



Create Sustainable Home Designs by Recycling Waste Fabrics Using Collage Art

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Abstract:

The design by recycling the remnants of fabrics has now become occupied in important centers, because of its impact on showing renewal, and its reflection on the economic aspects, as it has become one of the candidate means in decorating brushes for the home, curtains and pendants, and we address in the research recycling of fabric residues using collage art to produce utilitarian and aesthetic home designs to achieve sustainability and aims to exploit the recycling of fabric residues to achieve sustainability with collage art

The proposed designs consist of pillows, bags, round rugs, wall hangings, cooking bib, baby girl's dress

The questionnaire was prepared and presented to 7 arbitrators specialized in the field of clothing design. The questionnaire included the evaluation of 10 proposed designs that varied in their methods and uses, and the results were used to determine the extent to which these designs achieve their design, aesthetic and functional goals. The questionnaire was designed according to three main axes to evaluate the proposed designs, and the opinions of the judges were relied upon to determine the quality parameters for each design. The results were as follows:

-The best designs in the design aspect:

- Design (1) received the highest score in achieving the design aspect with a quality rate of (96.9%).

While design (10) received the lowest score with a quality rate of (57.9%).

-The best designs in the functional aspect:

- Design (1) achieved the highest percentage in the functional aspect with a quality rate (95.1%).

-While design (10) achieved the lowest quality ratio (57.9%).

-The best designs in the aesthetic aspect:

- Design (1) received the highest rating in aesthetics with a quality rate of (97.1%).

-As for the design (10), it was the lowest with a quality rate (94.3%).

-The best designs in the axes as a whole:

- Design (1) came at the forefront with an overall quality rate of (96.1%).

While design (10) was the least in achieving the axes as a whole by (94.3%).

Introduction:

The adoption of an industry that is used for recycling in the economy is important and this results in benefiting from it with collage art, which is an artistic expression and from modern media focused on the synthesis between the material that is stacked in a specific context and we get the rhythm of the art in a different coordination and compatibility between the part used from the synthesis of arts and multiple industries and benefit from them and exploit them in multiple forms.

This study presented the progress of new industries in the market, and that the improvement of investment among young people in art and ideas for products that adopted the concept of sustainability is to achieve results between the consumption of resources from nature and achieve balance in improving human living standards and well-being and innovation for social justice to manage resources and protect biological diversity and reduce their damage.

The recycling of waste fabrics is one of the most important means of achieving sustainability in terms of benefiting resources instead of wasting those materials and maintaining a better environment and researchers seek to find a solution from waste recycling solutions and benefit from them, and fashion designers seek to benefit from them. The researchers directed the students of the Department of Clothing in the faculties of arts applied to collect the remains of fabrics, waste, curtains, furnishings, upholstery and furniture to design and produce women's clothing instead of dolls, they recycled waste and fabrics for furnishings and curtains pieces to be made again in furniture upholstery and take advantage of the aesthetic values of these fabrics in dividing students into groups and each group recycles a type of curtain for Fabrics and furnishings are replayed and implemented pieces of clothing for girls and is one of the remnants of cloth produced from the process of cutting and knitting clothing factories and the problem in the accumulation of a huge amount of fabric scrap inside ready-made clothing factories without scientific and technological methods until a large amount is filled to dispose of them. (Ahd bint Mohammed bin Abdulaziz and others - 2018) with all the previous steps of production, distribution and consumption in a representative of a danger that cannot be underestimated on the planet, so we talk about recycling waste fabrics to achieve sustainability.

Researchers were able to produce innovative designs by recycling from leftover fabrics using the collage art method and integrating them, and employing many young people on the job, which is one of the most important strategic goals for developing sustainability and providing them with job opportunities.

As for our current research, it is an artistic expression through the art of collage, recycling waste fabrics and exploiting them in resources or factories to achieve sustainability for them.

Search problem:

The research problem is summarized in several questions:

- 1- The extent to which collage art is used in design?
- 2- How can waste fabrics be recycled using collage art?
- 3- Is it possible to benefit from collage art in producing aesthetic utilitarian designs that achieve sustainability?

Research Objectives:

The research aims to:

- 1- Knowing how to best use the remnants of fabrics.
- 2- Creating new designs using collage art to make aesthetic and utilitarian home designs to achieve sustainability.
- 3- Employing collage art in making utilitarian aesthetic home designs.

Research hypotheses:

- 1- There are statistically significant differences between aesthetic utilitarian home designs in achieving the utilitarian aspect according to the opinions of the research sample
- 2- There are statistically significant differences between the designed home designs in achieving the functional aspect according to the opinions of the research sample.
- 3- There are statistically significant differences between home designs designed to achieve the aesthetic aspect according to the opinions of the research sample
- 4- There are statistically significant differences between the designed home designs in achieving the design aspect (as a whole) according to the opinions of the research sample.

Importance of Research:

- 1- Emphasizing the aesthetic of collage art in aesthetic utilitarian home designs.
- 2- How to benefit from recycling in making aesthetic and utilitarian home designs through collage art.

Research Methodology:

The research is based on the descriptive, experimental analytical approach with the application.

Research Limitations:

Time limits: First Semester of the academic year 1446 AH - 2024 AD

Spatial boundaries: Department of Home Economics _ Applied College in Mahayel Asir _ King Khalid University

Research sample:

The research sample included:

- 1- The number of (10) designs proposed by researchers
- 2- Research sample.

Search terms:

Collage: It is a work of art based on the collection of different forms to create a new work of art. The use of this technique had a radical influence among twentieth-century oil painting circles as a kind of abstract art, i.e. serious development.

