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From Editor - Editörden

The international journal A+ArchDesign is expecting manuscripts worldwide, reporting on original theoretical and/or experimental work and tutorial expositions of permanent reference value are welcome. Proposals can be focused on new and timely research topics and innovative issues for sharing knowledge and experiences in the fields of Architecture- Interior Design, Urban Planning and Landscape Architecture, Industrial Design, Civil Engineering-Sciences.

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Assoc. Prof. Dr. Ayşe SİREL

Greenwashing in Turkey: Sustainability as an Advertising Strategy in Architecture¹



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Abstract: As a result of the depletion of natural resources, destruction of green areas, loss of ecosystem and consequent shrinkage of habitable areas, the concept of “sustainability” has become an important parameter at all stages in architectural discipline as in all fields. However, in some cases this notion has started to transform into an advertising tool developed to feed consumption due to its structure being open to interpretation, its current value and its lack of adequate supervision. Sustainability has three aspects that are economic, social and physical. Apart from the successful architectural designs that take all the values of sustainability into account, the concept has also been used as a popular culture item that enables the projects to come forward and be preferred by people. In this study, the phenomenon of “greenwashing” was examined and five architectural projects from Turkey with the claim of sustainability were evaluated within the criteria of three sustainability scopes.

Keywords: Greenwashing, Sustainability, Architectural Design

Türkiye'de Yeşil Aklama: Mimarlıkta Bir Reklam Stratejisi Olarak Sürdürülebilirlik

Öz: Doğal kaynakların tükenmesi, yeşil alanların tahribatı, ekosisteme verilen zarar ve buna bağlı olarak yaşamlılabilir alanların giderek daralması sonucunda “sürdürülebilirlik” kavramı, tüm alanlarda olduğu gibi mimarlık disiplininde de tasarım kararlarından uygulamaya kadar her aşamada önemli bir parametre haline gelmiştir. Ne var ki bu kavram; yorumu açık yapısı, sahip olduğu güncel değer, konuya ilgili yeterli denetimin bulunmaması sebebiyle kimi durumlarda tüketimi beslemek için geliştirilen bir reklam aracına dönüşmeye başlamıştır. Ekonomik, sosyal ve fiziksel olmak üzere üç kolu bulunan sürdürülebilirlik, onu oluşturan tüm değerlerin göz önüne alındığı başarılı mimari tasarımların haricinde, projelerin öne çıkıp tercih edilmesini sağlayan bir popüler kültür ögesi şeklinde de kullanılır olmuştur. Bu çalışmada, yeşil aklama olgusu incelenerek sürdürülebilirlik iddiası taşıyan beş mimari proje, sürdürülebilirliğin üç kolu göz önüne alınarak hazırlanan ölçütler dâhilinde değerlendirilmiştir.

Anahtar Kelimeler: Yeşil Aklama, Sürdürülebilirlik, Mimari Tasarım

¹ This study is produced from the master thesis written by the first author under the supervision of the second author.

1. INTRODUCTION

From the moment of birth, human is in direct relationship with natural and the built environment. As a result of industrialization, globalization and rapidly growing world population, pollution, climate change and energy deficit have begun to take over the planet. The idea of sustainability is a very broad and comprehensive guide to the idea of “ability to sustain itself” and inherits sub-themes such as integration with natural environment, justice, competence, efficiency, full cost calculation, participation, communication, prudence and flexibility [1]. Having three branches, namely physical, economic and socio-cultural, the concept of sustainability adopts the objective of eliminating the human-nature conflict as its main objective.

The physical principle of sustainability involves the conservation of natural resources and the minimization of human damage to nature. The economic principle ensures a balanced economic distribution using resources efficiently. The sociocultural principle implies the creation of a high life-quality by protecting social and cultural values [2]. In view of the responsibilities for these three key principles, sustainability is not only concerned with the environmental issues but also with the transfer of socio-cultural and economic values to future generations.

However, the idea of sustainability, which serves such an important purpose, also has a great potential of turning into a tool that serves consumption. Sustainability is susceptible to fraud due to the fact that the measurable values are limited and some of the contents are interpretable. This concept does not have standard norms other than green building certification systems and therefore can become a marketing tool of architectural projects for users who do not have sufficient knowledge of the subject. In this context, the aim of this study is to select some projects in Turkey with sustainability discourse or implication and to test them through physical, economic and sociocultural principles. Within the scope of the study, five projects with the highest investment budget, construction area and public recognition were selected among the projects that do not have any green building certificate but include marketing concepts such as “green”, “environmental” and “natural”. These projects were evaluated by using “hybrid sustainability criterias”, which were developed by the authors examining the LEED, BREEAM, Green Star, DGNB, SBtool and ÇEDBİK-Housing Certification Systems and taking the three main branches of sustainability into account.

2. THE CONCEPT OF SUSTAINABILITY IN ARCHITECTURE

Sustainability, rooted in a long-standing history, has become a concept that has gained real importance as a result of the environmental pollution, the depletion of natural resources and the economic, socio-cultural and health problems associated with them [3]. Sustainability, which has existed in various disciplines, has also influenced architecture under the title of “green design” since the 1980s. From the 1990s on, the theory of “green building” has begun to grow beyond being a design idea and began to find the body also in architectural practice.

However, sustainable architecture is a much more comprehensive movement than green design and green building concepts [4]. This is because the concept of sustainability is not only limited to the physical environment, but also related to the economic and social cycle. Sustainable architecture, in the real sense, should include the concepts of efficiency, rationality, and functionality as well as the nature friendly

design. In addition, it should exhibit a user-friendly structure that interacts with the existing built environment. The building must be compatible with the social texture and supportive of the publicity by creating the space for socio-cultural activities. In view of these, it is obvious that the principles of sustainability in architecture should include the design, construction, utilization and (if necessary) the deconstruction processes. Thus, the principles of sustainability in architecture can be grouped under three main headings: *resource management, life cycle design, providing livable environments* [5] [6].

One of the most important points in resource management is the correct determination of the resources to be used throughout the life cycle by considering the function, user profile, design and the site of the building [6]. Another important point is to avoid the use of fossil fuels and turn to alternative renewable energy sources. To take advantage of daylight, to use passive heating and cooling systems, to benefit from solar panels, to generate electricity from wind and to use geothermal energy are some of the many applications that reduce the energy load and resource consumption of the building. The efficient use of water can be achieved through recycling initiatives such as the selection of energy saving luminaires, the use of gray water in cleaning works and landscaping, and the accumulation of rain water throughout the building. The efficient use of the building materials starts with the selection of natural and economical materials during the design process. However, this alone is not enough. Transportation and application processes should also be considered. Thus, the choice of domestic and recyclable materials is important [6] [7].

The efficient use of the building site is also within the scope of resource management. The main purpose is to use only the areas that are reserved for construction and to protect the land in other functions (forest land, agricultural land, site area, stream bed, etc.). Moreover, the relation between the site and the design is another important point. A structure compatible with the topography reduces the workload of the construction process and therefore saves energy and resources [6] [8].

The lifecycle design of an architectural structure is the implementation of the principles of sustainability to all the phases of the process, from design to deconstruction of the structure, and thus gaining the highest benefit [6] [7]. This process consists of three periods; pre-construction period, construction period and post-construction period. The pre-production period includes the design of the building and the land selection as well as the energy policy of the building and the strategies to be followed during construction. During the construction period, the implementation of determined strategies is important. In the post-construction period, the continuity and re-use of the building is targeted. In addition to this, it is possible to identify new strategies that provide sustainability by examining the interaction of the building with the environment [6]. In addition to protecting nature and the environment, it is necessary for a sustainable structure to take care of the interests of the users, the employees and even those who will interact with this structure. When creating a new environment with architectural interventions, it is important to plan the settlement correctly preserving the existing natural and cultural values [6] [9].

Founded in 2002, the “World Green Building Council” leads the sustainability movement in architecture and construction. Today, sustainable architecture is compared and evaluated with several certification systems prepared by the national green buildings councils. The certification systems measure and promote the compliance of architectural structures with the environment, waste and resource management

within the criteria set by the World Council of Green Buildings and national councils. Furthermore, they draw attention to the possible environmental, economic and socio-cultural problems and guide architects to seek for solutions. Therefore, certification systems are the biggest encouragement of the sustainability movement in the field of architecture and construction [10] [11].

3. AN ADVERTISING STRATEGY IN ARCHITECTURE: GREENWASHING

As a result of the better understanding of the importance of sustainability, the green movement has turned into a current in a short time. However, at the same time, increasing popularity has made this phenomenon vulnerable to abuse [12]. Many companies who want to benefit from this popularity of green movement use concepts like “environmentalist”, “green”, “ecological”, “natural”, “sustainable” etc to be recognized. Some of these initiatives are truly environmental actions while others have been transformed into purely advertising and unrealistic actions. This situation caused the green movement to lose the notion of environmentalism and to decrease the trust in these concepts. As a conclusion, the concept of “greenwashing” has emerged [13].

The definition of the most descriptive green laundering was done by Bowen and Correa [14]. According to them, green washing is the use of selected positive information without mentioning any negative aspects with the aim of creating a positive image that is environmentally exaggerated. The purpose of this action is to observe the image of the actor in the market rather than the environmental interest.

In recent years, the widespread concepts in popular culture such as “escaping from city and returning to nature” have promoted the marketing of architectural buildings, especially offices and residences, as liveable and green projects. Considering the market volume of the construction sector; the concepts of nature, environmentalism and sustainability can easily turn into a greenwashing tool. In this way, without looking at any other design criteria, the wrong choice of construction site or the size of the construction area, the architectural structures which cannot be friendly to nature can be shown more sympathetic and attractive.

In Turkey, there are architectural projects that claim to be integrated into nature but have not received any green building certificates or even attempted to obtain them. Among these designs, the five major projects, namely, Vadi İstanbul, Tema İstanbul, Şehrizar Mansions, Zorlu Center and Bosphorus City, stand out with their construction volume, budget and public recognition. During the design and construction phases, the advertisements of these projects, which are frequently featured in the media, include slogans or visuals (Table 1) that enable the user to relate the project to sustainability. This way, by forming a nature-friendly image as a subliminal or directly given message, companies aim at creating a positive impression in the public opinion.

