

*Review Article*

## **A Review Paper on the Role of Commercial Streets' Characteristics in Influencing Sense of Place**

**Sami Al-Obeidy Musaab<sup>1\*</sup>, Shamsuddin Shuhana<sup>2</sup> and Taha Al-Qemaqchi Nahith<sup>3</sup>**

<sup>1</sup>*Department of Architectural Engineering, Cihan University Erbil, 44001 Erbil, Iraq*

<sup>2</sup>*Department of Civil Engineering (Built Environment), University Technology Malaysia, Jalan Semarak, 54100 Kuala Lumpur, Malaysia*

<sup>3</sup>*Department of Architectural Engineering, Cihan University Sulaimaniya, Wuluba Neighborhood, 46001 Slemani, Iraq*

### **ABSTRACT**

Streets are an important part of open public spaces that reflect the character and the sense of place of cities. Streets have many functions that give them their sense of place in the cities, as well as reflect the character of cities by their physical characteristics. Due to the unfit development of street characteristics, changing some of them, and remove others, the sense of place is interrupted, thus, affecting the people's feelings and perception of the streets. This paper attempts to review the roles of the physical characteristics of commercial streets in giving the sense of place in city centers. The aim of the study is to determine theoretical framework of the roles of the physical characteristics of commercial streets in giving the sense of place in city centers. The paper reveals that location, physical appearance, landscape features, and quality of views represent as the physical characteristics in streets, which play different roles in accessibility, recognition, legibility, safety, comfort, and visibility.

*Keywords:* City centers, commercial streets, physical characteristics, sense of place

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*E-mail addresses:*

[arch.musaabsami@gmail.com](mailto:arch.musaabsami@gmail.com) (Sami Al-Obeidy Musaab)

[shuhana.kl@utm.my](mailto:shuhana.kl@utm.my) (Shamsuddin Shuhana)

[nahithtaha@yahoo.com](mailto:nahithtaha@yahoo.com) (Taha Al-Qemaqchi Nahith)

\* Corresponding author

### **INTRODUCTION**

Streets are an important part of open public spaces that reflect the character and the sense of place of cities (Najafi & Shariff, 2011). The topic of this research refers to "Role", which means a function or the degree to which someone or something is involved in a situation or an activity and the effect that they have on it (Stevenson,

2010). Streets have many functions that give them their sense of place, thus this sense is reflected generally in the city. The physical characteristics of streets, such as building and landscape features, contribute not only to make the street legible and accessible (Abbaszadeh, 2011), but also to provide a safe, comfortable, visible, and orientated environment in the street (Ja'afar, Sulaiman, & Shamsuddin, 2012; Shamsuddin, 1997). Therefore, it is vital to understand that street character and its role in urban studies is important to reinforce the sense of place of city centers. Based on the statement, the main feature of this research is to establish the role of the physical characteristics of the commercial street in contributing to the sense of place.

### **Problem Statement**

Physically many public open spaces of city centers' streets have changed (Ja'afar et al., 2012). However, due to the unfit development of street characteristics, the sense of place is interrupted, thus, affecting the people's feelings and perception of the streets (Shamsuddin & Ujang, 2008). This unfit development of street characteristics is represented by using different materials and colors in the finishing of building elevations, and rebuilding some parts of street by adding new physical elements without having pre-study about street character in relating to the sense of place. Moreover, new buildings and their front facades in the streets do not emphasize the character of city. Random signs and billboards hanged and fixed on the building facades reduce the

significance of these facades in enhancing the character of city, making it difficult to notice (Jawad, 2011). In most cases, changes in the physical setting may consequently erase what is precious in street.

## **LITERATURE REVIEW**

### **The Concept of Place and Sense of Place**

Many authors and environmental psychologists argued that the experience of place is one of the most important factors in the sense of place, as mentioned by Steel (1981), Shamai (1991), Lynch (1981), Barker (1979), Relph (1972), and others. They defined and explained many important definitions and concepts that were related with place. Also, they are regarded as pioneers in using experiential perspectives to reflect on place and the "sense of place."

