

Islamic architecture as an entrance to enrich the surfaces of metalwork

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Abstract:

Islamic architecture is one of the most important achievements in which decorated architecture has been built with such magnificent design skills. The architecture of mosques is an important resource that can be used to inspire elements of art and technical methods.

The scholar has identified the scope of the research into Islamic architecture, especially the facades of mosques, which are one of the most important areas of Islamic civilization, which has received many innovations throughout the different ages. This has given it a great deal of beauty, as it is characterized by its many types, shapes, and functions, and various kinds of unique decorations, making it an important part of architectural design and symbols that reflect many values.

This study has functional, aesthetical and historical documentation values that confirm the close association between the artist and the heritage arts. Islamic architecture has had the most luck in the visual and creative handling of this art. The operation of minerals is one of the fields of art that are directly associated with innovation and performance. If art is the only asset in our civilization that still retains the nature of the absolute capacity of thought, then metal works are driven by metallurgy.

The researcher also drew on the use of Islamic decorations to handle metal hangers because they are one of the most important tributaries of multi-style artistic heritage that can be used and adapted to build contemporary metal operators rooted in the relationship to the originality of the idea, the ore, the tools of execution, the skill of performance, the elements of construction and expression, and the artistic and aesthetic performance. Accordingly, the idea of the research is based on new platforms for the field of work.

Keywords:

Islamic architecture, mosques, exterior, metal artifacts

Search problem:

The educational process in the field of art education in general and metalworking specifically seeks to develop the creativity of the student by addressing and benefiting from the heritage as an important educational source and by realizing the relationship with the past and present. The field of metalworking requires many visions, sources, and inspirational ideas appropriate to the different environments of society.

From the above, the problem of the research can be identified by answering the following question:

- To what extent can Islamic architecture (the facades of mosques) and its aesthetic and artistic vantage point be used to enrich the roofs of metal hangers?

Search details:

The researcher assumes that:

-The aesthetic dimensions of Islamic architecture can be used as an entry point for enriching the roofs of metal commentators.

Search objectives:

-Development of designs from Islamic architecture (facades of mosques) to create metal hangers.

-The development of creative and innovative thinking among students through the design and execution of metal stickers.

Importance of the research:

-To emphasize the importance of heritage in all its components, in particular Islamic architecture, and to make use of its symbols and aesthetic vocabulary.

-Use the aesthetic and artistic values of Islamic architecture, especially the facades of mosques, to enrich metal hangings.

Search limits:

-Configuration: Yellow copper slices 0.7 mm thick, aluminum slices 0.6 mm thick, ores complementary to Fiber Glass.

-Technology: Use of the chemical drill method to form metal hangings.

-Creating metal hangers based on Islamic architecture and the facades of mosques.

-The experiment is applied to a random sample of the Third Division students in the metalworking course of the Technical Education Department of the Faculty of Quality Education of the University of Al-Zagazig for the academic year 2020/2021 in the second semester.

Research methodology:

•The current research follows the analytical descriptive approach in the theoretical framework and the experimental approach in conducting the field experiment.

First axis: Theoretical aspect:

-External form of Islamic architecture

-Architectural design of the mosque

-Types of mosque architecture

-Building blocks of the mosque's exterior shape

-The Art of Islamic Decoration

-Elements of Islamic decoration

-Decorative roofing in Islamic architecture

-Metalworking in Islamic Art

-Some methods of metallurgy

The second axis is applied:

In this part, the researcher relied on a semi - experimental approach, where experimentation is about the ability to benefit from the aesthetic employment of Islamic architecture's façades as an entry point for enriching the roofs of metal commentators.

First, field experience:

1. The intellectual basis for building field experience: The intellectual basis of field experience depends on two fundamental aspects:

A Shining light on Islamic architecture and the external shape of the facades of Islamic mosques and decorations of various kinds, and the metalworking of Islamic art.

The introduction of a semi-experimental curriculum that supports experimentation in how to benefit from the aesthetic employment of the external shape of the mosque facades and its aesthetic dimensions as an entry point for the development of metal operators, with a view to enriching the educational process.

