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Is Cultural Heritage Still Considered Important in Architectural Education?

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ABSTRACT The aim of this study was to discover the style preferences of undergraduate architecture students in Cyprus. The primary source data for this study was via interviews with architecture students. A total number of 50 undergraduate students from five different countries were selected. A standard questionnaire was used to collect data from the selected students. During these surveys, students were asked their nationalities in order to analyse if nationality had an effect on their design preferences of architectural. In addition, their heritage conservation knowledge and awareness were evaluated. Through this research style preferences of architectural students were investigated. Research results of the study indicated that most of the students preferred modern architectural designs instead of traditional architectural designs. The researchers' findings emphasise the importance of including heritage conservation within the architectural education framework.

INTRODUCTION

In recent years, there has been great interest in modern architectural designs; this can lead to the loss of traditional architectural design perspective in younger generations. Furthermore, cultural heritage conservation has been greatly influenced by the increase in the urban transformation projects throughout the world. For this reason, it is necessary to understand the architectural design preferences of the future generation of architects (Orhan 2017). Previous qualitative and quantitative studies have shown design differences between respondents coming from different cultural backgrounds (Wilson 1996; Imamoglu 2000; Akalin 2009). Imamoglu (2000) explored preferences and familiarities of architectural and non-architectural students regarding traditional and modern house facades. The facades of eight houses were divided into two sets. The complexity level of the house facades were arranged from the simplest to complex. He concluded that despite some minor differences, the general pattern of results appeared to be applicable for different measures, rating and preference. The background of students being architecture student or non-architecture student and also the house types as traditional and modern were some of the measures. Erdogan et al. (2010) investigated the differing interpretations of 83 undergraduate architecture students on different architectural styles during the early years of their education and senior students as soon to be architects. Twenty one public buildings (Early modernist, late modernist, high tech and deconstructive designs) built between the end of the 1990s and early 2000s were selected for the study. Erdogan et al. (2010) found that late modern schemes were preferred by the new students. Alternatively, soon to graduate architects did not strongly prefer any specific style. Other findings included some new learners had interpretations closer to those shown by senior architecture students than their peers. They concluded that students exposed to environmental factors such as having relatives in the architectural field and being already familiar through the exposure to magazine, media, or an individual familiarity with architecture may be important factors underlying their representation and interpretation of architectural stimuli.

Wilson (1996) made a cross-sectional study on architectural preferences of 150 British students from two different architectural schools having a similar technologically based orientation. The students were from five different educational levels. Each student was interviewed separately and asked to consider coloured photographs of contemporary architecture. They were expected to classify the photographs according to their personal preferences and explain their reasons. The results showed that students generally develop standards of judgement as characteristic of the architecture profession. These standards of judgement are generally shaped by the specific school they are trained. It is also indicated that students' building evaluations are clearly based on the buildings architectural style.

Although the architectural preferences have been the focus of many researches, to date there have been no studies to evaluate the style preferences of undergraduate students in architectural design. In recent years there has been tremendous interest in modern architectural designs (Pottmann et al. 2015; Asak 2016). This may lead to the loss of traditional, rural architectural design perspective in new and future generations. Lately, heritage conservation has been strongly influenced through the increase of urban regeneration developments (Guzman et al. 2017). Therefore, it is necessary to understand the architectural design preferences of younger generations. This study focused on the style preferences of undergraduate architecture students from five different nationalities (Iraq, Syria, Nigeria, Jordan, and Egypt) in Cyprus.

Objectives of the Study

This aim of the study was to investigate design preferences of architectural students from different countries who are studying architecture in Cyprus. The researchers measured students' style preference on their architectural design projects to find out if they prefer modern architectural designs or traditional architectural designs. In addition their heritage conservation knowledge were evaluated.

