EVALUATION OF AN INSTALLATION DESIGN AND APPLICATION PROCESS: A CASE STUDY OF THE SURAH AL-ALAQ INSTALLATION PROJECT

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Abstract. Installation Art, which is a result of industrial developments, has been discovered depending on the fiction that objects are placed in the space and experienced by the viewer. The main purpose of the installation is to emphasize space fiction to comprehend the message that the artist wants to give. In this study, the Qur’an Installation Project, which has an important place in the Islamic World, was analyzed in the concept of Surah Al-Alaq, the first surah that was revealed to Prophet Muhammad (s.a.v), descending from the heavens and pouring into the pages of the book. This artwork, which is applied for the first time in the ethnography museums in Türkiye, is discussed by explaining all the stages from design to installation.

In the first part of the study, information about the art of installation consisting of space, material and observer components is given. In the field study, information about how these components were adapted to the Qur’an Installation was given and the design, manufacturing and implementation stages of the project were explained. The data collection analysis method, which is a qualitative analysis method, was used in the study. As a result of the analyses, it was determined that there were some differences between design and implementation.

In conclusion; installation is a branch of art that changes depending on technological developments and has an application system depending on the requirements of the space. However, the success of this art technique will be possible with the architect’s participation in the application model as well as determining the design criteria.

Keywords: Installation, Ethnography Museum, Qur’an Installation, construction.

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1. Introduction

The aim of this study, which analyses the design and implementation process of the Qur’an Installation built in the Ankara Ethnography Museum, is to observe the development and construction stages of an installation fiction. Therefore, to transform the idea of art into a concrete design fiction, the requirements of the space and the semantic concept to be given should be well assimilated.

The study was conducted through the Data Collection Analysis Method, which is a qualitative analysis method. This research method is a method that brings together qualitative data based on observation, examination and document analysis techniques.

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The data collection analysis method is based on creating a new theory by evaluating perceptions and events in the light of holistic and real data (Yıldırım, 1999).

Art is defined as the creative expression of human imagination and emotions with abstract or concrete materials that interact with the natural and artificial environment since its existence (Thomas, 2014). Art and artworks are affected by the changes experienced throughout the history of humanity as they symbolize the emotions that are interpreted, observed and perceived by human hands. Especially the beginning of the industrial era in the 19th century made it necessary for the artist to adapt to the conditions of the age and turn towards technological works and ideas. In this context, art was taken out of traditional molds and brought to life as contemporary works.

In the mid-20th century, rapidly developing technology and the industrial revolution have both increased production capacity and the associated consumption potential. Therefore, people have turned towards a constantly renewed and differentiated form of consumption. The increase in consumption, technology and technical possibilities has caused people to have new ideas and design expectations in their perspective on art. This situation has made it inevitable for artists to create contemporary works by making use of industrial facilities.

The concept of the ready-made object, which is an industrial product, continued to change in the 20th century, when artistic expression ceased to be merely 'watched' and became 'experienced art'. In this period, artists needed space to mature their works and to reflect the conceptual message they wanted to give.

Since the 20th century, the art of placing objects in space and experiencing them by the viewer is called 'Installation Art' (Atalar, 2006: 16). In the 21st century, installation art has become an expression of the concept of contemporary art, bringing together the elements of space, object, observer and time. In this period, the work of art integrates with the space and includes the viewer in the fictional world of the artist (Köksal, 2012).

2. Installation Art

Installation, a word of French origin, corresponds to the concept of 'installation' in Turkish. In Turkish, it is used as both installation. (Taştan, 2016). According to Bozkurt, the artistic expression formed by positioning the objects in the space as the artist sees them constitutes the basic building block of the installation. In this way, visual tools enable not only the image but also art and installation to come together in a space with different times and fiction (Bozkurt, 2012).

The art of installation, which interprets the meaning given by the object and space to the viewer, brings together different disciplines with their unique approaches. The main goal of the installation is to emphasize a spatial fiction aimed at grasping the meaning that the artist wants to give. Therefore, in installation art, the use of objects, materials and space to perceive the concept gains importance rather than aesthetic effects. The perception of the concept that the artist imposes on the space with the installation is completed with the viewer's experience by being involved in the work.

