



Mutual Relationship of Culture and Architecture: Focused on Residential houses in Kabul City

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Abstract

Culture as a whole context includes all aspects of human life, e.g. science, religion, art, ethnics, customs, and any kind of human capability. The culture and architecture are inextricably linked together that the culture of each civilization is reflected by its architecture monuments and designs. Afghanistan due to its strategic location in trading route of India and Central Asia has attracted the attention of civilization and cultures. Considering the dominating of various cultures influence and history, the territory is considered as multicultural country. Each culture represents a specific architecture style. Kabul city as a capital of the country representing the wealth of cultural repositories through its architecture and urban form. Residential houses where most of the people are living have a vital role in Kabul city architecture design. By passing the time, these types of houses have been experiencing various forms from cultural perspective.

This study was conducted by reviewing the past literatures and analyzing the Afghanistan culture and architecture styles to find the relationship between culture and architecture during the history, and to evaluate the morphological changes of residential houses by cultural impacts. The findings of this study show that in recent decades, the architecture of Afghanistan has been strongly influenced by local and regional cultures which are characterized by strength and weak points. The suitable combination of different cultural and architectural styles with Afghan traditional architecture is the main solution to overcome the architectural problems arisen by cultural influences.

1. INTRODUCTION

Culture as a whole context includes all aspects of human life, e.g. science, religion, art, ethnics, customs, and any kind of human capability. Architecture and culture are two interconnected concepts that all architectural designs have been created according to the existing history and culture of societies. Several studies have been carried out on evaluation of the relationship between culture and architecture. Hassan Fathy claims that each nation has its own architecture style in which the culture is represented by its architecture form, habits, traditions and customs [1]. George Micheli stated that Islamic culture is expressed extremely in the existing buildings. According to Robert Powell, the influencing culture factors are required to be considered to understand the building forms, hierarchy, and spatial arrangement [2]. Architecture represents the identity of each society and defines each civilization, also it introduces itself as an iconic and cultural concept for recognizing the culture of societies [3].

[4], Stated that every historical building defines different periods of time, variety of individuals, groups, and cultures. Architecture as a most important part of each civilization can affect on all aspects of human life even some architects and sociologists believe on having the mutual relation of culture and architecture.

Due to the geopolitical location of Afghanistan over the main trading routes of India and central Asia, its architecture and culture have been influenced by regional civilization [5, 6]. Considering the civilization changes and various empirical states in Afghanistan over the historical periods, it has experienced distinct evolution from its architecture and culture perspectives. However, Afghanistan has its own architecture

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style that is in line with the culture, climate, and environment characteristics considered in all province of country. Kabul as a capital of country is the meeting place of all those cultural effects which give the distinctive architectural, historical, social and political characteristics [7, 8]. Kabul city through its architecture and urban form, which have been the result of an evolving process of development through many civilizations, introduces a wealth of cultural repositories [9]. In addition to other influenced architectural styles within Kabul city, traditional architecture styles also occur which have been investigated by several scientists. [5, 6, 10–18].

Residential houses are the vital indicators of traditional architecture style of Kabul city. Based on cultural effects, several types of houses are found in Kabul city that the fundamental types of housing are termed Kala which are related to the historical architecture styles of this region. Over the time, the residential architecture and lifestyle have been influenced by regional and international cultures that sometime clash with local culture and environment [19].

Considering the reviewed literature, the lack of detailed investigation on the evolution of courtyard houses architecture through the historical period of time are felt, moreover, the existed studies on architecture styles of Kabul city were conducted mostly by local and foreigners researcher who focused on the traditional architecture style individually rather than evolution till contemporary courtyard houses style.

This study aims to identify the relation of Afghanistan culture with its architecture through the different periods of time, moreover, evaluate them in Kabul city residential houses focused in the contemporary age. The findings of my study contribute to further Afghanistan architecture related studies in terms of connecting the different evolution types of houses in Kabul city, also it is considered as an instructive material for the responsible departments and architects during their designing houses.

