Contextual Design for New Additions in Historical Complexes (Cairo University Campus)

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ABSTRACT

The addition of ancient buildings and sites is an established phenomenon as old as architecture itself. It was a familiar phenomenon in ancient Egyptian architecture and Islamic architecture history. For example, the Temple of Hatshepsut was added to the Temple of Mentuhotep III site in Deir El-Bahari, and the Karnak Temple witnessed a series of additions to the original site built more than a thousand years ago. Egypt includes historical sites that are still alive and functioning, such as the Al-Azhar Mosque. In addition, it has heritage complexes from modern histories, such as Cairo University and the Egyptian Parliament. Therefore, it requires the knowledge of adding a new building to historical sites.

The research discusses the issue of adding a new building to a historical site and presents its causes and problems. It also discusses the distinctive design approaches, strategies, and theories involved in adding a new building to a historical site. The research also documents and analyzes the layers of additions to the Cairo University campus, which witnessed a series of additions to its buildings and open spaces that spanned over a century and included additions of modern and postmodern styles to its original buildings, which were of the neoclassical style.

KEYWORDS

Addition, Historical Context, Heritage Complexes, Responsive.

الملخص

تعتبر الإضافة إلى المباني والمواقع القديمة ظاهرة قديمة قدم العمارة ذاتها وكانت ظاهرة مألوفة في تاريخ العمارة المصرية القديمة والعمارة الإسلامية مثل إضافة معبد حتشبسوت إلى موقع معبد منتوحتب الثالث بالدير البحري، ومعبد الكرنك الذي شهد سلسلة من الإضافات على الأصل الذي بُني منذ ألف عام. ومصر تضم مواقع تاريخية ما زالت حية وتقوم بوظيفتها، مثل جامع الأزهر وتضم مجمعات تراثية من التاريخ الحديث مثل جامعة القاهرة أو مجلس الشعب المصري. لذلك يتطلب الأمر معرفة كيفية إضافة مبنى جديد إلى المواقع التاريخية. يناقش البحث موضوع إضافة مبنى جديد إلى موقع تاريخي، ويعرض أسبابه ومشكلاته. كما يناقش مناهج التصميم والاستراتيجيات والنظريات المختلفة التي ينطوي عليها. ويعرض المداخل التي يختار المصممون والمخططون طريقة منها لتصميم المبنى الجديد ليتوافق مع محيطه. كما يناقش عناصر التصميم

التي تجعل إضافة جديدة للمبنى تتلاءم من الناحية الجمالية مع السياق التاريخي القديم، وتحقق استمرارية في الشخصية والطابع، وطرق تحقيق التوازن بين تصاميم المباني الجديدة والسياق المحيط بها. كما يوثق البحث ويحلل طبقات الإضافات إلى حرم جامعة القاهرة، الذي شهد سلسلة من الإضافات لمبانيه وفراغاته المفتوحة امتدت عبر قرن تقريبًا، وضم إضافات من طرز الحداثة وما بعد الحداثة إلى مبانيه الأصلية التي كانت من الطراز الكلاسيكي المحدث.

الكلمات المفتاحية

استجابة، إضافة، النسيج التاريخي، المجمعات التراثية.

INTRODUCTION

Old historical complexes are evidence of the past. It shows us what life looked like 100 or 500 years ago and what materials, values, and skill sets were available and used in the past. (Stavreva, 2017) They are considered a core in many countries (Sotoudeh & Abdullah, 2013). The historic areas around monuments present spiritual and cultural connections transmitted through built surfaces (Păun, 2017). Buildings reflect the culture, traditions, and values of their society. Buildings are considered storytellers of the advances and knowledge of the societies that built them, from the early caves and clay huts to modern glass skyscrapers. (Stavreva, 2017).

A complex is a site containing a group of buildings and urban spaces sharing a specific function. Some historical complexes either fell into neglect or suffered from harmful developments (Păun, 2017). Some historical complexes are not functioning anymore; their activities and functions stopped in the past and are museums now. The pyramids complex in Giza is a prominent example. Other complexes still carry out their functions, like Cairo University) or the Egyptian Parliament. A third type has changed its function, like El sultan Hassan school and El Azhar Mosque and University, which fully or partially lost their educational functions.

