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# Cultural Perception Performance Assessment of Adaptively Reused Heritage Buildings: Kilis Eski Hamam Case Study

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## Abstract

Adaptive reuse of the built heritage can often result in damage to heritage values both during the adaptation and reuse processes -in many cases it can bear on building performance and user satisfaction. Post-occupancy evaluation (POE) is a well-known method of assessing building performance, and previous studies demonstrated the practicality of employing POE in reused heritage building assessment. Yet, POE's contribution to heritage conservation has not been comprehensively explored. This paper presents the findings of an indicative POE of a hammam building adapted into a restaurant as a case study.

The case study building was evaluated through a series of walk-throughs, photographs, documentation, and a user survey. The POE has pointed to damage and authenticity loss in the building by reuse based on established conservation principles concerning intangible heritage values and cultural perception, resulting in a series of recommendations to prevent future deterioration and improve the performance of the building. A key observation is that data from the user survey do not coincide with the findings based on internationally acknowledged principles of conservation practice, which indicates that heritage awareness still has not been gained by the wider society. Hence, this study concludes that more research is required to examine the use of POEs in addressing heritage conservation issues and suggests a greater understanding of the role of POE surveys for a more valuable insight into user feedback. It also provides designers and decision-makers with matters to be taken in account regarding the preservation of authenticity when executing an adaptive reuse project for a heritage building.

## Keywords:

*Adaptive reuse, heritage buildings, cultural heritage, post-occupancy evaluation, building assessment*

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## INTRODUCTION

In modern conservation theory and practice, adaptive reuse is regarded as a critical strategy towards heritage building conservation (Plevoets and Van Cleempoel, 2012). This international trend has made conservation by adaptive reuse among the priority topics of conservation theory (Mazlum, 2014) – the theory that relates to intangible aspects of heritage conservation, produced in the last couple of decades (Viñas, 2002). Subsequently, it has been acknowledged not only by the governments or academics but also by a large part of society that retrofitting old buildings for new uses provides economic, ecological, and most importantly, socio-cultural benefits. Yet as a specialized form of refurbishment, adaptive reuse poses significant challenges for designers (Langston and Shen, 2007). The primary concern in this approach is giving the building its new function without damaging values that make it a built heritage; while also taking present-day conditions and requirements into account. The most outstanding adaptive reuse projects are those that honour and preserve a building's heritage significance and add a contemporary layer that presents value for the future (Bullen and Love, 2011). Thus, adaptive reuse projects require moderate alteration, a high level of creativity, and diligence. However, they often involve poor design decisions and practices. Heritage buildings may be damaged in many ways both during the adaptation and reuse processes, bearing on the building performance, as well as user satisfaction.

Previous studies have demonstrated (Günçe and Mısırlısoy, 2019; Yung and Chan, 2013; Mundo-Hernandez et al., 2015; Yıldız and Asatekin, 2016) that reused heritage buildings can be evaluated through the post-occupancy evaluation (POE) method. POE studies can be conducted to ensure preservation without damage to a building's original characteristics while retaining the expected sociocultural, ecological and economic benefits of adaptive reuse; as POEs provide more than just feedback and solutions for the assessed building and develop design guidelines for future projects. Despite identified benefits, more studies are needed to address how POEs are to be implemented in reused built heritage to ensure their contribution to heritage conservation.

This paper presents the POE of a hammam building adapted into a restaurant from Turkey's southeastern Kilis province. The 16th-century hammam not only bears witness to the Turkish bath culture but also demonstrates a past community life, socio-cultural activities, religious rituals and architecture of the region. The case study examines whether the reuse project is justifiable by following established conservation principles and evaluates the building's performance regarding cultural perception elements. Moreover, it questions the reliability of user feedback in adapted heritage building evaluation. This research also gives a literature overview of the cultural perception context of heritage conservation and aims to contribute to evaluation studies in adapted heritage buildings.

