A Study on Accessible Tourism Potentials of Göreme Open Air Museum

Anıl Evci¹, Candan Kuş Şahin²*

¹Süleyman Demirel University, Faculty of Architecture, Isparta, Türkiye (ORCID: 0000-0002-4490-2562)
²Süleyman Demirel University, Faculty of Architecture, Isparta, Türkiye (ORCID: 0000-0002-0413-2380)

(First received 4 July 2020 and in final form 12 January 2021)
(DOI: 10.31590/ejosat.764073)


Abstract

The Göreme Open Air Museum, which has hosted many civilizations throughout the history, has a worldwide reputation. This region is well known in terms of natural beauty and historical features. In this study, a total of 405 people from three target groups, who visited the region, were interviewed face to face with applying a standard questionnaire. As a result of the survey, the different groups visiting the area on their accessibility way in terms of tourism potential have been studied. From the findings, it was understood that most of the foreign tourists (15%) came from the United States. Tourists came to the region with the highest rate with tour operators. The foreign visitorshad reported the basic equipment and landscaping of the area to be higher than the local visitors and local people. National tourists and local people stated that the walking paths are very sloppy with many-steep lead to difficulties in reaching historical and cultural assets. As a result of the detailed examination and research carried out in the Göreme Open Air Museum and its near vicinity, which is on the UNESCO world cultural heritage conservation list, it was concluded that the existing regulations in the region should be reconsidered to review the accessibility of disabled individuals to the area and to make some new arrangements. Suggestions were made to organize the area so that all visitors could benefit from it.

Keywords: Göreme open museum, Accessible tourism, Landscape architecture.

Öz


Anahtar Kelimeler: Göreme açık hava müzesi, Erişilebilir turizm, Peyzaj mimarlığı

* Sorumlu Yazar: candansahin@sdu.edu.tr
1. Introduction

Tourism is a generic term to cover both supply and demand. However, for simplicity and well-known basis, it could be defined as ‘activities of people traveling to and staying in places outside their usual environment for holiday, recreation, leisure, or other purposes’ [1]. Tourism is a dynamic and competitive industry that requires the ability to adapt constantly to customers’ changing needs and satisfaction, safety and enjoyment. Moreover, it does not conform to the usual ways that industries are defined, such as manufacturing, agriculture and other industries. Its constituents a wide variety of sectors that provide diverse products and services to not only for visitors but also local residents. In this regard, the tourism activities have become an important industry without regular manufacturing process ‘non-chimney business’ in world wide.

However, history, culture, and natural beauty are places of attract or interest where tourists visit, typically for its inherent or an exhibited historical or cultural value [2]. Globally, millions of people with disabilities representing important percentage of the world’s population while this signifies a high potential market for tourism. However, individuals with disabilities have also needs to access into attractive or sightseeing places. Hence, these areas should be designed to all visitors for their demand. In this sense, accessible design of special places enables all people to participate in regardless of their physical limitations, disabilities, age and enjoy tourism experiences [3].

Accessible tourism involves a collaborative process among all designers, policy makers, touristic agencies and end-users, including persons with disabilities and their organizations [4]. However, accessible tourism has also enabled people with access requirements to function independently and with equity through the specially designed tourism environments [5]. So, it is making easy for disabled to enjoy tourism experiences. In order to be understood these tourism activities, the characteristics and social structures of the groups of disabled tourists should be taken into consideration by the managers [6]. Moreover, it normally involves many factors, including accessing information, local transportation, accommodation, shopping, and dining [7]. Thus, it impacts the tourist beneficiaries to the wider society, engraining accessibility into the social and economic values of society. Therefore, making tourism more accessible for all group of people including disabilities are a compelling business case.

In order to be understood accessibility tourism activities, the characteristics and social structures of the groups of disabled tourists should be taken into consideration by the authorized persons [6]. Hence, the skills of planners, designers, producers, managers and other professional groups are very important for creating a sustainable accessible tourism environment [4]. However, it is necessary to design and construct not only the facilities but also attractive places for whole group of disabled tourists [7]. In this sense, making tourism more accessible for all tourist groups are not only a social responsibility but also a compelling business case for improving accessibility.