It is also: an artistic composition made of various materials (such as fabric, paper or wood).

Recycling: The process of converting scrap and waste into new materials and elements that can be used.

It is also: the reuse of waste to produce other products of lower quality than the original product.

Sustainability: It is an environmental term that describes how biological systems remain diverse and productive over time, and sustainability for humans is the ability to maintain the quality of life we live in the long term, which in turn depends on the preservation of the natural world and the responsible use of natural resources.

Research Tools:

1. Questionnaire
- 2- (10) proposed designs
- 3- The following programs (Canva)

Previous studies:

1- Al-Hawari, Journal of Home Economics, Menoufia University) (2015 entitled: (Utilizing the remnants of fabrics in the design of children's clothes)

The study aims to: The ready-made garment industry is one of the most important industries on which the national economy is based, as interest in it has recently increased by officials in order to technological progress, and talk in this industry at the local and global levels. Hanem El Hawary-2004) Despite the technological progress that has been made in the clothing and textile industry, there is a process of waste in the various stages of the industry resulting in the remnants of fabrics during the various stages of manufacturing, and the remnants and waste of fabrics are considered low-exploited exhausts that should be used (Thana Mustafa Sarhan-2011) In terms of costs and prices of products, it is necessary to consider benefiting from each part of the different raw materials Used by ready-made garment factories in their production, especially what affects the price of the product and the functional properties and thus the ability of the consumer to buy, so the study concluded: It is necessary to exploit each part and a small clip of the remnants of fabrics produced in these factories as a natural result of the process of interlock and cutting of the parts of the pattern (textile-2001) and the clothes (dress - jumpsuit - children's apron - hat) of design nature and applied (functional) individually allows the possibility of using small pieces of fabrics and assembling and sewing them in a special way and special patrons with excellence in the selection of raw materials And suitable colors and designs, and all of this can produce children's clothes that combine the functional aspect (i.e. meet the child's needs of clothing properties) and economic and give the child beauty and low cost (Afaf Kamal Ali Mahmoud-2000).

2- Doaa Abdul Majeed Ibrahim Jaafar (2017) entitled: (Utilizing the remnants of fabrics to produce children's occasion clothes supported with satin ribbons to serve small projects)

The study aims to: Demonstrate the impact of using the remnants of soiree fabrics to produce children's clothes supported with satin ribbons, achieve economic and functional benefit, and achieve job opportunities for graduates and housewives through the implementation of the project in a workshop or at home. The researcher used satin ribbons of different widths (2-3-5-7 mm) and carried out different textile pieces with plain fabric 1/1 to make a gilet, short jacket, long jacket, junley, belt, chest dress of different widths, and the arithmetic averages and one-way analysis of variance were used One Way an Ova To calculate the differences between the arithmetic averages of the models and the tokay test (post-test) to find out the differences between the averages in favor of any model, the study found: The results show that the judges and consumers agreed on the products implemented from the remnants of fabrics to produce children's occasion clothes using 1/1 woven satin ribbons and achieving the aesthetic, functional and innovative aspect

And keep pace with fashion, and recommended the researcher the need to find alternatives to the high prices of clothing products by trying to replace them with alternative products lower price to achieve economic benefit

3- Ashjan Mohammed Jassim 2024: (The art of collage and its applications in the structures of fashion fabric designs) The study aims to: Fashion design is the procedural work that interprets the shape of the fabric into shapes, configurations, performances and procedures that replace the shapes by cutting and pasting in unusual and surprising shapes and transforming the final design of the fabric into different costumes of an aesthetic and practical nature. The study found: The art of collage is one of the modern arts that artists resorted to to break the classical art schools and invent a new style of design using natural elements and various materials and adapted to reach the final form of the design.

4- Ahmed (1991) entitled: (The use of small pieces of cloth to make large pieces)

The study aims to: It is possible to assemble small pieces of fabric in a harmonious way to obtain a large piece.

It was invented in the past for a utilitarian purpose, and today it is used for cosmetic purposes. The American pioneers invented this method to collect the remnants of cloth and benefit from it in the work of bed linen and it works in the form of squares or rectangles and collected without a clear order, the study found: the emergence of shapes that gave greater importance to color coordination, and beautiful bedspreads were made in this way and then found to make them warmer and softer. In the twentieth century, installation or patchwork was used in other aspects such as outerwear, home furnishings, and a technique can be used to suit every type of business.,.

5- Sahar Al-Saeed Al-Deeb entitled: (The Morphological Possibilities of Fabric Remains as an Expressive Entrance in Collage", 1998).-The study aims to: The experimentation with non-traditional materials in the field of collage and focus on discovering new methods and treatments for the same material from the remnants of fabrics and discovering more of their morphological and formal possibilities and knowing their names and characteristics. The study found that: Analysis of different methods followed by artists in their handling of the remnants of fabrics and employing them in their work in the field of using the collage method

5--Study "The Impact of Collage Art on Contemporary Art Practices" - Journal of Modern Art, 2021

summary:

This study focuses on the impact of collage art on contemporary art practices and how contemporary artists use collage techniques in their artistic expressions today..

The study examines how artists exploit everyday materials such as newspapers, magazines and consumables, and analyzes how symbolic connotations are formed across those materials..

The study suggests that collage in modern times has become a way to understand contemporary social and cultural challenges, and to use it as a critical tool in expressing issues such as identity, gender and race..

6- "Digital Collage: Reframing Traditional Art in the Digital Age" - Art and Technology Journal, 2020

summary:

A study on the impact of digital technology on collage art and how the Internet and digital editing software such as **Adobe Photoshop** have provided artists with new tools to create collage works using digital images.

