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The Impact of Higher Education Projects on Reforming Urban Identity of The Urban Communities: Case Study of 6th October City In Greater Cairo

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Abstract

The 6th of October city was established in 1970's to be one of the national projects creating a new urban community to reduce pressure on the greater Cairo. It is consisted of residential, industrial and recreational areas. The 6th of October University was the first higher education project established in 1996 followed by several higher education projects which played an essential role in changing the urban identity to meet the inhabitants' needs. An analytical study of 6th October case was held through a quantitative and a qualitative data on a time line study. The study is focused on the urban growth of this urban community during the last two decades to investigate how the land uses can change the urban community in terms of the urban identity. The study results show that a significant change has occurred during the period of study, visually and functionally.

1. Introduction

1.1. Urban identity

The users' needs play an important role to reform the city's physical elements, where these elements affect on the identity of place as an intangible aspect (Alexander, 1979).The identity is the extent to which a person can recognize or recall a place as being distinct from other places (Lynch, 1981). In other words It is what gives to the built environment or what makes it special in buildings, spaces and paths. In other context, identity is the sum of characteristics that are used to describe and differentiate assets with natural and cultural properties. As it can change in time based on the variable purpose. (Beyhan & Gürkan, 2005) Likewise, the purpose of using the land plays an important role to reform the urban identity .

Lynch argue that the ability of the city depends on its ability to be identified in an easy way. In other words, it is what could be defined as in a legible way, where legibility of the city enhances the identity. In that sense, the identity is clarified significantly based on several aspects such as the city elements focusing on the study's context (i) *Paths*; the channel of movement which is strengthened by several elements, like the width where the buildings' elevations enhances its strength and gives it a clear identity. (ii) *Edges*; it separates two areas even if they have a major differences in features or minor such as architectural vocabularies in the buildings' elevations or different housing types. (iii) *Nodes*; as a gathering points such as squares. (iv) *Landmarks*; as an external feature valid to be a reference point for users such as statues in squares or feature building. Finally, (v) *District*; which has common features giving it an identity such as names or buildings types .

1.2. New urban communities in Egypt

In the 1970's, the Egyptian experience in new communities has started the origins of the proposition of developing new communities outside the populated areas of Egypt; it is dated back to the late 1960s. The Greater Cairo Region – Preliminary General Plan, Study (1970) , advocated the development of four new urban communities in the Greater Cairo Region to enhance and support national development and help solving the expansion of urbanization, over-populated major existing cities problems (nasamat&ettouny,2009).

The 6th of October City was established by New Urban Communities Authority in 1979 to be one of the first generations of new urban communities' cities which symbols the 1973 War (Yom Kippur). It resembled everything strating from the city names and its squares names in addition to land marks statues. It is located in the West of greater Cairo at a desert location about 40 km from the center of the metropolis. It is goal was to accommodate the expected population growth in greater Cairo. It aimed at 500 thousand ihabitatsn in the city, which was the anticipated complete growth in 2000 on urban mass area 4788 acre.

The 6 of October City morphology is affected, mainly, by the city's establishment that required creating an attractive areas for the people. Therefore, the original schematic plan had to be consisted of three major components; (i) *Residential*; the prevailing component which extended on the account of recreational areas where established several new housing patterns such as governmental housing and private housing, (ii) *Recreational*; as an attractive points and, (iii) *Industrial*; which hasn't changed. Therefore, the original schematic is consisted of twelve residential districts distributed perpendicularly on a central service of linear axes, bounded by; recreational area in the northern east , industrial area in the southern west and green buffer zone in rest orientations. Accordingly, it reflected the equitable distribution of the population, to ease the urban fabric, and cleared the identity of the land uses as shown in Figure 1.



Figure 1. Original scheme of 6 October City

1.3. Higher education projects in 6 October City

The original scheme has been developed several times; firstly in 2000, regarding to the presidential decree (PD) 192 followed by PD 269 in 2006 which aimed at 1.5 million people in 2027. Finally, The PD is 89 in 2009 . These increases rounded about several land uses such as ; (i) tourism housing and recreational projects in east, (ii) housing projects in north expansions - green buffer zone - (iii) industrial and investment projects in the west, (iv) several land uses in the south such as governmental housing projects , clubs, graves area, media production city and Private Universities.

