

Employing visual thinking skills in creating design formulas in the field of designing decorative iron products

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Abstract:

The design process depends on the designer's ability to employ his culture, imaginative abilities and skills in formulating designs that achieve the characteristic of innovation. To address one of the thinking methods and mechanisms that can be employed in the design process, which is visual thinking, and the study dealt with visual thinking skills and how to benefit from them in the field of designing decorative iron products. decorative iron

The research aimed to employ the skills of visual thinking in the development of innovative formulas in the field of design for decorative iron products. **The limitsof the research** were limited to studying the nature of visual thinking skills and their impact on the design of some applied products for decorative iron products.

The research hypothesis was that good use of visual thinking skills enhances the effectiveness of the design process and helps to develop innovative design formulas in the field of designing decorative iron products .

research methods: the descriptive analytical method, and the experimental method, The study dealt with **three axes:**

First: Visual thinking (definitions, concepts, skills)

Second: The basics of designing decorative iron products.

Third: The effect of employing visual thinking skills in formulating designs for decorative iron. The study found the possibility of employing visual thinking skills in developing proposed design formulations for application in the various fields of decorative iron products, and it reached a set of related result.

Keywords:

visual thinking, design, decorative iron

Introduction:

The design process depends on the designer's ability to employ his culture, his imaginative abilities and his skills in formulating designs in which the characteristic of innovation is achieved. The designer uses all his imagination, knowledge and skill in creating his design work. And since the thinking process is distinguished from other processes of knowledge as it is the most capable of penetrating into the depths of things, the current study tends to research the components of one of the ways of thinking that can be benefited from in the field of design, which is the method of visual thinking. Visuals and their structures in order to form concepts related to those visuals or in order to derive and derive the laws of their construction to build on them and benefit from them in the production of new structural formulations in the field of art or design.

Visual thinking according to (Obeid, Afana, 2003, p. 24) depends on three basic components represented in vision, analysis and drawing, as these three components interact in an active interaction in producing formulations of innovative ideas, and since the design field for decorative iron works and products is one of the design fields that can be It depends on this type of thinking, so this study aims to research the nature and nature of visual thinking skills, which can be used in developing innovative design formulations in the field of designing decorative iron products.

Research Problem:

The research problem crystallizes in determining what are the visual thinking skills that can be used in the field of design and how to employ these skills in the design process stages for decorative iron products.

Research objective:

The research aims to employ visual thinking skills in developing innovative design formulations in the field of design for decorative iron products.

Search Limits:

The research is limited to studying the nature of visual thinking skills and their impact on the design of some applied products in the field of decorative iron, such as (metal screens, consoles, and metal lighting units).

Research Hypothesis:

The researcher assumes that good use of visual thinking skills enhances the effectiveness of the design process and helps to develop innovative design formulas in the field of designing decorative iron products.

Research Methodology:

The research is based on two research methodologies:

- 1- The descriptive analytical method for collecting and analyzing information about visual thinking skills and their nature.
- 2- The experimental approach in making experimental attempts to build and formulate innovative designs in the field of designing decorative iron products by employing visual thinking skills.

Research axes:

To achieve the aim of the research, the study included three axes:

First: Visual thinking (definitions, concepts, skills).

Second: The basics of designing decorative iron products (foundations and building elements).

Third: The effect of employing visual thinking skills in formulating designs for decorative iron products

Results:

This study found the possibility of employing visual thinking skills in developing proposals and visualizations for innovative design formulations in the field of designing decorative iron products.

The study also reached a set of the following results:

- 1- The practice of visual thinking activities helps to mix between the intuitive and imaginative method in design and the logical method with sequential steps in design.

