

ARCHITECTURAL COMPETITION PROJECT EXPERIENCE DURING THE PANDEMIC

PANDEMİ SÜRECİNDE MİMARİ YARIŞMA PROJESİ DENEYİMİ

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ABSTRACT

It should be emphasized that the pandemic reminds us the importance of the efficient use of technological facilities in the field of architecture as well as in other branches. In this study, within the scope of a graduate course, the process of participating in an architectural competition project in the online platform has been handled. The problems occurred during the online preparation for the competition (Izmit Fethiye Avenue Regeneration Project), and the solutions have been discussed. The inferences have been made, and the methods have been suggested, which can be followed for online competition projects.

Keywords: Pandemic, design and technology, online communication, architectural competition.

ÖZET

Pandeminin bize, diğer alanlarda olduğu gibi mimarlık alanında da, teknolojik imkanların verimli kullanılmasının önemini hatırlattığının altını çizmek gerekir. Bu çalışmada, pandemi sürecinde, mimarlık yüksek lisans dersi kapsamında, bir yarışma projesine çevrimiçi olarak katılım süreci ele alınmaktadır. Bu çalışmada, yarışma (Izmit Fethiye Caddesi Yeniden Düzenleme Yarışması) sürecini tamamiyle teknolojik imkanlarla yürüten ekip üyelerinin karşılaştığı sorunlar ve çözümleri tartışılmıştır. Bu çıkarımlar sonucunda, çevrimiçi olarak yürütülecek yarışma projeleri için izlenebilecek yöntem önerileri yapılmıştır.

Anahtar Kelimeler: Pandemi, tasarım ve teknoloji, çevrimiçi iletişim, mimari yarışma.

1. INTRODUCTION

With the COVID-19 pandemic affected all over the world, it is necessary to emphasize the importance of the effective use of digital technologies in the world of architecture as well as in other branches. This situation required urgent decisions to be taken during the pandemic. For example, the use of digital technologies in architectural education has taken its place. Milovanovic et. al. (2020) discussed online architectural education during

the pandemic, while Ahmad et. al. (2020) focused on online interior design education. Some of the architectural offices started to work in remote communication.

In the pandemic, the use of digital technologies in the preparation for architecture competition projects is also very important. In this study, the preparation experience for an architectural competition, which was started before the pandemic and continued throughout the pandemic, was discussed. It is thought that the inferences can be a guide on how to design an architectural competition project that can be conducted online.

The architectural competition project preparation experience during the pandemic was within the scope of a graduate course. The competition group consists of the lecturer, 6 architectural graduate students, 1 landscape architect, 2 environmental engineers, 1 electrical engineer, 5 assistant undergraduate architecture students and 2 recently graduated architects. 6 people dealt with plans, sections, elevation drawings, 5 people with the theoretical infrastructure and concept, 3 people with renderings, 2 people with landscape design details, 2 people with the infrastructure system, 1 person with the lighting design and system, and 1 person with the presentation boards design. The instructor of the course directed the design decisions, coordination among the relevant units and time management.

2. METHODOLOGY

"Izmit Fethiye Avenue Regeneration Project" competition has been announced on 27 January 2020. It was decided to prepare for the competition as of 13 February 2020 within the scope of the graduate course named "Computer Applications in Architecture" (Figure 1).

During the first month period, until the pandemic was declared, studies related to the competition were carried out. First of all, in this process, one person went to Fethiye Avenue and took the photos of the competition site and made site analysis. Analysis such as functional analysis, building height analysis, historical texture analysis, existing tree analysis, transportation analysis and cultural sustainability analysis were carried out. These analysis and the inferences were shared with the competition team in the classroom. Another person researched the historical background of Fethiye Avenue and presented it within the scope of the lecture. After the presentations, work distribution between the team members was made. Meanwhile, the main design decisions were made as a result of the manual and digital sketching studies about the concept. Afterwards, studies were carried out for the level arrangements for the slope that may require additional steps in front of the shops along the street (Figure 2).

Within the scope of the graduate course, it was also focused on the use of new programs during the competition preparation process. During the digital sketching, in addition to Rhino program, Pufferfish, an add-on in the Grasshopper, was used. Many sketches were made with Tweencurve command, which is one of the features of Pufferfish. Later, plan drawings were continued by using Tweencurve command over Rhino program. After many alternative pattern experiments, formal design decisions were made in relation to the pavement material in the landscape.

The preparation process for the competition continued online after 12 March 2020 due to the pandemic. Many different programs were used in the online process, especially in the field of online communication. First, the Google Drive file was opened and a folder was created for each participant under their own names. In this way, it was aimed to prevent confusion in the working process. Work distribution could be done via Whatsapp program. Details of communication between the team members are given in the next section.