2. METHOD

This study was conducted by reviewing the existing literature on architecture styles of Afghanistan and Kabul city. The research procedure was followed by the flow chart depicted in (Figure 1).

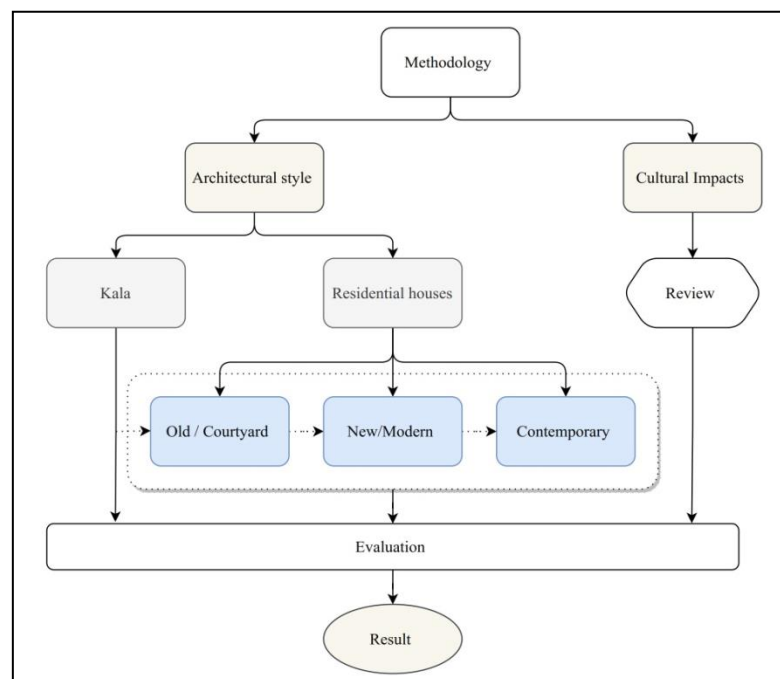


Figure 1. Methodology flowchart

3. CULTURE AND ARCHITECTURE

Basically, culture is a wide concept which encompasses knowledge, belief, art, morals, law, custom, habits, and any other capabilities achieved by peoples as a member of society [2]. Furthermore, culture

includes those shared ideas, beliefs, emotions and customs representing the behavior and place values on creative artistic expressions in various fields e.g. art, music, literature and architecture [20]. Architecture and culture are assumed as two related concepts that each civilization is reflecting its own culture enrichment with its architecture monuments, if we consider the historical monument, each of them reflects a wealth of cultural components. The concept of cultural effect on architecture style describing the most important role of buildings form and architecture pattern to introduce the cultural, social, and economical condition of societies. Architecture can arrange the lifestyle of people in a society and establishes the communication among them by architecture forms and patterns [3].

Throughout the history of humanity, architecture as a mother of all arts, has supplied shrines for religion, homes for the living, and monuments for the dead, also architecture is concerned with finding the pattern of building and communications which makes the community function, and, at the same time, it represents a meaning [21]. Architecture styles in every society are establishing according to the needs of society and environment condition to provide a quality life for people and protect them from natural disasters by maintaining their cultural and ritual values in a society. Architecture as an illustrator of culture derived from the culture and directly affected by that, therefore it causes to establish connections between culture and society by representing the society's thoughts. Building culture as a kind of culture descriptor introduced by varied architecture elements and intangible values in the built environment is revealed by vernacular architectural language in urban spaces [4]. Based on [22] architecture styles and forms are corresponding to the needs of society and quality of habitations lifestyle, therefore, architecture has to be followed by any kinds of cultural or social changes and rapidly adjust itself with it. Each country has its own culture and lifestyle which contributes for establishing a traditional architecture style being suitable with social, economic, and environmental conditions of a society. Afghanistan as a multicultural country has a diversity of ethnics which live in a different part of the country. Kabul as a capital of the country has been a magnet point for every ethnic group of Afghanistan to move here and live.