As mentioned by Wardner (2012), Farkisch, Che-Ani, Ahmadi, Surat, and Tahir (2011), and Ja'afar et al. (2012), it has been stated by Relph (1972) that the interplay of three components, namely "physical setting," "activity," and "meaning" constituted what was known as place. This notion has been further elaborated by Shamai (1991) to define sense of place as the aggregation of three elements, which are landscape, location, and personal involvement. Sense of place has been referred to by Soini, Vaarala, and Pouta (2012) as a manifestation of harmony between people and nature, where care is given to the place, adding aesthetic quality of the landscape, as echoed by myriads of researchers (Birkeland, 2008; Soini et al., 2012). Furthermore, sense of place is

deemed to be a dynamic construct, in that it has the tendency to vary as a function of culture and time (Relph, 2007).

On the other hand, sense of place has been defined by others as a multidimensional concept of affective, cognitive, and conative aspects (Casakin & Omar, 2008; Farkisch et al., 2011; Jorgensen & Stedman, 2006). As mentioned by Jorgensen and Stedman (2006), because sense of place is such a complex concept, until now there is yet no consensus in the literature in terms of what it actually consists of and how it ought to be assessed. In further elaboration of this concept, the rational, emotional, symbolic, and spiritual aspects of the relationship between people and their physical environment is addressed by sense of place. It was considered by Semken, Neakrase, and Dial (2009) that the psychomotor aspect relates to sense of place if particular kinesthetic activities are associated with or localized in a particular place, whereas they later mentioned that sense of place encompasses the cognitive and affective aspects.

Three components that contribute in making a sense of place were referred to by researchers (Beidler, 2007; Najafi & Shariff, 2011). They mentioned that activities, meanings, and physical attributes are components related to places that contribute to creating a sense of place. It is worth considering that each place was built for serving a specific action, meaning activity could refer to actions served by the place (Najafi & Shariff, 2011). As for physical elements, it indicates to the characteristics and attributes of a setting that define the

kind of place it is. In addition, it can also be said, as mentioned by Najafi and Shariff (2011) that sense of place is defined as an overall impression surrounding the general ways in which people feel toward places, sense them, and assign concepts and values to them.

In parallel, place relationships were related with sense of place, since place is fully made of concrete things that comprise of shape, texture, substance, materials, and color, which together determine the essence of a place (Shinbira, 2012). It is the area where one is acquainted of the unique character of given localities and perception is enhanced. The faculty of recognizing various places and distinguishing different identities of a place is attributed to the concept of sense of place. People are effected by places and reciprocally place is affected by people due to the attribution of meanings to physical forms. Subsequently an interaction occurs with a place rather than a response to a place, hence enriching the place with meanings. For this reason, historical and heritage places carry more sense of place compared to contemporary modern places. Based on the aforementioned, this study looks into the role of characteristics of streets in terms of their functional and physical aspects, while excluding the meanings of street.

The strong relationship and bonds between place and people is well established in the academics (Wardner, 2012). Researchers of environmental psychology, such as Shamai and Ilatov (2005), have categorized these relationships into three dimensions for individual study. One of these

dimensions involves the affective dimension of place (feelings and emotions) and includes variables such as place attachment. Another is the cognitive domain (perceptions and beliefs of place) and includes variables such as place identity. Finally, the third is the conative domain (commitment to place and behavior toward it) and is measured in terms of place dependence. Having seen these three dimensions, Jorgensen and Stedman (2006) stated that sense of place could safely be regarded as a multidimensional attitude toward a spatial setting. This framework manifests the three-aspect view of place. It is assumed that the physical environment, activities (the cognitive dimension), and meaning (the affective and cognitive dimensions) are independent variables of a sense of place.

There are also alternative three viewpoints for sense of place as stated by Williams (2007). One of these viewpoints regards sense of place as cognitions of place, as in awareness and knowledge of place. The other regards sense of place as a faculty or capacity, as in keen sense of place similar to a keen sense of smell or a keen sense of humor. Finally, sense of place is regarded as the character of a place, as in the atmosphere of place. This study adapts the latter of these viewpoints, as in sense of place being related to place character.