The team contacted to the engineer consultants after the completion of the analog and digital sketches. The infrastructure system was discussed with the environmental engineers, the appropriate materials for the landscape design was discussed with the landscape architect, the form and functions of the lighting elements were discussed with the electrical engineer. The sketches were reshaped in line with the discussions. After this stage, technical drawings such as sections and elevations were started. AutoCAD and Rhino programs were used in the drawings. Presentation board layout editing was done in Photoshop. If necessary, Illustrator program was used in graphic expression. In addition, 3D modeling support was received from undergraduate architecture students. SketchUp was used as a 3D modeling environment (Figure 2).

On 19 March 2020, Izmit Municipality published an addendum because of the pandemic. Accordingly, the project submission date was postponed for up to 20 days and it was envisaged that the delivery will be made online on 20 April 2020. The results of the competition were announced on the website on 22 June 2020. The colloquium of the competition was held online on 13 July 2020 (Figure 1).

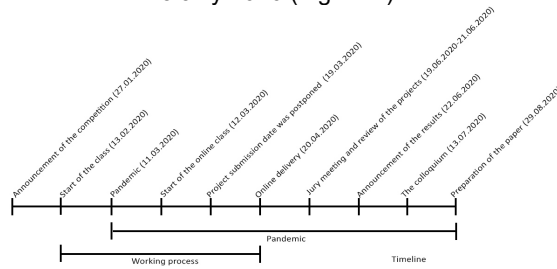


Figure 1: The timeline of the preparation for the competition (The image was produced by the authors)

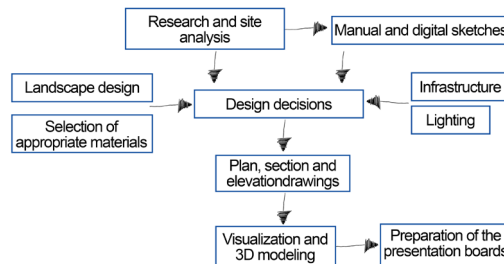


Figure 2: The design process (The image was produced by the authors)

2. 1. Team Communication

Various online communication tools were used during the competition process. We can list them as Whatsapp, Teamviewer and Google Drive (cloud system).

The Whatsapp program was the main source of communication between the team members throughout the process. In addition to the main Whatsapp group, which includes all of the team members, sub-communication groups were also created. Because, according to the distribution of the tasks, small groups of people who carried out directly related works emerged. These small communication groups differed in connection with the work done during the competition process.

During the preparation of the competition project, team members may encounter various problems. These problems can be related to various uncertainties experienced in the drawings and difficulties encountered while using a program. To solve these problems, the team members connected to each other's computers with the TeamViewer program. Therefore, the solutions were produced in a short time.

Google Drive was used as a cloud system. Sub-folders were created using the names of the team members in the main folder. The works were regularly uploaded to these folders as they progressed. Thus, a person working dependent on another person was able to download and use the updated file without losing time with mailing. Using a naming system was very practical to distinguish the updated files (Figure 3). At the same time, even if the files belonging to previous dates were deleted from computers, they were found and used in the cloud system.

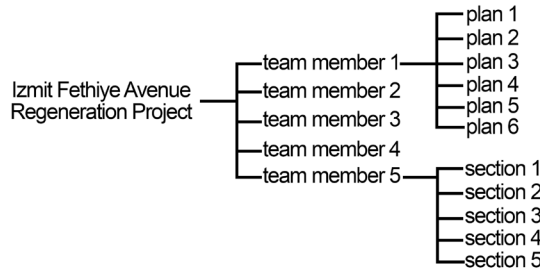


Figure 3: The folder arrangement by using names (The image was produced by the authors)

Oral and written expression remained limited in visual-oriented works and was not sufficient to express what was intended to be expressed. This deficiency was tried to be solved with various sketches (Figure 4).

To solve various design-oriented problems, layered-digital sketched were used. The ideas were exchanged within the group over the 2D or 3D visuals. The sketches were usually made over the phone by adding lines that express the idea quickly. Team members used different colors in layered-digital sketches (Figure 5).