Table 1: Slogans Used in Promoting Projects

Project Name	Hit Key-words	Promotional Image of the Project
Vadi İstanbul	“make you experience a completely different Istanbul with ... and a wide green area located next to the Belgrad Forest” [15]	
Tema İstanbul	“...a second phase with focus on nature and green ” “... the largest living space has been allocated to nature with abundant greenery ” “... joy will fill up the garden , and the greenery will become one with the city” “363 apartments, 365 days of garden ” [16]	
Şehrizar Mansions	“Şehrizar Mansions, which contribute to the natural and cultural heritage of Boğaziçi with its unique architecture...” “...glows by hiding in a special world overlooking the large inner garden on the slope leading to the Bosphorus.” “As if you're in a huge kaleidoscope between the gardens , you're going to look around you and say "I'm glad I'm here".” [17]	
Bosphorus City	“Bosphorus City, one of Turkey's first and World's rare housing projects, carries the Bosphorus of İstanbul and the life of the Bosphorus to Küçükçekmece. In this magical project, you can get on a boat from Ortaköy Square, have a tea break in Emirgan, eat yogurt in Kanlıca and enjoy eating fish in Kandilli...” [18]	

Zorlu Centre	<p>“An Exclusive Lifestyle at the Center of Life and the City, Surrounded by Green and Facing the Bosphorus...”</p> <p>“...On the garden levels, each home features its own individually designed garden, proving it is possible to make that green and natural world of your dreams a reality...” [19]</p>	
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3.1. Evaluation of the Projects

In order to analyze the projects mentioned above, international and national certification systems (LEED, BREAM, DGNB, GREEN STAR, SBTool, ÇEDBİK-KONUT) which document the sustainability of the architecture were used. A hybrid evaluation criteria have been created by taking the three main principles of sustainability and the basic substances obtained from this study into consideration. These criteria are grouped under three main headings:

Relation between the environment and the construction area:

- Correct selection of the construction area,
- Utilizing the potentials in the site during the design and construction process,
- Minimizing the impact of the project on the site and its environment during and after the construction,
- Public transport and pedestrian access,
- Providing users access to where they can meet their daily needs.

Energy and Resource Management:

- The establishment of the energy management and natural resource policy of the structure, especially the use of renewable resources,
- Efficient use of water (relationship with water resources around the building, rainwater management and usage of treated wastewater etc.),
- Use of daylight (attempts to reduce energy consumption by using daylight).
- Correct material selection (Usage of ecological, recyclable, renewable, domestic material)

Socio-Cultural Contribution:

- Opportunities provided by the project to improve the life quality of the users (indoor air quality, optimum indoor temperature etc.)
- Innovative initiatives to meet the social and cultural needs of users (cultural and recreational spaces)
- Accessibility for all
- Ensuring social justice

In the review process, no scoring was performed. The positive and negative aspects of the projects were determined within the scope of the evaluation criteria and the scopes described above. (Table 2)

Table 2: Review of Selected Projects through Hybrid Criteria

Terrain History	Vadi İstanbul	Old Evyap Soap Factory Land
	Tema İstanbul	It is located on the former Halkalı landfill.
	Şehrizar Mansions	Chronologically: it was a private land belonging to seven different persons, then it was expropriated, transferred to TOKİ and sold as a private land by TOKİ. It is the first and a third degree natural protected area in the land history.
	Bosphorus City	It is located on the former Halkalı landfill.
	Zorlu Center	17th Regional Directorate Land of the General Directorate of Highways (office block, administration, accommodation, technical unit, social facility, warehouse)
Gentrification	Vadi İstanbul	No. The terrain doesn't have residential history.
	Tema İstanbul	No. The terrain doesn't have residential history.
	Şehrizar Mansions	No. The terrain doesn't have residential history.
	Bosphorus City	No. The terrain doesn't have residential history.
	Zorlu Center	No. The terrain doesn't have residential history.
Usage of Terrain Characteristics	Vadi İstanbul	There is no natural land cover since it is a former factory land.
	Tema İstanbul	The waste land was evaluated and reused.
	Şehrizar Mansions	Natural Land Cover has changed.
	Bosphorus City	The waste dump land has been evaluated and re-used.
	Zorlu Center	Natural topography features not used.
Suitability of the Project to the Terrain	Vadi İstanbul	As it is located on a creek bed (Saadabat Creek), there is a risk of soil liquefaction in a possible earthquake.
	Tema İstanbul	A landfill is a risk for the settlement
	Şehrizar Mansions	The project is not suitable for land because it is built on the natural protected area.
	Bosphorus City	A landfill is a risk for the settlement
	Zorlu Center	The project interferes with the Bosphorus skyline and it is against the zoning plan.
Relationship Between Project and Terrain	Vadi İstanbul	The fact that it is close to the Belgrad Forest, makes this region a new center of attraction which poses a risk for Belgrad Forest
	Tema İstanbul	There are slums in the vicinity of the project and the project encourages urban transformation initiatives that may take place in the future.
	Şehrizar Mansions	Natural Land Cover has changed and the project interferes with the Bosphorus skyline
	Bosphorus City	There are slums in the vicinity of the project and the project encourages urban transformation initiatives that may take place in the future.
	Zorlu Center	The project intervenes with the Bosphorus skyline and appears as a huge mass in its surroundings

Transportation Ability	Public transportation	Main Arteries	
Vadi İstanbul	With 4 different İETT bus lines from Evyap Cami Bus Station, 1 İETT bus line from Vadi İstanbul Bus Station and 4 different İETT bus lines from TT Arena Stadium Bus Station. In addition, free transportation from Seyrantepe Metro station can be provided and the project has its own Havaray line.	Project is located parallel to the E 80 highway and there are twin side outs on both routes	
Tema İstanbul	K.S.S. 15 İETT bus lines from the K.S.S. Research Hospital Bus Station, 9 İETT bus lines from Orta Mahallesi Bus Station, and 7 İETT bus lines from Güney Yanyol Bus Station are available. The nearest Metro stop is Ataturk Olympic Stadium Metro Station, 2 km away.	The project is 200 m to TEM highway, 7 km to E-5 highway, 9 km to the coastal road, 8 km to Atatürk Airport and 20 km to 3rd Airport.	
Şehrizar Mansions	1 İETT bus line From F.S. Mehmet Bus Station Bus Station, 5 İETT bus lines from Altunizade Bus Station, 3 Metrobus lines from Altunizade Metrobus Station and 3 Metrobus lines from Burhaniye Metrobus Station.	It is 1 km from Şile Motorway, 1km from Bosphorus Bridge and 3 km from Beylerbeyi..	
Bosphorus City	9 İETT bus lines from Hastane Yolu Bus Station, 9 İETT bus lines from Kati Atik Tesisleri Bus Stop, and 3 lines from Fatih Caddesi Bus Station.	The project is 200 m to TEM, 7 km to E-5, 9 km to the coastal road, 8 km to Atatürk Airport and 20 km to 3rd Airport.	
Zorlu Center	43 different İETT bus lines from Zincirlikuyu Bus Station, 4 metrobüüs line from Zincirlikuyu Metrobus Station, 1 metro line from Gayrettepe Metro Station, 2 subway line from Levent Metro Station, 1 metro lines from Nispetiye Metro Station	2 km from Bosphorus Bridge, 200m from D-100 Highway and 2 km from Besiktas.	
Access to Services	Number of Hospitals Nearby	Number of Educational Facilities Nearby	Number of Shopping Centers in the immediate vicinity of the project.
Vadi İstanbul	8	29	4
Tema İstanbul	9	24	7
Şehrizar Mansions	8	15	2
Bosphorus City	9	27	7
Zorlu Center	11	13	9

Energy Efficiency	Renewable energy	Water use	Water resources	Rain Water Storage	Recycling of Waste Water	Solar Energy Storage
Vadi İstanbul	✗	✗	Tap water	✗	Connected to the city sewer system.	✗
Tema İstanbul	✗	✗	Tap water	✗	Connected to the city sewer system.	✗
Şehrizar Mansions	✗	✗	Tap water	✗	Connected to the city sewer system.	✗
Bosphorus City	✗	✗	Tap water	✗	Connected to the city sewer system.	✗
Zorlu Center	Renewable energy is not used but green roof application affects energy and water consumption positively.	Saving armature usage - rainwater and gray water use.	Tap water	✓	Gray water is used for irrigation of green area by treatment.	✗
Material Usage	Renewable material	Domestic Material Usage	Material - Health Relation	Material - Waste Relation		
Vadi İstanbul	No information.	✓	✗	✗		
Tema İstanbul	No information.	✗	✗	✗		
Şehrizar Mansions	No information.	✗	✗	✗		
Bosphorus City	No information.	✗	✗	✗		
Zorlu Center	No information.	Although the registered amount cannot be reached, material usage is mixed. Laminex RF product was developed by Kalebodur for the project	✗	✗		

Life Quality	Indoor Air Quality	Intelligent Building	Disability Policy	Cultural and Social Facilities for the Public	Innovation
Vadi İstanbul	User controlled air conditioning system.	✓	Disabled parking, chair ramp, relief road.	Social Facility For Shopping Centre	Intelligent Building - Havaray
Tema İstanbul	User controlled air conditioning system.	✗	✗	Social Facility For Residents	✗
Şehrizar Mansions	User controlled air conditioning system.	✗	✗	✗	✗
Bosphorus City	User controlled air conditioning system.	✗	✗	In-site Social Facility	✗
Zorlu Center	User controlled air conditioning system.	✓	Disabled parking, chair ramp, relief road.	The Performance Arts Center within the complex providing a positive contribution to the city but addressing only a certain number of people	Smart building - Europe's largest green roof .

4. CONCLUSIONS

As mentioned before, the concept of sustainability should take three key elements into account. These are:

- Protection of nature by minimizing the damage caused to the environment,
- Ensuring economic balance by efficient resource utilization and reduction of consumption,
- Protecting social and cultural values and contributing to these values in the interventions.

When we look at the projects that use keywords referring to the green movement in their publicity, it was determined that no project other than Zorlu Center had an initiative related to sustainability or any green building certificates. Projects are not as eco-friendly as are implied in their advertising campaigns. It has been observed that an environmental friendly impression is created by highlighting the landscape.

Looking at the construction area history of the five projects examined, none of them were found to be suitable for construction. The natural site has been destroyed due to the Şehrizar Mansions project. One of the registered cultural assets of İstanbul, the Office Building of 17th Regional Directorate of Highways was demolished due to the Zorlu Center Project. The other three projects were settled on risky lands. Bosphorus City and Tema are located on the landfill area and Valley İstanbul is constructed on the stream bed. In addition, Şehrizar Mansions and Zorlu Center projects were built to interfere with the Bosphorus silhouette. Bosphorus City and Tema İstanbul projects were found to be positive in evaluating the old dump sites in the city. However, the fact that these projects opened the landfill areas to the settlement made this positive situation controversial. The roof of the Zorlu Center is Europe's largest green roof.

Renewable energy sources are not included in any of the projects reviewed. Projects other than the Zorlu Center project also do not have specific initiatives on water use policy and energy efficiency. Zorlu Center saves energy and water consumption thanks to its green roof. In addition, a serious water use policy is implemented throughout the project. Energy saving armatures are used, rain water and gray water are treated and used in green field irrigation. In general, it was seen that the energy policy of the other four projects did not go beyond using the new generation standard saving armature and led lighting. When construction material selection and usage were examined, no sustainability-aware initiative was found in any of the selected projects.