Another way of defining sense of place is as the qualities that differentiate between one place and another (Shamsuddin & Sulaiman, 2002, 2008). According to English Oxford Living Dictionaries (2012), quality means a distinctive attribute or

characteristic possessed by someone or something. As this study attempts to focus on street characteristics and their roles on making sense of place, one direction should be selected from the aforementioned wide dimensions of sense of place to build the basis of the study. Thus, the researcher found that the definition of sense of place by Shamsuddin and Ujang (2008) was the most suitable definition for achieving directly the aim of the study and avoided unrelated information.

### **The Role of the Street Characteristics Relating to the Sense of Place**

First of all, it is important to clarify the meanings of street character. The concept of character relates to the qualities belonging to a place that together give it its own identity and help distinguish one place from another (Changes Log, 2013). This is often referred to as its sense of place; so when one gets “there,” one experiences a sense of arrival or being “somewhere.” Character is influenced by factors such as architectural feature, materials and traditions, relationship of buildings to landscape, history and economy. These factors combine to create places that are distinctive and specific to their location, not the qualities of somewhere else (Changes Log, 2013).

It is worth notion that understanding the concept of the street character associates with the understanding of street characteristics and their roles. Thus, the following sections will explain physical characteristics and their roles one by one.

### **The Physical Characteristics of Streets and their Roles associated with the Sense of Place**

Physical characteristics are the main feature of a city (Abbaszadeh, 2011). They tend to play a role as qualities associated with street identity that generate the sense of place (Shinbira & Sulaiman, 2010). According to Cizler (2012), Calcatinge (2012), DePriest (2010), Khirfan (2010), and Fisher (2009) quoted from Lynch (1981), “identity” is the narrow meaning of that common term: “a sense of place.” “Identity is the extent to which a person can recognise or recall a place as being distinct from other places – as having a vivid, or unique, or at least a particular, character of its own” (Lynch, 1981). If this definition is taken, then it can be presumed that people can recall or recognize places by their distinctive features, and such places will have their unique sense of place (Shinbira & Sulaiman, 2010). It is the unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. In some cases, these values allocated to the place are similar for a wide spectrum of users or viewers, giving the place a universally recognized and therefore strong sense of place (Martin, 2012).

Since the place should be noticeable or recognizable through its physical characteristics, it is evident that the role of these characteristics is to make the street recognizable or noticeable or legible. Hence, the following sections explain the physical characteristics of the street and their roles that identifies the street. The roles

of physical characteristics are related with identity of place or imageability or legibility that in turns give the sense of place.

### **Location Feature and its Roles in Making the Street Accessible and Recognizable.**

Location in context is one of the physical characteristics of the street (Shamsuddin, 1997). This researcher finds that the location of the street becomes a recognizable feature, especially when its surrounding environment is easily identified. Streets and buildings are recognized by their location in relation to the buildings located adjacent to them or within their vicinity.

On the other hand, Jalaladdini and Oktay (2012) mentioned that the street was a space within the city area, which was accessible to all people and was the ground for their activity. Accessibility has two types: (a) visual accessibility that allows people to see it and be informed about what is happening there, and (b) physical accessibility that allows people to enter that space and use its functions. An urban public space should invite people to come inside and use its facilities (Jalaladdini & Oktay, 2012). Moreton Bay Regional Council (2013) defined accessibility as the ease at which people could move around and between places and facilities. Accessibility means the ability to easily get to and move through a place, thus provides ease of movement (Ujang, 2008). According to Abbaszadeh (2011) quoted from Litman (2017), accessibility refers to the ease of reaching destinations. People who are in highly accessible places can reach many other destinations quickly.

Each street forms both a destination and a connection to other places (South Gloucestershire Council, 2013). According to Ujang (2008), the location of the place plays an important role in making the street accessible, particularly, when these streets are strategically located and are highly accessible from various locations, are well-connected streets, are well-connected pedestrian paths, and are accessible by various transport modes. These features of street location emphasize the importance of connectivity and permeability in supporting movement in the street, thus making it accessible for users.