Modern-Contemporary Architecture

The concept of modern architecture is generally explained through expressions of clarity, smoothness, pure forms, integrity, refinement, simplicity. It is defined by clear lines and minimal interiors that allow the self-expression of the structure. Modern architects express themselves through simplicity without unnecessary design detail (Little 2014). Rashid and Ara (2015) emphasized the features of modern style using simple forms and visually expressive structures. Briefly modern architecture can be explained by employing features such as open floor plans, steel or concrete structures, large glass surfaces, painted white, usually stucco over brick or another minimal exterior expression, and the absence of elaborate ornamental decor. It is known that Ludwig Mies van der Rohe, Le Corbusier, Walter Gropius were among the leading architects of the modern architectural movement.The terms, "modern" and "contemporary" create some confusion, directing people to ask: "What is the difference between modern architecture-design and contemporary architecture-design?" Modern architecture focuses on materials of steel, concrete and glass as innovative industrial developments of its time, whilst contemporary architecture uses the same materials, with forward thinking. Contemporary architecture means now, architecture of its time, therefore innovative and forward-looking (Little 2014). Contemporary architecture is not only the rediscovery of complex and curving forms, at the same time, generating the construction information through the techniques of digital design and production (Kolarevic 2009). It allows architects to test fantastical designs, unique shapes through the use of computer modelling software. Aided by sophisticated computer software, Frank Gehry created extraordinary curvilinear shape of the Guggenheim Museum built in Bilbao, Spain, in 1997. Another example of contemporary architecture is Zaha Hadid's masterpiece, the Heydar Aliyev Center, built in Baku-Azerbaijan between 2007-2012. During the design of the building, a continuous, fluent relationship between the building interior and surrounding plaza is established. Elaborated formations like undulations, folds and inflections of the plaza surface, curvilinear lines of the building are the main features of this contemporary example of architecture (Zaha Hadid Architects n.d.).

Architecture is not only an absolute art; it is the art of innovation and creativity which has relationships with time, space, culture and sometimes politics. Architecture formed by human

interactions with their environment, society and history. Traditional architecture, as a witness of the history and built cultural heritage, gives information about the identity of the location. If the architects imitate modern architectural examples by neglecting their own traditional architecture, they fail to appreciate the values of their own culture and history (Azarshahr et al. 2013). Building the future by taking lessons from the past should be the most important approach for architects. In recent years, sustaining traditional architectural examples and protecting cultural heritage has gained global importance (Serageldin et al. 2001; Günlü et al. 2009). In all countries, traditional local architecture reflecting the past should be considered as a guide for future developments.

Traditional Architecture and Cultural Heritage

Traditional architecture is an architectural style which is based on local needs, climatic conditions, availability of rural construction materials and reflecting local norms of the society and traditions. It can be considered as the identity of that location. In this study, there were respondents from five different countries, each of them having their own considerable traditional architecture assets.

Cultural heritage, as a reflection of history, is an important role in the well-being of society and community (Graham et al. 2016). Throughout the world, all the countries increasingly recognise the value of their cultural heritage. For the sustainable development of towns and cities, built heritage is a very important part of the cultural heritage (Tweed and Sutherland 2007). The definition used in the Council of Europe's Framework Convention on the Value of Cultural Heritage for Society:

"*Cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time"* (Dümcke and Gnedovsky 2013: 6).

According to the World Heritage Convention, the term cultural heritage refers to: Single monuments, architectural works, works of monumental sculpture and painting, building groups and sites, archaeological sites, territorial systems, landscapes, and intangible heritage (UNESCO 1972).

Iraqi Traditional Architecture

In Iraq, conservation, restoration, rehabilitation, re-use, etc., have been of special importance during this past decade, mainly due to the effects of war. Many buildings, including traditional ones have been the targets of air raids and long-range missiles during the war. Some of them have been restored some repeatedly (Mehdi n.d.).

Besides the effects of the war, Iraqi cities have witnessed chaotic urban transformations that are not in consonance with national architectural policy protected by the law since the 1970s (Zeed 2015). Architectural heritage of Iraq has been decimated and is under the threat of complete annihilation. Iraq's historical landmarks are gradually being destroyed and replaced by modern structures despite laws such as the Antiquities and Heritage Law which are designed to protect such historically important structures. Buildings neglected for many years, are demolished and replaced with new ones with modern-looking cladding made of aluminium and plastic (Bassem 2015).