When examined in terms of socio-cultural contributions, it was determined that no concrete attempt was made other than the Zorlu Performance Arts Center and the Open-Air Event Area located in the Vadi İstanbul. The fact that Zorlu Center and Vadi İstanbul projects are smart buildings can be characterized as innovation. In addition to these, the initiatives of five projects in order to improve the quality of life do not go beyond the user controlled air conditioning system and the standard disability policies.

In general terms, the five projects have almost no attempts for sustainability, but they are trying to draw a nature friendly image with their landscape designs. In the same way, despite the innovative green roof and noteworthy water policy, the Zorlu Center project casts a shadow on the sincerity of its sustainability initiatives with its intervention to the Bosphorus silhouette and demolishing of the historic office building of General Directorate for Highways. This brings the idea that all positive things are made for green washing purposes to mind.

In this context, the uncontrolled use of the positive image created by environmentalism in the public opinion is a serious danger for sustainability. In order to prevent the transformation of environmentalist slogans into greenwashing tools, advertisements for architectural designs that are not physically, socially and economically sustainable should be subject to inspection. Furthermore, the public should be informed that the concept of sustainability is not only composed of large green areas but also includes protection of economic and socio-cultural values. The protection of all these values by state or non-governmental organizations and, if necessary, the application of certain sanctions are crucial for the correct interpretation of sustainability.

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Building Resilience By Responding to Change: Case Study of Fes



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Abstract: Intangible values of cultural heritage give life and spirit to the tangible ones within their existing environment and context. This aspect promotes cultural heritage as a living expression and certifies its irreplaceable role to be a source of identity for communities and individuals to be protected and consigned to posterity. The aim of this study is to explore the existing state of heritage buildings in Medina (old city) of Fes in order to investigate the strategies developed to safeguard its unique cultural heritage. Restoring historic house buildings by giving them new functions is a trend of adaptation to the modern life considered within adaptive re-use strategy. Most of the historic houses are abandoned and few are restored or converted into restaurants, guest houses, exhibition galleries and the like, intended for foreign visitors located in the city as a symbol of an ancient civilization within adaptive re-use aspect. The aim of this study is to explore Fes, a city of Morocco, inscribed in UNESCO's world heritage list in order to examine adaptive re-use strategy as an investment in tourism sector to enhance the economic, social and cultural resilience of communities. Expected result of this study is to discuss adaptive re-use approach in cultural heritage preservation with its link to Sendai Framework for building resilience.

Keywords: Adaptive re-use, resilience, cultural heritage, Morocco – Fes, tourism

Değişime Ayak Uydurarak Direnç Kapasitesini Artırma: Fes Örneği

Öz: Somut olmayan kültürel miras değerleri, somut olanlara mevcut çevrelerini ve bağamları içerisinde yaşam ve ruh kazandırmaktadır. Bu bakis açısı ile kültürel miras canlı bir öğe olarak ele alınmakta ve yeri doldurulamaz değeri ile toplulukların ve bireylerin korunmasına, geleneklerin gelecek kuşaklara aktarılmasına ve kültürel kimliğin oluşmasına kaynak teşkil etmektedir. Bu çalışmanın amacı, Fes Medine'deki (eski şehir) mevcut miras yapılarını örnek olarak inceleyerek kültürel mirası korumak için geliştirilen stratejileri araştırmaktır. Tarihi konut binalarına yeni işlevler vererek restore etmek, yeniden kullanım stratejisi olarak ele alınan, modern yaşama adaptasyon eğilimidir. Tarihi evlerin çoğu terk edilmiş ve çok azi restore edilmiş veya yeniden kullanıma yönelik yeni işlevler kazandırılmıştır. Eski bir medeniyetin sembolü olarak kentte bulunan pek çok tarihi konut; yabancı ziyaretçiler ve turistler için tasarlanan restoranlara, konuk evlerine, sergi galerilerine ve benzerlerine dönüştürülmüştür. Bu çalışmanın amacı; toplulukların ekonomik, sosyal ve kültürel direncini artırmak için yeniden kullanım stratejisini turizm sektöründe bir yatırım olarak değerlendirmek amacıyla UNESCO'nun dünya mirası listesinde yer alan Fas'ın Fes şehrini incelemektir. Bu çalışmanın beklenen sonucu, kültürel mirasın korunmasında yeniden kullanım yaklaşımını, direnç kazandırma konusunda Sendai Çerçeve ile tartışmaktadır.

Anahtar Kelimeler: Yeniden kullanım, Dirençlilik; Kültür mirası, Fas – Fes, Turizm

1. INTRODUCTION

Cultural heritage might be considered as a creator of identity for the communities associated with its tangible and intangible values that shape it. Intangible values of cultural heritage give life and spirit to the tangible ones within their existing environment and context. This aspect promotes cultural heritage as a living expression and certifies its irreplaceable role to be a source of identity for communities and individuals, to be protected and consigned to the posterity. Transfer traditions and knowledge to the future generations and sharing the stories of our lives as memories is a crucial step in protection of cultural heritage. Indeed, its protection includes public authorities and individual works in terms of existing safeguarding strategies and conservation approaches. Some of the actions undertaken until the present might be examined in terms of their results. Currently, many heritage examples around the globe are under the risk of degradation and demolition because of being abandoned. Therefore, conservation and preservation actions are based on development of new strategies oriented to re-use in order to protect cultural heritage.

1.1. Objectives

The aim of this study is to examine the present condition of heritage buildings in Medina (old city) of Fes and to discuss solutions developed as strategies to safeguard cultural heritage. Particular emphasis is given to adaptive re-use aspect used in restoration works and its link to the Sendai Framework Priority 3 - where public and private investment is encouraged in order to prevent and reduce risks - is discussed [1, p. 18]. Adaptive re-use is selected as a main strategy for protection of houses in Medina of Fes because of their existing condition that most of the examples are abandoned and few are restored or converted into restaurants, guest houses, exhibition galleries and the like, intended for foreign visitors located in the city as a symbol of an ancient civilization.

Consequently, this study raises the fact of the importance of integration between decision makers and practitioners to build resilience [2, pp.17-18].

1.2. Methodology

In this study, one case is selected to be explored in order to examine adaptive re-use strategies as an investment in tourism sector to enhance the economic, social and cultural resilience of communities which is aligned with Priority 3 of Sendai Framework. Selected case study is Medina of Fes, a city of Morocco, inscribed in World Heritage List of UNESCO. In order to understand the present condition of the site and demands of its community a survey with the locals is made. Based on the literature research and case study exploration a discussion on the adaptive re-use approach in heritage sites is conducted

2. BUILDING RESILIENCE IN HISTORIC SITES

The city is a living phenomenon develops during the course of the time that allows playing its role of economic, social and cultural organization. It is constantly changing under the pressure of technological innovations, the change of social practices, life style, and globalization and so on. The built environment, like the outstanding and unique natural surroundings, provides a vital link to the past, assists in celebrating achievements, and offers a vision for the future. Protecting built heritage and preserving national story for future generations presents a real challenge, a challenge that is being enthusiastically taken up by heritage councils, developers, architects, community groups, heritage councils, individuals and all levels of government [3].

Cities including historic environments where the existence of heritage buildings is a challenge for the present conservation actions need to be responsive to the change which has been brought by the modern life in respect to their cultural and historic values. City, as a living phenomenon evolves during the course of the time and its spatial and functional configuration is shaped by the transformation of social, economic

and cultural events. Therefore, this evolution process has a strong relation with the concept of resilience which is the capacity of coping with changes, even traumatic and catastrophic ones, calamities, disasters, exploitation of available resources and so on. Within this aspect historic sites have a specific place because their lack of adaptation to technological developments, accessibility, performance requirements of modern life, functional normative etc. Requirements for the improvement of performance in order to preserve historic buildings might conflict with conservation restrictions. Due to these facts a multi scale approach including environmental, economic, social and cultural aspects is an imperative for preserving historic sites and their buildings [4].

Historic buildings represent not only traces from the history, but also belong to the present of the city. A heritage building is recognized and protected for its exceptional historical, architectural and cultural aspect. Conserving heritage buildings and giving new functions according to their location, size, and potential can help to future generations to understand their roots and to the culture they belong and to strength cultural identity [5]. However, the proposed new use must be appropriate in terms of preserving the cultural significance of the historic fabric. When heritage buildings are adapted for different functions, the new use and the intervention work should preserve the originality and architectural character of the building to not give wrong or missing information for the further generations.

Today people have become more conscious about architectural conservation of built environment, so selection of new uses for heritage buildings is handling more professionally. Adaptive reuse poses quite difficult challenges for designers. Changing the function of a building introduces new regulatory conditions [6]. Deciding the new use of a heritage building is a difficult problem in decision-making process since there are many factors in the process. Finding the most appropriate function within the context is crucial in order to preserve the cultural significance of the heritage building. All the factors are taken into consideration in adaptive re-use decision-making process to find the most appropriate function for the buildings, considering the different dimensions of its new function. A successful adaptation is one that respects the existing building and its historic context and adds a contemporary layer to the heritage building rather than destroying its character [7].

2.1. Adaptive Re-Use Approach

Adaptive re-use of a heritage building is a challenging process since the heritage values, physical characteristics and potentials of the heritage building need to be well analyzed holistically [5]. Society is becoming more aware of ecological issues and the demolition of heritage buildings is now seen as an ecological waste and also as the disposal of cultural identity, of heritage and of socio-economic values [8]. Adaptive re-use or the act of transforming something into something else, in terms of architecture, is the adaptation of the function of an existing building to another function to meet the new requirements. It can take many forms: To save an abandoned building for heritage reasons, assigning to it another function, to revise, renew any activity of a neighborhood by adapting it with any of other neighborhoods, or with the present life style, to project a new direction for a region. Re-use decision requires a preliminary study for a reciprocal adaptation between the existing building and its new use.

Protection of heritage buildings is a challenging topic in terms of ensuring continuity of the life and meeting modern demands [9, p.9; 10, p.9]. Intervening a building by alteration is called “adaptive re-use” (Brooker & Stone, 2004). Although adaptive re-use approach seems as quite recent topic in the field of preservation of heritage buildings, it can be traced in Viollet-le-Duc (1814–1879) statement: “*the best way to preserve a building is to find a use for it, and then to satisfy so well the needs dictated by that use that there will never be any further need to make any further changes in the building*” [11, p.156]. Adaptive re-use approach advocates sustainability in terms of saving energy and preservation of cultural heritage [6]. Alteration for giving new function to the buildings which face the risk of becoming obsolete is the way of

re-use. Adaptation of an existing building to its new function includes many challenges. Finding the most appropriate function within the context is crucial in order to preserve the cultural significance of a heritage building.

