Designing a Village Museum Ecologically: Reuse of Historic School Building

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An Introduction to
ATINER's Conference Paper Series

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This paper should be cited as follows:

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Abstract

The number of the village museums has highly increased in recent years parallel to the increase in the care of the ways of life, intangible cultural heritage of societies. Designing village museums necessitates to understand the tangible and intangible characteristics of the village accurately, specifically, both the architectural language of traditional buildings and the cultural practices of people. This study aims to present a process of designing a village museum in a historical building in the village as a common design problem between the disciplines of interior design and conservation. The reuse of the historic building primarily necessitates to deal with both the structural system and the values of the building which constitute the reasons for conservation of the buildings and the architectural significance of the building besides the natural, economic and cultural characteristics of its context. The reuse of historic buildings necessitates its adaptation to the program of the new function by certain interventions, like, new extensions. This study presents a specific framework for reusing a historic school building in Botsa Village in Konya as village museum developed within an interior design studio. The design framework is mainly based on discovering the ecological principles of local architecture and oriented to the needs of villagers emerging within cultural and touristic developments.

Keywords: Botsa, Ecological Architecture, Historic Building, Reuse, Village Museum.
Introduction

The role of the education in the conservation of cultural heritage has highly been emphasized in the international documents prepared by UNESCO in recent years. From this respect, it needs to prepare specific interdisciplinary courses conforming to the educational aims and processes of the different departments in the school’s curriculum. In the departments of architecture and interior design of universities, throughout the studio projects, studying the elements of cultural heritage provides students first to understand the elements of heritage, and its cultural context, and then, to raise their awareness on the conservation of both tangible and intangible cultural heritage.

This study shares an interior design studio experience developed from three discussions on designing “village museum”, reusing historic buildings and ecological architecture. Therefore, first, a literature search on the historical development of museum understandings, reuse of historic buildings and ecological architecture will be discussed and after that, the process and results of studio experience will be clarified in detail.

Historical Overview of Understandings of Museum

From the beginning, museums have generally focused on displaying the various elements of tangible heritage (Stefano, 2009, 112). After the 2003 UNESCO Safeguarding Intangible Cultural Heritage Convention, museums have been accepted as one of the tools for safeguarding intangible heritage on the national level for the implementation of the convention. The understanding of emotions, meanings and values with or without physical embodiment is also crucial for the safeguarding of both tangible and intangible heritage (Stefano, 2009, 113). In this respect, “musealization” approaches need to consider the values and meanings of the people attributed to buildings while displaying intangible cultural heritage.

Even if museums conflict with living intangible cultural heritage, especially for the conservation of disappearing elements of intangible heritage, they are indispensable for collecting, conserving and displaying the material traces of the past (Alivizatou, 2006, 47). Determining the conflicts between traditional museum practices and living culture, Alivizatou (2006, 48) tries to suggest new functions and roles for museums by developing the concept of “post-museum”. Especially, the new understanding of museums has responsibility for presenting tangible properties with its cultural expressions or developing new methods to conserve and display intangible cultural heritage. Accordingly, “video and sound recordings of cultural expressions and practices” (Alivizatou, 2006, 51) can be used in museums to display the processes of intangible cultural heritage.

As determined in UNESCO 2004 Expert meeting¹, museums are a part of their context, either, buildings, gardens, parks, neighborhoods, villages, so, they

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need to reflect both physical and cultural qualities of these multilayered contexts in their spatial organization, display techniques. Thereby, museums can also be a space for gathering living heritage and bearers in every context. For displaying and safeguarding living heritage, local museums have a more crucial role than national museums. From this respect, village museums as local museums need to reflect the soul of their contexts which is constituted by both physical characteristics and intangible values. In addition to this, museums have also gained an educational role to teach local inhabitants in different subjects and local crafts to increase local economic growth and create employment in the village.

Current Understandings of Reuse of Historic Buildings and Use of Ecological Approaches

The theoretical approaches of conservationists and international and national documents have shared common ground on the necessity of reusing the historic buildings constructed for the different lifestyles and cultures to serve new and contemporary functions through their restoration processes (Kuban 2000; Zakar and Eyüpgiller, 2015; Madran and Özgönül, 2005, 158). The management of change is accepted as one of the aims of the conservation of cultural heritage, defined as “the action taken to prevent decay and manage change dynamically” by Feilden (2003, 3). Given this emphasis, it can be stated that re-using existing historic buildings, which have become out-of-use in time due to a great variety of reasons, needs to create a new life in harmony with the changing life conditions. According to the contemporary conservation approaches, which have developed after the 1964 Venice Charter all over the world, reusing is considered as the only way to conserve and sustain old buildings.