3. Field Study

The Qur'an Installation project was built in Ankara Ethnography Museum. The museum, where traditional Turkish historical collections are exhibited, was built on the instructions of Gazi Mustafa Kemal Atatürk in the area called Namazgah Tepe in the
Altındağ district of Ankara. 1. One of the most important representations of the National Architecture Period, the Ethnography Museum is the first museum designed and built after the proclamation of the Republic (Ministry of Culture and Tourism, 2021).

In the Ankara Ethnography Museum, restoration works were initiated in March 2022 in order to bring contemporary and technological solutions while reflecting Turkish culture and national traditions. It was completed in a short period of 1.5 months by the Director of Survey and Monuments under the Ministry of Culture and Tourism, Master Architect Cennet Ceylan, and made ready to be visited at the opening of the Capital City Culture Road Festival on 29.05.2022.

The route followed in the restoration of the museum is to highlight the old without damaging the historical artefacts and without disturbing the originality of the place. For this reason, the historical texture was wanted to be reflected as it is by re-enactments from time to time. However, in the Ethnography Museum, a hall that attracts attention with the use of a different method from this restoration idea was designed. This hall is the Manuscript Hall. This area, which tries to define the place of manuscripts and calligraphy arts in our culture with our religious values, is designed in a fiction that aims to integrate the space with the audience by supporting Çeber's famous quote for collection museums: "The new art paradigm, which includes the presence of the audience in the work of art, moves it from a "cardboard eye" to a bodily presence." (Çeber, 2017: 88).

One of the basic beliefs of Islam, the scenario of God's verses descending from the heavens and turning into the lines in the Qur'an, was placed in the space with an installation fiction. In this way, the manuscripts section in the museum has been interpreted in terms of cultural values by the designer of the Qur'an Installation and the author of the article, the importance of religious foundations has been reflected in the space and work desired to be in contemporary museology has been presented by transferring from the space to the audience. This work, which realizes the trilogy of audience and work, work and space, space and audience, which Çeber describes for contemporary museology and art, first surprised the visitors of the museum, then made them think, then made them make sense of it and made them question the meaning of the hall where it was located.

The installation project was organized into four stages; determining the conceptual idea of the design, creating the design, making the application drawings and material decisions and installation stages (Figure 1).

3.1. Creating the Concept Idea of Qur'an Installation

The most important factor that forms the conceptual idea of the installation project is that the design is built in the Manuscripts Hall. This hall, where the old Qur'an and tafsir books are exhibited, is a room containing historical artifacts belonging to the Islamic religion, which is one of the important factors of Turkish culture. For this reason, the artist wanted to make the visitors feel the importance of the holy book and the art of writing by telling the birth of Islam. The Prophet Muhammad, the prophet of Islam, was given the command "Iqra!" the first verse revealed during his seclusion in the Hira Cave on Jabal Nur. Therefore, the meaning and exegesis of "Iqra", which means "Read!" and Surah "Al-Alaq", which contains this word, should be well known.
Figure 1. Installation Project Concept-Design-Application-Installation Stages Flow Template (Prepared by the authors)
Surah Al-Alaq is the surah containing the first message of Allah to Prophet Muhammad. The surah, which was revealed in the Makkah period, consists of 19 verses in total. The number of words is 72 Qur’an and the surah number is 96 (Figure 3).

The word ‘Alaq’, which gives its name to the surah, means to cling to something in the dictionary, to hold on, to be hanging. In Sarıgül’s study on the meanings attributed to the word ‘Alaq’ in the tradition of tafsir, it was examined that most commentators think that the word means ‘clotted blood’. In some lexical interpretations, it is seen that the clotted blood due to its suspension is called ‘alaq’ and its part is called ‘alaqa’. When the word ‘alaq’ is mentioned together with the word ‘nutfe’ in the verses, it gains a plural meaning. In medical terminology, it describes the division of the egg, which is united with the sperm, from the zygote stage to the embryo stage (Ministry of National Education, 2012). In this way, the zygote represents the formation stage of the embryo. The word ‘Alaq’, meaning blood clot, which symbolizes the verb ‘hanging’ in its origin, is the name given to the embryo's attachment to the womb (Sarıgül, 2020). In the Qur’anic translation published by the Directorate of Religious Affairs in 2005, the word ‘alaq’ is defined as meaning the state of the embryo hanging on the inner wall of the mother’s uterus (Official Website of the Directorate of Religious Affairs, Qur’anic Translation).