Cities as living phenomena are constantly changing under the pressure of technological innovations, changes in social practices, life style, and globalization as well. Protecting the built heritage and preserving cultural identity are challenges which enthusiastically are taken up by decision makers, developers, professionals and communities etc. [3, p.1; 2, pp.11-14]. Therefore, responding to change is inevitable fact of safeguarding heritage.

Adaptive re-use is the approach which highlights how built heritage can be conserved through the successful marriage of existing heritage structures and cutting edge architectural design by preserving the past and building the future. The best way to preserve heritage structures is to give sympathetic new use [3].

Adaptive re-use is considered as part of resilience to sustain the use of historic buildings in order to preserve cultural heritage. Aytac et all defines adaptive resilience as “self-organizing behavior and adaptive capacity”. Also, associates it with Holling’s adaptive cycle which is formed as infinity symbol. Cities change continuously in terms of economic, social, political and planning point of view and do not hold on their current state [12].

To conclude, adaptive re-use has a good potential to preserve heritage buildings however it needs to be limited with conservation theories and consideration of additional new loads.

2.2. Sendai Framework - Priority 3: Investing in DRR for resilience

Increasing number and intensity of natural and human induced disasters bring forward the importance of disaster risk reduction in a global level. Therefore, many international agreements targeted to the risk reduction and risk mitigation are conducted and practiced. Among the prominent ones 2004 The Hyogo Framework for Action (2005-2015) can be listed [13, p. 3] as a threshold in the field of disaster risk reduction by its focus on building resilience and involving communities in order to mitigate disaster risks. Approximately ten years after Hyogo Frameworks; considering early-warning, preparedness, resilience, innovation, and risks, in 2015 Sendai Framework is adopted in an international level by having the importance of gaining global attention [13, p. 5]. The main goals of Sendai Framework can be stated as building resilience, promoting local solutions and fostering inclusion [14].

Sendai Framework is known as a 15-year, voluntary, non-binding agreement aiming at building resilience and reducing risks and losses of lives [1, p. 12; 15, p. 1; 2, p. 15]. Particular emphasis is to the involvement of all stakeholders within risk reduction such as states, private sector both in national and international levels [14].

In this paper, particular attention is given to the “*Priority 3: Investing in disaster risk reduction for resilience*” where resilience of communities and cities is driven by public and private investment in disaster risk reduction of cultural heritage (Sendai Framework, 2015, p: 18). The emphasis may be brought on the importance of integration between decision makers and practitioners to build resilience [2, p. 17 – 18].

3. THE CASE STUDY: MEDINA OF FES

A study of Medina of Fes, listed in the World Heritage List (<https://whc.unesco.org/en/list/170>) is conducted as a case study in order to explore re-use as a strategy for preserving historic sites by discussing challenges due to the context and existing circumstances.

Medina of Fes (Figure 1) is located in Morocco which has nine inscribed properties [16] and seven intangible values listed in World Heritage List [18]. Fes is the former capital of the country and still it is known as the cultural capital as well. Founded in the 8th century, Fes remains one of the few authentic Islamic cities, it has preserved within its walls, the most dazzling aspects of the Arab civilization. Palaces, mosques, mansions, medersas (schools), fondouks (hotels) remain eloquent witnesses of its prestigious past [17, pp. 230 – 241].



Figure 1. Medina of Fes [19]

3.1. Cultural Heritage in Morocco

Morocco has a rich history that began with the Berbers and has been ruled by many dynasties. Spanish and Portuguese influences have contributed to its rich cultural heritage. The kingdom of Morocco that is at the crossroad of Europe and Africa is a remarkable country with its culture and prosperous history. The country has a very strong sense of culture. Various rulers that ruled it influenced the country's cultural diversity. From the 8th century, great Moroccan dynasties succeed one another (Idrisside, Almoravide, Almohade, Merinide, Saadienne and Alaouite). Large imperial cities were built such as Fes, Marrakech, Meknes or Rabat, in a monumental and imposing architectural style.

During its rich history Morocco has faced a rush of European powers and the French in particular furthering their interests in North Africa at the beginning of 20th century. Therefore, Morocco was under protectorate until 1950.

With its large number of inscriptions in UNESCO World Heritage List Morocco has a rich cultural and historical values including tangible and intangible ones.

• Intangible heritage of Morocco

Intangible heritage of Morocco has a traditional expression acknowledged by many societies. Morocco has seven components inscribed as intangible cultural heritage among whose the Tan-Tan festival, the cultural space of Jemaa el Fna, the Mediterranean diet are the most known (UNESCO World Heritage List).

Tan-Tan Festival in southwestern Morocco is an annual gathering of nomads from the Sahara where more than thirty tribes from southern Morocco and other parts of northwestern Africa participate. Originally it was held annually around the month of May and it was also a pretext for various cultural expressions such as music, folk songs, games, poetry games. Since 1963 this festival has been transformed into the form of a fair which locally is called as Moussem. This fair aims at driving economic, cultural and social activities. The other well-known example of Morocco's intangible heritage, the Jemaa el-Fna square is one of the main cultural spaces of Marrakech. Having become one of the symbols of the city since its founding in the eleventh century, it offers an exceptional concentration of popular Moroccan cultural traditions that express themselves through music, religion and various artistic expressions. It is a meeting point for the inhabitants of the city, but also for people from elsewhere. Throughout the day, and late into the night, traditional food and a variety of services such as dental, traditional medicine, divination, preaching, henna (tattoos) are available. Additionally, storytellers, poets, snake charmers are performing in the square [20].

The diverse and rich cuisine of Morocco express its taste as the Mediterranean diet which involves a combination of knowledge, rituals, symbols and traditions relating to crops, gathering, fishing, breeding, conservation, processing, cooking and, especially, the manner how to share the table and consume food. Sharing the table is the foundation of the cultural identity and continuity of communities in the Mediterranean basin. It is a time of social exchange and communication, affirmation and re-founding of the identity of the family, the group or the community. The Mediterranean diet emphasizes the values of hospitality, good neighborhood, intercultural dialogue and creativity, and a way of life guided by respect to diversity. It plays an important role in cultural spaces, celebrations by bringing together people of all ages, classes and backgrounds [20].

- **Tangible heritage in Morocco**

Medina of Fes is one the places where tangible values of Moroccan heritage take place. It is known as the largest and best preserved coherent historical place in the Arab world, even in the Islamic world. In the 11th century, the Almoravids united the city within a single rampart and, under the Almohad dynasty (12th and 13th centuries), the primitive city (Fez el-bali) was already taking its current dimensions. Under the Merinids (13th – 15th century), a new city (Fes Jedid) was founded (in 1276) west of the old (Fes El-Bali) one. It houses the Royal Palace, the headquarters of the army, fortifications and residential areas. From that time, the two entities of the Medina of Fes constituting one of the great Islamic metropolises embodying a great variety of architectural forms and urban landscapes. They include a considerable number of monuments of a religious, civil and military nature which materialize a culture with multiple influences [20].

Tangible heritage in Morocco includes some monuments such as Ait Benhaddou Palace which is a striking example of the architecture of southern Morocco. Inside defensive walls reinforced with corner towers and pierced by a chicane door, numerous houses around, some modest, the others being small urban castles with their high corner towers. It is an extraordinary set of buildings offering a complete perspective of techniques. Architecturally, the structure of the habitat is in the form of a compact cluster, closed and suspended. The public spaces of the palace consist of a mosque, a public square, a caravanserai, two cemeteries (Muslim and Jewish) and the shrine of Saint Sidi Ali. The Ait-Ben-Haddou palace is a perfect synthesis of the earthen architecture of the pre-Saharan regions of Morocco. Ait Ben Haddou Palace constitutes a remarkable model of a multiscale architecture land of southern Morocco [20].

3.2. Particularities of Medina of Fez

The word Medina refers to the old part of a town or a city. It is typical traditional settlement including narrow streets, fountains, palaces and mosques [21].

The case of this study, former capital city Medina of Fez, is dated back to the 9th century. It includes rich cultural assets by its madrasas, fondouks, palaces, residences, mosques and fountains as tangible part and intangible values as Tan – tan festival, Mediterranean diet, argan tree, cultural spaces etc. Since 1912 the capital city was transferred to Rabat, however, Fez kept its statues of being cultural and spiritual centre with its largest Medina [19]. It is one of the ancient cities of Morocco which is considered as one of the largest and best preserved historical cities in the Arab-Muslim world. The Medina of Fez is surrounded by the city walls dated back to the different periods and spread over an estimated length of 25 km. (the belt 13.6 km, the inner ramparts 9 km, the outer ramparts “Qasbah Cherrarda” 1.526 km) [22, p. 6 – 8; p. 52 – 55].

At the end of the fifties, the medina of Fez underwent changes at various levels that influenced its traditional fabric. The abandonment of traditional houses by their owners to move towards economic activity clusters or the new cities that represent the image of modernity, with their new habitats, better infrastructure, better services and modern standards. As a result the city has been left to low-income population and deterioration of the traditional pattern and buildings were inevitable. Consequently, the site faces seriously risk of loss of traditional fabric and heritage values. However, in the last few years, there has been a new movement, which is reflected by the return of the national investors to the old houses with rather touristic intention. Different strategies are applied to safeguard Medina of Fez in governmental level, among which adaptive giving new functions to the individual buildings is one of the mainly used approaches. Another action has been done with the practical aim from the governmental level, establishing agency titled “ADER” in order to coordinate and to scrutinize restoration works of Medina of Fez. ADER is the agency of development and rehabilitation of the Medina of Fes founded in 1989 [23].

3.3. Site Survey

In order to better understand the dynamics of the studied Medina of Fez, and to have more information about the site and its culture, a survey was conducted accompanied with three interviews.

• Survey

The survey is aiming to explore interpretation of the users regarding their connection with Medina of Fes, economic condition and building quality of the site. The questionnaire is divided into four parts according to the scope of the questions such as personal information, house status, opinions about restoration strategies, options that can be suitable for the inhabitants. 160 people were surveyed and the survey language was in French and Arabic. The results and outcomes of the findings were translated to the English for being able to be used within this research.

The significant outcomes of the survey are summarized below:

- The largest part of the surveyed people (70%) is a local one lives more than 20 years in the Medina of Fez and they own their own properties (56%).
- The size of the houses is mostly between 70 – 100m² (36%).
- The reason of living here is more or less equal in terms of having family here (40%) and working as a craft man (30 %).
- Education level of the locals is basically as primary (40%) and high school (30%) and 20 % of the locals is not educated.
- 50% of the locals are employed and 49% among them are unskilled employees.
- The large part of the buildings is over 20 years old (68 %).

- Most of the population have the intention and demand to intervene their houses (53%) and most of them have not made it yet because of financial lack (45%).
- The thought about re-use is mostly related with giving new function as accommodation for tourists (27%) and the profit that can be got (27%).

