, C) From the works of the artist Farghali Abdel Hafeez

Artist Mohiuddin Taraba

The Egyptian artist Mohieddin Tarabieh draws inspiration from the data of the popular environment to give his creations the Egyptian national identity, as the artist employed environmental materials in his experimental artistic practices, so he began to treat them with the methods and techniques of handicrafts that are distinctive to the Egyptian environment. The artist begins by choosing his compositional paintings from things that are handmade in the Egyptian environment, such as wicker, palm frond and cardboard products, which he assembles with colored pastes and white glue. He also uses the colors of the environment to color those ready-made and consumed parts resulting from handicrafts, and this is evident in the form of (12- A, B, C, D).



Figure (A)



Figure (b)



Figure (c)



Figure (d)

Figures (12- A, B, C, D) From the works of the artist Mohieddine Tarabieh

The artist formed the palm fronds and the reeds as sticks using the plain hand-weaving technique to create a circular radiating disc, then glued the linen fabric in various folds above the edges of the radiating disc, and made extensions of the fabric as strips that emphasize the warp lines. The artist also treated the burlap fabric by forming it into soft lines after softening and weaving it in different positions. The artist used colored pastes to fill the background and fix the edges. The artist formed the burlap mesh fabric in longitudinal and transverse rhythms, varying in wavy rhythmic lines that emphasize the contrasting rhythm between the wavy perpendicular lines and the innate organic textures of the colored pastes, using the colors of the environment distributed between the shape and the ground of the composition. He weaved some of the burlap threads to form the spaces of the artwork through them to extend the vision between the shape and the ground. The artist

also treated the cardboard material available in the environment with its regular, prominent formations, perpendicular and accumulating structural systems in sunken and prominent levels to combine the forms of the prominent shapes and create various spaces between them, and he used bamboo to achieve the connection of groups of shapes with the spaces.

Artist Yousry Alqweidy

The Egyptian artist Mohamed Youssef El-Quwaidi was inspired for his works by the shape of (13- A, B, C, D) are neglected natural objects that people usually throw in the trash can, or leave in an abandoned warehouse because they are of no use or importance. The artist saw that these objects have two values, one of which is material by recycling them in other productive aspects, and the second is aesthetic, which the artist sees and treats aesthetically. In doing so, he emphasizes the message of art as a social intellectual activity that is linked to life and is not separate from it.

The artist Al-Quwaidi has extensive experience with three-dimensional paintings made of paper or plastic. He used bottle caps, cardboard boxes, pins, old eyeglass frames, watches, used paint tubes, buttons, and children's toys. The artist directed the method of combining different environmental materials in one artwork.



Figure (A)



Figure (b)



Figure (c)



Figure (d)

from the works of the artist Yasser Al-Quwaidi (A, B, C, D -13)

Artist Nagia Abdel Razek

A ceramic work entitled “Launching” was formed in an innovative way, through special combinations in which the artist was influenced by the materials of the surrounding environment, which gave the ceramic work vitality, flexibility and balance, and gave new aesthetic values to the ceramic product, in addition to the glazes and their compatibility and suitability with the nature of the work. She also relied on combining metal networks before firing, which are materials that do not melt to the melting point of the ceramic clays used in forming the ceramic work, shape number (14) (Mustafa et al., 2022, p. 1048).

Artist Mervat Hassan El-Suwaify

The ceramic work is a combination of ceramic and wooden pieces after firing, glazed with metallic luster paints resembling a dove's neck. The ceramic work consists of two pieces with a difference in length. The natural wood material was combined with the ceramic work by adding a group of wooden strips to the shape after firing, of various sizes and lengths. They were fixed in a circular shape around the surface of the ceramic work, as shown in the shape (15) The ceramic work shows the extent of the harmony between the wood material and its natural colors with the ceramic form glazed with overlapping colors (yellow, orange, gold, and blue-gray) as a result of the use of metallic luster techniques (Mustafa et al., 2022, p. 1049).



Figure (14) From the works of the artist Nagia Abdel Razek



Figure (15) From the works of the artist Nagia Abdel Razek

The following can be summarized as follows: The methods of plastic treatments of environmental materials from the art of Painting and ceramics:

Assembly:

It is a means of creating works of art, composed entirely of materials that were previously present, where the artist's contribution is greater through finding relationships between things, and putting them together side by side, than through finding and creating things from the beginning. William Steez says about this, referring to the current trend of installation art, that it has changed from an abstract, subjective, non-objective, unclear art, to a revised connection with the environment, which has made art more connected to the environment and society, as the concept of art has changed from a subjective direction specific to the artist to a general direction, so there has been a positive interaction between the artist, the environment, society, and the public. There are some synonyms for the word installation, which Tharwat Okasha added to his technical definition, such as the word dressing, inlay, covering, and downloading.