The Göreme Open Air Museum has been enrolled in UNESCO World Heritage list since 1984, and was one of the two UNESCO sites in Turkey. However, it is also one of the major places to visit in Cappadocia region where forms a coherent geographical entity and represents historical unity. Moreover, the most important and famous attraction is the complex of medieval painted cave churches carved out by Orthodox monks. The Christian monks who lived dating from 900-1200 AD, built these churches by carving the soft volcanic rocks. There are about 10 cave churches along with rectories, dwellings, and a religious school that form a large monastic complex carved out of a roughly ring-shaped rock formation in the fairy-tale landscape of Cappadocia region. The important churches and their specifications located in Göreme open air museum as follows;

**Church of the Buckle:** Contains frescoes of the 12 apostles and the life of Jesus,

**Apple Church:** Built in approximately 1050 AD.

**Chapel of St. Barbara:** Dedicated to an Egyptian woman who was killed by her father for following Christianity.

**Snake Church:** Aptly named because of the frescoes displaying George killing the dragon.

**Dark Church:** Built in the 1000’s AD, and displaying frescoes from the new testament,

**Sandals Church:** Named because of two footprints connected to many urban legends and myths.

In this study, Göreme Open Air Museum, which has an important historical place for cultural, historical and faith tourism values, has been examined in terms of accessible tourism for disabled visitors. In this sense, the current situation analysis was conducted in the area, and surveys were conducted with different type of visitors (domestic and international/foreign tourists) and local people. After the detailed analyses and survey results, demands, expectations and some suggestions on accessibility potential of that area were determined. It is envisaged that the results of the survey obtained from this study may constitute a basis for the accessibility of the region and take a guiding role in future studies.

2. Material and Method

2.1. Material

The material of this study was the Göreme Open Air Museum where located in Göreme Historical National Park in the borders of Nevşehir province, Turkey. Related maps and architectural documents were also used as auxiliary material. This place has very high reputation throughout the world due to the fact that natural features was created since thousands of years. However, it has also well-known place where the monastic education system was launched first time in human being. Thereby, from the 4th century to the 13th century AD, the monastery life was intensely experienced [8].

The study area is located 13 km away from Nevşehir province and 2 km east of Göreme township. However, there are two main gates (east and west) available to enter these regions. These are, one from the center of Göreme city and another from Ortahisar-Urgüp motorway [9].

In the region where the terrestrial climate prevails, less clayey, sandy, tuffaceous and moisture-free soils have formed due to the continental volcanic formations. These soils, which are suitable for viticulture and orchard planting, but are not suitable for irrigated agriculture. The step-based plant formation, which turns green in the spring and disappears in the summer, spreads throughout the region. However, there is no any natural forest cover in the region except for some tree stands grown around the river valleys and dam ponds [8,9].

Currently, there are 3 parking lots with mobile stands and 9 churches in the museum which has a total size of 40,000 m².
However, there are many recreational areas and archeological structures at this region. The general topographical properties look like hilly and surrounded with many cliffs. Figure 1 shows general view of the Göreme Open Air Museum and its near vicinity.

2.2. Method

The Göreme Open Air Museum and its environment were analyzed in both general and special design principles for accessibility of not only by regular visitors but also for disabled or handicapped visitors too. However, particularly, it was carefully analyzed in view of landscape discipline. The survey was aimed to evaluate the both general design characteristics and accessibility properties of that area for disabled people. The face-to-face questionnaire method were used for three different group of visitors (A: Foreign/international visitors, B: Domestic/Turkish visitors; C: Local people/residents). This approach was considered to be most effective way and recommended by many literatures finding on similar research. Hence, two different types of questionnaires conducted and each group was evaluated in its own way.

In this subject, the sub-topics that need to be examined by making necessary literature research have been put forward and the data related to the current situation, studies and applications have been conducted by contacting administrates. In the literature research, a detailed review was conducted on national and international level, projects, brochures, magazines, catalogs, photographs, books, thesis, articles and papers which were to be examined.

The survey analyses and field study for questionnaire was conducted from 14.06.2016 to 03.07.2016. The careful observations and field surveys made at the study area. Typically, four to five hours was spending during conducting survey and questionnaires. In this regard, standard approaches were applied to the visitors by one-to-one interviews and the responds on the questions were recorded. Each questionnaire was answered between 10-15 minutes by responders.

The study was aimed to examine whether or not there is a difference between domestic/Turkish, foreign/international tourists and local people's opinions about the accessibility of the area. In this sense, the minimum number of participants was calculated according to the values determined in the target sample size [10]. However, participants were requested to rank in order of general design characteristics of area and with suitability for disabled people. The following numbered ranks used for classification of results. 1: Strongly agree, 2: Agree, 3: Undecided, 4: Disagree, 5: Strongly disagree.