As a result of the survey it can be said that most of the inhabitants have the intention and desire to convert their houses and re-use for tourism purposes, however, could not afford the expenses. In general the locals support adaptive re-use strategy and believe that it will have positive effect to revitalize their neighbourhood. According to the opinion of locals, contributed to the survey, the number of the restoration projects aiming re-uses needs to be increased. This approach will have brought reputation to the owner in society and will offer new jobs for unemployed locals.

- **Interview**

The interviews aimed at having information from decision makers, professionals and experts level about policies, and practise in restoration works in Medina of Fez. These interviews had open-ended questions about policies, practise in restoration works in Medina of Fez and generally the site condition (Table 1).

Table 1. The frame of the interviews

Role	Actor	Aim of the interview
Decision maker	ADER	Understanding the strategies of preservation of the Cultural heritage of Medina of Fes, and the legislation applied by the government to ensure the heritage preservation.
Professional	Architect	Understanding the way of intervention, and the complexities faced during transformation work.
Expert	Prof. at UIR	Understanding the dimensions of the Medina of Fes.

The main aim of the interviews is to get the point of view of the actors in the field of restoration works. The president of ADER Fes agency “Fouad Serrhini” gave information about the procedure of acceptance of restoration projects in Medina of Fes. Serrhini stated that the decision of the acceptance is dependent on the different authorities based on the fund of the project such as the prefecture, the Ministry of Culture, Habitat Ministry, Craft Ministry, community and ADER Fes Agency. The role of ADER Fes is to steer and oversee the works in terms of their legal status. He also remarked the importance of World Heritage Convention (WHC), ratified by Morocco that establishes a system of identification, presentation, and registration to the heritage list and definition of the outstanding value as well. Serrhini stated that “Although recently Medina of Fes does not get international financial support no one can deny the 80s and 90s projects funded by FADES and World Bank”.

In the interview done with the architect Kabbaj as a representative of professionals who owns the guest house restored by him, the intervention works and the challenges faced during adaptive re-use projects were explained. The necessity of restoration works of old houses as the evidences of the culture and identity of Morocco and the link between past-present and future were pointed out. He explained in detail the restoration and conversion process and works of his own house. He highlighted the importance of structural problems and provided solutions and the difficulty to find skilled craftsmanship to restore traditional ceramics and the plaster as challenges during the restoration works.

The last interview was done with the representative of scientific side, Prof. Dr. Bennani the director of UIR International University of Rabat, an expert in the field of Moroccan heritage. She has been studied the case

of Medina of Fes and is the author of a book [23] where the disastrous state of the Moroccan heritage is discussed. She stated her support to the idea of adaptive re-use strategy to preserve the heritage versus ignorance or leaving the buildings to their destiny which mostly end up with abandonment and demolition.

To conclude the interview results it is possible to say that the points of views of three different levels of heritage preservation actors is coming together in the support of adaptive re-use approach for the case of Medina of Fes when the particular condition of the site is taken into consideration.

3.4. Adaptive Re-use Approach and Restoration Works in Medina of Fes

With its rich and long history Morocco has passed from two political stages such as before the protectorate and after the protectorate. Before the Protectorate, the historic buildings were maintained by two main entities which are The Habous and the Makhzen. The Habous was a public service, benefiting from a particular organization and ensuring a great independence from other institutions. It took care of all the pious foundations, public buildings or inalienable private property. This institution had effectively contributed to the maintenance of a number of especially religious monuments, although this interest stemmed less from an awareness of the artistic or historical importance of these buildings than from the needs to following their functions. After the Protectorate, by the establishment of independency, the Ministry of Culture, called at the beginning Ministry of State in Charge of Cultural Affairs was created “following a royal decree to 8 July 1968”. It was lasted only two years and then converted to the direction for two successive ministries which currently are the main players for heritage conservation.

The ministry responsible for housing and urban planning which supports the protection of heritage at the level of three directorates: At the level of the Planning Directorate, the Service of Plans and diagrams of specific areas, included in the division of studies, takes care of the areas to be endowed with a specific arrangement including the Medinas. At the level of the Social Housing and Land Affairs Branch, the Department of Renovation and Rehabilitation of Old sites, included in the Division of Unsanitary Habitat, is responsible for historical rehabilitation of the sites. At the regional level, the management of heritage is generally delegated to local authorities who must ensure, when decisions are taken to preserve the heritage assets included in its territory. They can also propose a classification for the monuments included within their territory. Only the Medina of Fes is endowed with a specific organism for the preservation of the historical fabric: the Agency for Development and Rehabilitation of the City of Fes which is called as ADER-Fes.

ADER-Fes is an anonymous company created by the Moroccan state in 1989. The Board of Directors is chaired by the Minister of the Interior. It has the task of safeguarding the Medina of Fes. Thus the Medina of Fes is the only one in Morocco to be endowed with a specialized institution, which undertakes various safeguard actions in order to preserve the heritage richness of this historical fabric. With the collaboration of various stakeholders such as the Ministry of Culture, ADER-Fes has undertaken actions to restore and rehabilitate not only landmark monuments, including the Medersa Bouinaniya (school), Fondouk Nejjarine (hotel), old houses but also public spaces including the rehabilitation of the place Boujloud, souk R'cif, place Seffarine [20].

In addition to the technical study programs in view of improving the built frame, ADER attaches great importance to the social and economic development of the Medina of Fes. In order to do this, it has introduced specific programs such as restoration and rehabilitation of housing programs, which allows inhabitants to benefit from a material subsidy (30% of the cost of the investment); the creation of a social cell that works in partnership with neighborhood associations; also, collaboration in the development of specific programs for professionals; and the organization of international rehabilitation and restoration

workshops and sites. These actions show the importance of collaboration and contribution of all stakeholders involved in restoration works where the strategy for adaptive re-use in Medina of Fes is framed.

Another important step within the aspect of preservation works is a project has been launched in 2013 and founded by the World Bank aiming at safeguarding Medina of Fes. It consists of the rehabilitation of built heritage including assistance to the rehabilitation of housing and workshops as well as the development of tourism, and the rehabilitation of the road system essentially including the improvement of existing accesses, the development of parking and the development of an emergency road network.

4. DISCUSSION

The Medina of Fes as the listed historic site facing many challenges to be preserved and meet requirements of the modern life like with the other medinas. Although being a former capital of Morocco and now still keeping its importance as a cultural centre its glory is shaded by the low income population and uncontrolled growth of the new comers and tourists. The fact that the owners of the buildings have an intention to leave Medina of Fes in order to find more modern life and immigration of the countryside low-income people with a hope to find a job in the city has brought serious problems to the site. The change of local profile and abandonment of the buildings are the main reasons of preservation problems; as well as old infrastructure and its limited capacity.

Expected result of this study is to discuss adaptive re-use approach in cultural heritage preservation of Medina of Fes. Additionally, the critical thinking for the future works is associated with the link to Sendai Framework for building resilience.

One of the main drivers of adaptive re-use in Medina of Fes is potential of tourism in the site or individual building which will bring income to the locals. However, the use of tourism as a tool of preservation may be critical for the heritage site itself. Control the increasing number of the site's population has a vital role for infrastructure and capacity problems. Therefore, planning of adaptive re-use with all its positive and negative effects is crucial.

The proposal of improving the existing strategy for adaptive re-use in Medina of Fes is framed as setting criteria for evaluating the existing buildings as an integrated approach and their relation with the stakeholders. The idea is to increase community involvement by raising awareness about resilience and how to contribute to the system and how to deal with historic buildings, particularly residential ones.

Table 2 gives criteria need to be documented for each individual case in order to evaluate and compare the existing condition with the new proposal. These criterion are developed during this study. Particular attention needs to be paid to the new number of the users to see the impact to the infrastructure. This evaluation has a critical role to estimate the level of the impact of adaptive re-use work in order to ensure preservation of the individual building and its heritage context.

Table 2. Criteria for evaluating the existing buildings

Criteria		Existing	New proposed
Budget	Personal		
	National support		
	International support		
Function	Residential		
	Guest house		
	Public		
Context	Residential neighbourhood		
	Commercial neighbourhood		
	Mixed		
Comfort level	Traditional life style		
	Modern life style requirements		
	Universal design criteria		
	Water management		
	Energy consumption		
Impact to the infrastructure	Electrical energy		
	City sewage system		
	Communication system		
	Other technologies		
Number of the users			
Stake holders	Owner		
	Decision maker		
	Professional		
	Expert		

The decision and evaluation need to be proceeded by integrated design approach (Figure 2). By this way all the parameters and their role in the decision making will be considered. Figure 3 shows a proposal of a committee that work on the adaptive re-use projects.

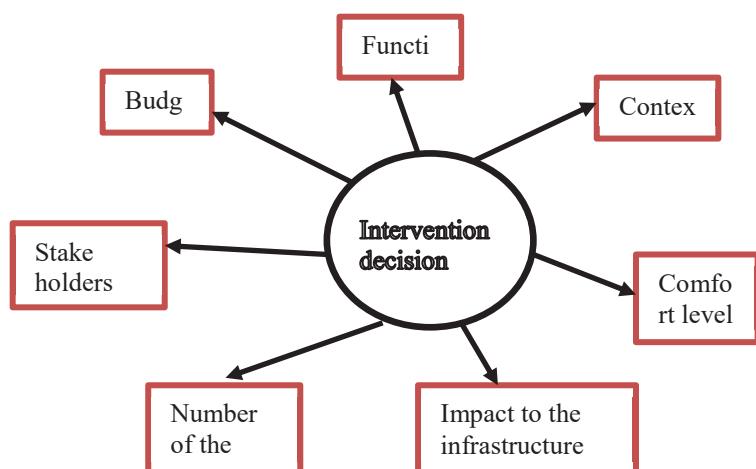


Figure 2. Intervention decision

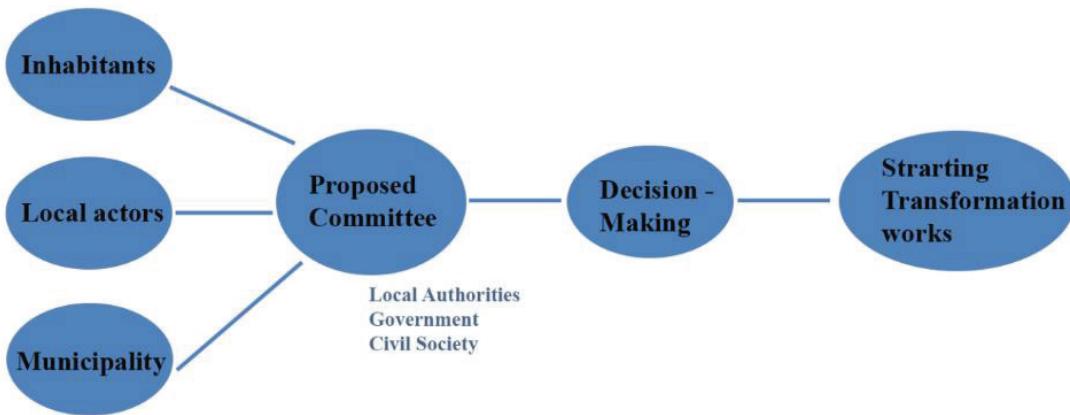


Figure 3. Proposed committee

As a result of the discussion about adaptive re-use approach applied in Medina of Fes it can be stated that adaptive re-use as a more recent and trend strategy which has brought the attention of the owners and has created a reason to go back to the Medina of Fes. Particular interest is given to the tourism potential which includes positive and negative effects. Therefore, the urgency and priority to its consequences are pointed out in this study.