Surah Al-Alaq begins with the verse ‘Iqra’, that is, ‘read!’ Since Iqra is the first verse that was revealed to the Prophet, the Qur’an, the holy book of Islam, draws attention to reading and the ability to learn, which is the most important feature that distinguishes human beings from other living things. ‘Read in the name of your Lord, the Creator! He created the human being from aqa’alaq. Read! Your Lord is infinitely gracious, who taught man to write with the pen, and taught him what he did not know.’ In the continuation of the verses, it is clearly seen that Islam is a religion of knowledge. Surah Al-Alaq, which contains the orders to write with a pen, read and learn together, sheds light on the advancement of knowledge and making it permanent for future generations (Gündoğdu, 2018) (Figure 2).

Figure 2. The Qur’an / a new translation by M.A.S. Abdel Haleem (Oxford World’s Classics)
3.2. Creating the Design Draft of the Qur’an Installation

The Qur’an Installation Project in the Manuscripts Hall of the Ankara Ethnography Museum is a first in terms of the Islamic meaning it carries, the place where it is designed and the way it is implemented. The project simply depicts the descent of Surah Al-Alaq from the heavens to the pages of the Qur’an.

The idea of design originated from the fact that visitors to the museum experience the space. For this reason, the artist focused on a work that can be felt throughout the space. At the same time, the protection of historical artefacts pushed the design area out of the showcases and caused it to be solved within the visitor circulation (Figure 3).

The hall, where manuscripts and calligraphy are exhibited, was designed in a fiction centered on the Qur’an to appeal to the religious memory of the visitors. Surah Al-Alaq, which contains meanings such as read, pen, write, learn and teach, was considered as the most appropriate surah for the meaning and importance of the hall. The fact that the surah is also the first revelation and verses revealed to the Prophet gave the designer the idea of conveying the words of Allah to the visitor. The word Alaq, which means to be hung like an embryo, sheds light on the method to be used in laying the verses in the space. In this way, the installation fiction of Surah Al-Alaq started to mature.

To provide realistic results for the project, the work was modeled in 3D and renderings were evaluated. As can be seen in the draft design, the project was designed in 3 stages from top to bottom; the ceiling plate on which the installation will be hung, the words section where the installation will be placed and the Qur’an base where the verses descend (Figure 4).

The panel placed above the space is designed to present a light show flowing from the ceiling to the floor with fiber lighting. In this way, the grains of light is symbolized as angels descending from the sky, and by following the fiber material, they turn into letters, letters turn into words, and words turn into verses.

In the design of the installation, it is important that the visitor entering the space can read the surah from beginning to end. For this reason, the words and verses are designed to follow each other in accordance with their meaning in the Qur’an and are rotated 7 times around the pedestal. In this way, the artist wanted to make a reference to the pilgrimage obligation performed by circling the Ka’bah 7 times. At the same time,
the fact that Surah Al-Alaq is ranked 96th in the Qur'an determined the number of pieces to be used in the installation.

Figure 4. In the figure, the Qur'an Installation project was modeled and rendered in 3D max computer program as a draft project (The project was designed by the authors)

Another detail in the draft design is the animation by placing the Qur'an on a model. Here, the designer has completed the composition by integrating the verses of the Qur'an, which were revealed to the Prophet Muhammad while he was in the cave of Hira on Jabal Nur, with the light filtering from the cave.