The study sheds light on how digital photographs and graphic designs are integrated into contemporary collages, leading to transformations in form and artistic content.

The study shows that digital collage is not only an aesthetic addition, but has also become a means of presenting contemporary political and cultural issues.

7- Study "Collage as a Political Art Form: Visualizing Social Change" - International Journal of Art and Politics, 2022

summary:

A study looking at the role of collage art as a means of political expression, and how artists use collage to comment on social and political events in the modern era.

The article focuses on some contemporary artists who have used collage to express political protests and human rights, and examines how collage provides a platform for reinterpreting social and political symbols..

The study also includes a critical analysis of a number of artworks that have been used in protest campaigns and the process of reshaping community identity through collected materials..

8- "Psychological Interpretations of Collage Art: Exploring the Subconscious Mind" - Journal of Art Therapy, 2019

summary:

This study focuses on the use of collage in art therapy and understanding the subconscious. The article discusses how collage can be a tool in psychological understanding, as the selection and arrangement of materials helps in exploring feelings and thoughts buried in the subconscious..

Researchers discuss how collage reflects part of a person's collective memory and is a powerful tool in trauma management..

Study suggests that collage in art therapy can help patients discover and express their feelings indirectly.

9- "Collage in Feminist Art: Deconstructing Gender and Identity" - Feminist Art Review, 2023

summary:

This study sheds light on the use of collage in feminist art and how it was used as a tool to deconstruct concepts of identity and gender in society.

The article discusses the impact of collage on feminist movements in the seventies, and how artists used it to challenge stereotypes of women and patriarchal artistic traditions..

The study also includes analyses of a number of famous feminist works that used collage techniques to raise women's issues in art..

10-Study "The Evolution of Collage in Abstract Art" - International Journal of Abstract Art, 2021

summary:

This study focuses on the development of collage art in abstract art. It focuses on how many abstract artists adopt collage as a tool to develop their artistic ideas.

The article discusses how artists used collage to embody geometric shapes and complex visual layers in their abstractions, and examines how collage provides opportunities to express unconventional combinations of colors and lines..

Previous studies on collage and recycling

1- A study on the use of recycling in collage art

Many contemporary artists rely on the use of recycled materials in their artwork. In collage, multiple materials such as paper, fabrics, plastic, and wood are combined to produce works of art that carry environmental messages. Many studies address how the use of these recycled materials affects artistic expression and social messages related to sustainability..

One study published in *the "International Journal of Art and Design"* (2019) suggests that collage art effectively reflects themes such as sustainability and recycling, and is used as an environmental awareness tool. The artist relies on recycled materials to create a work that reflects the interaction between the environment and humans (Johnson et al., 2019).)

2- A study on the interaction between art and sustainability through collage

Another study in *the Journal of Sustainability in Art* (2020) sheds light on how collage art contributes to environmental awareness, focusing on the use of recycled materials in artists seeking to combine art and sustainability. Collage is used as a tool to understand environmental degradation and changing nature.

The study suggests that artists who incorporate recycled elements into their work can deliver a powerful message about environmental impact because this type of art connects the audience directly to the experience of waste, and how it can be transformed into something aesthetically valuable (Smith, 2020).)

3- Studying the impact of recycling on contemporary art

-Study by Lifset *et al.* (2015) examines how recycling practices affect contemporary art, including collage. The study reveals that many contemporary artists use recycled materials to turn waste into works of art that reflect environmental and social issues. These works challenge the idea of consumption and overconsumption, reinforcing messages calling for sustainability (Lifset *et al.*, 2015)

4- An artistic study on the integration of sustainability with collage art

In the study "*Art and Recycling in Contemporary Art*" (2021), the increasing use of recycled materials in collage art was examined. This research illustrates how collage art reflects global environmental trends, with artists contributing to environmental awareness through the use of consumables. The research also confirms that artists not only present artistic aesthetics, but also provide powerful messages about resource sustainability. (Taylor, 2021).

Conclusion:

These recent studies show that collage art has evolved to encompass multiple fields, from contemporary art to digital arts, art therapy and political art. The development of collage also shows the importance of using it as a tool to express social and psychological issues in the contemporary world. The continued use of collage in various fields demonstrates its flexibility and ability to deeply influence art and culture..

Theoretical framework

Introduction

Collage art is a contemporary art form that emerged in the early twentieth century and occupied an important place in many art movements such as Cubism and Surrealism. This art incorporates a range of different materials such as paper, wood, photographs, text, and tangible objects, to produce a work of art that reflects multi-meaning visual messages. Collage has evolved to include diverse methods and techniques, from traditional tools to modern digital media. Taylor, Brand, 2009)

Definition of collage art

Collage art is an artistic technique that allows the artist to combine different materials to create a piece of art. The term was coined in the twentieth century by Pablo Picasso and Georges Braque during the development of the Cubist movement. Collage is an unconventional style in contemporary art, in which material elements such as paper, photographs and text can be combined to make the artwork reflect multiple ideas in visual harmony. Greenhalgh, David, 2005), Danto, Arthur, 2003)

History of collage art

The collage technique emerged in the Middle Ages during the thirteenth century, when Gothic Cathedrals began using paintings made of gilded leaves, precious stones and some precious metals in religious paintings. In the nineteenth century AD, collage methods were also used by amateurs of handicrafts for souvenirs, such as their use of them in decorating photo albums and books.