- 2- The method of visual thinking contributes to linking thinking between thinking and doing when formulating a design through analysis, deduction, arrangement, organization, modification, documenting analytical ideas by drawing, then reformulating and presenting them in the form of new design formulations.
- 3- The designer can employ the skills of visual thinking in creating innovative design formulations through successive and sequential processes (analysis, elicit, modify and reformulate, visualize and imagine, reformulate and employ) or design formulas are created through overlapping interactive processes.
- 4- Visual thinking skills develop the capacity for imagination and creativity, which depends on sensory, perceptual and cognitive processes and mental perceptions that interact within the designer's mind and are employed in creating new creative formulations.
- 5- The designer was exposed to various visual experiences and observations that lead to increased response and interaction with various visual stimuli (nature and heritage), which represent a rich and diverse source of design data (vocabularies and decorative elements, aesthetic rules and design foundations, structural systems) that can be used in formulating decorative iron designs. .
- 6- The designer can employ the skills of visualization and reformulation and by taking advantage of the processes of formal behavior (deletion and addition / enlargement and reduction / modification / abstraction 000) through these processes, he can formulate various perceptions of the shapes of the decorative units, which can be employed in building innovative design formulas for the various applied fields of iron products ornamental 0

Recommendations:

- 1- Nourishing and enriching the visual memory of the designer and students of art and design sciences with various forms and visual stimuli, whether from the artistic heritage or the natural environment or from artworks and applied products to stimulate and stimulate visual thinking processes to produce creative solutions and ideas in the field of designing decorative iron works and products.
- 2- Attention to the formulation of the structural bodies of the decorative units, as these units represent the basic building block in the formulation of designs of decorative iron, which results from the diversity of its formal structure, various perceptions and solutions that can be employed in creating innovative design formulas for the applications of decorative iron products.
- 3- Inclusion of the visual thinking methodology and its applications within the educational content of the Design Fundamentals course 0

References:

- 1- 'abu zayd 'ahmad (2013) faeiliat alkitaab almadrasi fi tanmiat maharat altafikir albasarii ladaa tulaab alsafi alkhamis , risalat majistir , aljamieat al'iislat - ghaza.
- 2- 'ahmad zahir (1996) "tiknulujiat altaelim falsafat wanizama" , almaktabat al'akadimiat - alqahira
- 3- alshawbuki alfida' (2010) "'athar aistikhdam almanhaj alnizamii fi tanmiat mafahim wamaharat altafikir albasarii fi alfizia' litalibat alsafi alhadi eashr" , risalat majistir , kuliyyat altarbiat , aljamieat al'iislat - ghaza.

- 4- al'afun - nadiat , eabd alsaahib - muntahaa (2012) "altafkir - 'anmatuh wanazariaatuh wa'asalib taelimih wataelimihu" dar safah lilnashr waltawzie - eaman.
- 5- biwaqasat eamru (2013) "almuealajat al'idrakiat almaryiyat - muqarabat maerifiat fi 'iitar nazariat takwin almaelumat waltaeamul mieaha" 'iitrak liltibaeat walnashr - alqahirati.
- 6- riad eabd almuneim (2000) "tadrib fi alfunun altashkiliati" nashir - jameiat maeamil al'alwan - alqahira
- 7- jamal aldiyn munaa (2015) "ruyat tahliliat limaeayir altasmim fi alfunun alzukhrufiati" , dukturah. 'utruhat bikuliat alfunun altatbiqiat - jamieat hulwan
- 8- radi wayil (2016) "faeiliat astiratijiati altadris almuqtarahat liltaealum almuetamad ealaa aldimagh fi tanmiat maharat altafkir albasarii ladaa tulaab althaanawiat alsinaeiat fi aldiykur alsinaeii" , almajalat altarbawiat , kuliyaat altarbiat , jamieat suhaj - almujalad 64
- 9- eubayd wilym , eafanat eazw "altafkir walmanhaj almadrasi" maktabat alfalah lilnashr waltawzie , alkuaytu.
- 10- hindawi rida , eabd alrahman wali (2014) "faeiliat barnamaj yaetamid ealaa kharayit altafkir fi tanmiat baed maharat altafkir albasarii min khilal manahij aldirasat alaijtimaeiat litalabat alsafi alkhamis". majalat aljameiat altarbawiat lildirasat alaijtimaeiat - kuliyaat altarbiat jamieat eayn shams - aleedad 56
- 11-Marita Sturken& Lisa Cartwright(2009)"practices of looking-An introduction to visual culture" Oxford univirsty press-New York
- 12-Mckim,R(1980)"Experiences in visual thinking"pwsEngineering publishers