The establishment of ADER as a stakeholder has a very important role in terms of legislation of the restoration works and to help in technical issues. The population of the Medina of Fes is constantly decreasing between 2000 and 2014, the decrease of 24000 is registered, which represents almost 25% of the total population. This regression is mainly due to the fact that the Medina was devalued and undermined. However, since 2014 the population started increasing and this is strongly related to the new refurbishment plan made by the government and ADER association which has brought many locals back to the Medina due to the new opportunities of work, and also restoration works for the houses threatening ruins.

Guesthouses, a recent phenomenon in the Medina of Fes are one of the new trends as part of adaptive re-use approach. Converting historic house buildings into guesthouses has an excellent ground regarding the development of a new type of accommodation and the transformations of the traditional built environment. Guesthouses refer the notions of rehabilitation, renovation or preservation of the architectural and urban heritage. This type of accommodation presents some major benefits such as personalized attention, healthy and homemade food, quietness, inexpensiveness, and meeting modern life requirements. Table 3 shows the fact that guesthouses in the Medina of Fes are increasing due to the high demand of tourism. The guesthouses represent a chance for the preservation and protection of the Medina of Fes and the development of tourism.

Table 2. Evolution of the number of guesthouses in the Medina of Fes

Year	1997	2000	2002	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014
#	1	5	10	18	35	49	64	75	94	103	110	111	112
	7	0	2	4	6	7	8	9	0	3	4	5	7

Source: Charai, Z, 2017. Les Effets du Tourisme sur l'identitéculturelle : le Cas de la Medina de Fes (Fr).

This increase can be linked to the Priority 3 of Sendai Framework which is focused on investing disaster risk reduction for resilience. In the case of Medina of Fes the main risk is the increase of number of the tourists and its affect to the infrastructure. Adaptive re-use works must be controlled by decision makers in order to control the negative effects and to balance positive results and negative impacts of restored buildings and their use.

It is obvious that the achievement of best practices and good solutions cannot be possible only by leading of governmental level. The key of success is based on the involvement of communities or civil societies and all other actors, stakeholders as well.

5. CONCLUSIONS

Adaptive re-use strategy, giving new use to a building is not only saving and anchoring it in contemporary life, but often savings in terms of land, networks, and materials. It is also to preserve the identity and the memory of a place, to reclaim it and to ensure the transmission of an inheritance. Thus, reusing a building can be part of a sustainable development process and part of resilience work frame of a historic city. The increase of the transformation operation of traditional houses into new functions, particularly those related to tourist infrastructure equipment (accommodation, restaurants or commerce) will enable, avoiding the fragmentation of homes by a low income who has invaded places after the departure of wealthy families to the modern city, revitalizing and preserving the crafts in danger, and, promoting the economic level, Offering a typical traditional accommodation for foreign tourists, offering new job opportunities for the locals. Although adaptive re-use strategy has some disadvantages such as the land speculation, the lower income population living in the houses targeted for transformation will have to leave the premises and find new housing in often disadvantaged neighborhoods, and the overexploitation of spaces and the use of new materials can have adverse effects on the structure. Also, the revival of the zones affected by the transformation can cause an imbalance at the level of the traditional fabric.

Adaptive re-use approach, as a strategy of preservation, attracts interest of investors more and more in Moroccan cities such as Marrakech, Essaouira and Fes whose first objective is participation to tourism development. The way of contributing tourism development is to revitalize historic sites and cultural assets. However, these intentions have created their new dispute, dilemma and discussions. To encourage re-use and increase of tourism potential in one hand seems as an advantage, on the other hand, if it is not limited it may cause serious infrastructure and life line problems and dramatic loss of traditional pattern. Consequently, it may end up as a disaster.

Heritage dimension of Medina of Fes represents an identity and cultural value likely to become, through cultural tourism, an essential vector of development in a context of globalization. Adaptive re-use process positively effects the social and cultural environment by maintaining heritage significance of buildings and ensures their survival. With a special focus on traditional old houses, the process of adaptive re-use is part of a move to adapt the built environment to a contemporary lifestyle. Even though adaptive re-use strategy may be a backbone for preservation of cultural heritage and ensures protection of tangible values it increases tourism industry as a key economic driver and needs to be managed thoroughly. In this sense, the way of collaboration of public and private stakeholders in order to enhance resilience and to control tourism impact is critical.

Adaptive re-use process positively effects the social and cultural environment by maintaining heritage significance of buildings and ensures their survival, and supports the resilience approach as well. With a special focus on traditional old houses, the process of adaptive re-use is part of a move to adapt the built environment to a contemporary lifestyle. Even though adaptive re-use strategy can be a backbone for preservation of cultural heritage and ensures protection of tangible values it increases tourism industry as a

key economic driver and needs to be managed thoroughly. In this sense, the way of collaboration of public and private stakeholders in order to enhance resilience and to control tourism impact has a critical role.

Adaptive re-use strategy is valuable way to preserve heritage buildings in Medina of Fes as the listed property in World Heritage List. This strategy has three main inputs to the city. The first one is taking back the glory of the place by the back movement of the owners, primary actors in heritage and cultural identity preservation. The second one is to create new opportunities for unemployed people. The third one is increase of tourists. However, the consequences of these three seemingly positive inputs need to be considered in a holistic way within resilience of the cities.

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Multicultural Education in Barcelona



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Abstract: Multicultural Education is generally defined as any form of education incorporating different cultural backgrounds. Architectural education is inherently multidisciplinary and celebrates cultural diversity. In many cases, culture is defined in the broadest possible sense covering nationality, language, religion, class, gender etc. The main objective of multicultural education is to remove barriers for educational opportunities and promote success for students from different cultural backgrounds. This paper is about an international workshop held in Barcelona, June 2017, between Universitat Politecnica de Catalonia/Escuela Técnica Superior d'Arquitectura de Barcelona, Bahçeşehir University Faculty of Architecture & Design and Smt. K.L. Tiwari College of Architecture of Mumbai. The title of the workshop was "BCN Step by Step: Gaudi and his Time". Twenty-four students from three faculties worked in joint groups and were asked to create a stop motion video as the end product of the workshop. Growing popularity of videos for education proved to be right in the case of Summer Workshop 2017 of ETSAB, BAU and Tiwari College. Thinking and reflecting on Gaudi's buildings, students had a chance of experimenting lived space by using all their senses. Sketches and mixed images made up their stop motion videos. Multicultural collaboration and diversity were the key factors of this group.

Keywords: Barcelona, multicultural education, workshop, stop motion video

Barselona'da Çok Kültürlü Eğitim

Öz: Çok Kültürlü Eğitim, genel olarak değişik kültürel arka planları olan eğitimleri bir araya getirmeyi amaçlayan eğitim şekli olarak tanımlanır. Mimarlık eğitiminin özdür çok disiplinli olmak kadar çok kültürlü olmak da vardır. Kültür ise geniş bir tanımlama ile milliyet, dil, sınıf, ırk, cins vb. gibi alanları kapsar. Eğitim alanında amacı, sınırları kaldırma ve değişik kültürel arka planlardan gelen öğrencilerin başarısını sağlamaktır. Bu makale, Haziran 2017'de Barselona'da gerçekleşmiş olan Uluslararası bir atölye çalışmasını anlatmaktadır. Katalonya Teknik Üniversitesi'nin Mimarlık Fakültesi (ETSAB), İstanbul Bahçeşehir Üniversitesi Mimarlık ve Tasarım Fakültesi ve Hindistan'dan Mumbai Tiwari College Mimarlık Bölümünden öğrencilerle gerçekleşmiştir. Atölye çalışmasının başlığı "Adım Adım Barselona: Gaudi ve Zamanı"dır. Üç fakülteden 24 öğrenci karışık gruplar oluşturarak, 5-6 dakikalık "Stop Motion Videolar" hazırladılar. Videoların mimarlık eğitimi alanında giderek daha fazla kullanılır olduğu gerçeğinden hareketle, Workshop Final Projelerini bu şekilde hazırlamaları istendi. Gaudi'nin işleri ve Barselona şehrini geneli üzerinde, tüm duyularıyla algıladıklarını videolarına yansittılar. Videolardaki görüntüler öğrencilerin eskizlerinden ve diğer karışık görsellerden oluşmaktadır. Çok kültürlü iş bölümü ve çeşitlilik halinin, tüm grupları bağlayan en önemli anahtar faktörler olduğu gözlemlenmiştir.

Anahtar Kelimeler: Barselona, Çok Kültürlü Eğitim, Atölye Çalışması, Stop Motion Video

1. INTRODUCTION

Architectural education is inherently multidisciplinary and celebrates cultural diversity. We are presented with a great opportunity to embrace a phenomenon that is essentially human. Incorporating a variety of dimensions into architectural education programs honors the many ways in which locales, communities and cultures texture our life stories. Celebrating a multidimensional sense of place encourages recognition of the uniqueness of each individual's connections with the places that create the rich, meaningful context of our lives.

When a brief history of multicultural education is viewed, conceptualizations of multicultural education evolve and diversify. It becomes even more important to visit its historical foundation. How did the earliest form of multicultural education come about and what triggered it? How has multicultural education developed since its earliest conceptualizations?

Roots of multicultural education lie in the civil rights movements during 1960s in the USA. People who challenged discriminatory practices in public institutions carried out social action [1], [2]. As for the public institutions, educational institutions were targeted. They were the most oppressive and hostile to the ideals of equality. In the late 1960s and 1970s, the woman's rights movements forwarded the challenges for education reform. Women's rights groups challenged inequalities in all forms besides education. Feminist scholars and other women activists insisted on a curricula more inclusive of diverse histories and experiences. Educational institutions and organizations addressed concerns for traditional curriculums. The separate actions of various groups claiming dissatisfaction with the inequalities of the education system and the resulting reaction of institutions during the late 1960s and 1970s happened to be the earliest conceptualizations of multicultural education. James Banks, as a pioneer of multicultural education, was among the first multicultural education scholars to examine schools as social systems from a multicultural context [3]. His conceptualization was grounded on the idea of educational equality. According to Banks, a multicultural school environment examines and transforms school policies, teachers' attitudes, instructional materials, assessment methods, counselling and teaching styles.