Synthesis

It is the harmony and coherence of a diverse group of materials, which may not be found in the perceptions of the natural environment, but when these materials are combined in a single artwork, they lead to the achievement of a specific artistic purpose. It is the integration of more than one material in the visual artwork in an artistic unit, provided that harmony and coherence are achieved between the elements of the artwork and its enrichment.

ASynthesis is the degree to which a material coexists with another material without conflict and aims to train innovative thinking processes (Mustafa et al.,2022, p. 1041).

Collage

It is the collection of flat scraps of paper, cloth or environmental materials, and placed together to create a flat composition.

Controversy

It is produced by fixing two or more ends of wires or strips and then twisting two or more ends of the other two in a uniform direction alternately, resulting in these wires or strips interlocking in a regular manner (seed,1996, p. 156).

TendernessBending

Bending means the movement of the body resulting from fixing parts of it and rotating other parts of it in multiple directions. This is done through an external force that affects the resistance of the body to be bent.

Twins:

Twisting means the state of a body when it is fixed at one end and its other end is rotated at a certain angle, then this is repeated several times in the same direction and at equal distances (seed,1996, p. 8).

Roll

Winding means the movement of the body resulting from the rotation of the material in a uniform direction, in a regular and successive manner.

Braiding

It refers to the movement of the body resulting from fixing three ends of the bendable material, then bending the other three ends in an inward direction (from outside to inside) and in a regular repetition of each end according to its role in the bending.

The cooler

The purpose of the file is to remove a portion of the surface of the material lightly using the file, resulting in a decrease in the surface level of the material.

unloading

It is the process of completely removing some parts of the surface or separating a part from the inside of the inner surface or part of the outer frame.

Chopping

It is to make the cellulose-rich printing paper with an appearance that has the ability to be directly formed on the surface of the plate or cast in the mold.

Casting in the mold

A plaster mold is made of the shape to be copied, then the artist isolates the mold with an insulating material called varnish, then takes the paper pulp material with suitable additions of environmental materials to show smoothness or roughness on the surface of the shape after removing it from the mold.

The wrinkle

It is the occurrence of wrinkles in the material to give various tactile effects depending on the degree of wrinkling of the material.

Abrasion

It means rubbing or scratching to achieve different textures on the surface of the material.

Textile

It is two groups of threads intertwined with each other at a right angle. The first group is called the warp and the other is called the weft. The warp is a number of parallel threads of equal length, representing the longitudinal direction of the fabric. As for the weft, it is a thread that extends across the width of the fabric between its two edges. The threads are intertwined in a fixed system known as the weaving structure.

Intarsia

It is the placing of a small piece of shell or tooth, or the addition of threads, thin strips, or calculated areas of other types of wood on flat wood surfaces.

Analysis of one of the philosophical principles that calls for experimentation with environmental materials in the field of visual art:

In the modern era, many philosophies have emerged that call for attention to the material, and the methods of dealing with materials have diversified, and attempts at creativity in the artistic field have multiplied, and thought has developed. "The emergence of modern artistic schools and trends has had their effects on the form, with awareness of the importance of the material, as new materials have been introduced that have had an impact on the artworks and their quality. In addition to that, the designer's intellectual and artistic trends are added, as the artist is born together with all that it includes of principles, values, and intellectual concepts" (Hamed,1998, p. 39).

The researchers' thinking focused on environmental materials, their data and methods of processing them so that they could be employed in the field of teaching the art of Painting and ceramics, and spreading environmental awareness, supported by the thinking of some important art schools that called for the

importance of studying the material and its role in supporting the creative aspect. Examples of these models include the model (Laurah – Chapman).

Where "the model is (Laurah - Chapma) "One of the models that dealt with the material and prepared an analytical study based on divisions of experimental approaches that suit the material and its variations. It also includes classifications of the main experimental objectives and approaches for art education, which are based on experimentation and translation of ideas and the extent of their connection to the environment" (Ahmed, 1997, p. 167).

And I divided Laurah – Chapman "The artwork is divided into stages, and then the stages are divided into three steps:

- 1-Start the idea.
- 2-Transformation of general ideas into formative ideas.
- 3-Intermediary execution.