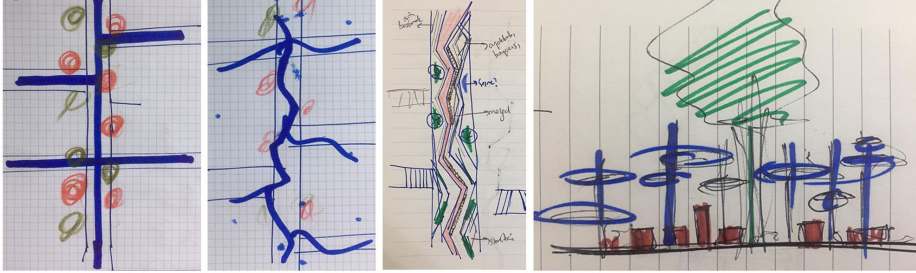


Figure 4: Manual sketches (The image was produced by the authors)

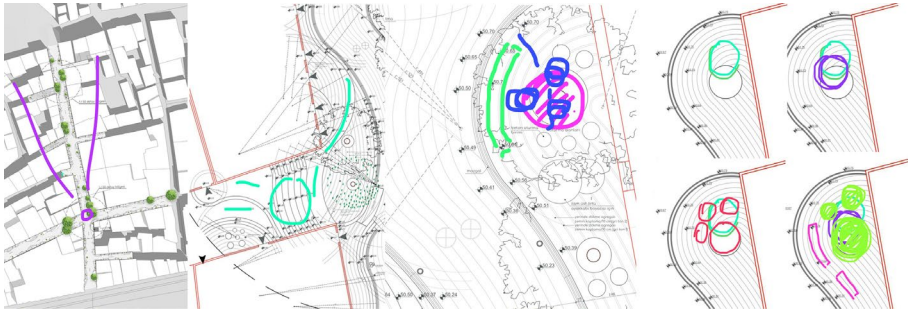


Figure 5: Digital sketches and layered-digital sketches (The image was produced by the authors)

3. THE PROJECT PROPOSAL

It is known that many movie theaters/cinemas were opened in Izmit during the period of 1930-1960. These facilities, which could not survive until today, had an impact on the urban development of the region. It can be said that the *Oguz Cinema* at Inonu Street, the *Oguz Summer Cinema* at Sanat Street and the *Aile Bahce Cinema* on Fethiye Avenue had a great impact on the development of Fethiye Avenue. Along with cinemas, new shops were opened on Fethiye Avenue, so that commercial life became active and social life was generated in this way (Akdas, 2017). This culture, which had existed in Izmit for years and affected the urban development, disappeared over time.

With the proposed Fethiye Avenue Regeneration project, the publicity in the region was reevaluated and it was aimed to make the region an attraction point again. While doing this, the revitalization of the “stage” culture, which existed in the region for many years, but has not survived until today, was proposed and the design decisions were made in this context. It was aimed to create node points by creating various “stages” on Fethiye Avenue and the streets associated with it. The existing features such as trees were used as constraints for determining the locations of the proposed node points (Figure 6).

It was thought that every shop would have its own “stage”. The level differences that currently exist on Fethiye Avenue were used to create stage platforms. In addition,

canopies were designed for the various street sellers. An amphitheater was proposed for Tokoglu Street that is connected to Fethiye Avenue. A stage for street artists and performance artists was arranged in front of the amphitheater. The trees that already exist were thought as scenery for this scene. These trees also defined the boundary of the scene. Salim Efendi Street, where the coffeehouse was located, was supported by seating groups along the street and transformed into a stage where the historical Ottoman Bath was the scenery. In addition, the fountain that exists at the intersection of Fethiye Avenue and Istiklal Street was transformed into a stage by supporting it with sitting units, canopies and a water element (Figure 7).

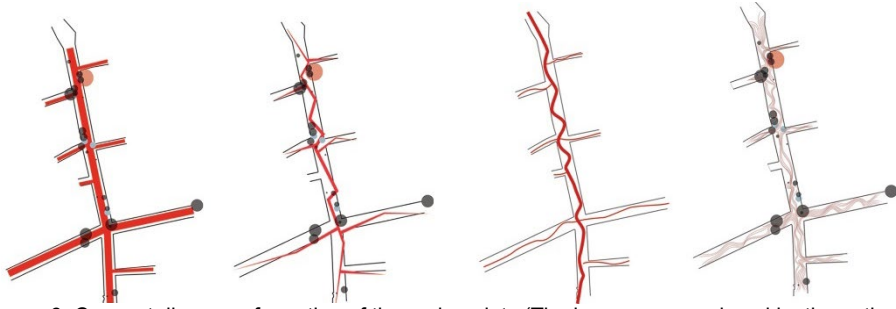


Figure 6: Concept diagram of creation of the node points (The image was produced by the authors)