Besides USA, the cultural landscape all over the western societies seemed to be missing to provide all students with creative and critical thinking skills, intercultural competence and social and global awareness. The education system was not good enough to prepare the students to completely participate in an increasingly diverse society. Towards the final decade of the twentieth century, multicultural education scholars refocused on developing new approaches and models of education and learning built on a foundation of social justice, critical thinking and equal opportunity. Educators, researchers and cultural theorists began to deconstruct traditional models both in lower and higher education arenas from a multicultural framework. Both schools and society were re-examined from a progressive and transformative framework. The emerging conceptualizations of multicultural education indicated that this work must be interpreted with social and political structures because they are linked and seem to be starting points in eliminating inequalities in the society. It is important to keep in mind that multicultural education is rather a new concept that will be changing to satisfy the needs of changing societies.

Multicultural education is a comprehensive reform in solving problems arising from cultural conflicts and to support students in developing empathy so as to recognize their mutual cultures and in doing so increase their academic success. Penny, Forney and Harlee [4] set out the following principles to follow in multicultural education;

1. An essential part of multicultural education ought to be to allow different voices to be heard,
2. The verbal and nonverbal communication models of the teacher need to be analyzed continuously so as to raise the participation of students in their learning process,
3. Multicultural education should occupy a place in the formal educational program,
4. Multicultural education should encompass all levels,
5. Multicultural education should teach students to think critically so as to develop objective research and learning tools and allow them to ask questions freely,
6. Multicultural education necessitates an understanding of the family culture of that community,
7. Multicultural education should be evaluated as a source of benefit for the community

As the first principle points out, hearing of different voices has a primary importance in challenging diversities. Architectural education soon adopted itself to this reality. International and multinational workshops are held in architectural schools from different countries.

Architectural design education consists of theoretical and practical courses aiming at contribution to the development of the society at social and cultural levels besides the economic. With the advent of globalization another aim should be contribution to the society at the international level. In this context, besides formal architectural education, informal studies such as workshops have a growing importance. As Driscoll says [5], learning is a persisting change in human performance or performance potential that must come about as a result of the learner's experience and interaction with the world. As for a form of interaction, workshops are held frequently between two or more number of architectural schools from different countries resulting in outstanding success and sharing. They help the student to improve design thinking skills, learning by doing skills, creating motivation for creativity and most important of all, self-confidence in international environments.

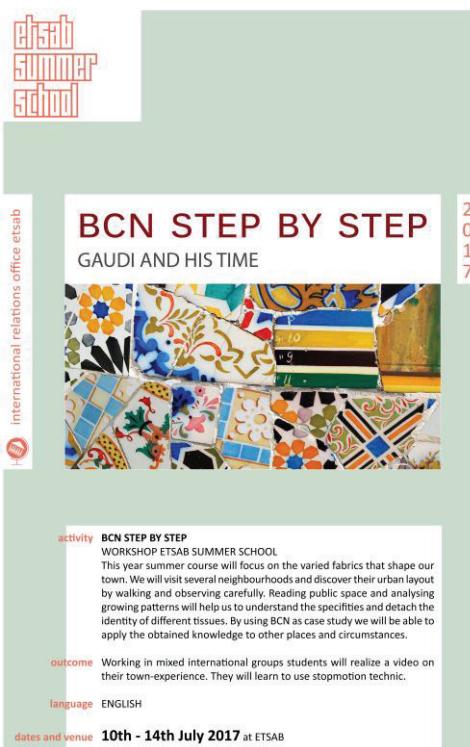


Image 1. Poster of the workshop

This paper is about a workshop titled “BCN Step by Step: GAUDI and his Time” held in Barcelona, on 10-14 July, 2017 (Poster Image 1). It was held between Escola Tècnica Superior d’Arquitectura de Barcelona, BAU Faculty of Architecture and Design of İstanbul and Smt. K.L. Tiwari College of Architecture of Mumbai. 24 students from three schools worked in joint groups that consist of four members. As the assignment of the workshop, students were asked to create a stop motion video of the works of Gaudi they visited. Going through Gaudi’s works in Barcelona and environs, Spanish, Turkish and Indian students encountered the various places in the city with all their senses and emotions. In spite of the short time, the students searched for a best learning experience (Image 2).



Image 2. Students at work in joint groups

Presenting information is an important part of learning. Some presenters are verbalizers while some are imagers. Verbalizers are better in presenting the information in words and imagers in pictorial form [6]. So, if information is presented in both formats, the students can choose the best for their learning between the formats. Learning preference is a function of learner's capability of information intake. Here, intake means what the learner finds important or worth learning.

Videos are effective means of using the auditory and the visual perception for learning. When the video presents more information than the learner can intake, there might be a perceptual overload. We, human beings, are so good at processing the appropriate amount of information at a time. The overload in watching a video can be interpreted based on two theories: cognitive load theory and cognitive theory of multimedia learning [7]. These two theories both state that human memory has a certain cognitive capacity and if it is overloaded, learning may not be optimized. According to this, in order to learn more effectively, the cognitive load should be kept optimal. Since, people's perception capacity varies from one to another, the editorial decision for the optimal amount of information in videos for education is difficult. Videos are appealing. Nowadays, they can be produced with low budgets which is one of the important challenges for universities.

2. METHODOLOGY

In this workshop, the students were asked to create a stop motion video of their Barcelona and Gaudi experiences. They were supposed to focus on the spatial, visual and audio characteristics of the city through Gaudi's works. The student groups produced 6 videos. The duration of the video was defined between three to five minutes. The titles of the videos were: "Waves and Shapes", "Trenk Life", "Light of Gaudi", "3 Tourists & 1 Local", "Gaudi Experts" and "Casa Mila". Since they were working against time, in the final presentation the students found themselves in a position of saying the most in 10 to 15 minutes using appropriate amount of verbal and image information. The oral presentation of the final stop motion video took place on the last day of the workshop.

The students who participated in the workshop did not know each other before since they were from three different universities and also from different levels of architectural education. So they were all asked to present themselves to the class. After this, they were given a short time for getting into groups of four students. In our opinion, it was important that the students should themselves decide in which group they were going to take part. When all the groups were formed, they were asked to think about a name for their groups. After the groups were formed, it was time to introduce the stop motion technique to the workshop students. In general, this was not a commonly used representational tool at the three collaborating universities. The students were shown different examples and were informed about possibilities of new ideas for making the videos.

In image 3, there are three frames of the stop motion "Gaudi Experts". One can have a look at the city in three different ways: first, as monochromatic or without color, light or textures, second as more colorful and third as in the other color versions where everything gets mixed together.



Image 3. Stop motion frames, “Trenk Life”

As seen in Image 4 and Image 5, two of the frames for two different stop motion videos titled “Waves and Shapes” and “Gaudi Experts”, a similar technique of hand drawing and the real image are presented next to each other. This happens to be very common in stop motion videos.



Image 4. Stop motion frames, “Waves and Shapes”

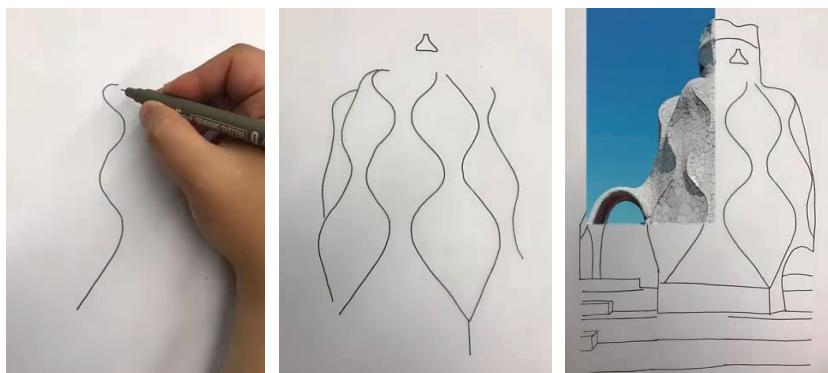


Image 5. Stop motion frames, “Shapes and Gaudi Experts”

One of the important stages of doing a stop motion video is the way the story is explained, namely the storyboard. The storyboard concept was defined as a tool for creating the videos. All of the elements that took part in the movie; scene, frames, space, camera position, music, movements, characters, time, action were explained in detail. The students were given a template storyboard to guide them to design the content of

their group story. They had to hand this template in along with their drawings, at the final presentation of the stop motion videos, on the last day of the workshop.

On the template, the first box was supposed to have a three-dimensional drawing including the scene with the position of the characters and their movements. In the second box, they had to draw the plan of the scene with the position of the cameras and their movements around the space. And on the right side of the template they had to write the duration of the frame, the space where the action was going to take place, the music they were going to use, define the characters and explain all the relevant information for the video.



Image 6. Students working in joint groups.

In Image 6, the students are seen working in groups in this first stage, defining the total story and doing the first sketches of their storyboard. Once they had defined the storyboard the groups could start preparing all the documentation for the stop motion video. The students had to mix different techniques of graphic representation for doing their movies. One of the main rules was the importance of introducing hand drawings in their works. They did it using notebooks and pens, but also with digital tools.

The students could use different technological tools for doing their stop motion video. Each group decided which program they were going to use depending on their knowledge in computer applications. The tools that the students used for the stop motion videos were “Adobe Premier”, “IMovie”, “Windows Movie Maker” and “PowerPoint”. It was not important for the instructors which platform the students used to perform the videos, because the software used was just a tool to explain the ideas of the different groups.

All of the students were encouraged to have a sketchbook along with them during the visits of the workshop. In general, at least one or two students per group were doing sketches while visiting the places and buildings. The students were asked to focus on hand drawings since it is a tool that coordinates the brain with the hand and allows capturing very quick impressions of the visited sites. As John Berger [8] said: “There are many types of drawings: ones that are studies, forms of research and other projects that are sketches of masterpieces”. We were interested in these drawings as forms of research, as a tool for discovering new aspects of the cities. The students were not expected to do perfectly finished drawings as seen in Image 7. Incomplete ideas that appeared on the sketches were sought after.