## METHODOLOGY

This study adopts both quantitative and qualitative research methods. It is generally trusted to adopt a variety of techniques as part of the POE process. The questionnaire, the standards of which are derived from the relevant literature, examines the values to evaluate the heritage site by the users. However, most POE studies have relied heavily on user feedback only, and some studies have shown that the results can sometimes be distorted. Hence, POEs based on user or resident feedback alone are insufficient in assessing building performance (Deuble and de Dear, 2014). For this reason, this study also attempts to figure out whether there are any significant differences between the users' opinions and our findings based on international heritage conservation criteria. Accordingly, the study illustrates the widely accepted established conservation principles and philosophy concerning cultural perception, to begin with. Subsequently, the building was evaluated through inspections/walk-throughs to investigate elements, systems, and fittings through observation, photographing, and interviews with the personnel. The collected data were subjected to qualitative analyses based on the conservation criteria.

A commonly used POE method, walkthroughs are an informal meeting, a tour around the entire building and its immediate surroundings intended to identify issues that may require urgent attention by facilities managers; or those that need more investigation. In such an examination, areas or elements in critical situations are identified through signs of deterioration or misfits between the elements in the building (Hassanain et al. 2010).

### Design of Survey

Data for this research was also collected from a random sample of 95 users using an online survey. The sample reached was assumed to represent the goers of Eski Hamam Restaurant who are assumed to have understood the questions correctly and answered truthfully. The survey consisted of 20 questions in two parts. Part A contained questions about the respondents' background. Part B contained the evaluation of the cultural perception performance of the Eski Hamam Restaurant. Questions in Part B were measured by means of a 5-point Likert-type scale, ranging from 1 ('strongly disagree') to 5 being ('strongly agree'). Considering the calculation of the interval width of the scale with the formula "array width/number of groups to be made" (Tekin, 2002), the arithmetic mean ranges that are taken as a basis for the evaluation of the research findings; 1.00-1.80; "Strongly disagree", 1.81-2.60; "Disagree", 2.61-3.40; "Partially agree", 3.41- 4.20; "Agree" and 4.21-5.00; is "Strongly agree". Since the scores on the scale are between 1 and 5, it is accepted that the perceived level of the cultural values of the Eski Hamam increases as the scores approach 5.00 and decreases as they approach 1.00.

## LITERATURE REVIEW

Conservation in architecture refers to continuous protection, restoration, maintenance, and monitoring work to carry cultural heritage to the future (Ahunbay, 2019). Hasol's Dictionary of Architecture (2016) defines conservation as "taking necessary precautions for preservation, repair, and maintenance for buildings, natural values or city parts bearing historical or artistic value to survive." Taking an old building/site and reusing it for a function other than that it was designed for, is termed adaptive reuse (Shipley et al., 2006). It is an effective strategy to encourage the preservation of architectural heritage (Bacon, 2001) and can be defined as the process that adapts heritage structures, which have become unusable with their current function, to new uses while preserving their unique features. With this method, the life span of the building can be expanded by protecting the entire or most of the building system, including the building envelope and even interior materials. The approach of preserving historical buildings by using them with new functions includes a series of precautions and implementations to be taken before the buildings are reduced to trivial objects or ruins. The approach of preserving historical buildings by using them with new functions includes a series of precautions and implementations to be taken before the buildings are reduced to trivial objects or ruins. Adaptive reuse is not a modern phenomenon (Stone, 2019), yet it was not established as a theory and practice before the 1970s (Plevoets, 2014). Previously, adaptive reuse was more about providing a new use to an existing building for its time-saving and labour-saving benefits (Velthuis and Spennemann, 2007). In modern conservation, however, adaptive reuse is a tool for preserving the value and meaning of cultural heritage, sustaining the built environment, and the genius loci, or spirit of place (Dogan, 2019). The built heritage can also hold value for telling a story, being a symbol of events, conveying knowledge, evoking past experiences, old traditions, beliefs, namely, a source of cultural value (De Medici et al., 2019).

### Post-occupancy Evaluation

Throughout history, the purpose of a building has primarily been to safeguard people and their belongings from environmental factors; in modern times, however, a lot more is expected from buildings. Owners invest in more advanced buildings that are sustainable, convenient, adaptable, energy-efficient, and economical to build and maintain; meet the needs of their customers, improve work productivity, profit, and image. Users demand buildings that are practical, comfortable, secure, and harmless to their well-being. Building performance is a building's capability to fulfil these expectations (Council, 2001).