**Appearance Feature and its Role in Making the Street Recognizable.** Physical form and appearance are the characteristics of the physical environment, especially buildings, which are distinctive and easily recalled (Shinbira & Sulaiman, 2010). Shinbira and Sulaiman (2010) suggested that differences also must be noticed by the perceiver. Physical differences, according to him, are identified as follows: shape, size, height, color, materials, texture, details, location, and movement. According to Abbaszadeh (2011), appearance is an important feature of physical elements, especially in buildings appearances that make them noticeable and easily recalled (Appleyard, 1969; Shamsuddin, 1997). On the other hand, Omer and Jiang (2008) mentioned that the appearance of an object in the environmental image depends on its “distinction from other things...as a separable entity,” which makes it easier to

identify the object according to its spatial or pattern relation to other objects and its “meaning for the observer, whether practical or emotional” (Lynch, 1960). The physical appearance is a feature that is associated with the overall perception of the street environment whether it is building or non-building elements (Abbaszadeh, 2011; Better Market Street [BMS], 2011; Shamsuddin, 1997).

Buildings not only play an important role as landmarks but also as public art (such as sculptures, statues, and murals). These urban features create “monuments” that act as a visceral compass and aid in way-finding (Grabler, Agrawala, Sumner, & Pauly, 2008). Buildings can act as landmarks and nodes, and can be used in determining the path of place or street (BMS, 2011; Long, Baran, & Moore, 2007; Lynch, 1981; Mohammed, 2010). These elements are among others mentioned by Lynch in his book, *Good City Form* (1981) and asserted by many authors (Mohammed, 2010; Kumar, 2007; Long et al., 2007; Shannon, 2012).

Non-building elements contribute to making the street legible and recognizable (Shamsuddin, 1997; Ujang, 2008). According to Mohammed (2010), street furniture and lighting equipment have a major impact on the appearance of a street. Street furniture should be integrated into the overall appearance of a street (Telford, 2007). Abbaszadeh (2011) quoted from Lynch (1960) stated that street furniture was a physical characteristics that users utilize to identify the street easily.

The appearance of the physical elements, especially buildings, played an important role in recognition by the residents (Shamsuddin, 1997). It was determined that there were nine aspects relating to the appearance of buildings that are used to recognize a building. These features were the height and size, architectural style, facade and decorations, condition and upkeep (age), building form, color, roof form, bill boards, and building materials. In line with this issue, Abbaszadeh (2011) argued that buildings' appearances form an attractive public environment, creating places that could be seen and enjoyed by the public. Several authors (Appleyard, 1982; Shirvani, 1985) suggested that the building's features included size, shape, signs, color, material, texture, architectural style, ornamentation, height, roof form, skyline, and storefront. For instance, Harrison and Howard (1972) and Shamsuddin (1997) argued that buildings' appearance included height, size, architectural style, facade, roof form, material, and color.

According to the aforementioned literature, physical appearance is a feature that is associated with the overall perception of the street environment and it is important in the recognition of streets. As mentioned by many researchers, building appearances are consist of style, form, facade, material, color, height, size, age, condition, roof form, and signage. It is in the interest of this research to identify the role of appearance as one of the physical characteristics of the street in making the sense of place in Mosul City. Since there are many attributes relating

to building appearance, it is also interesting to discover which aspects of building appearance are important to give a sense of place on the commercial streets and which are the least distinctive to the users.

### **Landscape Features and their Roles in Making the Street Safe and Comfortable.**

According to Ja'afar et al. (2012), landscape features are one of the physical elements of the place. It is generally natural physical characteristics (Abbaszadeh, 2011). Soft landscape (trees) and hard landscape (street furniture) are considered as landscape features based on the study of London Borough of Croydon (2009). Soft landscape features in this study are the landscape elements that represent nature such as plant, water, and topography (London Borough of Croydon, 2009). However, hard landscape was categorized as the manmade features designed to complement the soft landscape (Mehta, 2007).