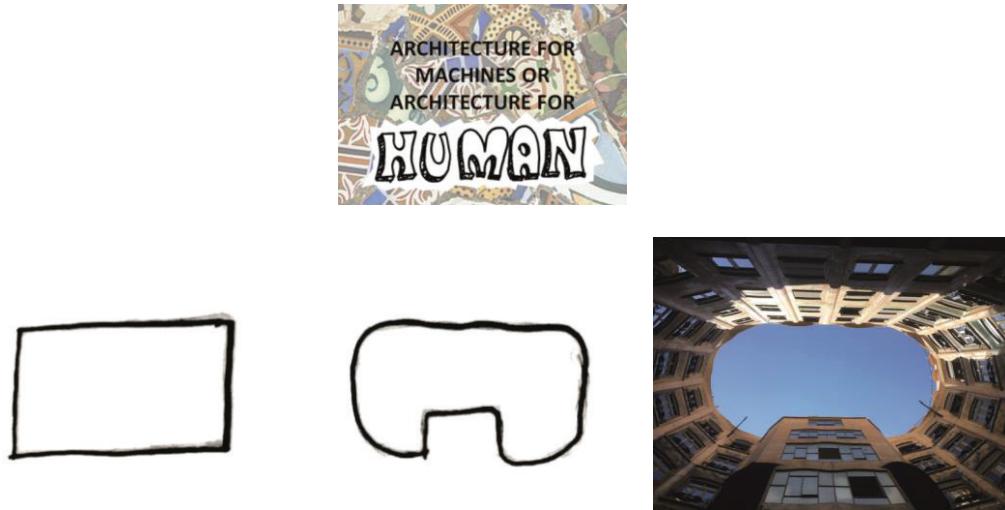


Image 7. Stop motion frames from “Shapes”

The focus was on the importance of exploring, studying and analyzing the city with Gaudi's works, as Georges Perec [9] described in his book “Our look moves around the space and gives us the illusion of relief and distance. So we built the image of space: from above and below, from left and right, from front and back, from close and a far”. With the sense of vision and the sense of touch our students were able to find all the necessary information for creating their stop motion videos.

In image 8, we can see another example of mixing techniques. In this case, the group drew on some of the images of the stop motion, with the idea of defining and explaining the main important parts of the story they were explaining. Using *trencadis* of different mixed colors, the city parts were represented on a map.

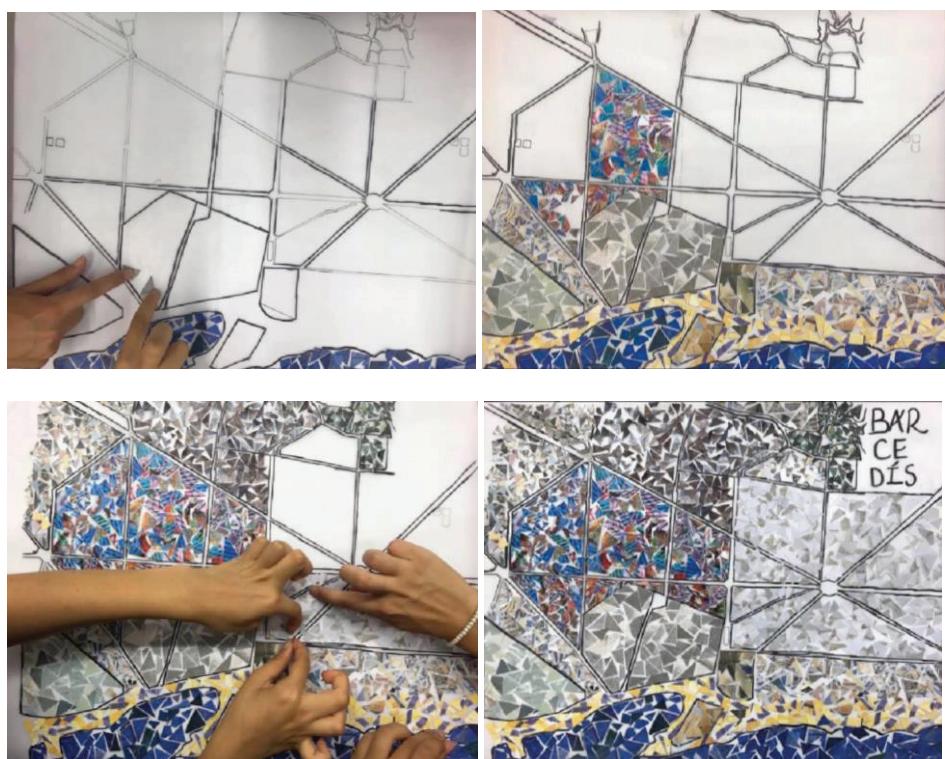


Image 8. Stop motion frames, “Trenk Life”

Two different techniques of using newspaper letters and letters drawn on paper for doing titles, were used by different groups. This happens to be very common in stop motion videos (Image 9).



Image 9. Stop motion frames, “3 Tourists & 1 Local”

All the groups used sketches and photographs in their stop motion videos. They were asked to create a story mixing all the techniques explained in the stop motion video. We explained the relevance of feeling with the cities. We encouraged the students not just to walk, but to live the places and buildings. As Pallasmaa [10] says “Architectural space is lived space rather than physical space, and lived space always transcends geometry and measurability”. We challenged the groups for trying to find this lived space, these personal feelings they had while they were going around different works of Gaudi. Gaudi (Image10) has been very influential all through this workshop. In Image 11, there are seven frames of the stop motion video titled “Gaudi’s Light”. They defined their work, as a perceptual condition of mixed sensations. They played with light and color. They experienced the way light travelled through Gaudi’s works. One cannot feel all these aspects only by using the sense of vision. It is important to give the students different tools and different ways of experiencing through architectural works.



Image 10. “Gaudi from the students’ sketching”

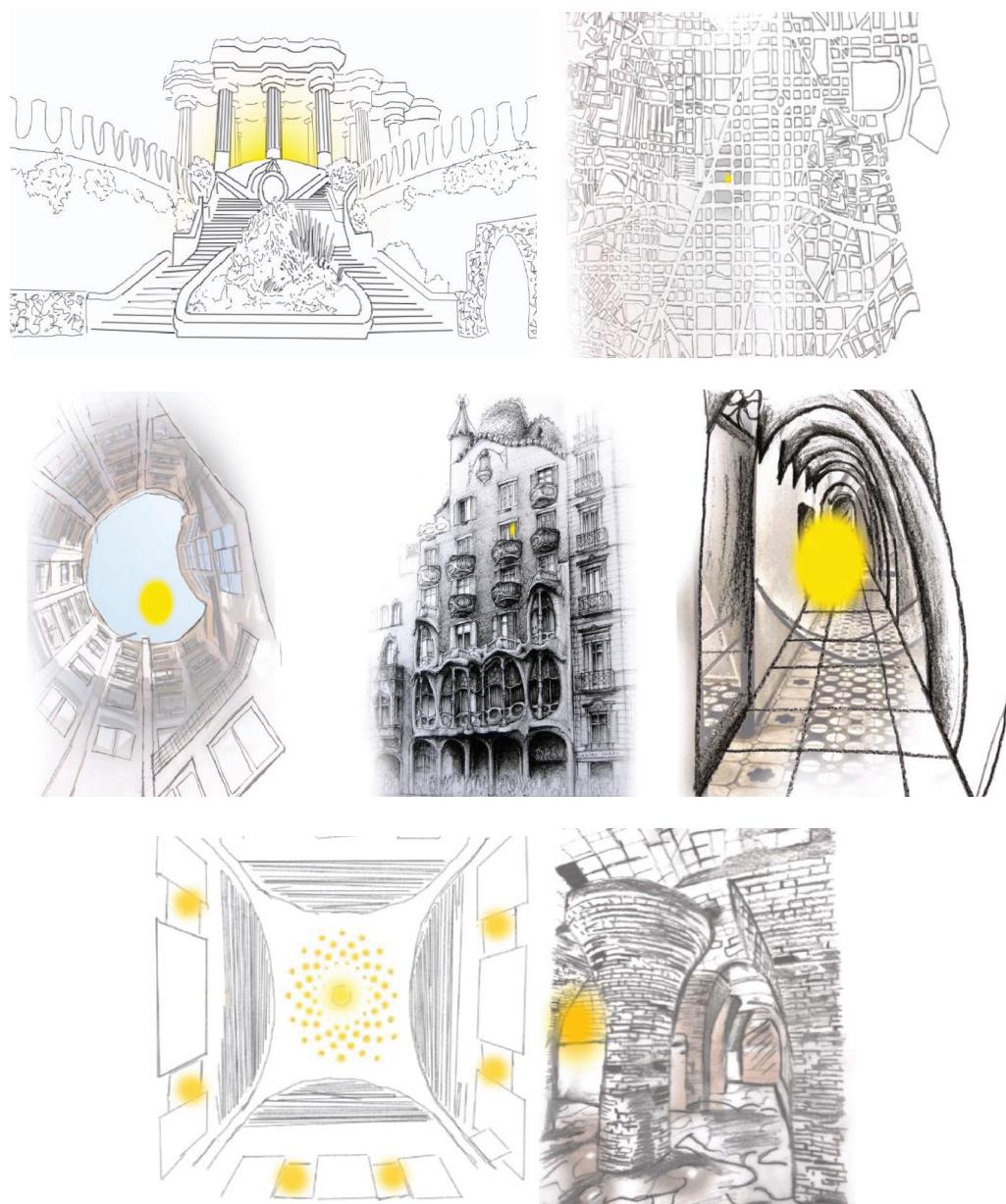


Image 11. Stop motion frames “Gaudi’s Light”

In general, all the six videos presented on the last day of the workshop were related with Gaudi and his contributions to the city of Barcelona. All of the students did good research on this new way of experimenting with the city. It was a challenge for the students to work with a different tool of graphic representation of spaces, namely the stop motion video. All of them were very enthusiastic about this new experience and they succeeded. All the groups enjoyed thinking and imagining the best way to express their ideas through a stop motion video of a short duration.

3. CONCLUSIONS

In recent years, videos have played an important role in education. Videos help create student engagement and facilitate learning. This is true for architectural design as well as learning in all design arenas. Over the last decades, technology has been reorganizing our ways of learning. With the advent of globalization, one of the aims of architectural design education has been contribution to the society not only at a national level but also at a multinational level.

International workshops held between architectural schools result in outstanding success and sharing because they incorporate different cultural backgrounds. Architectural education is inherently multidisciplinary and celebrates cultural diversity. In this respect, multicultural education should be evaluated as a source of benefit for the community.

Growing popularity of videos proved to be right in the case of 2017 Workshop in Barcelona. Potential benefits and challenges associated with making videos in the teaching and learning process at higher education level has been a good experience for the students and the faculty alike.

Thinking and reflecting on the buildings of Gaudi and places they visited, students had a chance of experimenting lived space by using all their senses and through their sketches and mixed images shown in their stop motion videos. It was a challenge because the conditions were not the best. Budget was zero and there was not much support neither in terms of producing, designing and technology. All students attending 2017 BCN Step by Step: Gaudi and his time Workshop stressed the importance of social and cultural development besides educational development. They also expressed the satisfaction of working with others in a multicultural environment. The organization that achieves these conditions is able to create an environment where all members can contribute their maximum potential and the “value in diversity” can be fully realized.

As a final word, increased diversity presents challenges to learners and teachers alike. Higher educational institutions must maximize the opportunities they offer and must transform from monolithic organizations to a multicultural model.

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