“Adaptation” and “adaptive reuse” are the new terms used for expressing the reuse of the historic buildings. “Adaptation”, defined as one of the degrees of intervention for conservation purposes in the ICOMOS New Zealand Charter includes the interventions from” maintaining its continuing use” or, from “a proposed change of use”. The aims of adaptive reuse projects are mainly to conserve the historic buildings; meaning to safeguard their qualities and values, their material substances and ensure their integrity for future generations (Feilden and Jokilehto, 1993). Thus, the adaptive reuse of historic buildings needs to have minimal impact on the heritage significance of the building, mainly, the integrity of spatial and architectural characteristics.

The function of “museum”, aiming to conserve and exhibit the objects included, is the one not overloading to historic buildings (Kuban, 2000). The adaptive reuse of historic buildings as museums is a complex subject in architectural conservation necessitating to develop conservation measures for both
buildings and the included objects. As Madran and Özgonül (2005) states “the historic buildings to be converted into museum should also be considered like as an object” to be exhibited, besides the collections included.

Through the reuse process, to use ecological approaches inspiring from traditional architecture helps to achieve harmony with the local architectural language of historic building and environment. In ecological architecture, the terms ‘tradition’ and ‘technology’ especially come forward to understand the relationship between natural environment and traditional building technologies (Karakul, 2016). Today, the main objective of the ecological design approaches is “to achieve acceptable indoor environmental conditions for occupants with the least expenditure in energy and materials, replacing non-renewable energy sources with renewable ones and doing away with environmentally unfriendly processes and materials” (Weber and Yannas, 2014: 2). From this respect, embodying this objective in a great variety of building examples, traditional architecture includes specific lessons to be learned by architects and students to design new buildings. Traditional architecture is a valuable source to discover the ecological principles with regard to its inclusion of the variety of the nature friendly designs, the usage of local materials and the creative building methods to be inspired by architects.

Turkish traditional architecture is specifically accepted as a successful model for new buildings in terms of “representing our cultural values and the reflection of their erection period honestly” (Bektaş, 1992: 5). From this respect, these buildings have already been the sources of inspiration for some of architects, like Le Corbusier, to develop the principles of Modernism (Kortan, 1983: 41-75). Bektaş (1996: 23) investigates Turkish traditional architecture to highlight certain common principles to be considered for sustainability as (1) suitability to life, nature and environmental conditions, (2) realism and rationalism, (3) solution from interior to exterior, (4) harmony between interior and exterior, (5) frugality, (6) the principle of easiness in construction methods, (7) selection and use of local materials nearby environment, (8) elasticity. When reconsidered these principles within the scope of ecological architecture, it is seen that they completely coincide with the main objective of ecological approaches mentioned above on a large scale.

A Design Problem of Botsa Village Museum

The studio project carried out in the spring semester of the 2015-2016 academic year addressed to solve the problem of designing a village museum for Botsa Village to develop various ways for displaying the cultural heritage of the
village; besides solving the various social and touristic needs of villagers. Students were expected to develop their design approach by considering both the architectural features of museum buildings and Botsa’s cultural heritage besides developing an awareness of contemporary conservation approaches on historic buildings. The methodology of this studio work was mainly based on an interdisciplinary approach necessitating to understand both the elements of intangible cultural heritage of the village from a folklorist’s point of view, the elements of tangible cultural heritage from an architects’ point of view and the historic building from a conservation architect’s point of view. Apart from the prevailing ethnographic approaches on the traditional village museum designs, the village museums to be designed are intended to orient the economic and cultural life of the villagers and to create employment within Botsa.

**Historic School Building in Botsa**

Botsa (Güneydere) is a village located 45 km far from Meram in Konya. Botsa is one of the settlements in the region of Hatunsaray, which is known as Antique Lystra (Bozkurt, 2015, 3). The history of the settlement dates back to Iron Age 2000 B.C. according to the findings obtained from Mula and Hatunsaray Mound (Bahar, 1998; Bahar, 2003; Mimiroğlu, 2014). Within the village, there are a great number of remains of buildings from the periods of Hellenistic, Roman and Christianity (Bozkurt, 2015, 4). There are a great number of carved-out buildings which were especially used for the religious activities through Christianity period (Figure 3). The Region is characterized by its peculiar earth formation, which is the product of a very long geological process. The geological formation of the region has been very suitable for construction in terms of carving out easily and as building stones getting hard after exposed to air. Botsa Village was proclaimed as an urban conservation site and III. Degree urban, archeological and natural conservation site in 1994.²

The peculiarity of the topographical structure and earth formation is a dominant feature among the environmental factors affecting the formation of the settlement characteristics and building typologies, as well as the climate. The earth formation on which the settlement is laid down, is mainly formed by a stream and tuff rocks surrounding Botsa Village. Buildings on the slopes on the north side of stream are placed in an adjacent way and not closing the views of others through the valley (Figure 1).

