

A comparison study to develop the strategy for designing traditional Glass products in Egypt

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Introduction

Traditional glass industry in Egypt is one of the most important traditional handcraft industries, it is distinguished by high artistic and aesthetic value in its production. It depends firstly on how skilled the glass maker is and his ability to work on a piece of soft glass to transform it into a distinctive artistic product, that has originality and beauty which makes it stand out among other glass products. But, with more technological progress and less interest along with poor creative thinking from manufacturers, the industry suffers from the lack of innovation and poor design ideas to keep up with globalization and civilization changings, which led to a drop in numbers of traditional glass designs, lowering the number of traditional glass makers and artists, and leaving the profession of ancestral heritage in Egypt.

The research presents a comparison study to develop a strategy for designing traditional glass products in Egypt along with the country trend in caring and developing handicrafts through small and micro projects, to help bringing handicrafts industries to life again.

The research reviews a number of heritage glass products formed by different blowing methods (free blowing - blowing inside a mould - blowing with winding - rotating inside a mould), which is produced during different eras in Egypt (The Ancient Egyptian - Roman - Coptic - Islamic) to show the differences in glass products in terms of (shape of decoration, production method, dimensions), by doing an analytical study which is one of the scientific methodology research ways to know the range of changes and stability in products design forming now.

Importance of the research: -

- Enriching the traditional glass industry in Egypt by developing a heritage products designing system.

Objective of the research: -

- Aiming to develop a methodology for designing heritage products to develop the traditional glass industry in Egypt.

Problems of the research: -

- Disappearance of many traditional designs in the traditional glass industry.
- The need to enrich the traditional glass products designing system.

Applied methodology framework (Analytical Study):**1- Classification of traditional glass products:**

Classification of a number of traditional glass products, the classification based on the arrangement of products according to the nature of use and function, and it is divided into ten classifications: (decanters, bottles, large dishes, small bowls, food cups, drink glasses, lighting units, cabins and seals, lobes and accessories, and stereoscopic sculptural units).

2- Analytical study of the traditional glass products designing and producing systems:

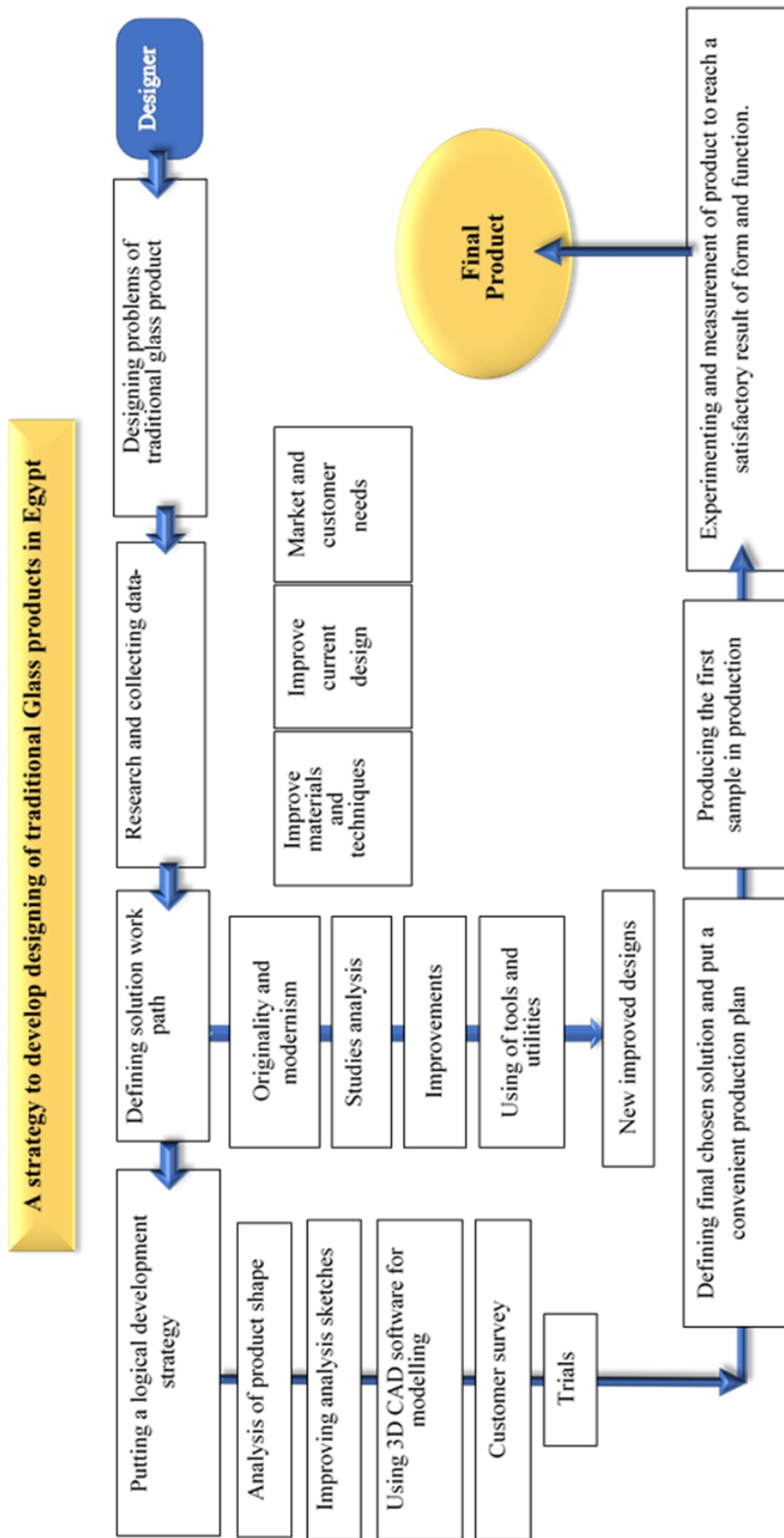
Analytical study of heritage glass products through the identification of the following: product name - shape description - product dimension - surface appearances and textures - production method.