Development is an inevitable process for every city. As time passes, the heritage buildings that can no longer function correctly rehabilitated or replaced to meet the needs of current and future generations; this development process needs to be regulated to respect their heritage value. (Agustiananda, 2015). Due to physical, functional, and economic reasons, heritage buildings require architectural additions while adapting to current conditions (Soliman & Aggour, 2018). Some architects believe it is essential to preserve the historical settings, like Raymond Erith, Norm Tyler, and Wend Fischer. Others believed that the new developments should reflect their own time, like Daniel Libeskind and Norman Foster, who designed the dome of the German Parliament and Frank Gehry, who designed a Dancing House, Prague 1996 (Imam, 2013). Unfortunately, those beliefs are sometimes used badly by few designers nowadays; some of them produce contemporary buildings contradicting their surroundings. While others strictly imitate the surroundings without understanding the form and character of the area, which produce an imitated building

with an alien material, size, scale, proportions, colour, and rhythm. Which raised many questions: Should the new building provide the continuity of the surrounding environment or an iconic image. Should the new building echo the aesthetics of the old building or respond to its period.

This paper is concerned with the growth, changes, and urban developments that happen to the historical complexes that still carry out their functions and activities. Developments that occur in the historical complexes are an issue that raises a debate on how to preserve the values of the past and support the function of the present and formulate an appropriate design response to an urban historical context, form, and character. For example, is it possible to integrate new buildings in a historical complex with an old one? Moreover, how? This paper is concerned with adding new buildings in a historical context; these additions have several design approaches; they may be a reproduction of the original building, an abstraction, a background building, or sympathetic contrast to the original building (Ray, 1980).

1. PROBLEM STATEMENT

Adding a new building design to a historical complex raises questions about choosing suitable design approaches that make the new addition compatible with its surroundings. How to make the new addition fit aesthetically with its surrounding, and how to balance preserving the past and adding new contemporary design that does not break the atmosphere of the surroundings.

2. SIGNIFICANCE

Egypt is rich with its historical sites, which are still alive and functioning, either medieval complex like El Azhar Mosque or modern heritage complexes like Cairo University or the Egyptian parliament. Therefore, it requires the knowledge of adding a new building to historical sites. The paper discusses the issue of adding a new building in the historical context, its reasons, and its problems. It also discusses the distinctive design approaches, strategies, and theories of adding a new building in a historical context. In addition, techniques make designers and planners choose a suitable design method that makes new building design compatible with its surroundings.

3. GOAL AND OBJECTIVES

This paper aims to help designers and planners choose suitable design techniques for involving a new building in a historical context. It happens by choosing the proper method to integrate harmonically with its surrounding by discussing distinctive design strategies in addition to a historical urban complex. It also illustrates those schools and beliefs of planners and designers on the issue of addition. That will help the designers and planners to know the different methods of adding design techniques to the historical complex. Moreover, their case studies also the reasons and factors that lead to choosing a particular design technique from other techniques.

4. METHODOLOGY

This paper discusses theoretical studies concerning new development that happened in the historical complex that still carries out its functions and activities and appropriate design approaches that hold sensitivity to the identity and character of a place. The methodology is divided into theoretical and analytical studies; Literature is reviewed to illustrate distinctive design approaches, strategies, theories, and schools that deal with adding new buildings in a historical context. Collecting data about the founding history of Cairo university campus & its facilities was from thesis supervisor, Dr Rauf Abbas book (History of Cairo university), monument inside the campus, interviewing with the dean of some facilities like the dean of dar ulum, surveying map from Egyptian survey authority & Center for Documentation of Culture and Natural Heritage (CULTNAT). Analysis of these data helps identify the construction date of the original building (Heritage building) inside campus & the building that had been added over the year to determine the building architecture style in its construction era. Then, applying the theoretical framework (additions strategies in terms of appearance) to know whether the developments of the case study follow any of the design theories or schools. Then, rating the quality of changes from the perspective of the designer, planner, and layperson by investigating through an interview. To know whether changes to the historical complex integrate with the surroundings. Finally, evaluate those developments using the concluded theoretical framework.

5. APPROACHES TO URBAN DESIGN COMPLEX (ADDITION APPROACHES)

Designs in the historical complexes are composed of three contextual design choices: - (alteration, addition, and infill). (Ray, 1980). Where attitudes toward the design of additions and infill buildings reflect one's priorities in the architecture of the present day (Sotoudeh & Abdullah, 2012, Vol. 3).