Syrian Traditional Architecture

In Syria, there is a rich diversity in traditional building types, varying according to the region and people's lifestyles. Two main lifestyles generate a major difference in construction and dwelling. One of them is nomadic lifestyle which requires a constant migration from one place to another dependent on pasture and water reserves. These nomadic populations are called "Bedouins" and they usually live under portable tents. A sedentary lifestyle is the second lifestyle usually linked both to city and rural lifestyles of Syria. Here, diversity in housing typology exists according to the geographical locations like seaside, mountain, valley, etc. There are also clear differences between traditional city houses (characterized by stone constructions with variety of types and colours and of building typologies with inner courtyards) and traditional country houses (Generally small, ranging from a two unit house to houses with courtyard where rooms border the courtyard which is used

more as the garden of the house). The preservation of local traditional architecture, which is often subject to demolition, is very important for the sustainability of traditional architecture in Syria. Changes due to reconstruction or change of use, or modernisation threaten the preservation of traditional buildings (Al-Kodmany 1999; Corpus Levant 2004; Yahia and Johansson 2013).

Traditional Architecture of Nigeria

Nigeria's traditional architecture varies across different geographical regions, extensively responding to local climate, technological and socio-economic characteristics. Therefore, traditional architectural designs represent the cultural lifestyle of the people and symbolizes the heritage its inhabitants. The origins of these traditional building structures are the natural materials available to local builders, religious beliefs of people, culture and taboos (Agabekova 2017). Traditional Nigerian life and culture were radically changed through the emergence of colonialism in Nigeria. This created a weak link between traditional architecture and contemporary architecture (Agboola and Zango 2014). A cultural transfer including technological transfer occurred with all failures and achievements. It can be expected in a country experiencing powerful colonial influences. Modern architecture in the country as a means of progression has been reinterpreted and articulated to fit the specific needs of the Nigerian people. The architects of the country regarded the challenge of modern architecture as a progressive ideal and introduced the variations suggested by climatic and socio-cultural necessities (Adeyemi 2008). In Nigeria, when the modern and traditional architecture is considered, professionals, designers and researchers emphasize that, for functional architectural forms, efforts should be directed towards harmonizing the concepts of traditional and contemporary designs (Agboola and Zango 2014).

Traditional Architecture of Jordan

Jordan is a country having rich cultural heritage. After the foundation of Jordan, Jordanian architecture has passed through various stages. In the past century, there were a number of buildings concentrated in the Jordanian towns and villages, with local styles from the Eastern Mediterranean countries. Their plans were rational; forms and details were simple. Builders used building materials such as mud, wood, rough stone which were locally available. They adopted traditional systems in construction, especially for public buildings and houses, Ottoman and English architectural styles were an obvious influence. After independence of the country, the modern architectural period began as a consequence of the changing social and economic conditions in Jordanian society, which had adopted a Western model. By the end of the last century, major developments in Jordanian architecture started parallel to the intellectual and technological progress in the world. At the same time the number of new graduate architects from Jordanian universities increased. During this period, although the buildings, which were described as modern, diversified with new types and forms, they kept their relationship with architectural heritage by using various forms and methods. The general situation of contemporary architecture in Jordanian is heterogeneous. The reasons of this can be explained by blends of cultural and social factors, political interventions, economic and demographic changes, visions of contemporary architects who live in contradictory intellectual environment and influenced by distorted social and cultural values (Rjoub 2016).

Traditional Architecture of Egypt

Ancient Egyptian architecture is the most fascinating and magnificent architecture of the ancient world. Beliefs of the ancient Egyptians were the main driving force behind the construction of Egyptian monuments, temples and pyramids. For example, it was believed that the pyramids were the eternal homes of pharaohs and temples were built to honour gods and pharaohs. For the construction of these buildings a variety of materials were used, including stones and bricks, however, wood was notably lacking in ancient Egyptian architecture. Due to the dry climatic conditions in Egypt, large amount of wood as construction material were in short supply (Moffett et al. 2003). The monuments still stand out as the main cultural elements of Egypt and they continue to play important role in defining the Egyptian identity and developing the country's economy (Abulnour 2013). Egypt also

has very rich traditional residential architecture as part of its cultural heritage (Fathy 2010).

Within this framework of traditional architecture and modern architecture, this study aimed to find out style preferences of Near East University undergraduate architecture students from different countries of Middle East. The paper firstly provides a review of related literature. Secondly, the methodology provides sampling of the study and the analysis. Finally the results of the paper provide valuable recommendations for further research.