Kabul as a historical city is considered to ancient time. In the sacred book of Hindus' Rig-Veda, 1500 BC current Kabul River was described as Kabuha [23]. Kabul city as a mountainous area provides excellent defensive barriers and climate for living that is the main reason for being as an urban site since ancient time [17]. Also based on geographical location within the ancient trade routes which linked India and China to the Persian trade routes and beyond to the west, had an opportunity of developing and represented many historical aspects which are considered as the main reasons for its development [9]. Accordingly, during the history it is witnessed a varies invasions from several civilizations and each of them introduced a specific culture and architecture style in this territory.

Architecture history of Kabul city based on culture and religious beliefs can be divided in to two-parts; pre-Islamic and post-Islamic. Pre-Islamic civilization in Kabul city is followed by the epoch of the Kushan empire dated back to the first to third centuries A.D [7]. Kabul city during the reign of Hephthalites in the 5th century becomes a stronghold in the history of Afghanistan, and as an administrative capital in a part of Hephthalites kingdom, it was the most prestigious economic and religious center [24]. Moreover, there can be found lots of pre-Islamic architecture monuments, however, during the civil war and nonstable condition in the country, most of these monuments were damaged and destroyed [7]. Post-Islamic architecture of Kabul city starts from the conquest of the city completely by Yaqub ibn Laith in 870 A.D, where he introduced Islamic culture [7, 23]. Kabul due to its strategic location in the territory has an important statues for the Islamic civilizations from ancient [7]. Therefore, Islamic architecture history in Afghanistan largely representing the dynasties of the Samanids, Ghaznavids, Timurids, Moghuls, Ghurid, Khurasani and etc empires [25, 26]. Based on cultural influencing, Afghanistan architecture styles can be divided into three sections; Central Asia, Persian and Indian which during the history Afghanistan was a most important part of these civilizations. Kabul city according to its strategic location and capital of the country is the meeting place of the three culture style [5, 7, 27]. These three Islamic architecture styles in Kabul city are considered as the most famous Islamic architecture styles reflected by various architecture monument related to different periods of time till now. Kabul as a capital of Afghanistan is followed by the variety of urban identities reflecting distinct social and political aspects of development [8].

In 1947 when current Afghanistan was established by Afghan Empire Ahmad Shah Durrani, in case of some political issues and dislike of ostentatious, large-scale monumental building projects were ceased, this situation continued till 1880. Also he moved the capital from Kabul to Kandahar that after his death

in 1773, his son Timur-Shah transferred back the capital from Kandahar to Kabul, since then Kabul has preserved its position as a capital of Afghanistan [9]. During these historical period from 1947 – 188, public and domestic architecture has been representing the same forms for rich and poor community by a massive unadorned mud-plastered wall with single doorways corresponding blank faces to the people outside. That architecture reflected an inward-looking, self-protecting, family, and tribal society [25]. In 1880, when Amir Abdurrahman Khan took the power, large-scale monumental building projects in Kabul city restarted and he was the first king of Afghanistan who introduced the foreign (western) architectural styles to Kabul city [20]. He built Bagh-e Bala palace followed by Moghul and western architecture style and Arg palace influenced by British architecture style [8, 25]. Son of Abdurrahman Khan, Habibullah Khan took the power between (1901-1919) and he was fond of the modernization. Therefore, he established a postal service, photography, electricity, cars and the telephone services. After that, his son Amanullah Khan between (1919-1929) during on his visit to Europe, he was influenced by European architecture styles and culture such as Berlin, Paris, and London. Upon his returning to Kabul, he developed the idea to have a capital characterized by modern European cities, therefore he built Darulaman Palace in European style by European engineers and craftsmen[8]. Moreover, Amanullah Khan wanted to fatly expand the western traditions in Afghanistan culture. Afterwards, for the first time, significant impacts of western architecture and culture in Kabul city happened in Amanullah Khan time [27].