Post-occupancy evaluation (POE) is a pursuit in exploring how a building performs, along with if and how adequately it responds to expectations and how content its users are with the designed

environment (Vischer, 2001). The Royal Institute of British Architects' Research Steering Group defines POE as "a systematic study of buildings in use to provide architects with information about the performance of their designs and building owners and users with guidelines to achieve the best out of what they already have" (RIBA, 1991). Various methods exist for assessing buildings during the planning, design, construction, and occupancy stages. However, they generally focus on technical performance, operation, or shape/beauty, not the perspective of occupant needs and goals. The method of POE is different from other types of evaluations in various ways. For instance, a POE focuses on the needs, activities, and ambitions of the people and organizations using a building, in addition to maintenance, building operations, and design concerns. Moreover, POEs are known for examining both successes and failures of a building's performance (Preiser, 2001), generating suggestions to improve its performance (feedback), and collecting information that will lead the way for future designs (feedforward) (Preiser et al., 1988). The data collected from a POE done for a specific building can be employed for comparing the performance elements of similar structures (Hassanain et al., 2016).

The study of a building after occupation requires a complex, highly developed system involving many examinations. These should include thermal comfort, visual comfort, building functioning, human well-being and function, and, lastly, psychological comfort, for all of these matters will determine energy usage and user satisfaction. The techniques applied are both quantitative and qualitative and may be divided into three general categories based on the data examined and evaluated:

- measurements, observations, experiments;
- surveys, group studies, investigations, task performance analyses;
- document analysis and on-site inspections (Meir et al., 2009).

When the term POE was coined, the three widely accepted categories of performance criteria were technical, functional, and relational. Later, this formation was deemed inadequate in various aspects (Preiser and Nasar, 2008). As early POE studies were usually predominantly based on users' views, the increasing building complexity of our day requires a more comprehensive approach (Sanni-Anibire et al., 2016).

### **Cultural Perception Performance**

Adaptation of heritage buildings demands an insight into their identity and values (ICOMOS, 1994), and one of the main issues surrounding adaptive reuse is how to preserve the heritage value of a building undergoing this type of change. Broadly speaking, heritage values refer to the meanings and importance associated with heritage. The perception of what they are has changed over time, with considerable differences of understanding between one country and another. These values have been a crucial factor in the legitimization of heritage protection and management. Today, it is widely accepted that heritage values have

tangible and intangible dimensions which are intertwined and cannot be arbitrarily separated (Mezzino, 2017). Intangible values are socio-cultural, functional (as documentation of past human activity), associative/symbolic, political, spiritual/religious, memory, authenticity, rarity, and identity values associated with the significance of the building; whereas tangible values are aesthetic/artistic, architectural, technical, historical and age values of a building's material substance (Madran, 2006).

The sophistication of an adapted heritage building with its tangible and intangible values requires a more comprehensive approach beyond technical, functional and relational performance assessment. Thus, another category of performance criteria was introduced to study the state of intangible values post-occupancy: cultural perception. It largely relies on observer comments as heritage can rarely hold its values if not perceived as cultural heritage by society (Dogan, 2019). Moreover, it examines if the heritage building is maintained adequately concerning its intangible values. Cultural perception performance criteria are derived primarily from the notion of authenticity and its implications, for it is considered an important indicator of success in reuse projects. Authenticity embodies distinct features and qualities. Therefore, a heritage building's authenticity can be measured based on different elements, and each is exclusively a representation of it (Yazdani Mehr and Wilkinson, 2020).

Authenticity has been a predominant evaluation criterion in modern conservation (Plevoets & Van Cleempoel, 2019) and a values-based approach to conservation and heritage management has been broadly recognized today. However, the boundaries of authenticity are not explicit, and the requirement of modern materials and technology in conservation induces even more diverse perspectives on authenticity (Orbasli, 2017). In a generally acknowledged description by the UNESCO World Heritage (2019), eight main elements contribute to the authenticity of a heritage place: (1) form and design; (2) use and function; (3) location and setting; (4) traditions, techniques, and management system; (5) materials and substance; (6) language, and other forms of intangible heritage; (7) spirit and feeling; (8) other internal and external factors. Article 13 of The Nara Document underlines that authenticity perceptions may be associated with a large variety of sources of knowledge. It is further noted: "The use of these sources permits the elaboration of the specific artistic, historical, social, and scientific dimensions of the cultural heritage being examined."