2. Objectives of the field experiment: The experiment aims at:

- Validating the imposition of the research by conducting certain applied practices on students (the research sample) to use Islamic architecture as an entry point for the development of metal operators.
- The detection of figurative data and the aesthetic dimensions of Islamic architecture.
- The development of formative formulations inspired by the external shape of the mosques' facades.
- Developing creative and innovative thinking for students to develop metal preoccupations.

3. Test constants:

Search sample: The research sample consists of a group of 66 students divided into 11 groups each of 6 students from the Third Division of the Technical Education Department, Faculty of Quality Education, University of Al-Zagazig school year 2020/2021.

The field experience is limited to:

- Making use of Islamic architecture, the aesthetic employment of the facades of mosques and the aesthetic dimensions of Islamic decorations as an innovative design platform for the development of metal operators, the emphasis on authenticity and the preservation of the structure of Islamic architecture.
- Use of yellow copper 0.7 mm thick and aluminum slices 0.6 mm thick as well as use of some complementary Fiber Glass ores.
- Use of method (chemical drilling, cold mina, cutting method, vaccination).
- The type of metallurgy in the field experiment is determined by metal hangers of aesthetic and utilitarian values.

1. Field experiment controls and entry points:

The field experiment is based on several controls and variables:

- Color item: The color richness of the metal operator is achieved through the use of cold mina, aluminum slides and Fiber Glass complementary ores in the implementation process.
- Vacuum element: Blanks resulting from the discharge, deletion and addition method.
- Touchscreen: Decorative treatments of the metal-occupied surface through the chemical drill method and their reflective semantics and aesthetic values.

Second: Machinery and tools used in the field experiment:

•Hand tools: Arket saw, metal scissors.

•Mechanical tools: Electric drill.

Third: Stages of the field experiment:

•Design phase:

Students choose a range of Islamic architecture (mosques) as well as a variety of Islamic decorations. (Botanical, geometric) used for decorative processes of the metal-occupied surface and its aesthetics as an innovative design platform, inspired by the design of a metal suspension using many design processes (such as magnification, miniaturization, symmetry and syntax), taking into account the technical values of unity, balance and rhythm, each group of 6 students implemented metal hanging designs.

•Pilot phase:

The student is given sufficient time to experiment with the formatting methods and ores used by conducting some experimental practices, to implement the formatting methods to be implemented, such as (chemical drill method, discharge method, cold mina paint) by implementing them in 10 x 10 cm on the yellow copper ore 0.7 mm thick to ensure that the all details are well connected and mastered.

•Implementation phase:

This is one of the most important stages where the aesthetics of the ore are shaped and adapted, and the design chosen is applied to the quality of the metal used in the execution which is divided into:

- Identify the scales and thickness of the metal used (copper-yellow and aluminum slides).
- The design is printed on copper with the shape levels (prominent and invasive) being determined on the surface of the metal suspension.
- Vacuums in the metal hanger, whether an active vacuum in the shape was performed in a discharge method or an ocean vacuum by deleting the specific parts of the design.

•Trim phase and coloring:

At this stage, the aesthetic of the hanging is demonstrated by the finishing of the mixtures by fine-tuning it and coating it with cold mina.

The metal commentators resulting from the field experiment were classified into three groups based on decorative treatments of the surface of the metal operator:

- Works based on geometric decorations.
- Work based on botanical decorations.
- Works based on the fusion of both geometric and botanical decorations.

Applications have been refuted by specialized professors in the field of specialization to determine the validity of imposition and to produce research results, including the importance of Islamic heritage, in particular Islamic architecture, and how to preserve it by using its vocabulary and construction elements as a source of inspiration for metal preoccupations of contemporary origin. The results of the research were:

- The importance of Islamic heritage, particularly Islamic architecture, and how to preserve it by using its vocabulary and construction elements as a source of inspiration for metal preoccupations of contemporary origin.

- The development of metal hangers by taking advantage of the formal and aesthetic structure of the mosques' facades.
- Research has helped in the aesthetic recruitment of elements of Islamic architecture to support the innovative process of designing metallurgical artefacts without misrepresenting the architecture of the mosque.
- Developing creative thinking for students in design and technical aspects.