Within the framework of residential building architecture design, Afghanistan is characterized by almost rural community in which 90 percent of the people provide their own building needs that building forms and construction approach have been grown through the centuries considering the climate, resources, natural landscape, and social organization [27]. Traditional houses prototype features in Kabul city introduces introverted courtyard houses that each courtyard has its own open space and the required access system, which is closely linked with the culture and is easily adaptive to changing needs and desires of the families [9, 19]. Currently, Kabul has become a big melting pot which bringing people with different political opinions, social ideas and a variety of perspectives for the future together and has its own historical, social and political features, hence from ancient time has been developed into a unique city [8]. The architecture of Afghanistan has been widely influenced by cultural and natural environments, therefore, according to civilization influences during the history, it can be divided into various sections [9]. The architecture style of Kabul city is particularly reflecting the whole country culture and architecture style [7].

4. TRADITIONAL ARCHITECTURE AND SETTLEMENT

All types of architecture forms are used to provide the quality of human life and rapidly have to adjust itself with any kind of changes from cultural or social perspective. Vernacular architecture used by local people is strongly linked with climate, weather culture and local materials. According to some scholars, vernacular architecture is growing up in the society and gradually becomes a compatible architecture style with societal, climatic and technological conditions of the environment [3].

Every urban tissues and architecture forms are constituted through a slow and long process of change throughout many years considering the traditional and vernacular architecture styles [28]. The buildings in Kabul city designed by traditional architecture is representing the various needs of social and cultural requirements and the housing prototype is introverted courtyard house that perfectly matches with cultural requirements of Afghan lifestyle [9, 29]. Afghanistan based on its location on trade route has been influenced by different neighboring civilizations and cultures. History of living style in Afghanistan (vernacular dwelling) can be identified in several types; Nomadic community and animal-breeders based on location and cultural effects, live in tent shelters, yurt and huts and the peasant community lives in Kalas which has an inward-looking design and surrounded by strong walls and defense towers and urban community live in courtyards [6, 10].

The history of Kala and courtyard houses in Kabul city is linked to the cultural, environment, religious and historical background. The rooms settlement around the courtyard is following the ancient dwelling prototype. Also, the traditional architecture style of Kabul city reflects the inward looking and self-protecting family society. As [30] stated, in Kabul city, traditional buildings are surrounded by mud walls "curtains" for being protected against the outside world characterized by the Afghan way of living in

many respects [8]. According to [20], specification of Kabul city traditional architecture can be summarized as bellow:

- Inward-looking with facing onto courtyard and exteriors presents anonymous surfaces to outsiders.
- Dislike of ostentation and aesthetics is evident in architectural patterns.
- Whitewashed interiors are generally sparsely furnished except for displays of Afghan carpets.
- Carved and pressed stucco adorn the walls of rooms in traditional homes.
- Doors and windows usually display intricate carving

In Kabul city, the urban community is living in courtyards which can be the upgraded version of kala. Traditional houses in Kabul city represent the difference of living conditions in the society [17]. Considering the cultural effects and traditional architecture evolution in Kabul city, three types of houses are determined: Kala, courtyard house, and new or contemporary type of house.

4.1. Kala

One of the most prevalent and historical types of dwelling in Afghanistan is kala which is built in rural area where peasant community were living in (Figure 2). Kala as a type of buildings complex was developed during the iron age and (also alternative term for village) has a common place for family living, worship or mosque, sheltering strangers, and stocking etc. [5, 10]. Moreover, the traditional way to build afghan farmhouse is called kala [31]. Usually Kala is established by a landlord or tribal headman to provide accommodation for his family and his shareholders which also can be an alternative form of the village in a small scale (Figure 2).