In an attempt to develop assessment standards for intangible values, Yaldız and Asatekin (2016) created a set of questions; upon which our user survey is designed and developed:

- Is the heritage building's original function evident with its symbolic value?
- Is the new use of the heritage building recognized by society?

- Does the reuse highlight the heritage building's architectural, historical, and artistic values?
- Are the heritage building's authenticity, cultural, and socioeconomic values preserved?
- Does the reuse give a new vision to the heritage building?
- Is the heritage building's brand-new vision harmonious with the sociocultural structure of the region?

### CASE STUDY BUILDING: ESKI HAMAM

Eski Hamam is a 16th-century bathhouse (hammam) located in Kilis, Turkey. The hammam is the largest in the city and is considered a genuine example of hammam design from the Classical period of Ottoman architecture. It is also one of the oldest and most sophisticated surviving historical structures in the city and of the very few adapted for a new purpose. Its character, transmitted to us via its fabric, has survived relatively intact despite being abandoned for a lengthy period during the 20th century. This abandonment caused significant deterioration in its structure. The hammam was eventually restored in 2014 and adapted to become "Eski Hamam Restaurant".

Eski Hamam is a rectangular-shaped building (Fig. 1a) accessible through one main gate on the northern façade (Fig. 1b). The backyard is accessible from the southwest of the surrounding courtyard through a wooden door. The hammam was a "single bath", with men and women having separate bathing times; rather than separate entrances and chambers. The typological characteristics of Eski Hamam can be recognized from the outside, as each main space is in different dimensions in height and width (Fig. 2). The main sections of *soğukluk* (frigidarium), *ılıklık* (tepidarium), and *sıcaklık* (caldarium) are linearly lined up from north to south. Each space is identified in fig. 3: The entrance, *taşlık* (1), leads to the *soğukluk* (2) with the central fountain, the *ılıklık* (4) with the *aralık* (3) that includes the toilet, the *sıcaklık* (5), the furnace, and the water tank (6, 7).

**Figure 1.**  
a) Location of Eski Hamam in Kilis  
b) Northern Façade  
(Photos by first author)



The *soğukluk* is a square-shaped and domed chamber. Equipped on each side with benches and niches arranged around a central fountain, its setting aimed to maintain the centrality of the compositional forming of the space. The *ılıklık* is the medium-temperature room, directly connected with the toilet and the *mikveh* (bath used for ritual immersion in Judaism). The *sıcaklık*, the heart of the *hammam*, is connected to the

water tank and the furnace, with smaller rooms for the steam bath (the *halvets*) located over it. There is an octagonal-shaped platform where customers could lie down to relax or get a massage, called *göbektası*, at the centre of the *sıcaklık*.



**Figure 2.** The architectural survey of the Eski Hamam. Plan, section, and elevations. (Source: Bebekoglu, 2005)

The hammam structure is ashlar masonry. Its internal and external walls were built with matching ashlar blocks of 25-30 cm. The building interior and the façades are remarkably plain; the main gate on the northern façade is the only decorated element. Eski Hamam was, and still is, situated in a central area of Kilis surrounded by mosques and near a synagogue and a marketplace, so it serviced a great number of locals, both men and women; which suggests that it is a significant element of the city's collective memory.

#### FINDINGS OF THE STUDY

According to internationally accepted conservation principles, it is appropriate to attribute new functions to heritage buildings, which are no longer practical to use with their original functions. However, it is recommended to assign functions that do not require serious alterations in the spatial setup of the building, which is arguably the most important factor in the determination of a new function (Altınoluk, 1998). Article 5 of The Venice Charter (1964) emphasizes conserving heritage by using them for some socially beneficial purpose. However desirable it may be, it must not change the building's plan or decoration. Hence, adjustments demanded by a new function may be allowed only within due limits. Similarly, Article 7.2 of The Burra Charter (2013) states: "A place should have a compatible use."

Hammams have exclusive spatial layouts and equipment, and for that reason, their adaptation to reuse by preserving these features is considered quite challenging by some scholars (Ahunbay, 2019). Nevertheless, the particular challenges of adapting a hammam can be addressed after careful analysis and interpretation pre-construction.