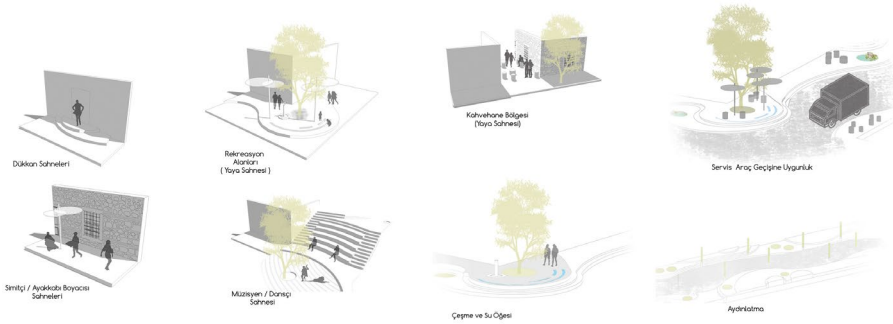


Figure 7: Proposed public spaces (The image was produced by the authors)

Fethiye Avenue is a street where pedestrian flow is intense. However, with the shift of the socio-economic center to the Izmit Walkway (*İzmit Yürüyüş Yolu*), Fethiye Avenue has lost its feature of being a center today and has turned into a transition zone. However, there are many elements around it that can feed Fethiye Avenue (Figure 8). In this project proposal, colors, patterns, level differences, lighting were used as tools to direct the pedestrian flow and determine the relationship between pedestrian flow and public space (Figure 9).

Sustainable design principles were applied to the project. For example, principles such as collecting water from the roof, bioretention by using the slope, and recycling the water were proposed in the project. The sidewalks were intended to create a living interface between the street and the shops while easing the shop entrances. Urban furniture were located on the sidewalks without interrupting the street flow and the access to the shops. The nodes on the street were strengthened and highlighted.

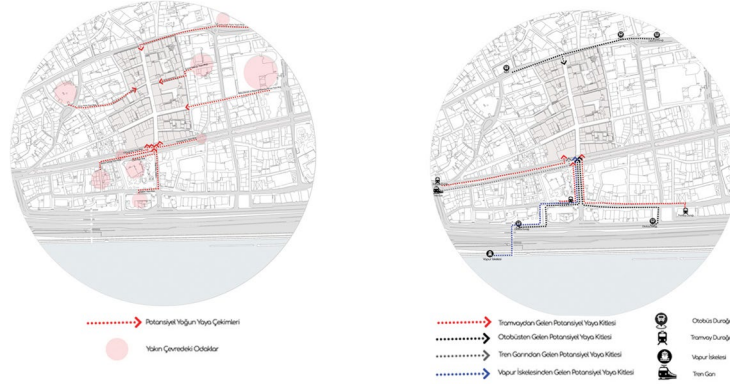


Figure 8: Potential pedestrian flow (The image was produced by the authors)



Figure 9: The plans (The image was produced by the authors)

Returning the rainwater to the air as early as possible before reaching the sea or treatment facility is important for the protection of natural balance. This recycling can be achieved with the bioretention method (Davis et.al 2009), and floods can be also prevented with this method.

It is suggested to place many flood pots along Fethiye Avenue in order to apply the bioretention method. Rain water, which can be collected with the slope of the street and the rain gutters from the building roofs, will be quickly caught by special plant beds that serve as flood pots. When the rain water reaches a certain amount in the pots, the chemicals contained in it will be filtered by plants through evaporation and perspiration. Therefore, it can be returned to the air before reaching the sea or treatment facility. Also, it can be added to the ground water via infiltration (Figure 10).

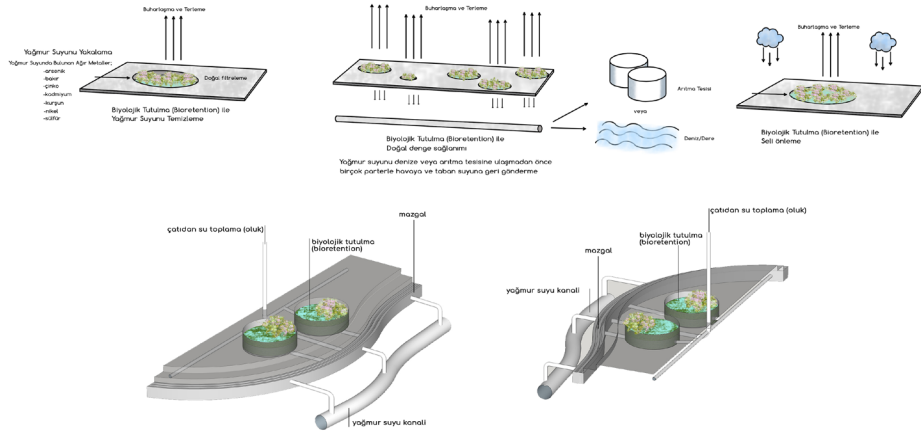


Figure 10: Bioretention and infrastructure diagram (The image was produced by the authors)

4. THE ADVANTAGES AND DISADVANTAGES OF THE PROCESS

During the pandemic, preparing for online competition has many advantages. These can be listed as below.