Figure 2. Photograph showing the traditional rural house or Kala view taken from [10]

Considering the general concept of Kala in Afghanistan, most architecture form of Kala contains a rectangular shape surrounded by massive mud walls with a single entrance door and has several watchtowers in corner and mid parts to protect habitants from outside attacks. The watchtowers are also used as storage for farm products. Basically, interior space of kala is subdivided by thinner mud walls to public and private spaces; public space includes mosque, share guestrooms, and some other public areas while private spaces encompass several multi-single interior courtyards (Figure 3). Each courtyard house is followed by Afghan traditional culture and living style. Houses in each courtyard is composed of two or three floors containing living rooms, kitchens, toilet, storage room, stable, and guestroom. Usually two or three families can live within a courtyard [10, 14].



Figure 3. Schematic plan of Kala in Kabul city modified from [10, 14]

Courtyard houses are usually attached together. The flat roofs of each courtyard house has a multi-function usage as in summer for evening outdoor living, drying farm and garden products and also laundry [5]. The rooms are placed around the courtyards and sometimes they are interconnected together. The winter rooms normally have small openings for light and the rooms used in summer have larger openings to provide a view and catch fresh breeze. The kitchen is usually attached to storage. Inward-looking, self-protection family design, and division between private and public spaces in Kala are representing Afghan and Islamic culture [31].

4.2. Courtyard Houses

One of the most famous types of housing in Afghanistan is considered as courtyard houses where more than 95% of people of the country are living in [19]. Traditional courtyards in Afghanistan and Kabul city present three purposes; first, open interior spaces with full privacy and security for all family member especially women and children; second, according to surrounding walls and rooms orientation, they have a good condition in summer to provide shading and avoiding the wind to enter the rooms in winter; third, multiple families can live in the same courtyard based on Afghan culture demands [19].

According to [32], two types of courtyard houses are distinguished by Guy Petherbridge: "The interior courtyard house, where the house surrounds a courtyard, while the exterior courtyard house where the courtyard bounds the house providing protected area, contiguous with the dwelling units but not enclosed by them". Kabul city as a merge point of diverse cultures and ethnic groups in country includes both types of courtyards; the first type is known as old type which can be found over the old parts of the (Serai Lahori, Deh Afghana, et.) [17]. Some scientists believe that old type courtyard houses are the upgraded version of Kala courtyards in single form. The second type that follows the exterior courtyard house form is known as modern or new type of houses which is distributed in all around the city and is currently considered as a the most famous types of courtyard houses in Kabul city. This type of housing has been identified by the foreign culture influences in the country. [33] Claims that one of the most important sources to solve the problem of new or modern houses in Kabul city built based on the foreign culture influences can be combining of Afghan traditional courtyard (Kala and courtyard) with new types. The common forms and views of courtyards plan in Kabul city extracted from aerial image of Kabul city using Google earth and survived by the authors shown in (Figure 4).

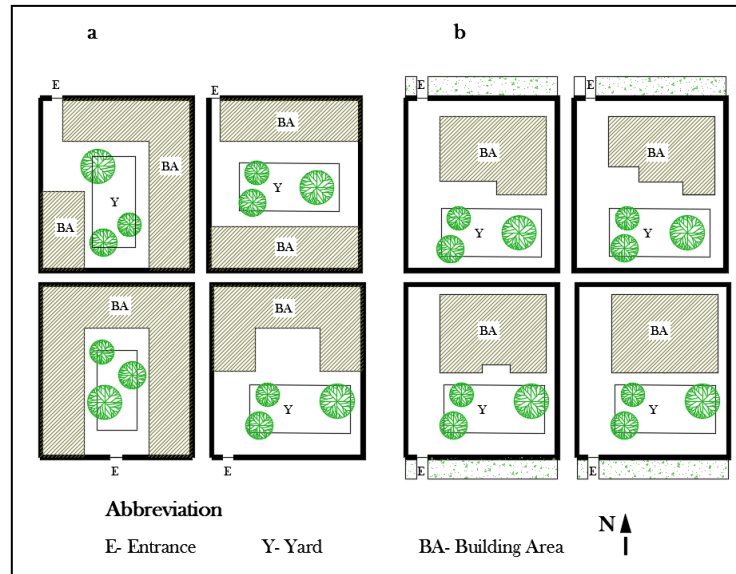


Figure 4. Two types of courtyard houses in Kabul city; a) old type or interior courtyard; b) new type or exterior courtyard modified from [19]