Thirteen years after the establishment of the city, specifically in 1992, the PD 219 paved the way for the establishment of several higher education projects (HEP) in Egypt either in the form of private universities or registered high education institutes. Regarding to the Acceptance Coordination of Colleges and Institutes Services portal, HITH were developed and started full operation in 1990. (Figure 2) Showed obviously that the HEP's component didn't have a clear form or connectivity, for where it was distributed in the city randomly. Naturally, these HEP as a physical element had an effect on other surrounding components in the city.



Key	project	establishment
1	Ahram Canadian University (ACU)	2005
2	Akhbar El Yom Academy	1995
3	Haut Institut De Tourism et d'Hotellerie (HITH)	1990
4	Culture & Science City	1994
5	October High Institute for Engineering & Technology	1993
6	Higher technological institute	1996
7	October University for Modern Sciences and Arts (MSA)	1996
8	October 6 University (O6U)	1996
9	Higher Institute of Applied Arts	1994
10	Misr University for Science & Technology (MUST)	1996
11	International Academy of Engineering & Media Science	2002
12	Pyramids Higher Institute for Eng. & Tech. Institute	2007

Figure 2. Higher education projects in 6 October City.

2. Methodology

This paper investigates the impact of O6U on the urban identity of 6 October City. To identify this impact; firstly the relationship between legibility and identity was clarified, then the intimate context of O6U was analyzed legibly; (i) *Visually*: based on four elements of Kevin Lynch approach to read the city (paths, edges, nodes and landmarks) in terms of its identity. The paths in surrounded streets and the nodes in squares included its land marks and edges as representatives in the surrounding residential buildings' elevations. (ii) *Functionally*: to answer only one question; how clear the function of the rental housing pattern appeared?

All above mentioned aspects investigated through the three decades are firstly ,since establishment of O6U in 1996 to 2006, only based on archive photos extracted from the internet and Google Earth. Secondly, from 2006 to 2016 and from 2016 until now respectively, it is based on previous sources in addition to the on-site monitoring which is based on the daily experience of the author as a habitant of the of 6 October City since 2009 up until now .

3. The Investigation

3.1. Case study

O6U was selected because it was one of the early establishments as a private university in Egypt in 1996. It contained 14 authorized faculty members spread on the area of 40 acres. It contained the largest amount of registered students in private universities by 15.1% (Databases department 2015). The intimate context of O6U states that it is located on the central service of the linear axes in the city entrance, surrounded by two major paths from north and south bounded by the seventh and the first residential districts respectively. Moreover, two minor paths from the east are bounded by 6 October club, and O6U, from the west is bounded by O6U library and Al-Hossary Mosque. In crossroads, four nodes "squares" include landmarks. O6U buildings contributed to the urban identity concerning the architectural vocabularies in elevations and its location; as in the center of city's entrance and exit paths.

Otherwise, a new housing pattern, host flats, took place noticeably in the surrounding residential buildings to meet the rapidly growing demands of the students concerning the rental housing near O6U; especially from the foreigner students. The number of the registered foreigner students in 2014/2015 in O6U reached 2292 students or a 15.2% from the total number of the registered students- 15160 students. In the same context, the O6U staff members is 629 or 11.3 % occupying the third place in registered faculty members in HEP in Egypt .

3.2. Between 1996 and 2006

In that decade, urban fabric was the same in the original scheme as mentioned previously. Visually, it was surrounded two-way major paths consisted of four-lane street with a width of 12 meters (m), pavement width of 1.5 m and service road with width of 9 m, In between 6 m mid-island, the importance of the northern path because of it is the first access to the city which included three nodes; one square in the entrance then two nodes as a result of streets congestion, later on between 2003 and 2005 two squares were added Al-Nadi (the club) square and Magda square respectively, where the second square included Egyptian actress statue called Magda .Bounded by District 7 residential buildings elevations .

At the same time, the southern path started with Dolphin land square included soldiers' statues which symbols the 1973 war enhanced the original scheme identity in a figurative way followed by a node of streets intersections and ended by Al-Hossary Square. It worthy of mentioning that it was one of the most important nodes in the city because of several points. Firstly, its location that was mentioned before and the satellite image (Figure 3) where clearly enhanced. The argument of the square wanted the city center to serve as a focal point for public transportation as station instead of what the original scheme aspires to. The square included Earth statue. The path bounded by district 1 building elevations witness a less developed urban block, unlike the northern urban block .

The minor two-way paths in the east and the west of O6U consisted of two-lanes street with the width of 6 m in each side, mid-island with a width 6 m, and the surrounding urban block land uses had not any changes from the original scheme which was described before. Functionally speaking, the O6U was noticeably affected by the surrounding environment where services such as stationaries, coffee shops and restaurants occurred. Clearly, it is shown in the block between the right side of the western path and the O6U.