- For example, as the competition process is carried out on a digital platform, it provides easy access to people via Whatsapp almost every hour of the day.
- The competition team can be in different regions during the competition preparation process.
- No time was lost in transportation.
- Problem solving has been accelerated with programs for establishing connections between computers such as Teamviewer.
- No data loss was experienced as the studies were carried out by uploading files to the cloud system.
- Practical visual expressions on subjects that could not be understood through verbal and written communications could be resolved with sketches over Whatsapp.
- Communication tools such as Google Drive cloud system and Whatsapp had positive effects on the online competition process. It has been understood that the use of digital platforms during the pandemic is actually at a level that can manage a competition process.

- During the pandemic, a competition project could be produced within the scope of a graduate course. Computer technologies in architecture in the course were discussed with innovative approaches. Practical experience and theoretical knowledge were gained by the students.

During the pandemic, preparing for online competition has many disadvantages too. These can be listed as below.

- The solution to the problem was delayed as a result of the communication disconnection caused by the digital platform.
- Solutions for some calculation based problems were delayed. For example, communication problems were experienced while solving the level problems of the sloping street.
- The stress caused by the pandemic on people has created focusing problems.
- In visual-oriented works, verbal and written expression remained limited and was not enough to express what was wanted to be told. This deficiency was tried to be remedied with quick sketches.
- Confusion in the perception of available time has emerged.

5. CONCLUSIONS AND RECOMMENDATIONS

The fact that visualization tools such as Photoshop may be used as a cloud system (such as the principle of interoperability in BIM) can ease the coordination of the competition team. Thus, a single person would not be responsible from presentation preparation. Link-based working principle such as InDesign and Illustrator can be facilitated by a system that can work over the network.

Moreover, it will be appropriate to standardize the file names uploaded to the cloud system at the beginning. Especially during the busy times of work, files uploaded to the cloud system can get mixed up over time.

Combining different parts in a single file was the main problem in this competition process. If the AutoCAD xref command would be used during the competition process, more than one person could work on the same file at the same time. Thus, a faster solution could be achieved.

An accumulated unread conversation history occurs on Whatsapp. Therefore, there may be confusion about which of the topics are up-to-date or which of the topics are more important and requires to be solved. Reading unrelated or resolved topics is time consuming. For solution to this problem, the messages may be rated according to their importance level. When writing a message to Whatsapp group conversation, the importance degree level can be selected as low, medium or high. Thus, a person who is not online during the conversation can have the opportunity to distinguish important messages (Figure 11).

The working environment and conversation environment can be created in a common platform. In this way, creating drawings, taking notes and interaction between team members can be in same platform. Thus, there will no need for an additional program

such as Whatsapp. The notes would be taken on the parts that require revision. Therefore, this part will automatically be seperated from other parts.

If applications such as Trello are used in the competition process, work distributions can be controlled more easily. A task can be assigned to the team member or a comment can be made to the team member. In addition, the tasks to be followed can be followed with the "follow" option. A date range can be created for tasks, and upcoming tasks are visible on the main page. In addition, the importance level can be adjusted by assigning labels to the tasks. Trello is compatible with Google Drive and Dropbox. It can also be used online or via mobile application.

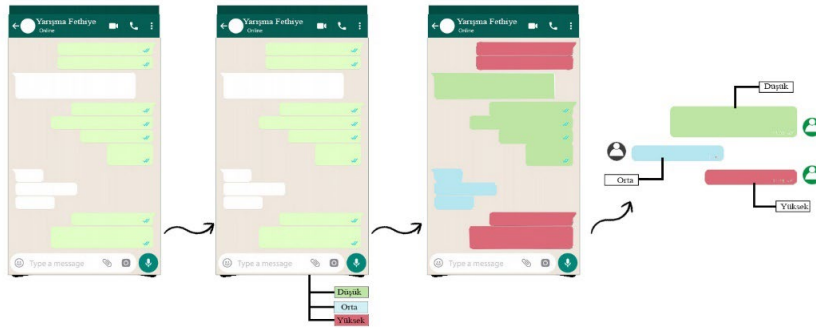


Figure 11: Importance degree level proposal for communication tools (The image was produced by the authors)

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