4.2.1. Old Type Courtyard Houses

Based on cultural effects and development of urban societies, these type of courtyards in Kabul city are the upgraded version of kala. Architecture design of old type courtyard houses are usually followed by the same cultural pattern and form of Kalas which confirm the Afghan culture and local climate. These houses are divided into two parts according to family privacy and Afghan families living culture; private and semi-private, which based on that, the privacy between family and guest are provided [33]. Based on my review concerning the most of courtyard houses in Kabul city, the typical rooms adjacencies in the courtyard are shown in (Figure 5).

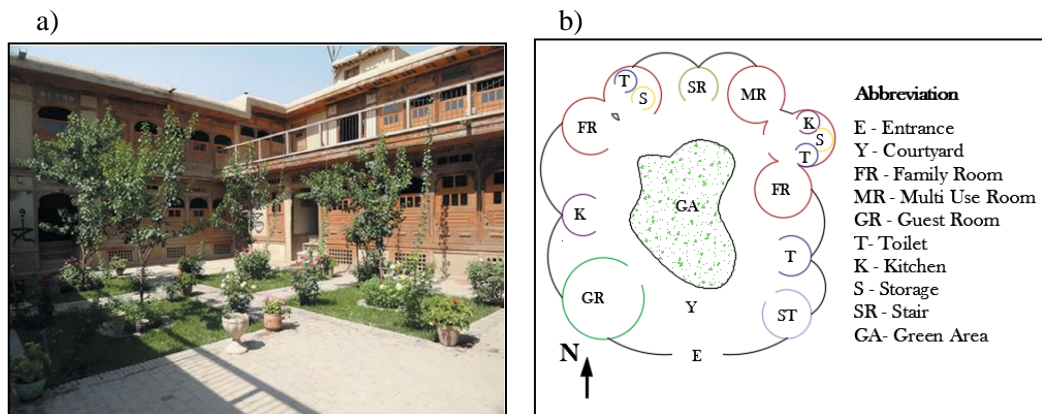


Figure 5. a) Photograph showing old type of courtyard houses in Kabul city [9, 34, 35], b) Schematic plan of rooms adjustment around the old type courtyard houses modified from [33].

Traditional urban courtyard in Kabul city is a four side complex with rooms which are built around courtyard in two or three floors and have been regulated according to diurnal rotation, climate and culture [36]. Rooms are backwards for people domain to provide security and privacy for occupants [34]. Each room has a window through the courtyard and has independent accessibility to courtyard; also in courtyards there is a playground for children, separately kitchen in courtyard corner, outdoor space in roofs and (sagoonja) for family setting in courtyard with half meter height, green area for landscape and sometimes a pool is considered for providing desirable climate.

4.2.2. New Type Courtyard House

This type of courtyard houses also known as modern houses have been built by foreign educated Afghans who had experiences from foreign cultures. For the first time in 1970s, they changed their live style and moved to the newly planned district Wazir Akbar Khan [8]. In that time, rural people were living in Kalas and old city of Kabul in old type of courtyard houses, while urban people were living in one or two storied new type courtyard houses, At that moment, the new housing style was not appealing to the majority of Kabul people live style, modern people who wanted to break out of their traditional family liked to live in the new housing style[30]. By passing the time, these buildings gradually changed to a famous type of courtyard house in Kabul city where majority of people want to live in.

A single yard is placed in this type of houses for guest and family members, all rooms do not have direct accessibility to the courtyard as they are designed around a hall which has access to yard. However, only guest room has a direct access to courtyard for providing family privacy in the hall. With consideration of many courtyard houses in Kabul city, the typical room's adjacencies in this type is illustrated in (Figure 6).