Changes in the spatial layout indicate a lack of consideration in the heritage significance before the adaptation process of Eski Hamam. The

heart of a restaurant, the kitchen and service area, for instance, could not be sorted within the building; hence, a prefabricated structure was erected in the front garden that is inappropriate in terms of building materials and functional efficiency. It goes against established principles of new additions to heritage buildings: they should have harmonious integration with the whole and not devalue the heritage building and its settings (Mısırlısoy, 2017).

In achieving the new design requirement, extensive alterations were required: each space except the toilet had to be given a new function. The furnace, formerly connected to sıcaklık by a small window, was organized as an office after the removal of this original window. The intact Jewish bath (mikveh) in ılıkılık, as evidence of past ethnic and religious diversity, is now used as storage. Heritage elements in the iwans and halvets, such as the traditional hammam benches and washbasins were all removed to make space for dinner tables, a practice that goes against the principle of reversibility in conservation. A common understanding of reversibility is 1) to return objects to the condition just before treatment and 2) select treatments whose benefits far outweigh the losses they cause (Smith, 1988). These practices also violate Article 8 of the Venice Charter: "Items of sculpture, painting or decoration which form an integral part of a monument may only be removed from it if this is the sole means of ensuring their preservation." In this respect, the right design decisions were solely not dividing the main spaces of the hammam and retaining them as single large spaces and preserving the raised floors of soğukluk. Such practices raise the question of whether the new purpose is appropriate for the heritage building. Adaptation solutions and additions to Eski Hamam are summarized as follows:

- Changes in the Building Layout: Since the restaurant use demands were not compatible with the former hammam use, extensive changes were required in the spatial setup (Table 1).
- Updating of Building Systems: Modern electrical, mechanical, lighting, air conditioning and plumbing systems were installed.
- Changes in the Façades: The window glasses were tinted in various colours, LED wall washer fixtures were employed to illuminate the façade, and a sizable nameplate is placed on the roof on the front façade.

Changes in the Immediate Surroundings: An additional building was erected in the front garden to provide space for the kitchen and service area. The backyard was designed as a cafe, with a large door added to its entry. A children's playground was built adjacent to the outer wall on the west façade; a seating area was arranged in the side garden with a polycarbonate porch roof over it.

Article 1.2 of the Burra Charter states that "cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places, and related objects." Article 8 declares the conservation of a historical area involves visual arrangements, and for this, it is necessary to retain the "appropriate setting" in that area. It

includes preserving spiritual and other cultural relationships that add to the cultural significance of the place (Australian ICOMOS Burra Charter, 2013). It is thought that the setting described here implies an indoor and outdoor atmosphere.

**Table 1.** Changes in the case study building's spatial configuration

Original Function	New Function	Description of Intervention
1 - <i>Taşlık</i>	Entrance	The <i>taşlık</i> , entrance of the hammam, remains the main entrance to the building.
2 - <i>Soğukluk</i>	a) Iwan	Dining Area
	b) Rest Area	Waiting Area
3 - <i>Aralık</i>	c) Toilet	Toilet
	d) <i>Mikveh</i>	Storage
4 - <i>Ilıklık</i>	e) Iwan	Dining Area
	f) Circulation Space	Circulation Space
5 - <i>Sıcaklık</i>	g) <i>Göbek taşı</i>	Circulation Space
	h) Iwan	Dining and Service Areas
	i) <i>Halvet</i>	Dining Area
6 - Furnace	Office	Furnace (the <i>külhan</i> ), the place used for heating the water, is arranged as an office.
7 - Water Tank	Office	The water tank is arranged as an office for re-use.

Light is one of the key elements that create atmosphere, and lighting is a serious design challenge in heritage buildings where the atmosphere of the space conveys many meanings. Building materials, such as stone wood, brick, marble, lead, copper, and tile form the natural colour compositions of old cities, neighbourhoods, and buildings. The natural colours of stones, its main building materials, are dominant in Eski Hamam. The introduced lighting design of Eski Hamam Restaurant goes against the authentic atmosphere of the building with its red, blue, green, etc., coloured lights, as well as dyed window tints.