She also identified in her experimental model many vital steps that must be followed when practicing artistic work, which she crystallized into six steps:Chapman, 1999, p149).

- 1-The ability to form ideas.
- 2-The ability to adapt and crystallize ideas.
- 3-Ability to use artistic materials.
- 4-Respond to visual elements.
- 5-Analysis and interpretation.
- 6-Judging the artwork.

It has been adoptedChapman" on the actual practice of art through contact with and integration with the material - where she treated skill as the basis for using materials as expressive media and when we can use art as a tool for expression it becomes a source of self-gratification. Learning how to perceive expressive forms is no less important than learning how to create those forms.

Practical framework:

The researcher directed the research sample, which represents graduate students. At the master's level at the College of Education at King Faisal University, according to a teaching plan - in the Advanced Studies in Fine Arts course - whose number reached (7) Students, to use more than one technique and style while processing environmental materials in a single illustrated artwork, which played a role in the diversity of the students' artwork. The diversity of techniques stemmed from the researcher's use of shaping methods from other fields of visual art."

First: Preparing materials and tools

- Wood remains that vary in color and type.
- Fabric scraps that come in a variety of colors, patterns and textures.
- Scraps of colored artificial and natural leather and rubber.
- Cotton wool, sponges and plastic models ready to go.
- Magazine scraps.
- Materials for fixing, mounting and gluing such as (nails, glue, etc.)

Second: Points that were taken into consideration before applying the experiment to the research sample:

- Creating a climate for creativity by giving students the freedom to choose the subject of the composition and the appropriate environmental materials to implement it, in an effort to achieve different artistic values.
- Allocate time for students to conduct exploratory experiments on methods and techniques for processing selected materials from the surrounding environment with colors appropriate to the composition topic (oil colors and acrylic colors).
- Not imposing a style to express the content of the chosen topic in an effort to provide multiple visions and experiences.
- Displaying the (research tool) on the sample, which is a video recording, to identify the materials, their most important characteristics, their formative capabilities, and the method of treating them on the surface of the painting.

- Displaying some of the Painting works that were previously executed using environmental materials so that students can become familiar with the methods of execution and the processing techniques they contain, using the help of...Datat Show.

Third: Student research experience

The research experiment consisted of a number of (14) Five (5) models were selected from which experiments were conducted using natural, manufactured, and ready-made environmental materials. Inspired by the assemblage art style, the environmental materials represented leftover fabrics in the shapes of ((16,18,19), paper scraps in shapes (17,16), wood scraps in shapes (20), foam in shapes (16,20), ready-made three-dimensional shapes in shapes (17,19,20). The works show the use of synthesis, pasting, inlaying, reduction and casting. Composition and assembly in the treatment of materials used on the surface of the painting, while achieving harmony between the color relationships and the environmental materials used.

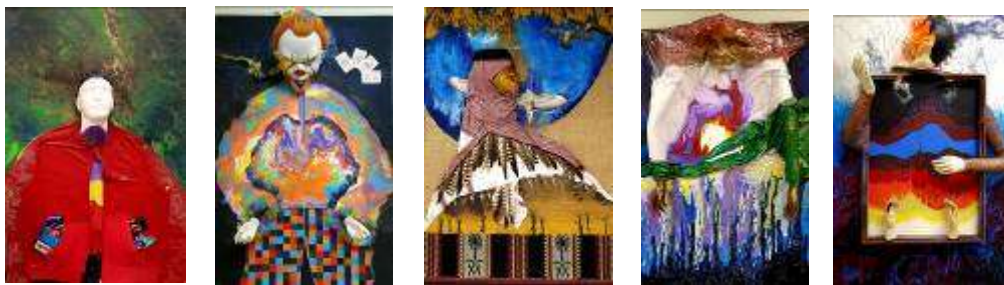


Figure (16)

Figure (17)

Figure (18)

Figure (19)

Figure (20)

Samples of student experiment work with environmental materials

Fourth: Personal research experience in the field of ceramics:

The self-research experience in the field of ceramics depended on the use of various environmental materials between glass, mosaics and various metals such as wrought iron. The self-research experience was divided into three groups. The first group combines the materials with the ceramic work during the formation before the fire using the inlay technique. The material remains after the fire, but its chemical composition changes. The second group combines or inlays the materials with the ceramic work before the fire, giving a clear effect on the surface of the work. The material burns and disappears, but its effect remains clear, but it gives a clear effect on the surface of the ceramic work. The third group combines the materials with the ceramic form after the fire to obtain an innovative ceramic work that achieves harmony and cohesion between its elements.