3.3. Drawing and Manufacturing of the Application Project of the Qur'an Installation

The main factor that played a role in the clarification of the material and application decisions of the Qur'an Installation is that the design will be hung on suspended ceiling profiles. Therefore, the weight of the installation had to be carried by the suspension rods of the suspended ceiling. For this reason, the architect of the design has preferred materials that both lighten the system load and can balance within themselves. These materials are MDF (Medium Density Fiberboard) for the ceiling plate, decota and plexi for the words, and fishing line as a suspension element. Another change in the design is that a Qur'an lectern with historical value was preferred instead of the model of Hira Nur Cave.
In order for the project to be dimensioned with the correct dimensions in the space, firstly drawings were made in the plan and section plane. The materials scaled in these drawings were cut and manufactured by CNC machine (Figure 5).

Figure 5. Plan Diagram of the Manuscripts Section of the Ethnography Museum
(The Project was designed by the authors)

The board on which the installation will be hung covers an area of approximately 4mx6m. 3mm MDF (Medium Density Fiberboard) was preferred for the production of the board where the words will be listed. The board is drawn in oval form following the curve of the installation. In the centre of each route, holes were drilled for hanging the words. Although the width of these holes is the same (3mm), their distances to each other are different. The reason for this is that the length of the letters decreases from the ends to the centre and the connection distance approaches (Figure 6).

Since the surfaces of the plate parts cut on the CNC machine are smooth and slippery, the surface of these materials was made paint-retaining with primer paint before painting with acrylic paint. After this process, the painting was carried out by spraying technique to form a homogenous and thin layer on the perforated plate. The parts were varnished in order to prevent contamination of the surfaces and removal of the paint due to the effects of environmental factors during manufacturing and transport.

For the production of the words, 2D drawings were first made in the computer environment. The Autocad program was used to test the shrinking of the letters from the edges towards the centre by length calculations and to reach the actual dimensions. The letters dimensions of which were clarified were grouped according to the volume and specific gravity equation and weight calculations were made. In this way, the most suitable material preference for the words was made by calculating the value between the maximum load that the suspended ceiling can lift and the minimum weight that the fishing lines will carry and the tension of which will not deteriorate. After this stage, the words
cut in CNC machines were brought to the painting stage. Finally, before the products were transported for on-site assembly, they were tested manually according to their centre of gravity and the hanger screws were attached and glued.

![Diagram of Surah Al-Alaq](image)

**Figure 6.** Orientation and dimensioning of the words of Surah Al-Alaq on the plan (The project was designed by the authors)

While arranging the word lengths of the surah divided into 4 groups, it was decided that the smallest word length should be 4cm by paying attention to the readability of the letters. In this way, a linear slope decreasing towards 4cm was formed with the largest word length being 50cm. The length order was planned to stay below this slope.

A fishing line was used in the project. The reason why this material is preferred is that it has a low stretch coefficient according to ambient conditions, high breaking force due to loads, easy processing feature and aesthetically transparent and reflective appearance compared to other fishing lines.

When calculating the length of the fishing line used in the project, the length of each helix must first be known. Therefore, the projection and heights of the spirals corresponding to the centre lines of the piece drawn for the ceiling plate were determined. In this way, the direction formed by the words was determined (Figure 7).

Due to the design fiction in the project, the word with the smallest weight was hung on the longest lines and the line with the largest weight was hung on the shortest lines. Therefore, to keep the system in balance, various calculations were made, material decisions were made and the application project was drawn.

The words cut on the CNC machine need to be painted before they are taken to the museum for assembly. After the primer paints of all the words were applied with the help of a soft-tipped brush and dried, they were painted with acrylic-based, glittery, gold-colored plastic paint. For the words to have a moving surface, sponge-type brushes were used to prepare the words with the buffering technique (Figure 8).
Some of the letters in Arabic should be separate from the whole word in terms of the way they are written. However, since it would be difficult to balance the line in this case, these letters were connected to the word to which they belonged by making intermediate bars. This process was done by drawing during the transfer of the words to the computer environment. Since the ceiling and shelves of the installation hall will be covered with black paint, the connections between the words were covered with black color during the painting of the words. In this way, the connecting elements of the words placed on the hangers were hidden with a color change (Figure 9).
After the paint has dried, before the words are transported to the museum for assembly, small screws need to be mounted on the words so that the fishing lines can be attached. These screws are gold colored to match the paint of the words and are used as jewelry screws with a diameter of 18 mm and a length of 60 mm. Since the fishing lines will be hung from the part where the material thickness is so that the words will stand upright, the screws should also be placed in these areas. Firstly, with the help of a charged drill, holes were drilled in the places deemed suitable for the balance of the words. Screws with a diameter of 18 mm were placed in these holes by squeezing strong adhesives (Figure 10).
3.4. Assembly Installation of the Surah Al-Alaq