6. NEW ADDITIONS TO EXISTING HISTORICAL COMPLEX

Additions to historical buildings in the preservation field have always been a big issue. Consequently, many discussions about the proper approach to a historical building. Contemporaneously, architects were of two minds: (A) The stylistic integrity of the addition shall be determined by the architect. (B) Contemporary architecture needs to respect and value the visual integrity of existing historic buildings. Make buildings fit for new uses and influence architects to convert through recognition and analysis of existing building values (use value, architectural value, historical and cultural value) (Ahmed, 2018).

8. INTERNATIONAL LEGAL FRAMEWORK AND GUIDELINES ON NEW ADDITIONS

The attachment of new additions to historic buildings is, in theory, opposed by the world's top preservation organisations, including the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Council of Monuments and Sites (ICOMOS), and the U.S. National Park Service (NPS). However, they welcome appropriate additions if necessary for the benefit of users and current use, provided that they do not alter the original building's distinctive qualities. Below are the vital international charters, rules, and specifications relating to new additions to historic buildings, along with the articles or sections they apply to (Gulsen, 2019).

- Articles 12 and 13 of the Venice Charter from 1964.
- Articles "3" and "4" of the Third General Assembly of ICOMOS, 1972.
- Section "f" of the 1975 Declaration of Amsterdam.
- 18, 1988 U.S. Preservation Briefs.
- Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, U.S. Secretary of Interiors, 1990, "p. 62", Articles "9" and "10".
- Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings, U.S. Secretary of Interiors, 1997, "pp. 91-93".
- Article "2.3" of the ICOMOS Charter adopted at the 14th General Assembly in 2003 in Victoria Falls, Zimbabwe.
- ICOMOS New Zealand Charter (2010), "p. 8," Article "21," and UNESCO's Fifteenth General Assembly, 2005, "p. 4", section "D-18."
- United States Preservation Brief, 14.
- Articles 7.2, 15, 21.1, 21.2, and 22.1 of the Burra Charter from 2013.

9. STRATEGIES OF ADDITIONS BETWEEN DIFFERENTIATED AND COMPATIBLE IN HISTORIC COMPLEX

One of four approaches that represent "differentiated" yet "compatible" designs may be used when a designer plans new construction inside a historic structure. These choices indicate a variety of responses to the demand for "differentiated" yet "compatible."

Table 1. Strategies of Additions designs for additions or infill construction in historic settings found in the Secretary's Standards.

(A) literal replication	Compatibility and reducing diversity were prioritized to maintain the existing character if the historical components were

	replicated. However, many officials in historical preservation rejected reproduction because they thought new construction had to give the sense of being modern.
(B) Invention within same or related style	To maintain the impression of continuity, additional features were introduced in the same or a much-related style while maintaining distinction and compatibility, albeit with a weighted emphasis on the latter. This resulted in a modern design that was distinct from and complementary to its previous environment.
(C)Abstract reference	It intends to reference historical elements without adopting a historically accurate aesthetic. Additionally, it sought to balance compatibility and distinctiveness but leaned more toward the former. It took imagination and talent to carry out this technique, which made it challenging. By reducing the composite form to an abstract shape, it was thought to be a modern design in which the compatibility of the new and the old was optional. It intends to reference historical elements without adopting a historically accurate aesthetic. Additionally, it sought to balance compatibility and distinctiveness but leaned more toward the former. It took imagination and talent to carry out this technique, which made it challenging. By reducing the composite form to an abstract shape, it was thought to be a modern design in which the compatibility of the new and the old was optional.
(D)Intentional opposition	It was consciously in opposition to the context, altering its character by promoting distinctiveness above compatibility. This tactic may correct the historical setting created by earlier insensitive or oppositional acts since the contrast is sometimes the appropriate response to a weak or insufficient background.

Source: (Ahmed, 2018) Retrieved from (Semes, 2007)

Semes' four methods offer a practical framework for analyzing contemporary structures in historical areas. Semes thinks that “Intentional opposition" is the least acceptable strategy among the four presented in this study in a historical district. He points out that "literal reproduction" is less frequently used and, as a result, poses a much smaller threat to the continuity and integrity of a historical neighbourhood than deliberate resistance or designs unconcerned with their surroundings. He presents the valuable viewpoint that literal replication, which preservationists frequently worry will lead to "false historicism," has its place in some situations (Semes, 2007).