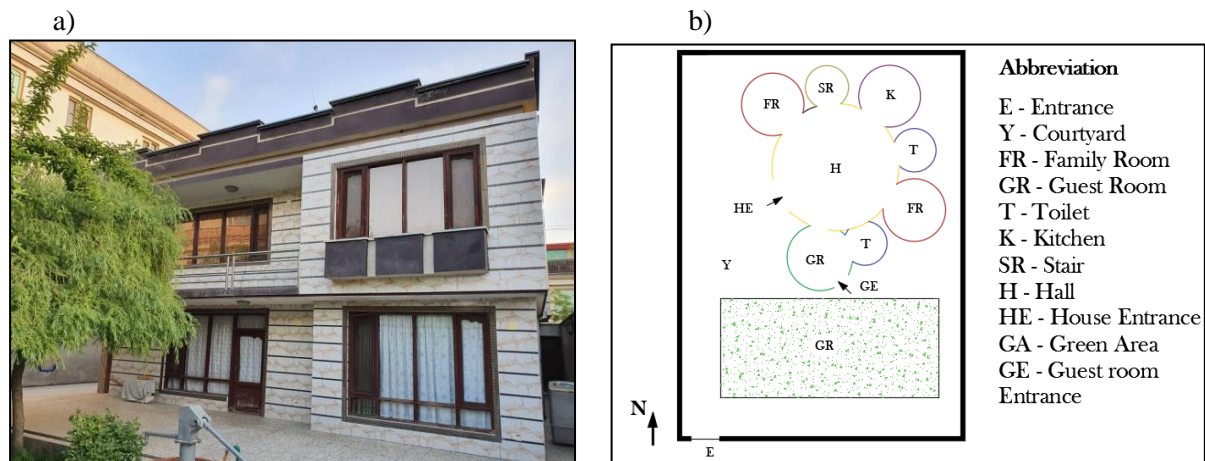


Figure 6. a) Photograph showing new type of courtyard house in Kabul city, b) Schematic plan illustrating the adjustment of rooms in new type courtyard houses around the hall.

Each room has an independent connection with outside by windows but due to limited orientation of rooms, some of them do not have view through the courtyard cause to decrease the quality of rooms as shown in (Figure 6). Therefore, based on, importance of the rooms and environmental conditions, the main rooms such as living room, guest room, etc. are placed to the north side or courtyard side, while the sub-spaces e.g. toilets, stairs, kitchens, etc. are oriented to other sides.

5. DISCUSSION

Architecture and culture are two related concepts that represent the identification of civilization and society [3]. The cultural variation in Afghanistan add richness to the overall culture of the country which many of these cultures have been introduced from other regional countries at different times during the long period of history [20]. In current age based on materialistic culture the form of vernacular architecture are ignored by builders and architects [3]. In Kabul city based on imperfectly modernization and impact of foreign cultures on vernacular architecture the convenience of the building has been lost [27].

Transformation of residential housing architecture style in Kabul city was between (1953-1963) when Kabul attracted the interest of the Western and the Eastern countries [8]. Hence many large-scale projects were carried out in Kabul city as urban development projects; "quarter, neighborhood", like Kart-e Seh, Kart-e Char, Kart-e Naw, Kart e Mamoorin, Karte Parwan, Wazir Akbar Khan etc. These types of housing were the examples of dwelling in Kabul city that have been built according to foreign culture impacts.

The mixed of different Afghan identities seeking to catch up with modernity while at the same time preserving their traditional way of life are characterized by the architectural diversity in Kabul city between new and old styles. After passing the time, new and old type of courtyards living style were merged and Afghanistan's living style and culture can be reflected also in a new type of buildings. Due to cultural effects, this new type of housing design has become a famous type of housing in Kabul city which showed modernization.