First group:

A group of ceramic works were formed using broken glass remains and mosaic slices of various sizes. These slices were inlaid in the ceramic works form and are in a state of (Leather Hard) is a suitable stage for decoration on the ceramic surface and inlaying some environmental materials, then applying some natural plant decorations using ceramic linings of various colors. Then the ceramic works are fired with a primary fire and then a transparent glaze fire at temperatures not exceeding 800 degrees Celsius as shown in Figures (21, 22, 23).



Figure (21)



Figure (22)



Figure (23)

The second group:



Figure (24)



Figure (25)



Figure (26)



Figure (27)

A group of ceramic works were formed using iron and shaped into decorative units, inspired by natural plant motifs. It is a simple unit that matches the nature of the hardness of iron. The unit was formed in various sizes and was added to the ceramic shapes after the final firing stage (firing the glaze using the technique of combining wrought iron and ceramic shapes. This is evident in the shapes (24,25,26,27)

Group 3:

The third group experimented with materials (threads - wires of various sizes and types - sugar and salt - horse hair - bird feathers - sawdust - papers and magazine clippings) to create some different techniques and effects on the surface of the ceramic shape by using some natural materials in the various stages of ceramic work during the preparation of the clays or during the stages of forming and coating the ceramic works, where the ceramic clays are combined with some natural materials such as magnesium, talcum powder, kaolin and urine so that the ceramic works can withstand high temperatures and thermal shocks outside the oven during the reduction process, and some of them are combined with the ceramic clay with some organic materials such as straw and sawdust during the construction of the ceramic works to create some effects, and after the fire the materials disappear but their effect remains on the surface of the ceramic works.

Some of them are done in the second firing stage of the ceramic shapes (the final firing stage or the glaze firing stage), whether through the oxidizing firing method or the reducing firing method, using these materials as reducing materials that help to create many diverse and unique effects on the surface of the ceramic shape. This was done by using threads and fixing them on the surface of the ceramic shape to create effects while applying the glaze to the surface of the ceramic shape. The effects appear on the ceramic surface after completing the second firing process of the ceramic shape, as shown in the figure (28) Also, a variety of wires of different materials and sizes were used on the surface of the ceramic dish with sugar or salt, along with the use of some salts such as copper carbonate and copper sulphate, and also the use of iron chloride to create effects in different colors using the raku firing technique (raku sager and iron chloride raku). The ceramic surface is reduced using the previously mentioned materials, either by completing the reduction process inside the ceramic oven, such as the raku sager technique, or by completing the reduction process outside the ceramic oven, such as the iron chloride raku technique, horsehair raku, feather raku, and raku using sawdust, magazine papers and clippings to create color effects between red, yellow, orange, purple, pink, black, and shades of gray to create smoking effects of various degrees, and this is evident in the ceramic shapes (29, 30, 31).



Figure (28)



Figure (29)



Figure (30)



Figure (31)

Rating:

After completing the experiment (student and self-directed), the evaluation was done using an evaluation card that was designed to measure the extent to which the research hypotheses were achieved by using a Likert scale to clarify the level of students' performance in experimenting with environmental materials on the surface of their artwork.

The results of the evaluation card show that the concept of environmental sustainability is enhanced by the aesthetic use of environmental materials, after applying treatments, techniques and methods extracted from the research literature in the student Painting experience, as well as the personal ceramics experience.

Search results:

Experimenting with environmental materials in Painting helped raise awareness of environmental materials among master's students and enhance the concept of sustainability in their paintings.

- The use of environmentally friendly materials in the field of Painting and ceramics adds aesthetic and utilitarian values that help rationalize environmental consumption.

The use of environmental materials, techniques and experimental methods in the field of Painting and ceramics helped produce artistic works that carry new and innovative aesthetic values.

Modern and contemporary artistic trends, along with the technical development in the use and processing of materials, have brought about an unexpected revolution in the structure of artworks.

Treating ceramic artworks with environmental materials, whether before or after firing, using either the synthesis or inlay technique, results in unique and diverse textures and effects.

Research recommendations:

- Directing research to benefit from the remains of natural or manufactured materials may help solve some environmental economic problems, and also helps meet the learner's personal needs.

- Establishing a system for managing environmental raw material waste within educational institutions in general and art colleges in particular.

-More technical research that studies the role of environmental waste and residual materials and their relationship with ceramic clays to produce innovative ceramic works.

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