10. URBAN DEVELOPMENT & TRANSFORMATION OF EGYPT IN 19TH TO 20 CENTURY

The world saw a resurgence phase in urban design and architecture during the 19th century. Several architects returned to the discipline's origins and incorporated past styles into their creations (Marei, 2012). Egypt's urban history, like many other countries, was shaped by political and economic events, as well as issues of identity

politics and international position (Howeidy, 2015). Egypt's Khedival era is renowned for the evolution of aesthetic culture and architectural innovations. With their reforms to modernize Egypt, Muhammad Ali Pasha (1805–1848) and Ismail Pasha (1863–1879) oversaw most of the improvements during this time (Alsheikh, Najwa; Wahyuni, Pande Putu Sri; Weisne, Zoe, n.d).

Ismail Pasha was intrigued by Paris' extensive reconstruction and architectural revolution when he was there in 1867 for the Universal Exposition. Hussmann, who organized Paris, was the person he met. Ismail consented to travel to Cairo to establish a new strategy and contemplate constructing other neighbourhoods and farms. To carry out his idea, foreign experts were hired. Foreign construction companies took over the most essential government and royal projects. The Opera House was designed by Italian architect G. Garozzo and constructed in 1862. The al-Galaa Bridge was built by an English company, while the Kasur al-Nil Bridge was built by a French company. Both were finished in 1869. French companies supplied water and gas lighting to the new suburbs. (Marei, 2012) "Ismailia Cairo" appeared as the outcome, referencing Khedive Ismail (Saleheldin & Gomaa, 2019) acquired from (El-Tarabili, 2003). Since Saladin had been stationed in the 12th-century citadel during the Middle Ages, the khedive decided against restoring the old city and instead started construction on a new capital that would be comparable in size to the old Cairo. He sought to distinguish between a modern, idealized Downtown and an ancient, mediaeval Cairo (Howeidy, 2015). Architecturally, the era's globalization is reflected in a new fusion of Classic, Renaissance, art deco, art nouveau—known in Germany as Jugendstil—baroque, expressionism, rationalism, and neo-Islamic forms. Cairo had benefited from the khedive's introduction of much-needed technological improvements, including new infrastructure and a growing rail network connecting the city to the capital. Most of these significant infrastructural developments take place below street level and are inspired by Baron Haussmann's vision for Paris. According to historian André Raymond, he wished to make Cairo "a legitimate rival of the great European capitals." (Howeidy, 2015). According to Raymond, the new neighbourhood was inspired by the Al-Ismailia Haussmann concept: "a network of straightened wider thoroughfares would connect a dozen squares." The khedive oversaw the planning the three current downtown thoroughfares: Nasr Al-Nil, Suleiman Pasha, and Qasr Al-Aini.

Grand Bek's revised plans for Cairo were completed by 1874. El-Seka el-Gidida, Mohammed Ali, and three vital European gardens, including el-Ezbekia, El-Orman at Giza, and a garden on the Island of El-Gizira, occupied a combined area of 456 Fadden in Cairo's network of European-style streets (Boulevards and Avenues) (Saad, 2019). (Egyptian Authority for Surveying, 1930). Gas, clean running water, and streets with trees and sidewalks were given for the west's emerging metropolitan area. In addition, it had modern urban amenities and attractions such as European public spaces, shops, markets, theatres, opera houses, and gardens (Saad, 2019). (Abu-Lughod, 1965, p. 436). Thus, as Ali Pasha Mubarak noted, the region became the most attractive in modern Cairo after careful design and was later sacrificed for

high-class standard housing. When streets in the Parisian style were built, the business district shifted from the threshold to these contemporary streets and started to bustle with activity from businesses, marketplaces, and banks (El-Tarabili, 2006). Physical and non-physical characteristics can summarize the 19th-century urban changes in Cairo. The celebratory visual aspect of its street pattern, its monotype urban realm (public only), its novel street pattern (radial and gridiron), its spatial organisation (geometric and regular), and its appearance of urban order are all examples of the physical dimension (Saad, 2019).