Reversibility in conservation also implies avoiding the use of elements that may become so immovable that their subsequent removal will threaten the object (Smith, 1988). In Eski Hamam's refurbishment, sufficient care was not taken when installing the modern lighting elements, air conditioning systems, energy and signal cables, and mounting equipment in a systematic manner not to damage the structure, which also resulted in an aesthetically non-pleasing look. In particular, the oversized chandelier in *sıcaklık* might pose a threat to the building in the future.

The interior design, finishings and furniture play a crucial role in the perception of space (Altan, 2015). Rugs, carpets, seating elements, decorative objects, and many other random items of various colours dispersedly placed in the Eski Hamam have created a gaudy environment lacking identity and authenticity. In the small chambers (*halvets*) of

sıcaklık, for instance, the dark furniture at varying heights made the spaces cumbersome (Fig. 3).



**Figure 3.**

- a) Sıcaklık
  - b) Ilıklık
  - c) A private room of soğukluk
- (Source: by the first author, 2020)

The variances of colour and form that disrupt the aesthetic integrity indicate that a thorough intangible values analysis was not undertaken pre-refurbishment. The authentic atmosphere of the Eski Hamam was damaged by the adaptation process; the original characteristics of the walls, ceilings, and floors can be vaguely noticed due to poor design decisions and applications.

Conversations with restaurant workers revealed that customers refer to the building as both the "Eski Hamam" and the "hammam restaurant". Also revealed by the walkthrough, quite limited information about Eski Hamam's history or the local hammam culture is conveyed, aside from the brief statements on a sign on the northern façade.

Subsequently, data obtained through the walkthrough were analyzed based on internationally accepted standards of conservation practice, and the adaptation of the building in terms of selected performance criteria was evaluated as "favourable" "partially favourable" "partially unfavourable" or "unfavourable" (Table 2).

A questionnaire was applied in the study to obtain the opinions of the users. The majority of respondents were female (57,9%), between 25 and 44 years of age (54,7%), and had a Bachelor's degree (55,7%). The mean responses and the rate of users' satisfaction for cultural perception elements of performance are presented in Table 3, and discussed as follows:

More than half of the users "strongly agree" that they still refer to the building as "Eski Hamam", want to show the building to their guests visiting the city, and regard the building as easily perceived in its environment and well-known by the people of Kilis. Nearly 50% stated that they prefer to go to Eski Hamam Restaurant because it is a historic building; its new use makes the building viable, leaving it empty would have been an economic loss, it has been important for the city from the past to present and still contributes to the promotion of Kilis with its new function. Also, the majority disagree with the statement that its reuse as a restaurant made people forget about its original use.

Analyzed according to the X variable; the following measures are above  $\geq 3.40$ : Users still refer to the building as "Eski Hamam", they like to take their guests there, the building is well-known by the people of Kilis

**Table 2.** Assessment of Eski Hamam according to cultural perception criteria

Assessment Criteria	Status	Brief Explanation
1- Is the authenticity of the heritage building preserved in adaptation and reuse processes?	Unfavourable	Loss of authenticity due to overall damage caused by major changes in the spatial organization; removal of heritage objects; the use of unsuitable furniture, fixtures and fittings; poor colour selection; construction of an incompatible additional building in terms of mass, materials, and colour, etc.
2- Is the heritage building known for both its original and new function?	Favourable	Largely owing to its name "Eski Hammam Restaurant", the building is known as both a hammam and a restaurant by users.
3- Does the heritage building retain its heritage values and symbolic meaning, despite its new function?	Partially favourable	No loss of symbolic meaning as the original function is not forgotten by the people. However, most intangible values that make the Eski Hamam a heritage building are not preserved due to poor design decisions.
4- Has cultural sustainability been achieved through reuse?	Partially favourable	No longer offering a bathing experience, the heritage building still serves as a meeting place where people socialize, as it did in its original function. Yet, very limited information about Eski Hamam's tangible and intangible values is depicted in and around the building.

and is outstanding in its surroundings, its use as a restaurant makes the building livable, they prefer to go to the Eski Hamam Restaurant because it is a historical building, leaving it empty would have been an economic loss, it has been important for the city from the past to the present, and it still contributes to the promotion of Kilis with its new function. They disagree with the statement that its use as a restaurant made them forget about its former, original function. The value of referring to the building as the "Eski Hamam" and not "Eski Hamam Restaurant" is 4.07 (Table 3), which demonstrates that the historical significance of the building is still in the minds of the city's residents. Overall, the results of the survey demonstrate the users view the Eski Hamam Restaurant as favourable.