The first attempts at collage art appeared in the early twentieth century, when Picasso and Braque began using ready-made materials such as newspapers and fabrics in their artwork. Initially, collage was considered an addition to traditional painting, but over time it became art itself. As time progressed, artists made extensive use of collage in modern art movements, such as Surrealism and Dadaism..

- Cubism: Artists Picasso and Braque began using collage in their Cubist paintings to enhance the third dimension and offer a new perspective on forms and objects.
- Surrealism: Surrealists used collage to explore the unconscious and psychological symbolism, combining familiar images to generate new and unexpected meanings. Taylor, Brandon, 2009 (Rubin, Alissa J, 2009) Surrealist artists used clippings or collages more extensively through Cubomania, a surreal method in the

form of scraps made by cutting the original image into small squares and then collecting them automatically or randomly.

The art of collage depends on a set of basic tools in his work, namely:

- 1- Newspaper clippings, magazines, handmade colored paper parts, photographs, and some other components of nature, as well as some threads, buttons or cut glass pieces, or a group of ordinary and colored sand, as well as a set of wooden colors or water and oil colors
- 2- The background or the floor on which it will be installed, either it is made of cardboard paper of various kinds to suit the painting to be made.
- 3- Paste the basic work to the background , usually white or transparent glue or glue.

Collage techniques

Collage techniques are very diverse, and depend on the type of materials used and the way they are combined. Here are some key techniques:

- Traditional collage: involves cutting and pasting materials such as photos and paper from magazines and newspapers on the surface of the board or paper.
- Digital collage: As technology advances, digital collages can be created using programs such as Adobe Photoshop or Illustrator, giving artists more control and innovation..
- Assemblage: It is a type of collage that uses three-dimensional materials such as wood, metal, and glass to create art sculptures (Abrams, Gerald, 1997) (Messer, Ellen, 2020).)

Uses of collage in contemporary art

In contemporary art, collage has become a powerful tool for expressing social, cultural and political issues. Collage can be a tool to comment on identity, gender, racism, or the influence of the media on society. Many contemporary artists use collage to reframe history and provide critical insights into contemporary conditions.

Examples of contemporary artists who have used collage:

- **Robin Gordon: Contemporary artist uses collage to incorporate techniques from folk art to critique consumer culture.**

Sarah Cecil: Cecil uses collage to highlight feminist themes and highlight human rights issues by portraying women in her work (Collage and Assemblage, 2017)

(Greenhalgh, David, 2005).

Collage aesthetic philosophy

Collage art reflects an aesthetic philosophy that relies on breaking the traditional boundaries of art. Collage promotes the concept of deconstruction and reconstruction. The philosophy behind this art is about bringing together disparate parts to formulate a new idea and a completely different meaning. This challenges traditional concepts such as classical aesthetics and creates an alternative context that allows interaction with a multidimensional work of art.

Danto, 2003., Taylor, Brandon 2009

- The impact of collage on other arts
- In literature: Many writers have adopted collage techniques in their literary works, where texts taken from different sources are synthesized to create a new narrative. This trend was prominent in surrealist literature..

- In cinema: Directors have used collage techniques in their films, especially in films that rely on combining disparate scenes to create a special artistic effect..

(*Collage Techniques in Contemporary Literature*, 2018)(*Collage in Cinematic Expression*, 2020)

Collage as a therapeutic tool

Collage is used in art therapy as a tool for exploring the unconscious and expressing emotions and psychological conflicts. Collage is an effective tool to help patients express their feelings and thoughts without the need for words, contributing to the healing process..

Reiss, Steven, 2018, *Art Therapy*, 2019.

Conclusion

Collage art is one of the creative methods that has given modern art a new horizon to offer unconventional visual experiences. This art may reflect contemporary cultures and themes, and represents a new opportunity for artists to explore the interaction between material and idea. Over time, collage has become a powerful expressive tool in various fields of art, from plastic arts to literature, video and digital art..

Recycling:

Recycling can be defined as collecting used materials, converting them into raw materials, and then reproducing them to become consumables again, and the concept of recycling can include anything old that can be used again. In other words, it is a process by which unfit materials that are considered waste are taken advantage of and introduced into new production and manufacturing processes..

History of recycling: The history of recycling dates back thousands of years, and this concept may seem like one of the modern concepts that were associated with movements calling for preserving the environment in the seventies of the twentieth century, but in fact it has been used in the past by some individuals in some way thousands of years ago, and the concept of recycling has emerged in The thirties and forties of the twentieth century as one of the important concepts in many countries of the world because of the economic depression that occurred at that time, some materials such as nylon, rubber, and metals were recycled.

Recyclable materials :

Recycling processes include many different materials, as the process of recycling these materials contributes to reducing the depletion of many resources from nature, such as petroleum, natural gas, trees, coal, and mineral ores, and here are some of these materials:

Carton: Cardboard can be recycled from many different materials, such as boxes containing drinks and various foodstuffs such as milk and soups, in addition to cartons for storing products.

Paper: The importance of paper recycling is to reduce energy use, maintain the cleanliness of the environment, and save its various resources such as water and trees, as the traditional paper industry is based on the use of trees as a basic element of the industry process, and perennial trees are often cut down to plant trees in their place that grow quickly to be cut again and used in industry, and paper constitutes 20% > of the total household waste, and the paper is recycled by collecting it, then sorting it into varieties that vary according to the type of paper, its weight, color, and other considerations, then soaking it with water, then ridding it of the ink on it or any materials stuck to it, and then placing it in the form of flat sheets to be dried. It should be noted that there are many paper materials that cannot be recycled, such as tissue paper, plastic coated paper or wax, and on the other hand, there are many recyclable paper materials, including the following::

-Packaging Papers

-and paper bags

-Magazines, newspapers and catalogues

- White and colored paper
- Mail envelopes.
- Books surrounded by a thin and soft cover.