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²See. The decision of Regional Conservation Council of Cultural properties of Konya numbered 2084 in 05.10.1994.
Figure 1. Map Showing Location of Botsa (left) and an Aerial Photo of the Village (right)

Source: Google Map (left) and Google Earth (right).

The traditional architecture of Botsa Village includes both public/ commonly used buildings like carved-out religious buildings, mosque, masjids, village rooms, village school building and fountains and traditional dwellings (Karakul, 2017). The traditional buildings of Botsa Village, both public buildings and traditional dwellings, were constructed by using stone masonry technique with timber bonds, like as the traditional architecture of Konya (Karpuz, 2000, 2002; Dülgerler ve Sözen, 1979). Traditional architecture exhibits an authentic stone and timber building tradition with their local characteristics (Figure 2).

Old village school, constructed by stone masonry in 1936 according to the information obtained from the villagers\(^3\); has many conservation problems due to being unused for long time (Figure 4). The building, which is located on the main street going through the village, has a great garden behind, along the stream.

Figure 2. Street Characteristics and Dwellings

\(^3\)Informant: Lokman Saraç.
Projects

Throughout the studio project, students were asked to solve a design problem of interior design of the given building, The Historic School Building of Botsa which has been constructed by using stone masonry technique in 1936. The studio project addressed to solve the problem of designing village museum to understand how the design process affected over the consciousness of students about the representation of the physical and cultural characteristics of village over spatial features and about the conservation of the building in the projects.

The studio discussions mainly focused on discovering and exhibiting the spatial aspects of cultural heritage particular to Botsa Village; and construing an ecological architectural approach to provide the continuity of the local building culture. Considering this aspect, students are expected to develop specific design approaches to provide a continuity in both living and building culture through discovering specific ecological principles embedded in traditional architecture. In this scope, it is intended to develop specific spatial and architectural approaches to test the ecological architectural principles, like green roofs, nature-friendly construction; and the contemporary uses of local building materials.

There were four phases of the studio for the students: (1) preparation of the inventory of the building and site survey (2) literature research on the reuse of
historic buildings, museum designs, ecological architecture and the traditional architecture of Botsa Village (3) preparation of the program of village museum considering exhibition halls: one of which is designed for displaying Botsa’s cultural heritage, specifically, cultural practices, traditions and traditional craftsmanship, and another for contemporary art exhibitions like painting, sculpture, to be arranged periodically, a multi-purpose hall for the conference and film showing, library and workshops for both local crafts and contemporary arts for providing employment (4) the development of an original conceptual approach and the designing process.

At the beginning of the studio, the students firstly surveyed and measured the school building studied; and prepared its architectural drawings to be used for the design process. Throughout this inventory work, students were expected to understand the values of the building within its context.

The design process of the studio project started with a literature search on the reuse of historic buildings, museum designs, ecological architecture and the traditional architecture of Botsa Village. By making an evaluation of the data obtained from literature search, students formed their specific conceptual approaches including their point of view in reuse, museum design, ecological design and the values of Botsa Village to outline their design of village museum. Throughout the reuse process of historic school building into the museum, the design of new mass additions and underground spaces could also be developed with the individual interpretations of the students.

Through the design stages, the students were encouraged to determine their own principles on the use of local materials and ecological approaches for educating and stimulating villagers and to develop a nature-friendly architectural language. The students were expected to develop a conceptual approach about how to integrate the values of Botsa Village into the interior design of the museum building, to prepare the building programs and the requirement lists and functional relations, to make the spatial analyses of the building by caring the architectural values.