Another important goal of the urban organization was to show axial streets and burning public buildings. Additionally, in old Cairo, the outward aspect of the city became its main goal rather than its outcome (Saad, 2019). The deprivation of privacy within residential entities, the development of new socioeconomic elites, the weakening of the public's attachment to and sense of belonging to their urban environment, and the removal of the public's rights to control their urban context can all be considered parts of the non-physical dimension (Saad, 2019).

11. HISTORY OF CAIRO UNIVERSITY CAMPUS

Cairo University was created on the model of a European university on December 21, 1908. It is the second-oldest institution of higher education in Egypt after Al Azhar University. After the July 23, 1952, revolution, Cairo University (known as the Egyptian University from 1908 to 1940 and King Fuad I University from 1940 to 1952) became Cairo University. In 1908, the university was established in the presence of Khedive Ismail II, and Ahmed Lotfy El-Sayed was appointed as its first president (1987, عباس).

The Faculty of Science, Faculty of Arts, Faculty of Medicine, and Faculty of Law were the only faculties that CU had when it started operating due to a royal order that

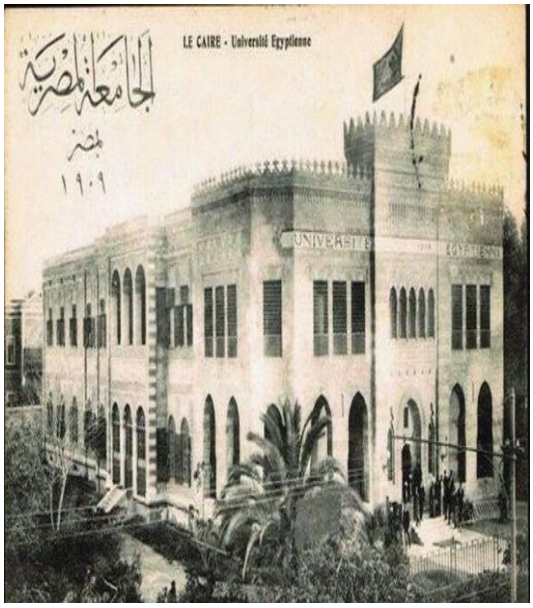


Figure 1. Egyptian university 1909, at saray Mohamed sedky pasha (Source:Cu, 2020)

Figure 2. King Fu ad I university, 1940 (Source: Cu, 2020)

was granted in 1925. The School of Medicine (1816), School of Engineering (1816), and School of Agriculture (1889) were only a few of the faculties that were founded before CU (1827). Egyptian University students began their academic careers in October 1926, but the campus had not yet been built. The institution was located at Saray Mohamed Sedki Pasha until it became a state university and was subservient to the Ministry of Education in 1928; buildings connected to Kasur El-Zafran at Abasia were used. The arts and sciences faculties could be temporarily housed there. The colleges of law, science, and medicine were added after the Faculty of Arts had moved to its new location in Orman Garden, Giza. October1929 (1987, عباس).

12. IDENTITY OF LOCATION OF CAIRO UNIVERSITY CAMPUS

In 1928, Princes Fatima (a royal family member) contributed a portion of the Giza Garden to the construction of the Egyptian University, which was originally part of the "Giza Palace Complex." The complex comprised three palaces to host guests of Khedive Ismael (Labib & Hamdy, 2004). The royal garden was used to entertain guests of Khedive Ismael and featured lakes, wooden pergolas; coloured gravel walks imported from Greece, trees, plants from all over the world, rare birds, and animal cages. The garden represented Khedive Ismael's new vision for Cairo (Abd El Aziz, 2019, derived from Wikipedia) (Labib & Hamdy, 2004). In 1938, a new artery was built to connect Cairo's "Menial neighbourhood" to Cairo University. The new thoroughfare (Nahda Street) cut across the Orman garden, dividing it into the botanical and zoo gardens (Abd El Aziz, 2019). The remainder of the campus was constructed by demolishing buildings and rural land (Author, 2022) according to The Survey of Egypt, 1950. European architects designed the campus (Reid, 2002)