The installation of the project was carried out as an on-site application in the Ethnography Museum. The structural elements of the system consisting of a ceiling plate, suspended words and a Qur’an lectern were transported to the Ethnography Museum Manuscripts Hall. Firstly, the ceiling plate was mounted to the suspended ceiling profiles with the help of scaffolding. Then the words packed in order were tied with fishing lines and hung. In order to ensure weight balance, words made of 3mm plexi were connected to each other and natural stones were placed at the ends. After the design fiction of the installation was completed, the Qur’an and the historical artifact lectern were brought and placed in the pedestal and fanus. The installation art, which tells the story of the first verse in Islam, Surah Al-Alaq, pouring from the heavens to the pages of the Qur’an, was constructed in this way.

After the parts were manufactured, the joints of the parts were numbered with paper tapes to prevent any confusion during transport to the museum. Before the MDF materials were mounted on the ceiling, they were placed on the floor and their projection was marked on the suspended ceiling profiles with lasers. In this way, the areas where the parts will be mounted were clarified and error-free work could be done. In order to fix the board to the suspended ceiling, black screws were inserted into all board gaps on the U profile and covered with screw caps (Figure 11).

The installation design was placed by hanging at the level of the gaps in the center of the ceiling slab. To determine the elongation curve of the fishing lines, one fishing line was hung at the level of the first and last words. Perforated metal washers with a diameter of 5 mm were used to fix the fishing lines to the board (Figure 12). The end of the fishing line, which was passed into the plate hole from below, was tied to the metal washer at the suspended ceiling level and knotted. Since the hole of the plate was 3 mm in diameter, the fishing line was fixed to the plate.
The words packed in order were hung starting from the first spiral. As the spirals rotated from top to bottom, the levels at which the scaffolding could move easily were hung at the same time. Two members of the team were on the scaffold fixing the lines to the ceiling, while the other two worked in synchronization with those above for material delivery and height adjustments. The assembly stages of Surah Al-Alaq are given in the table below with explanations and visuals (Table 1).

The first fishing line hung for the installation was placed in order to calculate the height value in the center. There is no word attached to this line. Instead, 6 pieces of agate stone, also known as Yemen Stone or Immortal Stone in Turkey, are lined up. Red agate stone is thought to have an effect on the energy flow of the space with positive emotions and thoughts as well as attracting negative energy in the environment like onyx. It is also known to increase blood circulation and activate the power of reason and logic (Yeniyol, 2009).

The words "read", "pen" and "write" in the commentary of Surah Al-Alaq show that Allah's first verses show that writing should be given importance by reading. Inspired by the importance of this hall where the museum's manuscripts are located, the designer wanted to refer to the types of writing. From the past to the present, manuscripts have been written in many different ways, using different types of writing. This writing art is
called hüsn-i calligraphy. The branch where Hüsn-i calligraphy art is classified according to the type of writing is known as aklam-i sitte. The writing forms known in this type of writing are: Sütlüs, Naskh, Muhakkak, Reyhani, Tevki' and Rika’ (Yıldız, 2012). For this reason, the architect preferred to hang only 6 agate stones on the line in the center of the manuscripts hall (TDV, 1989) (Figure 13).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Visual</th>
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<tr>
<td>1. Hanging the first words; &lt;br&gt;The longest part of the words is the first word of the first spiral. Since the length of this word is 3 m, this piece was left to the end. In case an error occurs during the assembly of the spirals, this part is planned to be shifted towards the suspended ceiling at the gap level to gain space.</td>
<td>![Image 1]</td>
</tr>
<tr>
<td>2. Creation of the first helix; &lt;br&gt;Since the first spiral is the outermost part, it is the reference for the other spirals. For this reason, the spiral was completed by hanging enough words so that the lines would not hit the scaffold.</td>
<td>![Image 2]</td>
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<td>3. Start to complete the other spirals by following the first spiral; &lt;br&gt;Since the word ranges were chosen by proportioning the spirals to each other, the formation of the first spiral was a reference to the others. For example, the stop of the first verse in the 2nd spiral corresponds to the stop of the 2nd verse in the 3rd spiral. Following this synchronization according to their length ensured that the word spacing progressed without error during the assembly. &lt;br&gt;The 4 spirals rotate 7 times in total. The lengths of the 3rd and 4th spirals are planned to be long enough to make a total of 3 turns in the center. The purpose of this is that the designer wants to refer to the tawaf worship performed in the Ka’bah by rotating the visitor who wants to read the surah from beginning to end 7 times around the Qur’an.</td>
<td>![Image 3]</td>
</tr>
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4. Tying the last lines before the scaffold is removed from the project center;
In order to mount the fishing lines on the ceiling, the team has to work on the scaffolding. However, the movement area of the scaffold is restricted by the letters coming toward the center. Therefore, the lines for the last words were placed on the ceiling plate with washers and brought to a level that can be reached with a normal folding ladder. In the meantime, the ends of the lines were temporarily attached to the other words below so that the scaffold could be removed from its place.