Recycling

Recycling is the process of converting consumables into new products by reusing them instead of disposing of them. This process aims to reduce waste, conserve natural resources and reduce pollution. Recycling is an important part of a sustainability strategy that aims to achieve a healthy environment and a sustainable economy. Geyer et al., 2016

- The importance of recycling

Recycling has many environmental and economic benefits. They contribute to reducing the amount of waste dumped in landfills, thus reducing pollution. They also help conserve natural resources by reducing the need for raw material extraction. Economically, recycling creates new jobs and saves energy.

World Bank, 2018

- Types of recyclables

Many materials can be recycled such as:

- Paper: includes newspapers, magazines and cardboard boxes.
- Plastic: Includes plastic bottles and food wrappers.
- Metals: such as aluminum, steel.
- Glass: Glass can be recycled and used to make new bottles or building materials.

EPA, 2016

- Recycling Process

The recycling process involves several steps:

- **Material collection:** Recyclables are collected from homes and businesses.
- **Sorting:** Non-recyclable materials are removed.
- **Manufacturing:** Recyclables are processed and converted into new products.
- **Distribution:** Distribution of recycled products in the market.

Lifset et al., 2015

- Benefits of Recycling

Recycling offers many benefits on various fronts:

- **Environmental:** reduce pollution and protect natural resources.
- **Economical:** Save energy and resources and reduce costs.
- **Social:** Creating new jobs and promoting environmental awareness in communities.

Zaman, 2015

- Challenges in the recycling process

Despite the many benefits of recycling, there are many challenges it faces:

- **High cost:** Some recycling processes require advanced technologies that can be expensive.

- **Limited awareness: Insufficient environmental awareness in some communities hinders efficient recycling.**
- **Logistics Systems: Collection** and sorting of recyclables need efficient infrastructure.

Wilson et al., 2015

Conclusion

Recycling is one of the effective solutions to reduce the environmental impacts caused by waste and achieve environmental and economic sustainability. By improving recycling processes and raising public awareness, pollution can be reduced and resources can be used more efficiently. However, the process needs to improve infrastructure and community outreach to ensure its long-term success..

Geyer et al., 2016

Sustainability

It is a key concept of great interest in the modern era, as it refers to the ability of the ecological, social, and economic system to continue to operate effectively over time, without depleting resources or harming future generations. Sustainability aims to strike a balance between the requirements of economic growth, environmental conservation, and social justice..

Brundtland Report, 1987.

-Sustainability concept

Sustainability is generally defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. This concept focuses on three main dimensions: the environment, the economy, and society. The integration of these dimensions is essential to achieve sustainable development that depends on the sustainability of natural resources and balanced economic growth..

Sustainable Development Goals Report, 2020.

- Sustainability Dimensions

- Environmental sustainability: focuses on preserving the environment by reducing pollution, protecting ecosystems, and using natural resources responsibly.
- Economic sustainability: aims to achieve sustainable economic growth that enhances human well-being without depleting natural resources.
- Social sustainability: seeks to achieve social justice and equality between individuals in access to economic and social opportunities.

World Commission on Environment and Development, 1987.

-Sustainability in the economic sector

Economic sustainability is about achieving economic development without negatively impacting the environment or spreading poverty. This includes adopting economic strategies based on the use of renewable resources and adopting innovative technologies that contribute to preserving the environment and reducing energy consumption..

Ekins, P., "Economic Aspects of Sustainability," Environmental Economics and Policy Studies, 1992.

- Sustainability in the environmental sector

Environmental sustainability seeks to protect natural resources from depletion and pollution. This includes waste management, biodiversity conservation, and reducing greenhouse gas emissions. Many environmental policies rely on the principle of sustainability to determine how to use natural resources fairly and efficiently..

Global Environmental Outlook, United Nations Environment Programme, 2019.

- Social Sustainability

Social sustainability focuses on improving people's lives through education, healthcare, and social equity. Aims to eradicate poverty and promote human rights by providing opportunities and justice for all individuals.

- Sen, A., "Development as Freedom," 1999.

- The importance of sustainability in the future

Sustainability is critical to the future of the planet. By sustaining resources and achieving intergenerational justice, we can address the challenges of climate change, natural resource degradation, and growing populations. Governments, companies and organizations need to adopt sustainable strategies for human well-being and environmental protection..

United Nations, Sustainable Development Goals, 2015.

Conclusion



Sustainability is the key to balancing the needs of the present with the priorities of the future. By focusing on environmental, economic and social dimensions, we can ensure a better world for future generations. Everyone, from governments to individuals, must embrace the principles of sustainability in all aspects of their lives to ensure the sustainability of the environment and society.