Cronbach's alpha ( $\alpha$ ) was used in this study to show the reliability of the results.  $\alpha$  should be at least 0.7 for a scale to be deemed reliable (Nunnally, 1978). In this study,  $\alpha$  is 0.735, which means that there is a satisfactory agreement among the respondents.

The walkthrough tour and conservation principles indicated damage to the building's original characteristics and authenticity. Yet, the average response of the cultural elements of performance shows that users are satisfied with the reuse of the building. This finding is addressed in the discussion section. Recommendations offered by this indicative POE study are as follows:

**Table 3.** Responses from users, their mean values, and standard deviations to survey questions. The answer choices for the items in the scale are 5 = Strongly Agree, 4 = Agree, 3 = Partially Agree, 2 = Disagree, and 1 = Strongly Disagree

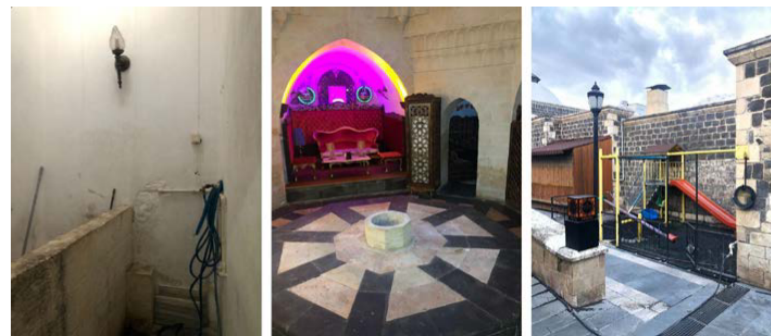
Statements	Likert Scale					Variables	
	1	2	3	4	5	X	S
I refer to the building as "Eski Hamam" not "Eski Hamam Restaurant".	8.4%	6.3%	5.3%	29.5%	50.5%	4.07	1.25
Eski Hamam is among the buildings known and deemed important by the people of Kilis.	0%	3.2%	21.1%	20%	55.8%	4.28	0.90
Eski Hamam is a building we want to show our guests who visit Kilis.	0%	12.6%	13.7%	20%	53.7%	4.14	1.08
Eski Hamam is a distinct and prominent building in its surroundings.	4.2%	8.4%	9.5%	25.3%	52.6%	4.13	1.15
Its reuse as a restaurant made Eski Hamam a viable environment.	6.3%	7.4%	13.7%	29.5%	43.2%	3.95	1.20
I prefer to go to the Eski Hamam Restaurant because it is a historical building.	5.3%	9.5%	11.6%	28.4%	45.3%	3.98	1.19
Leaving Eski Hamam abandoned would have been an economic loss.	7.4%	8.4%	16.8%	21.1%	46.3%	3.90	1.28
The use of Eski Hamam as a restaurant made us forget that its original function was a bathhouse.	27.4%	29.5%	22.1%	12.6%	8.4%	2.45	1.25
Eski Hamam has been important for Kilis from past to present.	1.1%	4.2%	21.1%	29.5%	44.2%	4.11	0.95
The re-use of Eski Hamam as a restaurant contributes to the promotion of Kilis.	7.4%	5.3%	21.1%	20%	46.3%	3.92	1.24

- not using the *mikveh* as storage, since it was used for the religious bathing rituals of the Jewish community (Figure 4a)
- representing information about the hammam and local hammam culture in the building and its vicinity
- removal of all coloured lighting in the interior and exterior of the building and handing the lighting design over to lighting specialists
- renewal and reorganization of inappropriate fittings and furniture in all spaces (Figure 4b)
- removal of the large name sign installed on the roof of the building as it is incompatible with the building in terms of size and aesthetics
- removal of the children's playground attached to the western wall of the building (Figure 4c)
- using techniques and materials only known to be technically and aesthetically compatible with the building fabric.