Reconsidering information obtained from literature research and site survey, the students tried:

- To be in harmony with the historic building: creation of a closer dialogue between new design additions and the architectural integrity of the old building, specifically, building elements, spatial characteristics, architectural elements.
- To organize the programmatic requirements: exhibition spaces considering the variety of the local differences and workshops as the special training spaces for educating and transmitting local crafts.
- To utilize interactive and digital tools for revitalization the elements of local cultural practices and craftsmanship within the museum.
- To realize an atmosphere of village museum in the building without disruption of the spatial and authentic character of the historic building
- To discover the ecological sustainable principles of local traditional architecture and use in a contemporary way.
Within the scope of this paper, seven student projects were handled with regard to their specific design approaches with regard to their handling way of the elements of the cultural heritage of Botsa, the requirements of village museum and ecological design in detail.

**First Design Work**

The main idea orienting the design process of the first design work is to conserve and sustain the cultural values of the village besides creating employment in the village (Figure 5). The main aim of the first project is to bring nature, either in raw or processed way, into the interior; and to make the building one of the works being exhibited. To bring nature into the space, wide openings were used to enjoy the panoramic scenery of the rocky mountains and the rock-cut buildings over them; and; the colors of the nature, like green, orange, white and brown were used on the surfaces of the spaces and furniture. Designer was also used a great number of solar panels on the new designed roof to provide electricity and warm water for the building. The main design approach is to use the main building for exhibiting Botsa culture and the underground floor newly designed for the contemporary art activities, conferences and workshops. The new mass and space additions to the main building which are designed in a transparent way, includes a circulation space containing a stair going down to the underground spaces on the basement floor and a semi-open terrace overlooking the stream. All new additions are constructed by using local materials, like timber, in a modern and simple architectural style to achieve to be harmony with the architectural elements of the building. Designer uses the main building to exhibit a great variety of the elements of living and building culture of Botsa village and to perform the traditional crafts, like pottery and weaving carpets with the skilled hands of local craftsmen within the historic building without destroying the architectural significance of the building. On the main building, there were also spaces for teaching pottery for the guests. On the basement floor, which was formed by carving out from the rock under the main building, a multipurpose hall, an exhibition hall and workshops, a café and foyer spaces and a library and reading space are arranged in a modern architectural style. The workshops within the periodical exhibition areas were designed for the guest artists.

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4The project was designed Ahmet Kemal Ünsaçan.
The main design approach of the second design work is to use the main building for exhibiting Botsa’s cultural values and for teaching local crafts, pottery and weaving carpet; and the underground floor newly designed for the contemporary art activities, conferences and contemporary art workshops, library (Figure 6). The new mass and space additions to the main building were constructed by laminated timber structure and glass coverings in a transparent way to provide harmony with the historic buildings and its context. On the main floor, within the

5The project was designed Ayşegül Şahin.
new building attached to the main building includes an entrance space with a stair going down to the exhibition and foyer space on the basement floor; a café and an exhibition on agriculture and animal husbandry. On the basement floor carved-out from the rock layer under the main building, all spaces are designed in a modern and simple architectural style not to contradict with the historical building architecture and its nearby environment.

**Figure 6. Second Design Work**
Third Design Work

The main idea orienting the design process of the third design work is to use the principles of ecological and accessible architecture. The project used the main building for a permanent, a digital exhibition about Botsa and two workshop exhibition room and a sales unit designed in an open planning understanding (Figure 7). On the basement floor carved, there are two workshops for local crafts, namely, weaving carpets and pottery, a large foyer, a multipurpose hall for the conferences and performances and a library, a cafe and administrative units. Vertical green surface panels assembled into the steel structure, used to surround the terrace spaces, also provide sun control for the main building. In interior spaces of the main building, massive wood, local building material, was used as the main material of the architectural elements, like shelves and tables, in a contemporary technique and language to provide harmony with the historic building. Green and brown colors were used on the interior surfaces and architectural elements.

Figure 7. Third Design Work

6The project was designed Meltem Dolmacı.
Fourth Design Work

The main design idea of fourth project⁷ is not to make any new mass addition to the main building not to disturb its massive characteristics, only to make a new large basement floor carved out from underground rock formation (Figure 8). The design approach was to use the main building for exhibitions on Botsa’s cultural values and hand crafts and workshops of local crafts; and, the underground floor newly designed for the contemporary art activities, conferences and contemporary art workshops and library. The terrace roof of the basement floor is used as an open café looking into the scenery composed of stream and tuff rocks. The project also tries to sustain local building technology in a modern construction providing harmony with traditional context.