References:

- (1) qisab , saeid 'ahmad , alhalabiat , sabahi: dirasat muqaranat bayn eanasir alwajihat fi aleimarat al'iislatmiat waeimarat ma baed alhadathat halatan dirasiat alfutuhah , majalat jamieat hamaat , almujalad al'awal , aleadad althaamin , 2018.
- (2) basha , fuaad 'ahmad (alturath aleilmii lilhadarat al'iislatmiat wamakanatih fi tarikh aleilm walhadarat , dar almaearif , alqahirat , 1983.
- (4) 'iislam , 'ahmad midahat: eulama' alearab walmuslimin wa'injazat eilmia fi bina' alhadarat al'iislatmiat , dar alfikr alearabii , alqahirat 1999.
- (4) fikri , 'ahmadu: almadkhal 'iilaa masajid alqahirat wamadarisiha , dar almaearif misr aibn saed , 1961.
- (5) eafif , bihinsi: alfani alaislatmii , dar tilas lildirasat waltarjamat walnashr , altabeat althaaniat , dimashq , 1987.
- (6) hamuwdat , hasan ealaa: fani alzakhrifat , altabeat aleashirat , matabie ruz alywsaf , alqahirat , 1984.
- (7) alshaami , salih 'ahmadu: alfanu al'iislatmiu altizam wa'iibdae , altabeat al'uwlaa , dar alqalam , dimashq , surya , 1990.
- (8) salim , eabd aleaziz salah: alfunun al'iislatmiat fi aleasr al'iislatmii (altihaf almaediniati) , markaz alkitaab lilnashr , alqahirat , 1999
- (9) nazif , eabd alsalam 'ahmadu: dirasat fi aleimarat al'iislatmiat , altabeat al'uwlaa , alhayyat aleamat lilkitab , 1989.
- (10) almahdiu , einayati: rawayie alfani fi alzakhrifat al'iislatmiat , maktabat abn sina , altabeat al'uwlaa , alqahirat , 1992.
- (11) bruklman , karli: tarjamat majmueat tarikh al'adab alearabii , almujalad alsaadis , alhayyat aleamat almisriat lilkitab , alqahirat , 1993.
- (12) limubard , muris tarjamat yasin alhafizi: al'iislam fi eazamatih al'uwlaa , dar altalieat lilnashr , bayrut , 1977
- (13) tiras , hinri: tarikh almaghrib min albidayat hataa fard fard alfaransiat , mujmae altaarikh , madrid , 1950.
- (14) 'ahmad , 'asamir zakaria: eimarat almasajid bayn almadi walhadir ttbyqaan ealaa almuharik alkharijii li'anzimat almabani min almasajid , almutamar alsaadis eashar lil'athariin alearab , dirasat fi athar alwatan , 2013.
- (15) eamir , 'iismaeil 'ahmad: dirasat tatawur eimarat almasajid bayn al'asalat walmueasarat , majalat albuqhuth alhadariat , kuliyat alfunun aljamilat , jamieat alminyaa , aiktubar 2013
- (16) eatayh , ayman: almadmun al'iislatmiu fi alfikr almiemarii , risalat dukturah , alhandasat , alhandasat , jamieat alqahirat , 1993.
- (17) alqadi , shawkat muhamad ltfaa eabd alrahman: aleimarat fi misr (alnazariat waltatbiqi) , risalat dukturah fi manshurah , kuliyat alhandasat , jamieat 'asyut , 1998

(18) aldilymy , eabd alkarim jasim muhamad: alqiam aljamaliat lilzakhrafat al'iislatmiat fi jamie alkufat alkabir , majalat jamieat babil , aleulum al'iinsaniat mujalad 17 , aleadad althaani , 2009.

(19) 'iibrahim , eizat euthman: alaistilham min altabieat liltaakid ealaa aleimarat al'iislatmiat fi misr , majalat aleimarat walfunun , aleadad althaani , alqahirat , 2016 , s 3.

(20) muhamad , muhamad jalal: fanu alhafr alghayir watatawiruh waturuq tibaeatih , risalat majistir ghayr manshurat , jamieat hulwan , kuliyaat alfunun aljamilat , alqahirat , 1978.

(21) bilaylih , nizar eabd alraaziq , rajab eabd alrahman wakhrun: alqiam aljamaliat lileanasir al'asasiat fi eimarat almasajid , risalat majistir , makat almukaramat , jamieat am alquraa,1994

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