**Figure 4.**

- Mikveh
- Sıcaklık
- Western Façade

(Source: by the first author, 2020)



## DISCUSSION OF RESULTS

The research has highlighted some critical questions concerning the assessment of adapted heritage buildings. Firstly, it exposed a contradiction in users' opinions to conclusions based on established conservation criteria about the reused heritage building. It seems that *authenticity*, defined by English Heritage (2008) as "those characteristics that most truthfully reflect and embody the cultural heritage values of a place", has a relative and subjective nature. This finding is in accordance with several other authors (Jokilehto, 2008; Labadi, 2010) who stress that the concept of authenticity can easily be distorted as there are different opinions and concepts associated with it. Since most design decisions and practices in Eski Hamam are against the established principles of heritage conversation, as explored in the previous section, our conclusion was that Eski Hamam Restaurant is an unsuccessful reuse project, and its reuse damages the building. However, the data obtained from the questionnaire did not support this conclusion. As seen from the responses, many of the erroneous applications that were expected to set off a reaction went unnoticed by the users. Low public awareness of heritage may be the reason for this controversy. That reasoning is in line with those of other scholars, who identified that intangible functions of heritage are nonexistent for most people (Viñas, 2002). Users' positive attitude towards Eski Hamam Restaurant could also be explained by the plausibility that people enjoy heritage buildings without putting careful thought into architectural design and prioritise their overall experience over the preservation of heritage values. Admittedly, people feel a stronger bond with their local surroundings through heritage (Bullen and Love, 2011), and it strengthens a sense of social well-being (Taçon and Baker, 2019). Taha (2013) remarked that people are emotionally attached to their cultural heritage, to which the built environment adds considerably, and many people desire to observe obsolete or inaccessible buildings (Rushton et al., 2018). Another matter to take into account is a lack of alternatives: there are very few adapted heritage buildings in Kilis, which makes Eski Hamam unique in some way.

## CONCLUSIONS AND RECOMMENDATIONS

In this research, an indicative post-occupancy evaluation was conducted for a historic hammam adapted into a restaurant located in Turkey's southeastern Kilis Province. Previously described, Eski Hamam has many heritage values for still preserving its design and application techniques from the 16th century, its fabric, setting, function, relations, meanings, and associated objects. The POE has pointed to damage and authenticity loss in the building by reuse, resulting in the development of a series of recommendations to prevent future deterioration and to improve the cultural perception performance of the building.

This study indicates that conservation awareness still has not been gained by the wider society, based on the controversial data from the user survey. User perception is one of the main challenges in preserving

intangible heritage values. Many activities hold the potential of raising awareness among users or residents of built heritage:

- giving heritage awards to successful reuse projects of national and regional nature
- organising heritage events, festivals, campaigns and training workshops
- building student councils for promoting heritage conservation in schools
- using social media for community engagement in the reuse and management of heritage buildings.

Often, as observed in Eski Hamam, information about the heritage building is very limited or nonexistent, which contributes to the loss of intangible values. Given this finding, ways to represent information about a heritage building to cover its historical research are specified. Crucial data that should be depicted in and around heritage buildings are (1) date of construction, information about the architect and contractor, (2) the building's original use, significant changes in the building or its use, (3) significant historic events related to the building, (4) the building's relationship to the neighbourhood and society. Additional architectural documentation may also be represented, including descriptions, photographs and maps. Adopting the newest technology and using innovative solutions, such as augmented and virtual reality, mobile apps, QR codes, and many other interactive technologies, will enhance user involvement with the heritage building. The age of digital transformation certainly requires decision-makers to recognise the importance of interactive technologies in preserving heritage values.

Regarding POEs in adapted heritage buildings, this study suggests rethinking the role of POE surveys and a more promising insight and integration of user feedback. Single/multiple POE case studies of similar projects may be conducted with different approaches to the involvement of users to improve the process of POEs in heritage buildings and generate crucial guiding data. This study also advises that POE studies should be building-specific with the proper customisation of the assessment criteria when dealing with adapted heritage buildings. The recommendations would offer insights for other countries facing conservation issues, particularly those with a long way to go in raising awareness of cultural heritage.

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### Resume

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