3- A comparative study between the forms of heritage products and the forms of current products of traditional glass in Egypt:

A comparison has been made between the heritage products and the current products with the previous analysis and description of traditional glass products, by the following axes: the general shape of the product - the production method - the decoration methods used, under three main stages: (Total Match, Partial Match, and Unimpaired).



4- The proposed methodology of developing the designing system for traditional glass products:

It starts from the designer and ends with the product, taking consideration of all possible solutions to all the problems that faces the designer, by developing different system and how to choose the appropriate design idea then evaluate and present it to the customer, to access traditional glass products that enhance the technical value in existing products.






4-1 Suggested design processes for the traditional glass industry development system in Egypt:

Through three phases: (Inputs, Processing and Operations, and Outputs).



| Traditional glass product analysis example | | | | | | |
|--|--|--|-----------------|--|---|--------------------------|
| Production method | Surface appearance | Outer shape | Dimensions | Product shape | | Product name |
| Fixed Blowing inside mold. | Inclined grooves on the lower vessel body. | Spherical body have sloping slits and the beginning of | Height: 13.3 cm |  |  | decanter "Ancient Egypt" |

5- Application considerations for the methodology for designing heritage products for traditional glass in Egypt:

The study concluded from the previous comparison -of heritage products and current products- the classification of design processes in three types: (Perfect match)/ (Partial match)/ (New products)

| Stage two: Partial Match | | | Stage one: Total Match | | |
|---|-------------------------|--|---|--------------------------|--|
| Current product | Comparison axes | Traditional product | Current product | Comparison axes | Traditional product |
|  | | |  | |  |
| Circular connected to the origin of the body | Base | Circular connected to the origin of the body | Circular connected to the origin of the body | Base | Circular connected to the origin of the body |
| Cone | Body | Oval | Spherical elongated | Body | Spherical |
| Short clinder | Neck | Clinder | Short cone | Neck | Short cone |
| Circular with a small opening | Nozzle | Outside alligned | Outside alligned | Nozzle | Outside alligned |
| No decoration | Decoration style | A glass strip wrapped around the neck | Adding two hands | Decoratio n style | No decoration |
| Light green | colour | Light blue | Blue | colour | Purpel |

| | | | | | |
|--------------------------------------|--------------------------|----------------------------|------------------------------------|--------------------------|----------------------------|
| Free blowing with other hand tools | Production method | Fixed Blowing inside mould | Free blowing with other hand tools | Production method | Fixed Blowing inside mould |
| “Partial Match” in form and surface. | Similarities | | “Total Match” in form and surface. | Similarities | |
| The cone shape | Differences | | The two hands | Differences | |

| Stage three: Unimpaired | |
|--|--|
| Differentiations and distinguished qualities | Traditional product |
| <ul style="list-style-type: none"> - The pointed base pot and the connected hand disappeared from the nozzle to the beginning of the body blown into a mold. - These colors disappeared along with iridescence and landfill. |   |

5-1 Design Requirements Concerning First Classification:

Compliance with the same design for the archaeological product, shape and motifs shall be made, and a fixed design form would be recorded with all the details related to the product.

5-2 Design Requirements Concerning the Second Classification:

Equipping a matrix for designing families of different sizes and shapes inspired by antique products and making decorative alternatives to improve the aesthetic aspect.

5-3 Design Requirements Related to Innovative Products:

A mixture of originality and contemporary innovation, diversity in designs and uses, and attention to modern design programs related to the use of computers.

Results

1. A classification of traditional glass products (ten classifications) was determined according to the function used.
2. An analytical study of the heritage glass products of the eras (The Ancient Egyptian - Romanian - Coptic - Islamic) was made for (10) classifications according to the nature of use and function through analysing (35) products of heritage glass products where the study contained several criteria: (Product name- shape description- dimensions- surface appearance - production method).
3. A comparison was made between the heritage products and the current products based on the previous analysis and description (in terms of the: general shape, production method, and decoration style) the study found that there are three categories of design stages for the current traditional glass products, namely (total match - partial match - new designs)
4. A proposed methodology for developing the designing systems for traditional glass products has been developed and a plan outlines the proposed design processes for the traditional glass industry development system in Egypt.

5. Establishing application considerations for the methodology for designing heritage products for traditional glass in Egypt through the proposed categories for the design stages of traditional glass products.

Recommendations:

The research recommends the following:

- Paying attention to the integration of the cooperation organization between the Federation of Egyptian Industries (Chamber of Handicraft Development) and the relevant specialized scientific authorities and craftsmen in order to raise the efficiency of the design and production system.
- Paying attention to enrich the designing systems for traditional glass products in Egypt by completing the monitoring, analysis and documentation of all heritage glass products inside Egypt and what has not been documented from products outside Egypt.
- Establishing an information base for heritage crafts products in Egypt with the aim of making use of them in developing the traditional crafts system.

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