METHODOLOGY

The Interview Schedule

Primary source of data for the study was interviews of Near East University architecture students in Nicosia Cyprus. A standard questionnaire, containing ten questions was used to collect data. Random samples of 50 international undergraduate students from five different nationality profiles were chosen to be interviewed. Ten respondents from Iraq, Egypt, Syria, Nigeria and Jordan participated to the interviews. During the interviews, besides the demographic information, the students were asked about their style preferences. Also their heritage conservation knowledge and awareness of historical buildings have been evaluated.

Gender Profile and Age of Participants

The gender profile of each nationality was predominately male biased, details of individual countries gender ratio can be found in Table 1. The detailed description of age profile of the participants can be seen in Table 2.

Table 1: Participant's gender profiles (%)

Participants	*Male (%)*	*Female (%)*
Iraqi students	90	10
Syrian students	80	20
Nigerian students	100	-
Jordanian students	100	-
Egyptian students	90	10
Overall	88	12

Table 2: Participant's age profiles (%)

Participants	*<18 (%)*	*18-20 (%)*	*21-23 (%)*	*24-26 (%)*	*>27 (%)*
Iraqi students	-	10	50	40	-
Syrian students	-	30	30	40	-
Nigerian students	-	50	40	10	-
Jordanian students	-	60	20	10	10
Egyptian students	-	50	40	10	-
Overall		20	18	11	10

RESULTS

When the results of the student preferences in architectural design style was evaluated, it can be argued that sixty percent of Egyptian students seem more interested in traditional designs., with forty percent who were more interested in modern designs (Table 3). Also they mentioned that there are restrictive factors within historical environments. Some emphasized the point that modern architecture is more flexible with respect to architectural principles. However, the students from Nigeria comprehensively preferred modern designs by the result hundred percent. Half of Nigerian students agreed that modern designs are more common nowadays and forty percent chose the modern designs because they feel modern style gives them more flexibility to be creative and they can develop new ideas and concepts. Forty percent thought that there are restrictive factors when designing in historic environments.

Alternatively, thirty-five of Iraqi students were interested in traditional architecture, with sixty-five percent preferring modern designs. Sixty percent of Iraqi students preferring modern designs agreed that modern designs are more common nowadays and the rest of them thought that there are restrictive factors when designing in historic environments. Jordanian and Syrian students shared the same interest in traditional architecture (20%), with both nationalities preferring modern designs (80%). They agreed that modern designs are more common nowadays and some of them thought that there are restrictive factors when designing in historic environments.

Table 3: Student preferences in architectural design style (%)

	Egypt	*Nigeria*	*Iraq*	*Jordan*	*Syria*
Traditional Designs	60	0	30	20	20
Modern Designs	40	100	70	80	80

DISCUSSION

According to the results of the survey the researchers found out that among all the students participating in this survey, Egyptians were the most interested students in traditional architectural designs. It can be argued that the reasons Egyptians value traditional architecture style is due to their cultural history which sees traditional architecture as an important economic asset. Every region in the world has unique histories, cultures, political lifestyles and heritages (Timoty and Nyaupane 2009; Watson and Waterton 2010; Janssen et al. 2014; Isliyen and Isliyen 2017). However Egypt has a wealth of historical richness that goes back almost 3000 years and is considered one of the most significant archaeological tourist destinations in the world (Helmy and Cooper 2002; Moser et al. 2002). Egypt is one of the four major destinations of Africa's tourism, followed by South Africa, Tunisia and Morocco (Rogerson 2007). Tourism is the largest industry and very important for the economy in Egypt. It is identified as one of the major sources of economic growth (Tohamy and Swienscoe 2000; Ibrahim 2013; Richter and Steiner 2008; Dag and Tasar 2016). Thus, Egyptians know the economic benefits of their archaeological past and cultural heritage as a renewable resource, therefore they do not allow destructive processes within these important sites. This research indicated that every student grows up with this consciousness within their own country from their childhood and consequently this may have effect on their architectural preferences.

CONCLUSION

History is like a bridge, it connects the past with the future. Cultural heritage, tangible or intangible, is part of the culture and history of a country. In this respect innovation and sustainable development will be impossible without knowing the history of a region.