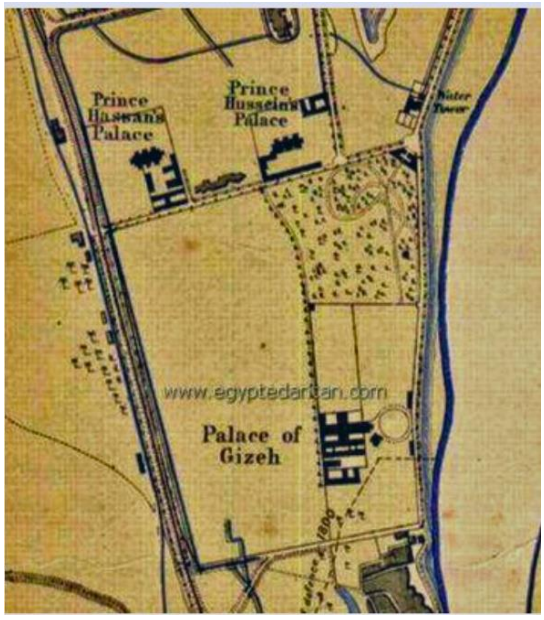


Figure 3. The location of Giza Palace gardens. (Source: Cultnat, 2018)

Figure 4.Historical map showing the Giza gardens before splitting into the Zoo and the orman gardens. (Source: Cultnat, 2018)

(retrieved from Nasser, n.d). Cairo University comprises 26 faculties &institutes, 177 units & centers, and 5 academic sectors, both on and off-campus.

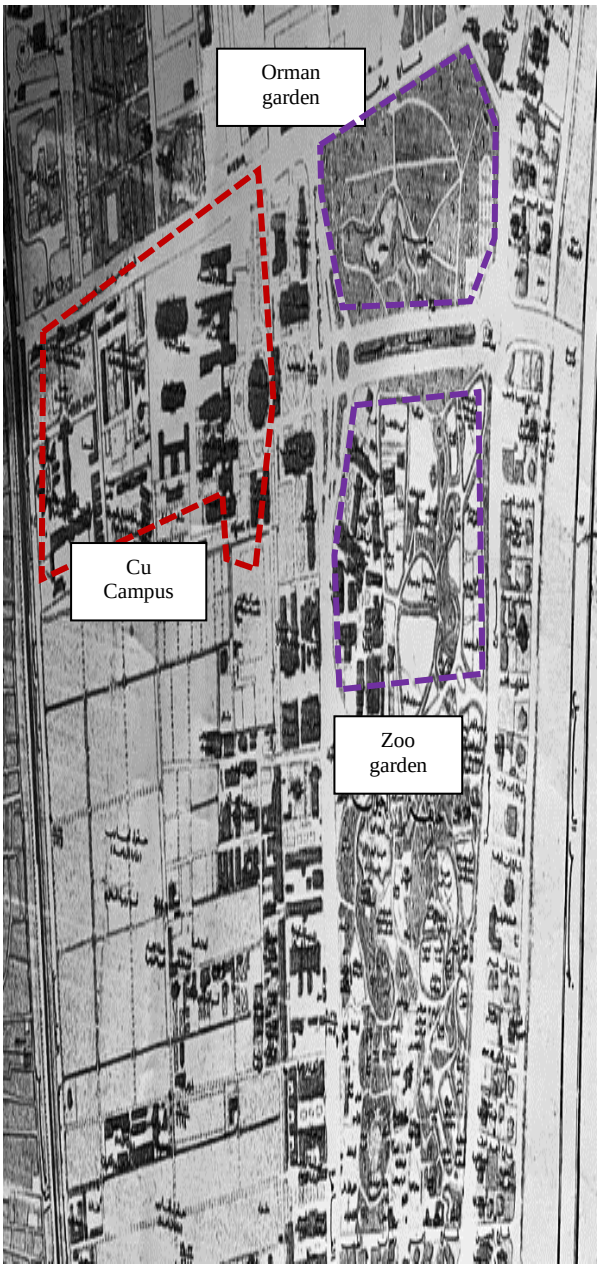


Figure 5. Cairo University Campus (Source: the Survey Egypt, 1950)

Figure 6. The garden after it was separated from the Zoo and other uses. (Source: (Abd El Aziz, 2019)by (the Survey of Egypt, 1929))

13. TIMEFRAME OF ADDITION BUILDING INSIDE CAIRO UNIVERSITY CAMPUS

Figure (7) Timeframe of addition building inside Cairo university campus.
Source: (Author, 2022) retrieved from the Survey of Egypt, 1950& (عباس,١٩٨٧)