Figure 8. Fourth Design Work

⁷ Project was designed by Semih Arıv.
Fifth Design Work

The main design idea of fifth project is to make a new mass addition to the back side of the main building, designed transparently without disturbing the visual perception of the historic building and of the scenery composed of stream and tuff rocks (Figure 9). Adopting ecological approaches, the roof of new additional building was completely covered with solar panels to meet the requirement of the electricity and warm water of the building. The designer used local building materials, like wood and stone besides modern building materials not to destroy contextual architectural language. The design approach was to use the main building for exhibitions on Botsa’s cultural values and hand crafts and workshops of local crafts and a digital exhibition space using digital media related to local cultural practices; and, the basement floor newly designed for the contemporary art activities, conferences and contemporary art workshops and a café. Within the new additional building, there is a café having both semi-open and interior spaces looking into a magnificent scenery. The designer reinterpreted the form of a local plant, called überlik otu, which has been used for amulet for long years in nearby environment, and stylized for using its new interpretations over the interior surfaces and furniture design. The designer used both local building materials, like wood, glass, and new ones, steel, rope in harmony in the interior of the building. On the basement floor, the carving-out method, extensively used in local building technology, was used for making a variety of niches in different geometries, especially, semi-circular, in a contemporary language.

Project was designed by Esra Altıparmak.
Figure 9. *Fifth Design Work*

The main idea orienting the design process of the sixth design work\(^9\) is to use the principles of sustainable architecture (Figure 10). Arising from the idea that sustainable architecture aims to create a self-sufficient society in the long term,

\(^9\)The project was designed Burcu Küçük.
using contextual possibilities in design process, like local materials, climate, technology and natural resources, designer used a large green roof over the new mass addition to the historic building and green surfaces and natural materials on interior wall surfaces and architectural elements. Within the main building, there are a space for exhibition on the cultural values of Botsa Village, two workshops on weaving carpet and pottery and a library, and a café on the green open area including a public stair going down to foyer on basement floor between the main building and new addition in which there are a café and an exhibition. On the basement floor constructed by carving, there are two workshops on painting for both adults and children, a library and a multi-purpose hall, and a large exhibition area connected to the foyer.

**Figure 10. Sixth Design Work**
Seventh Design Work

The main idea orienting the design process of the sixth design work is to use a local building material, wood, structurally for the construction of new additional building to provide harmony with the traditional buildings and contextual values (Figure 11). New additions surrounding the historic building in two sides were constructed by laminated timber structures, covered with glass surfaces on top of it to provide transparency and not to disturb the visual perception of the historic building. Within the main building, there is specific spaces for exhibition on Botsa Village, workshops on weaving carpet and pottery and a café and entrance space, designed in open planning, within the new additional building covered with glass, including a sculptural stair going down to foyer on basement floor. On the basement floor constructed by carving, there are two workshops on contemporary arts, and a multi-purpose hall, a closed exhibition space and a large exhibition area connected to the foyer.

Figure 11. Seventh Design Work

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10The project was designed Tuğçe Özköse.
Discussion and Conclusion

The interdisciplinary studies on conservation of cultural heritage in different departments of educational institutions provide to raise the consciousness of the students on the intangible and tangible values of the historic buildings and environments. This study presented such an interdisciplinary studio project carried out in the department of interior architecture intending to increase the awareness of the students on both conservation of historic buildings and the ecological principles of traditional architecture. The interdisciplinary methodology of this studio work provided students learn thinking like as architects, folklorist and conservation architects to understand the intangible and tangible heritage elements of Botsa Village and the values of historic school buildings to be conserved.

The results of an interior design studio experience on village museum motivated students to understand and care the values of a historical settlement and building, raising awareness on their conservation besides discovering specific ecological principles in local traditional architecture. The common approach of the student projects was mainly based on designing a village museum trying to integrate local values and traditional living culture with the emerging new social, economic needs of villagers and to create employment in contemporary art activities. The projects were mostly common in exhibiting a great variety of the elements of cultural heritage of Botsa besides designing spaces for performing local crafts without any disruption of the originality and integrity of the historic building. The projects are also common in using local building materials, like,
wood and stone besides new materials; and designing a carved-out basement floor continuing local building culture within the modern architectural technology.

Taking a conceptual approach to interior design, and particularly the themes “village museum”, “ecological architecture” and “adaptive reuse” was productive to the department of interior architecture’s educational aims and processes. In addition, the selected theme could also be a focus for interdisciplinary study in the school’s curriculum. Studying the elements of cultural heritage within a historic building provides students first to understand the elements of heritage, and its cultural context, and then, the building to provide the museum visitors virtual spatial experiences to percept and interact the intangible and tangible heritage of the village together.

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