RECOMMENDATIONS

The awareness of cultural heritage should be promoted during childhood. Protection of cultural assets must be one of the main subjects from the beginning a child's educational life. In architectural education, the studies evaluating cultural heritage with an innovative perspective is considerably important and should be emphasized at all levels of education, additionally, cultural heritage issues must receive a higher profile within architectural degree curricula.

REFERENCES

Abulnour AMH 2013. Protecting the Egyptian monuments fundamentals of proficiency. *Alexandria Engineering Journal,* 52: 779-785.

Adeyemi AE 2008. Meaning and relevance in Nigerian traditional architecture: The dialectics of growth and change. *Covenant University Repository,* 1(21): 1-33.

Agabekova Z 2017. Methods of using onomastics in teaching language and culture. *Global Journal of Sociology: Current Issues,* 7(2): 104-109. doi: https://doi.org/10.18844/gjs.v7i2.2395

Agboola OP, Zango MS 2014. Development of traditional architecture in Nigeria: A case study of Hausa house form. *International Journal of African Society Cultures and Traditions,* 1(1): 61-74.

Akalin A, Yildirim K, Wilson C, Kiliçoglu Ö 2009. Architecture and engineering students' evaluations of house façades: Preference, complexity and impressiveness. *Journal of Environmental Psychology,* 29: 124-132.

Al-Kodmany K 1999. Residential visual privacy: Traditional and modern architecture and urban design. *Journal of Urban Design,* 4(3): 283-311.

Asak I 2017. A study on graduate level education in architecture: Case of Turkey. *Global Journal of Arts Education,* 6(3): 89-100. doi: https://doi.org/10.18844/gjae.v6i3.1702

Azarshahr SF, Motamadniya A, Basiri M 2013. New technologies in modern architecture and its interaction with traditional architecture. *Research Journal of Chemical and Environmental Sciences,* 1(3): 70-80.

Bassem W 2015. Iraqis Struggle to Maintain Architectural Heritage. From <http://www.al-monitor.com/pulse/originals/2015/03/iraq-heritage-architecture-destroyed-modern-buildings.html> (Retrieved on 21 April 2017).

Corpus Levant 2004. Traditional Syrian Architecture. Handbook for the Maintenance and Rehabilitation of Traditional Syrian Architecture. From <http://www.e-corpus.org/eng/notices/143730-Traditional-Syrian-Architecture-Handbook-for-the-maintenance-and-rehabilitation-of-traditional-Syrian-architecture. html> (Retrieved on 21 April 2017).

Dag M, Tasar M 2016. More interactive historical vignettes. *International Journal of Learning and Teaching,* 8(1): 53-60. doi: https://doi.org/10.18844/ijlt.v8i1.526

Dümcke C, Gnedovsky M 2013. The Social and Economic Value of Cultural Heritage: Literature Review. *European Expert Network on Culture - EENC Paper,* P. 6.

Erdogan E, Akalin A, Yildirim K, Erdogan HA 2010. Students' evaluations of different architectural styles.