1. "The Impact of Collage Art on Contemporary Art Practices" - Journal of Modern Art, 2021





Applied Studies:



It has been proposed (10) designs for clothes and home furnishings utilitarian achieve sustainability using the recycling of fabric residues using collage art to enrich the aesthetic value, the proposed designs consist of pillows, bags, circular carpets, wall hanging, cooking apron, baby dress, vary in terms of shapes, colors and proposed design units, and the designs were made by the program (Photoshop-pics art)


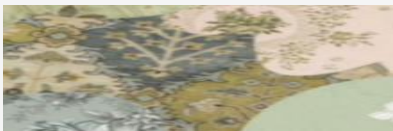


Proposed designs of recycling waste fabrics for utilitarian aesthetic household products that achieve sustainability

Proposed design:	Description of the proposed design:	Type of proposed design
	<p>Design (1)</p> <p>Cloth type collage art was used by adding selected decorative units</p> 	<p>: The design is</p> <p>pillow</p>
Proposed design:	Description of the proposed design:	Type of proposed design

	<p>Design (2)</p> <p>Cloth type collage art was used by adding selected decorative units</p>	<p>: The design is</p>
		<p>pillow</p>
Proposed design:	Description of the proposed design:	Type of proposed design
	<p>Design (3)</p> <p>Cloth type collage art was used by adding selected decorative units</p>	<p><u>The design is :</u></p>
		<p>Handbag</p>
Proposed design:	Description of the proposed design:	Type of proposed design
	<p>Design (4)</p> <p>Cloth type collage art was used by adding selected decorative units</p>	<p><u>The design is :</u></p>
		<p>Floor Carpets</p>
Proposed design:	Description of the proposed design:	Type of proposed design

	<p>Design (5)</p> <p>Cloth type collage art was used by adding selected decorative units</p> 	<p><u>The design is :</u></p> <p>∴</p> <p>Art mural</p>
<p>Proposed design:</p>	<p>Description of the proposed design:</p>	<p>Type of proposed design</p>
	<p>Design (6)</p> <p>Cloth type collage art was used by</p>  <p>adding selected decorative units</p>	<p><u>The design is :</u></p> <p>Cooking bib</p>
<p>Proposed design:</p>	<p>Description of the proposed design:</p>	<p>Type of proposed design</p>

	<p>Design (7)</p> <p>Cloth type collage art was used by adding selected decorative units</p> 	<p><u>The design is :</u></p> <p>Cooking bib</p>
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Proposed design:	Description of the proposed design:	Type of proposed design
	<p>Design (8)</p>  <p>Cloth type collage art was used by adding selected decorative units</p>	<p><u>: The design is</u></p> <p>Handbag</p>
Proposed design:	Description of the proposed design:	Type of proposed design
	<p>Design (9)</p>  <p>Cloth type collage art was used by adding selected decorative units</p>	<p><u>: The design is</u></p> <p>Carpets</p>
Proposed design:	Description of the proposed design:	Type of proposed design

	<p style="text-align: center;">Design (10)</p>  <p style="text-align: center;">Cloth type collage art was used by adding selected decorative units</p>	<p style="text-align: center;">: The design is</p> <p style="text-align: center;">Baby dress</p>
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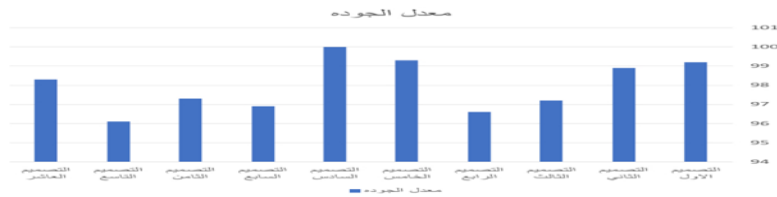
Discussion Outcomes:

- **First: Arbitrators Evaluation Card Questionnaire for the proposed designs**
- Six statements were prepared directed to specialists in the field of clothing, furnishings and art education to judge the designs proposed by the researchers, and the questionnaire included an evaluation of (10) designs and the questionnaire included three axes
- **The first axis: achieving the design aspect, which includes (3) phrases** The second axis is to achieve the functional aspect, and it includes (3) phrases.
- **The third axis: achieving the aesthetic aspect, which includes (3) phrases.**
- A three-level assessment scale was used so that the answer was given appropriate (three degrees), somewhat appropriate (two degrees), inappropriate one degree, and the degree of the first axis (1) degree and the second axis (1) degree, and the third axis (1) and the total score of the questionnaire (27) degrees.
- **Second: Discussion and interpretation of hypotheses and results: The first hypothesis: There are statistically significant differences between the proposed designs in achieving the design aspect according to the opinions of the arbitrators**
- table) 1) The averages of the arbitrators' evaluations of the first axis of the evaluation axes to achieve the design aspect) of the proposed designs

التصميم العاشر	التصميم التاسع	التصميم الثامن	التصميم السابع	التصميم السادس	التصميم الخامس	التصميم الرابع	التصميم الثالث	التصميم الثاني	التصميم الأول	الجانب التصميمي النسبة و التنااسب بين عناصر التصميم المستخدمة في فن الكولاج توافق وانسجام الألوان مع بعضها في التصميم مستوى الابتكار في التصميم المقترح
94.20%	97.10%	99%	94.20%	95.10%	97.10%	96.10%	96.10%	95.10%	96.10%	النسبة و التنااسب بين عناصر التصميم المستخدمة في فن الكولاج توافق وانسجام الألوان مع بعضها في التصميم مستوى الابتكار في التصميم المقترح
96.10%	94.20%	94.20%	93.20%	96.10%	96.10%	92.20%	96.10%	93.20%	96.20%	النسبة و التنااسب بين عناصر التصميم المستخدمة في فن الكولاج توافق وانسجام الألوان مع بعضها في التصميم مستوى الابتكار في التصميم المقترح
96.10%	94.20%	95.10%	95.10%	99%	97.10%	94.20%	95.10%	97.10%	97.10%	النسبة و التنااسب بين عناصر التصميم المستخدمة في فن الكولاج توافق وانسجام الألوان مع بعضها في التصميم مستوى الابتكار في التصميم المقترح