The mean values for the answers regarding the design characteristics of the area were calculated and classified as; values between; 1.00-1.50: Very adequate, 1.50-2.50: Adequate, 2.50-3.50: Unstable, 3.50-4.50: Inadequate, 4.50-5.00: Not applicable

In the statistical analysis of a specific population that is not generally known, for the minimum sample size, 30 cases could be provided acceptable size [11]. However, if there are several subpopulations, the larger sample size is recommended. According to Özgüner (2001), for example, the smallest subgroups should contain at least 50 to 100 cases in order to be divided into different groups [12].

The participants were classified as three different subgroups according to their nationality and aim of the visiting. In each subgroup had randomly chosen participants.

The total of 405 participants (A: 167, B: 151; C: 87) that were chosen randomly, were attended that survey. The respond of participants for Göreme Open Air Museum design principles were analyzed according to survey results and standards were put forward. However, in advance of face-to-face interview and questionnaire conduction, some suggestion and opinions from responders have been noted for better design suggestions/opinions of that area.

The SPSS Statistics software 22 were used for statistical evaluation of the data. It was evaluated whether or not there were any differences between the groups according to their responds on that subject. The significance value in the ANOVA analysis is used to determine whether the difference between the averages of two or more groups is significant. The level of significance used in engineering areas is generally 0.05 that is corresponds to a 95% confidence interval [13,14]. In ANOVA analysis, the values of sigma value less than 0.05 indicate that the differences between the groups are significant.

Figure 1. The location map and general view of Göreme Open Air museum (A: Nevsehir provenience location, B: Ariel view of Göreme Open Air museum, C: Maps of region, D-E: General view of region and carved churches)
3. Results and Discussion

Figure 2 shows some photographs of Göreme Open Air Museum and some facilities with some landscape properties.

For determining general design properties of Göreme Open Air Museum’s, some questions were directed to participants. It was requested to rank ‘the general design characteristics of the area for tourism activities’ in three different groups of people (A: foreign/international visitors; B: domestic/Turkish visitors, C: Local people/residents). In this regard, Table 1 shows the questionnaire summary of respondent’s opinions on the study area.

For foreign/international visitor group; 167 participants from 41 different countries were selected. However, most of the participants 25 people (15%) was realized to be from USA. General sex distributions of foreign participants as 90 female (54%) and 77 males (46%) with the majority of them were in the 20-29 age range (43%). Moreover, most of the foreign visitors come to area with tour company (101 people). They have usually visited to area during day time (8:00 AM to 5:00 PM) with spending 1 to 2 hours during that visits. It was realized that the majority of international tourists (A) declared as ‘adequate’ for the design properties of the area (Mean values for respondent’s values are between 1.69 to 2.33).

For domestic/Turkish visitor group; 151 participants from 30 different cities were selected. However, most of the participants 42 people (28%) was realized to be from Istanbul. General sex distributions of domestic participants as 76 female (50.3%) and 75 males (49.7%) with the majority of them were in the 20-29 age range (43%). Moreover, most of the domestic visitors came to area with their own vehicles (104 people). These visitors have also usually preferred to visit area during day time (8:00 AM to 5:00 PM) and spend 1 to 2 hours in the museum. Domestic visitors have usually higher mean values for general design properties of study area. Their ranked for these features are between mean values of 1.99 to 2.99. However, more less they have similar opinion of international visitors (ranked similarly) for ‘The accessibility into natural structures’; ‘The walkway’s numbers and functions’; ‘The lighting fixtures quantity and qualities’; ‘The overall cleanliness and service quality of area’ (X: 2.88), respectively.

For local people/residents; 87 participants were selected. However, local group of participants declared to reach Göreme Open Air Museum within 30 minutes. The general sex distributions of local participants as 41 female (47%) and 46 males (53%) with the majority of them were in the 30-99 age range (31%). In contrast to international and domestic visitors, local people have usually reached to open air museum by in very short time and preferred to visit afternoon, between 1:00 PM to 5:00 PM hours of time. Moreover, local residents (C) have found to be considerably different opinions on general design properties of Göreme Open Air Museum’s rather than from both international and domestic visitors. Except the ‘The overall cleanliness and service quality of area’ (X: 2.35), they ranked for all other features are between mean values of 2.58 to 3.03 that means ‘unstable’ opinions in design properties on Göreme Open Air Museum. The highest mean value was found to be for ‘The parking lot’s capacities and locations’ (X: 3.03), followed by ‘The lighting fixtures quantity and qualities’ (X: 3.0); ‘The billboard’s and directional sign’s quantity with locational properties’ (X: 2.89) and ‘The locational properties of basic needs units’ properties’ (X: 2.88), respectively.