The civil war happened in 1992 and continued several decades resulted in damages of lots of buildings and destroyed architecture identity in Afghanistan. After 2001 and establishment of new government, new hope for rebuilding Afghanistan and future perspectives started. Lot of immigrants returned to country and Kabul population increased rapidly. The returning of migrants from neighboring and western countries to Kabul city caused to identify a new culture of living and architecture style to Kabul city.

Based on the findings of this study on residential housing architecture style in Kabul city, after 2002 the rehabilitation and architecture of houses in Kabul city have been the attention of everyone from different aspects. Architectural style of residential houses has changed, and almost everyone has designed houses by their own ideas which usually influenced from regional cultures such as Iran and Pakistan. Traditional Architecture almost has lost its identity and less people construct their buildings followed by traditional architecture style and only it is used in self-made housing and in informal settlements. At present time, in Kabul city, building forms represent a complex condition and show diversity of cultural impacts particularly from Pakistan as depicted in (Figure 7). This issue has caused many living problems to afghanistan families from culture, climate, economy, and comfortability perspectives.



Figure 7. Photographs showing contemporary courtyards of Kabul city followed by Pakistan Architecture style

These types of building design based on Pakistan culture and climate which are facing with lack of enough courtyard space, represent massif construction, and following hot climate architecture style. Based on cultural effects, Kabul as a multi-cultural city identifies a complex architecture styles specially in terms of residential housing design which can be summarize into four types; the first type is Kala representing pure Afghan living style and culture, the second type is old type or courtyard houses which can be the upgraded version of Kala, they are typically houses designed in one or two stories building with a small courtyard and are surrounded by a high mud wall; the third type is new or modern style of houses created based on the western culture style after 1970. By passing of time, it was merged with Kabul city traditional architecture that almost follow the Kabul city cultural and environmental issues, and the fourth type is contemporary houses which has been emerged after civil wars in 2002 characterized by the impacts of regional countries, fitted with colored glasses facades and decorative ornaments with massive construction. Also at present day, in Kabul city, residential houses design represent the social status and richness of owner, if owner of building was rich, he would construct his house with relatively stable materials e.g. cement or baked bricks in three to four storied house with a decorative facade, balcony and colored windows in a massive structure. Otherwise the people build their houses using traditional style and cheap raw materials such as mud and wood.

6. CONCLUSION

Architecture of Kabul city is representing the cultural diversity and civilizations affected during the history. Residential housing in Kabul city as a famous type of dwelling, has several forms which have been established based on cultural impacts particularly from western and neighboring countries. The

ancient traditional type of housing in Kabul city was Kala which was belonging to rural people. During the several decades of war, based on non-stable condition in country, most of them have been destroyed. Old type or courtyard houses representing the upgraded version of Kala are currently located in old part of Kabul city, this type is the indicator of traditional courtyard houses which most of them also have been damaged due to several last decades of war in the country. After war in 2002, Afghanistan government and other institutions decided to reconstruct and conserve these courtyards aiming to survive Afghanistan traditional architecture style.

In 1963, when Kabul city attracted the interest of the Western and the Eastern countries, transformation of living style and culture of people changed. The reason behind this cultural change was the closing relation of Afghanistan with western countries and sending of students to foreign countries for education which resulted the establishing of new type of courtyard houses in Kabul city. By passing of time and cultural interaction, old type or courtyard houses in Kabul city gradually gave its preference to new types. New type of courtyards can be the integration of old and western type of courtyard houses from perspective of planning zonation.

Due to unfavorable condition in the country during civil war, majority of people immigrated to foreign countries, and after the establishment of new state in Afghanistan, they returned to country. Their returning caused the country to experience a new cultural evolution and emerging of contemporary courtyard housing architecture style. This style is mostly influenced by neighboring countries (particularly Pakistan). Traditional architecture style of Kabul city is usually ignored by architect and builders; however, it is only used by poor people in irregular settlement areas. In Kabul city at the same neighborhoods, different type of courtyards can be found which reflect the cultural impact and social statuses of building owner.

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