Table 2. Legend of Timeframe of addition building inside Cairo university campus

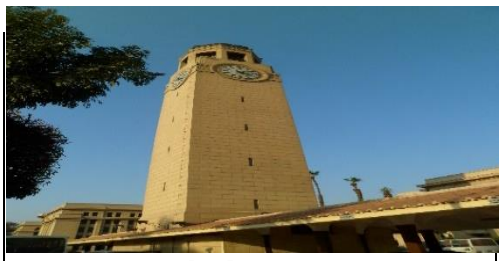
Original Building (1920-1930)	Third Addition (1950-1960)	Sixth Addition (1980-1990)
First Addition (1930-1940)	Fourth Addition (1960-1970)	Seventh Addition (1990-2000)
Second Addition (1940-1950)	Fifth Addition (1970-1980)	Eighth Addition (2000-2015)

Source: (Author, 2022)

14.APPLYING ADDITION STRATIGIES ON CAIRO UNIVERSITY CAMPUS

Building No	Building shape	Style	Original	Approaches Of Addition Strategies			
				(A) Literal Replication	(B) Invention Within Style	(C) Abstract Reference	(D) Intentional Opposition
Supreme Council of Universities & Its Extension							
1	 1934	Late Neo Classic		■			
14	 After 1950	Modern				■	
Grand Celebrations Hall							
2	 1935	Late Neo Classic		■			

Source: (Author, 2022)

Cairo University Clock &Its Shade							
3	 clock:1937	Late Neo Classic					
4	 shade:1947	Late Neo Classic					
Faculty of Arts							
5	 1929	Neo Classic					
6	 1929	Neo classic					
7	 CLT: 1970	Modern					

Source: (Author, 2022)

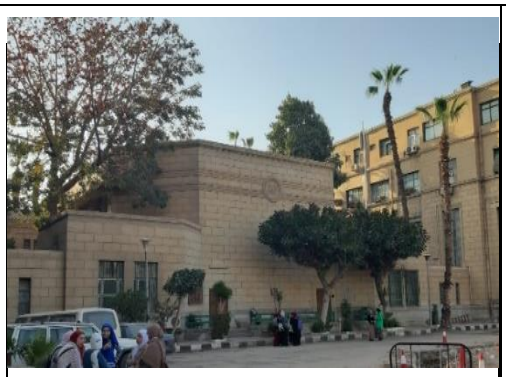
8	 1932	Late Neo Classic					
Faculty Of Law							
9	 1929	Neo classic					
10	 1929	Neo classic					
11	 1979	Modern					
12	 1979	Modern					

Source: (Author, 2022)

Guest House &Its Addition							
15	 1983	Modern					
16	 2012	Modern					
Faculty Of Economics and Political Science							
17	 1950	Modern					
Faculty Of Science							
13	 Dep. of Astronomy :1929	Neo classic					
18		Neo classic					

	Dep. of Biology :1929						

Source: (Author, 2022)

19	 Waly Amphitheater :1929	Neo classic					
20	 Dep. of Botany :1929	Neo classic					
21	 Dep. of Math :1929	Neo classic					
22	 Dep. of Chemistry +Admin :1929	Neo classic					
23		Neo classic					

	Dep.of Chemistry:1929						

Source: (Author, 2022)

24	 Mosharafa Amphitheatre :1929	Neo classic					
25	 CFRER:1998	Modern					
26	 Dep. of Physics:1929	Neo classic					
27&47		Modern					

	Dep. of Biophysics&Giophysics:1981						
28	 Precision Analysis Centre:1971	Modern					

Source: (Author, 2022)

29	 Dep. of Geology :1929	Neo classic					
33&47	 Dep. of Insect :1948 &Its Extension After 2000	Late Neo Classic					
ENTA							
30	 ENTA :1998	Modern					
Faculty of Archaeology& Its Extension							
31		Modern					

	1970						
40&43	 1955	Modern					

Source: (Author, 2022)

44	 1977	Post Modern					
45	 1978	Post Modern					
Cairo University's Press							
32	 2015	Modern					
Faculty & leadership development centre (FLDC)							

33	 After 2000	Modern					
Cairo University Khartoum Branch							
41	 1950	Modern					

Source: (Author, 2022)

Centre of Community Service							
42	 1950	Modern					
Faculty of Commerce							
34	 1935	Late Neo Classic					
35		Late Neo Classic					