5. Hanging the last lines;
Having completed its task at the center, the team moved the scaffolding out of the installation area. The last fishing lines on the Qur'an were temporarily removed from the letters where they were placed and tied to their own words.

6. Installation of the last word;
Finally, the last word of 3 m in length was hung. In order for this word to bend in the direction of the plate, cuts were made on the bending surface to make it bend. The slope of the bending points was fixed with fast adhesive and closed with putty.
7. Cutting the excess lines and finalizing the project; After all the words were hung, the fishing lines overflowing from the knots were cut and the number tapes pasted on the words were removed.

8. Placing the Qur’an Lectern and Pedestal; Qur’an lectern was specially selected and brought by the museum director for the installation project. This recipe from the Ottoman period was carefully placed inside the pedestal with a fan. The last Qur’an was placed on the Qur’an lectern with the 96th page of Surah Al-Alaq open.

9. Hanging Natural Stones; Since the last words are at weights lower than the pulling force of the fishing line, they could not be balanced alone. Therefore, the architect of the design hung natural stones on the ends of the words to create weight.

(Photos taken by the authors).
4. Evaluation and Conclusion

In this study, the installation project built in the Handicrafts Hall within the scope of the restoration of the Ankara Ethnography Museum is analyzed. The process from the design stage of the project to the construction was observed and evaluated.

The most important factor in the formation of the installation design is that the project was constructed in the Manuscripts Hall of the museum. Inspired by the concept of this place, the artist wanted to depict the descent of Surah Al-Alaq, known as the first descending surah in Islam, from the heavens to the pages of the Qur'an. The spiritual meaning and design fiction desired to be achieved in the draft project were constructed in accordance with the design during the manufacturing phase. Details such as the words being gathered from the heavens and descending to the Qur'an by shrinking, and turning 7 rounds around the priest and pedestal are artistic elements that are transferred from the design of the project to the production as it is.

In order to construct a work of art in a space, it is necessary to analyze the features of that space well, create a presentation file within the concept, determine the technical drawings and details, make the necessary mathematical calculations, and construct the project in the light of the available data. For this reason, artists designing work of art must also have a deep knowledge of structure. The branch of science in which the fields of aesthetic design and engineering structural knowledge are intertwined is undoubtedly architecture. Architects are individuals who are trained in the technical structure and material knowledge as well as artistic perspective. For this reason, the curators of the museum handed over the construction of the project to architects from the design of the installation project to its production. As a result of the architect's structural knowledge and process analysis, the area where the design would be applied was limited to
installation on a suspended ceiling, but the project was successfully implemented and the manufacturing process was managed skillfully.

The installation application, created for the first time in Ethnography museums in Türkiye, has the feature of being the first in the world with its construction in the concept of the first surah revealed to the prophet in the Qur’an. It is thought that installation examples will increase in museums, exhibition areas, gallery spaces of public buildings, courtyards and many areas in the future and this application will be an example for future studies.

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