Figure 3. O6U intimate context.

Significantly noticed that all mentioned squares in addition to most of city squares constructed by private investors which given a clear identity namely where these squares called by advertisement name instead of the official name, in addition to O6U and mosque.

3.3. Between 2006 until now

With regards to the strategic plan of 6 October province in 2006 issued by General Authority for Urban Planning, 90% of HEP's students, 25% of schools students and 40% of labors are from the outside the city. Also, the rapid growth of the city and Al-Hossary square location has accounted to significantly have traffic congestion. Between 2014 and 2015, the surrounding paths of the O6U has been converted by the decision makers to be looped around the university buildings to be the only one way path in the city.

The major northern path was the entrance of the city, where the two ways and mid-island were merged, started by Al-Nadi square. The square got renovated by a businessman who added palm trees as a landmark. The way ended ended by the Magda square. Although the land mark of the actress statue was replaced by an art work renovated by another investor, it had the same name. The edge level surrounded the urban block, and the minor one was developed, yet no significant changes were noticed. Also, the southern bath was converted, like what happened in the northern path to be the exit way of the city. Al-hossary square land mark ,replaced by artwork, was developed by investor as well. The second art work land mark was added to the node called Al-gehaz (city hall) square. Finally, it was followed by the same node mentioned before. While the minor two-way paths in the east and the west of O6U were converted to be a one-way path, the surrounding urban block land uses had not changed from its original scheme. The minor two-way paths in the east and the west of O6U consisted of two lanes-street with the width of 6 m in each side, a mid-island a width of 6 m, and the surrounding urban block land uses had not any changes from the original scheme as well.

On the contrary of northern path, surrounded by the totally developed urban block, a significant housing pattern took place. Technically speaking, the students rental housing pattern ,either for males or females, or even most of the residential buildings constructed after 2006 were done following this pattern based on two aspects. Firstly, the on-site investigation in the beginning of 2017 where written on the residential buildings elevations. Evidently, different commercial names included key words such as (hostel, student housing, daily housing and long period housing) as shown in Figure 4. Although no words were written on the rest of the buildings elevations, this pattern easily identified either by seeing the reception counter in the entrance of these buildings or asking any guard man in the street. Secondly, the personal meetings with four buildings' owners enlightened me that they were stressed about the main issue that the rapid demand on students rental housing, specially from O6U in addition to MUST and MSA universities, encouraged them to provide this housing pattern from the beginning of their projects. It started to take that trend about the end of 2005. Figure 4 showed that most of referred buildings in district one were for this housing pattern.

In the function context; service land uses in service block mentioned before were upgraded to be twenty four hours services. The O6U was affected by the manifestation of the surrounding environment where services such as stationaries, coffee shops and restaurants took place. It was clearly shown in the block between the right side of western path and the O6U, which is totally developed.



Figure 4. Rental housing samples up and rental housing buildings down

4. Conclusion and discussion

The scheme of 6 October city was developed for several times. The educational component represented in HEP showed clearly the random distribution in the city, O6U private university established in 1996 it was one of large HEP in the city, and it recently enjoys a high number of student enrollments.. The influence of O6U on urban identity of the city was investigated through a time line in two decades in terms of the Lynch visual aspects and the purpose of the surrounded land uses. The results showed that the first decade ,from 1996 to 2006, O6U itself gave an identity to the place concerning the architectural vocabularies in its elevations and its location as a land mark in the entrances of the city. Also, It visually contributed –poorly- to the surrounding paths, nodes, edges and landmarks. However, the functioning service-land uses related to students needs were enhanced consequently, and it was reflected on the social life- mainly for students .

In the last decade, from 2006 to 2016 , and on the visual side and until 2014 users of O6U contributed in reforming Al-hossary square to be a focal public transportation point. However, after 2014, the surrounding paths were converted to be circular around the O6U block ,which gave a unique identity compared to the 6 of October city's urban fabric. The study showed that the impact of O6U on nodes, landmarks and edges were neglected. At the same time, a significant impact on the southern urban block was observed. The students rental housing pattern was shown clearly since 2006 to meet O6U users' needs on housing, whereas most of buildings in the back street behind the southern edge were for new housing purpose. Consequently, 24\7 services emerged to meet the demands of the students life. Definitely, it added an attractive identity to the place .

It could be concluded that the urban identity of the 6 of October City, as a new urban community, was affected by HEP; ergo, the higher educational component should be taken in consideration during developing or establishing the urban communities.

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