When the findings have evaluated statistically in terms of Sigma mean values (0.05%) at 95% confidence level, it is seen that all of mean values are less than 0.05 and the differences between the survey groups are significant in terms of evaluating the general design characteristics of the area. However, it could be summarized that local people declared to be ‘adequate’ of all features that means have more optimistic vision on the accessibility properties of that area by visitors. It is important to note that local people declared to be that general design properties of area is ‘unstable’ in almost all features compare to international and domestic visitors. Table 1. summarize of participants responds for general design properties of Göreme Open Air Museum.
Table 1. Participants responds for general design properties of Göreme Open Air Museum

<table>
<thead>
<tr>
<th>Design criteria</th>
<th>Participants</th>
<th>Mean (X)</th>
<th>Freq.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The accessibility into natural structures</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>1.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.78)</td>
</tr>
<tr>
<td>The walkway’s numbers and functions</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.74)</td>
</tr>
<tr>
<td>The stair’s numbers and efficiency</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>1.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.84)</td>
</tr>
<tr>
<td>The ramp’s suitability</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.87)</td>
</tr>
<tr>
<td>The billboard’s and directional sign’s quantity with locational properties</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.06)</td>
</tr>
<tr>
<td>The seating unit’s numbers and characteristics</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.88)</td>
</tr>
<tr>
<td>The lighting fixtures quantitly and qualities.</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.83)</td>
</tr>
<tr>
<td>The parking lot’s capacities and locations</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.88)</td>
</tr>
<tr>
<td>The locational properties of basic needs units</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>1.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.81)</td>
</tr>
<tr>
<td>The efficiency of guidance in the field</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.93)</td>
</tr>
<tr>
<td>The overall cleanliness and service quality of area</td>
<td>A: 167</td>
<td>B: 151</td>
<td>C: 87</td>
<td>1.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.69)</td>
</tr>
</tbody>
</table>

*The number in parentheses are standard deviations

After the scoring for the total of 11 features in the respond of three different participant groups for general design properties of Göreme Open Air Museum (Table 1), a further survey has also conducted for accessibility design characteristics of the area for disabled or handicapped visitors.

Table 2 shows the questionnaire summary of respondent’s opinions on the accessibility design characteristics of the area for disabled people. It could be seen that international visitors (A) have respond as only ‘adequate’ for ‘The stair’s suitable’ (X: 2.20) and ‘The need of ramp’ (X: 2.27) that in all other features was responded to be ‘inadequate’ (X: 2.58-2.97). This is important that international visitors respond usually higher mean values (low suitability) for features that suitable for accessibility of disabled visitors rather that domestic visitors and local people.

In contrast to findings on general design properties, domestic visitors (B) have usually lower mean values means that more optimistic opinions for accessibility of area for disable people compare to international visitors. They ranked for these seven features are between mean values of X: 1.86 to 2.62. except ‘The waste bin’s properties’ (X:2.62); they have opinion as ‘adequate’ for other six features for disabled people.

Like domestic visitors, more less similar results were found for local residents (C). They ranked for all seven features are between mean values of X: 1.65 to 2.31 that means ‘adequate’ opinions on the accessibility on Göreme Open Air Museum by disabled people. It is also important to note that local people have most optimistic opinions (lowest mean values) on the area for accessibility of disabled people to area compare to other two groups (A and B).