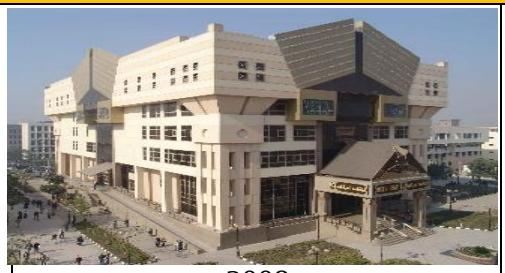
	1935						
36	 After 1960	Modern					
37	 Georgia State University (GSU):2007	Modern					

Source: (Author, 2022)

38	 English Commerce :1990	Modern					
31	 After 1993	Post Modern					
National Institute of Laser Enhanced Science (NILES)							
46		Modern					

	 1994						
Faculty of African Postgraduate Studies							
48	 1970	Modern					
Faculty Of Regional and Urban Planning							
49	 1977	Modern					

Source: (Author, 2022)

New Central Library							
50	 2008	Post Modern					
Faculty Of Dar Al Ulum							
51		Modern					

	1980						
Exams Central Hall							
52	 2002	Modern					
Faculty Of Mass Communication							
53	 1970	Modern					
Faculty Of Graduate Studies for Education							
54	 1987	Post Modern					

Source: (Author, 2022)

55- Engineering Administration for University							
The Development Research and Technological Planning Center							
56	 1979	Modern					

Source: (Author, 2022)

14. CONCLUSION

Additions to a historical site may follow one of the following approaches: literal replication, Invention within same or related style, Abstract reference, and Intentional opposition. Awareness of the different addition approaches may help designers to find better-planned ways for integrating their additions. In the case study of Cairo university campus, the original buildings were Neo-Classic, built between 1928 to 1930. The first addition to the campus was from 1930 to 1940 it followed the same style of the original building (Neo-Classic), they blended and adhered to the existing vocabulary perfectly. It is classified to (Literal replication) addition strategy. Some of them were slightly different from the original design, adding few new elements. So, it can be classified according to addition strategies to (Invention within a style) and (Abstract reference). From 1940 to 2015 most the rest of addition building inside the campus does not follow specified pattern & some of them are difficult to be identified, they contrast with the context and its character, through visible contrast, preferring differentiation over compatibility, most of them took (Intentional opposition) of the original style inside campus.

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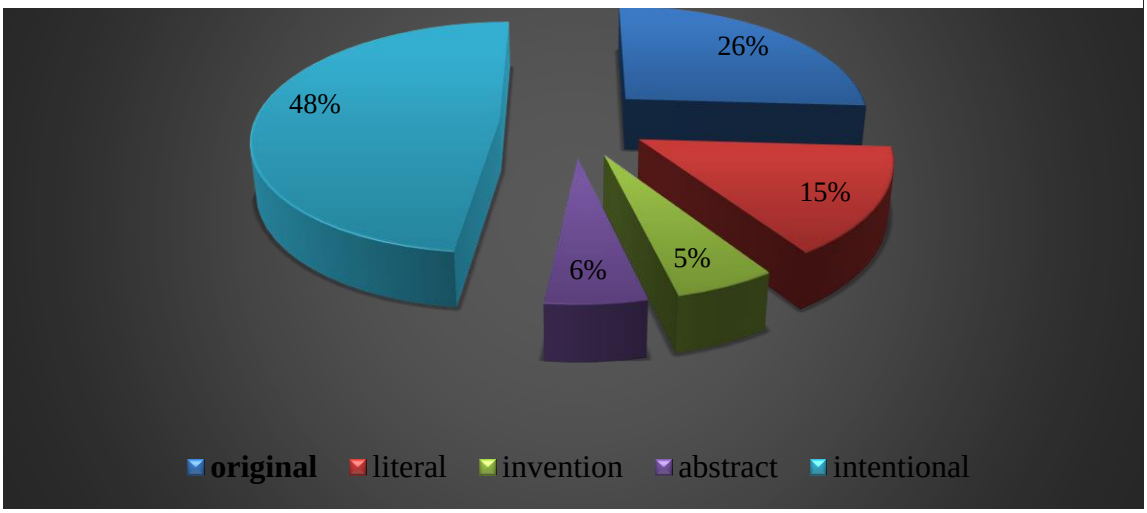
Figure 7. Analyzing & Assessment of Historic & Addition Building Strategies Style



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