Procedia Social and Behavioral Sciences, 5: 875-881.
Fathy H 2010. *Architecture for the Poor: An Experiment in Rural Egypt*. Chicago: The University of Chicago Press.
Graham B, Ashword G J, Tundbridge J E 2016. *A Geography of Heritage-Power Culture Economy.* New York: Routledge.
Guzmán PC, PereiraRoders AR, Colenbrander BJF 2017. Measuring links between cultural heritage management and sustainable urban development: An overview of global monitoring tools. *Cities*, 60: 192-201.
Günlü E, Pirnar I, Yagci K 2009. Preserving cultural heritage and possible impacts on regional development: Case of Izmir. *International Journal of Emerging and Transition Economies*, 2(2): 213-229.
Helmy E, Cooper C 2002. An assessment of sustainable tourism planning for archaeological heritage: The case of Egypt. *Journal of Sustainable Tourism*, 10(6): 514-535.
Ibrahim M 2013. The determinants of international tourism demand for Egypt: Panel data evidence. *European Journal of Economics, Finance and Administrative Sciences*, 30: 50-58.
Isliyen F, Isliyen M 2017. An overall assessment of the educational roles TV contents play in raising children's historical consciousness. *International Journal of Innovative Research in Education*, 4(2): 77-84. doi: https://doi.org/10.18844/ijire.v4i2.2317
Imamoglu C 2000. Complexity, liking and familiarity: Architecture and non-architecture Turkish students' assessments of traditional and modern house. *Journal of Environmental Psychology*, 20: 5-16.
Janssen J, Lutien E, Renes H, Rouwendal J 2014. Heritage planning and spatial development in the Netherlands: Changing policies and perspectives. *International Journal of Heritage Studies*, 20(1): 1-21.
Kolarevic B 2005. Preface. In: B Kolarevic (Ed.): *Architecture in the Digital Age.* New York: Taylor and Francis Group, P. 422.
Little S 2014. Why People Love Modern Architecture. From <http://freshome.com/2014/08/11/why-people-love-modern-architecture> (Retrieved on 21 April 2017).
Mehdi SA n. d. Architecture of the Nineties in Iraq. From<https://archnet.org/system/publications/contents/4782/original/DPC1494.pdf?1384786768> (Retrieved on 21 April 2017).
Moffett M, Fazio M, Wodehouse L 2003. *A World History of Architecture*. London: Laurence King Publishing.
Moser S, Glazier D, Phillips JE, Nasser el Nemr L, Mousa MS, Aiesh RN, Richardson S, Conner A, Seymour M 2002. Transforming archaeology through practice: Strategies for collaborative archaeology and the community archaeology project at Quseir, Egypt. *World Archeology*, 34(2): 220-248.
Orhan M 2017. The role and importance of workshops in the architectural design education; case of "self made architecture i-ii". *New Trends and Issues Proceedings on Humanities and Social Sciences*, 3(3): 131-136. doi: https://doi.org/10.18844/gjhss. v3i3. 1545
Pottman H, Eigensatz M, Vaxman A, Walner J 2015. Architectural geometry. *Computers and Graphics*, 47: 145-164.
Rashid M, Ara DR 2015. Modernity in tradition: Reflections on building design and technology in Asian vernacular. *Frontiers of Architectural Research*, 4: 46-55.
Richter T, Steiner C 2008. Politics, economics and tourism development in Egypt: Insights into the sectoral transformations of a neo-patrimonial rentier state. *Third World Quarterly*, 39(5): 939-959.
Rjoub A 2016. The relationship between heritage resources and contemporary architecture of Jordan. *Architecture Research*, 6(1): 1-12.
Rogerson CM 2007. Reviewing Africa in the global tourism economy. *Development Southern Africa*, 24(3): 361-379.
Serageldin I, Shluger E, Martin-Brown J 2001. *Historic Cities and Sacred Sites: Cultural Roots for Urban Futures.* Washington, D.C.: World Bank.
Timoty DJ, Nyaupane GP 2009. *Cultural Heritage and Tourism in the Developing World: A Regional Perspective.* USA: Routledge.
Tohamy S, Swinscoe A 2000. The Economic Impact of Tourism in Egypt. *Working Paper No.* 40, The Egyptian Center for Economic Studies, Egypt, P. 37.
Tweed C, Sutherland M 2007. Built cultural heritage and sustainable development. *Landscape and Urban Planning*, 83: 62-69.
UNESCO World Heritage Convention n.d. From <http://whc.unesco.org/en/conventiontext> (Retrieved on 22 April 2017).
Watson S, Waterton E 2010. Heritage and community engagement. *International Journal of Heritage Studies*, 16(1-2): 1-3.
Wilson MA 1996. The socialization of architectural preference. *Journal of Environmental Psychology*, 16(1): 33-44.
Yahia MW, Johansson E 2013. Influence of urban planning regulations on the microclimate in a hot dry climate: the example of Damascus, Syria. *Journal of Housing and Built Environment*, 28(1): 51-65.
Zaha Hadid Architects (n.d.) Heydar Aliyev Center. From <http://www.zaha-hadid.com/architecture/heydar-aliyev-centre/> (Retrieved on 21 April 2017).
Zeed AA 2015. Historic Iraqi Homes, Buildings Fall to Wrecking Ball. From <http://www.al-monitor.com/pulse/originals/2015/08/iraq-baghdad-heritage-buildings-destroyed-urbanization.html> (Retrieved on 21 April 2017).