When the collected data evaluated in terms of Sigma values, all the values were found to be less than 0.05 significance level at 95% confidence level. It is clearly indicated that the differences between the survey groups are significant in terms of evaluating the accessibility properties of the study area by disabled or handicapped individuals in current design characteristics of the area. It could be concluded that all groups have declared that the accessibility of this area by non-normal visitors (disabled or handicapped individuals) is not ‘very adequate’; ‘inadequate’ or ‘not applicable’ that means some level of accessibility is possible but with some difficulties or obstacles. It is also important to note that domestic and local groups have more optimistic opinions on the accessibility properties of that area by disabled people rather than international visitors.
4. Conclusions and Recommendations

Designing the built environment with the universal principles that is accessible to everyone could make life much easier. However, individuals with or without disorders should be have right to access all places easily. Therefore, healthy living environments and urban spaces should be design and created by taking national and international standards with considering all users. On the other hand, tourism activities are usually carried out for healthy individuals rather than disabilities while travelling and visiting to some places like historical parks, is one of the opportunities to spend time for all group of people. Besides travel activities, these could be created a fun atmosphere for visitors to enjoy. These creates a mutual interaction environment within the group, decreases social isolation and increases mental well-being.

As a result of this study, in the concept of accessible tourism activities for disabled or handicapped visitors for Göreme Open Air Museum, the following general landscape approaches and rules could be considered to be reorganizing area for visitors. Therefore, in order to make the Göreme Open Air Museum accessible and available to all visitors, some difficulties or obstacles were identified and recommendations were made. These recommendations briefly summarized in below,

Transportation: There is no municipal transportation provided access to the site. Visitors can reach the area especially by the tour companies' buses or special vehicles. Pedestrian route arranged from the center of Göreme to the area is not enough while the bicycle path is not available. However, there is no separate design for access of persons with disabilities to the area. Pedestrian path arrangements should be made between the town center of Göreme and the museum that located just 2 km away.

Parking lots: Despite the fact that there are three different car parking area at the entrance of the museum, insufficient design effects complex traffic. In addition, there are no specific parking spaces for disabled people in the existing parking lots. Hence, a sufficient number of parking spaces should be reserved for these groups and should be indicated with a standard disability sign. However, there is insufficient information (sign or billboards) for direction to parking lots.

Surface pavements: The museum is located on a hilly and sloping ground. However, currently basalt-based cube stone material, which is used in pedestrian roads, may cause problems for disabled people. These the existing floor coverings is not very useful especially walking disabled or wheelchair users that could restrict their access in the area. Moreover, non-slip materials should be preferred as the flooring material that existing surface pavements should be replaced with a more suitable material such as cast concrete or tartan.

Ramps and stairs: The elevation differences in the area are usually solved by stairs. However, the ramp is not intended especially for disabled users that hamper accessibility within the area. In addition, there are no railings and handrails on the ramp and stairs. In ramp and ladder, the railing and handrail must be used and located in accordance with the standards. At the end of the stair and steps, non-slip, protective strips should be utilized in appropriate dimensions.

Railings: The railings in the sections facing the slope of the valley are irregular and are especially dangerous for children. Therefore, the railings should be rearranged and positioned in such a way that they do not pose a hazard.

Billboards and signs: Information and orientation signs are insufficient in the area. Guidance strips should be added in the field and the number of guiding signs should be increased. The position of the sign elements should be evaluated individually.

Lighting elements: Lighting elements should be illuminated in urban outdoor spaces in a way to ensure access and personal safety. Increasing the intensity of light for people with low vision is beneficial in terms of their perception of spaces.

Seating elements: Most of the seating elements in the open-air museum are located at the wrong points, mostly at the sidewalk elevation that the wheelchair cannot enter. In the seating areas, there should be free space for the wheelchair next to the seating elements and for easy access to the wheelchair. Seats which are too close or too far to each other should be reorganized considering the standard design principles.

Terraces: By taking advantage of the existing elevation difference in the area, it should be possible to make the viewing...
terraces at the appropriate places so that the inside of the museum and the environment can be seen better.

Circulation routes: Some existing trees in the area prevent circulation, alternative routes should be recommended for this circulation. Bushes and shrubs that narrow down the road with trees hanging on the walking path should be pruned regularly.

The basic need and administrative units: WC units in the area are adequate, but the reserved WC section for disabled people has usually locked or closed and disabled individuals cannot benefit from this. The disabled WC should be used and it should be ensured that disabled individuals benefit from this.

It is important to note that no administrative personnel provided to that area for providing help and guidance to disabled individuals to access area. In summary, the efforts should be taken consideration for disabled persons to eliminate these obstacles. Therefore, all newly developed designs or projects must be universal under landscape architecture projects for everyone.

5. Acknowledge

This study was carried out within the Suleyman Demirel University ÖYP Project No: ÖYP 06445-YL-14. The author wishes to thank Suleyman Demirel University, ÖYP Coordination Unit for the financial support and contribution to this research.

References