Table (2) Quality coefficient for the degrees of the proposed designs in achieving the design aspect according to the opinions of the arbitrators

الترتيب	معامل الجودة	التصميم
3	99.20%	التصميم الأول
4	98.90%	التصميم الثاني
6	97.20%	التصميم الثالث
7	96.60%	التصميم الرابع
2	99.30%	التصميم الخامس
1	100%	التصميم السادس
7	96.90%	التصميم السابع
6	97.30%	التصميم الثامن
8	96.10%	التصميم التاسع
5	98.30%	التصميم العاشر



• Quality coefficient for the degrees of the proposed designs in achieving the design aspect according to the opinions of the arbitrators:

• Figure (1) shows the quality coefficient of the degrees of the proposed designs in achieving the design aspect according to the opinions of the arbitrators

• From Table (2) and Figure (1) above, it is clear that the best proposed designs in achieving the design aspect, according to the opinions of the design arbitrators (6), where it achieved quality coefficients by an excellent ratio (100), and the least proposed designs in achieving the design aspect is design (9), where it achieved a quality factor of (96.10). The researchers explain the high quality factor of design (6), which exceeded the rates of its quality factor of more than 90% because it was achieved with these appropriate designs between the different design elements with each other at a high rate, and they also achieved a high level of innovation and development, and these factors in turn came to achieve the design aspect with high quality in these designs.

• **The second hypothesis: There are statistically significant differences between the proposed designs in achieving the functional aspect according to the opinions of the arbitrator n**

Table (3) Averages of arbitrators' submissions for the third axis of evaluation (achieving the functional aspect) of the proposed designs)

الجانب الوظيفي	التصميم الأول	التصميم الثاني	التصميم الثالث	التصميم الرابع	التصميم الخامس	التصميم السادس	التصميم السابع	التصميم الثامن	التصميم التاسع	التصميم العاشر
المقترح يتناسب مع المفروشات المنزلية	98.10%	94.20%	92.20%	94.20%	98.10%	94.20%	93.20%	98.10%	97.10%	92.20%
سهولة استخدام التصميم في الأماكن المنزلية	96.10%	94.20%	91.30%	94.20%	98.10%	95.10%	94.20%	94.20%	94.20%	92.20%
فن الكولاج سهل الاستعمال	91.30%	93.20%	96.10%	93.20%	100%	95.10%	94.20%	95.10%	95.10%	95.10%

Table (4) Quality coefficient for the degrees of the proposed designs in achieving the functional aspect according to the opinions of the arbitrators:

الترتيب	معامل الجودة	التصميم
10	93.20%	التصميم الأول
2	98.80%	التصميم الثاني
4	97.90%	التصميم الثالث
9	95.80%	التصميم الرابع
1	100%	التصميم الخامس
6	96.90%	التصميم السادس
8	96.70%	التصميم السابع
3	97.10%	التصميم الثامن
8	96.70%	التصميم التاسع
7	96.90%	التصميم العاشر

Quality coefficient for the degrees of the proposed designs in achieving the functional aspect according to the opinions of the arbitrators:

Figure (2) shows the quality coefficient of the degrees of the proposed designs in achieving the functional aspect according to the opinions of the arbitrators:

From Table 4 (and Figure) 2. The proposed designs in achieving the functional aspect, according to the opinions of the arbitrators, it is clear that the design (5) where it achieved quality coefficients by an excellent percentage (100), and the least proposed designs in achieving the functional aspect is the design (1) where it achieved a quality factor by (93.20) and the researchers explain the high quality factor of the design (5), the rates of its quality factor exceeded more than 90% because it was achieved with these appropriate designs between the different design elements with each other by a high percentage, as achieved by them A high level of innovation and development, which in turn led to the realization of the functional aspect.

The third hypothesis: There are statistically significant differences between the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrator n

Table (5) Averages of the arbitrators' submissions for the third axis of the evaluation (achieving the aesthetic aspect) of the designs

التصميم العاشر	التصميم التاسع	التصميم الثامن	التصميم السابع	التصميم السادس	التصميم الخامس	التصميم الرابع	التصميم الثالث	التصميم الثاني	التصميم الأول	الجانب الجانبي
93.20%	97.10%	98.10%	97.10%	97.10%	98.10%	97.10%	95.10%	97.10%	96.10%	التصميم يلقى المصوبه على جمال فن الكولاج
										يوجد المسجلم بدون فن الكولاج واعادة التدوير في التصميم
90.30%	95.20%	98.10%	93.2	97.10%	97.10%	94.20%	96.10%	97.10%	96.10%	المقترح يظهر فن الكولاج بشكل مميز
92.20%	96.10%	96.10%	92.20%	93.20%	98.10%	94.20%	94.20%	97.10%	94.20%	

Third hypothesis: There are statistically significant differences between the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrators

Table (5) Averages of the arbitrators' submissions for the third axis of evaluation (achieving the aesthetic aspect) of the designs

الترتيب	معامل الجودة	التصميم
5	96.10%	التصميم الاول
2	99.40%	التصميم الثاني
5	96.10%	التصميم الثالث
6	96.20%	التصميم الرابع
1	100%	التصميم الخامس
7	95.10%	التصميم السادس
9	94.10%	التصميم السابع
3	98.60%	التصميم الثامن
4	98.10%	التصميم التاسع
8	94.30%	التصميم العاشر

Figure (6) shows the quality coefficient of the degrees of the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrators

Quality coefficient for the degrees of the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrators

Quality coefficient for the degrees of the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrators

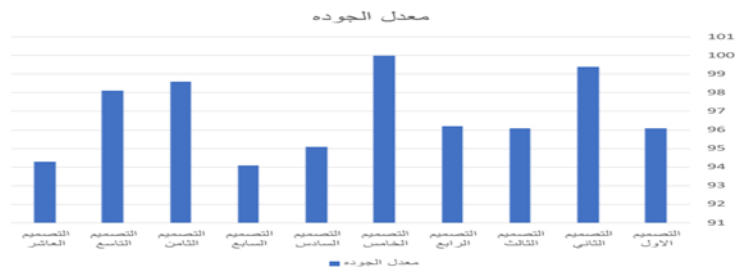


Figure (3) shows the quality coefficient of the degrees of the proposed designs in achieving the aesthetic aspect according to the opinions of the arbitrators. From Table (6) and Figure (3) above, it is clear that the best proposed designs in achieving the aesthetic aspect, according to the opinions of the arbitrators Design (5), where it achieved quality coefficients by an excellent percentage (100%) and the least proposed designs in achieving the aesthetic aspect is design (7), where it achieved a quality factor of (94.10) and the researchers explain the high quality factor of design (5), which exceeded the rates of its quality factor of more than 90% because it was achieved with these appropriate designs between the different design elements with each other by a high percentage, as achieved. They have a high level of innovation and development, and these factors in turn led to achieving the aesthetic aspect with high quality in these designs and quality coefficients. Fourth hypothesis: There are statistically significant differences between the proposed designs in achieving the evaluation aspects as a whole according to the opinions of the arbitrators.

Table (7) Quality coefficient of the grades of the proposed designs in achieving the evaluation aspects as a whole according to the opinions of the arbitrators.

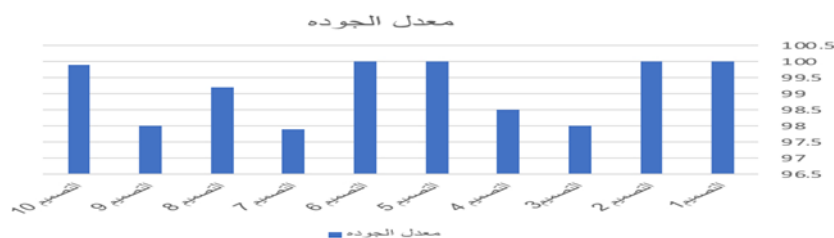
التصميم العاشر	التصميم التاسع	التصميم الثامن	التصميم السابع	التصميم السادس	التصميم الخامس	التصميم الرابع	التصميم الثالث	التصميم الثاني	التصميم الأول	الجانب التصانيفي
94.30%	98.10%	98.60%	94.10%	95.10%	100%	96.20%	96.10%	99.40%	96.10%	معامل الجودة الجانب التصانيفي
96.90%	96.70%	97.10%	96.70%	96.90%	100%	95.80%	96.10%	98.80%	93.20%	معامل الجودة الجانب التصانيفي
98.30%	96.10%	97.30%	96.90%	100%	99.30%	96.60%	96.10%	98.90%	99.20%	معامل الجودة الجانب التصانيفي

Table (8) Quality coefficient for the degrees of the proposed designs in achieving the aspects as a whole according to the opinions of the arbitrators:

ترتيب التصميم	معدل الجودة	التصميم
1	100	التصميم 1
1	100	التصميم 2
5	98	التصميم 3
4	98.5	التصميم 4
1	100	التصميم 5
1	100	التصميم 6
6	97.9	التصميم 7
3	99.2	التصميم 8
5	98	التصميم 9
2	99.9	التصميم 10

Figure (4) shows the quality coefficient of the degrees of the proposed designs in achieving the aspects as a whole according to the opinions of the arbitrators.

From Table (8) and Figure (4) it is clear that:



The best proposed designs in the aspects of evaluation as a whole, according to the opinions of the arbitrators Design (1, 2, 5, 6), where it achieved quality coefficients with an excellent percentage (100%) followed by design (10) where it achieved a quality factor of 99%, and the lowest design is design (7) where it achieved quality coefficients of 97%, and explains the high quality coefficients of design (1,2,5,6), whose quality rate exceeded more than 90% because it achieved these appropriate designs between the different design elements with each other at a high rate, and they also achieved the level of High innovation and development, and these factors in turn led to the achievement of aspects as a whole with high quality with these designs

From the above, it is clear that:

1- The best proposed designs in achieving the aesthetic aspect, according to the opinions of the arbitrators, design (5), where it achieved quality coefficients by an excellent percentage (100%) and the least proposed designs in achieving the aesthetic aspect is design (7), where it achieved a quality factor of (94.10)
2- The best proposed designs in achieving the functional aspect, according to the opinions of the arbitrators, design (5) where it achieved quality coefficients by excellent (100), and the least proposed designs in achieving the functional aspect is design (1) where it achieved a quality factor of (93.20)

3. That is the best The proposed designs in achieving the design aspect, according to the opinions of the arbitrators Design (6), where it achieved quality coefficients by an excellent percentage (100), and the least proposed designs in achieving the design aspect is the design (9), where it achieved a quality factor of (96.10). 4- The best proposed designs in the aspects of evaluation as a whole, according to the opinions of the arbitrators Design (1, 2, 5, 6), where it achieved quality coefficients by an excellent percentage (100%), followed by design (10), where it achieved a quality factor of 99%, and the lowest design is design (7), where it achieved quality coefficients by 97%.

Recommendations

- 1- Enriching electronic libraries with research on recycling waste fabrics.
- 2- Benefiting from the collage art technique in aesthetically enriching clothes.

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