The success of any given place is highly influenced by the safety, comfort, and convenience, which people experience while pass through and/or go to places, spaces, and buildings. According to Ja'afar et al., (2012), the presence of signs, lighting at night, sitting areas, trees, beautiful views, parking areas, facilities, and pavements with suitable width to walk on, contribute to making a comfortable environment. This study concludes that a significant role is played by natural elements in contributing toward the positive feeling of the place, thus making it comfortable for its users. A comfortable environment is also associated with the

quality of the view, which is created by river, vegetation, and topography, as suggest by Handy, Boarnet, Ewing, and Killingsworth, (2002) and Cullen (1985). The reflections of buildings along the river and the colorful lighting at night create a beautiful visual effect. Moreover, it has been proven from previous studies that trees create a good human relationship with nature and this creates a peaceful environment (Appleyard, 1982; Ja'afar & Usman, 2009). Ja'afar et al., (2012) mentioned that mature trees are considered as a street symbol and contribute to the comfort of the environment.

According to South Dublin County Council (2011), six features, namely, benches, dustbins, bicycle racks, bus stops, the quality of view, and pavements, contribute in making the environment in streets uncomfortable. It has been established that the attractiveness of the street decreases due to the presence of too much traffic management, which means that uncomfortable environment on streets is partially attributed to an over-presence of traffic lights (South Dublin County Council, 2011). Furthermore, the untidy appearance of transformer vaults and manholes adds to the decline in the quality of view, leading to an uncomfortable environment.

On the other hand, Shaftoe's (2008) suggested that to create a safe environment, it was important to provide appropriate street lighting. This is consistent with the findings of Ja'afar et al., (2012), who found that positive and negative feelings were influenced by a feeling of safety, particularly through street lighting, the lack

of which, especially at back lanes, created an insecure feeling, while the opposite led to a safe environment. Lighting assists in the protection of property, discourages vandalism and crime, and as a result residents and street users build a feeling of security (Telford, 2007). Furthermore, Ja'afar (2006) had observed that the continuous presence of pedestrians along the way, the presence of security officers and a safe traffic environment, walkways that extended from one destination to another, and lighting at night all had a vital role in making the street a safe place.

#### **Quality of Views Feature and its Roles in Making the Street Visible and Orientated.**

Quality of view is one of the physical characteristics of the street (Abbaszadeh, 2011; Shamsuddin, 1997). The quality of views contributes in making the street recognizable, thus enhancing the distinctiveness of physical characteristics (Shinbira & Sulaiman, 2010). According to Shamsuddin's study (1997), buildings, streets, and landscape features were sometimes recalled because of the quality of views that were enjoyed by the residents. Accordingly design principles, views, and vistas could be used to create and reinforce a sense of place in new development. Looking from one area to another highlights the feeling of being in a particular place. Views also help people to find their way around and to understand the relationship between building and connecting streets. Views focus on features of interest, distinctive buildings, or local landmarks that can

help to give places a sense of identity. Positioning buildings on the axes of views gives buildings more significance.

The location, types, and colors of greenery contribute to the quality of view for pedestrians on the street. Likewise, a breathtaking visual effect is formed by colorful lighting at night and the reflections of buildings along rivers. Moreover, hard landscape features also play a role in the quality of view. Colorful lightings in the form of decorative lightings have been found to contribute to the quality of view at night, as night settings form an enjoyable and attractive environment, contributing toward a sense of place in the form of a place symbol.

Shamsuddin (1997) mentioned that the type of view that made the street recognizable or recalled might be as a panoramic view, and a screened view. The quality of these views experienced by the residents affect their reaction to the town center's environment and their ability to remember them. Worskett (1969) also argued that the combination of different types of views and the discipline of their arrangement could be a strong factor in creating a local character. One of the characteristics of distinctive views is the discipline of their arrangements. An example was put forward by Worskett (1969). He suggested that the combination of contrasting viewpoints, such as a broad panoramic view and a small tightly enclosed view, played a big part in giving the street a particular character. If this arrangement is changed, then the whole character will be changed.

On the other hand, views to landmarks and the surrounding city serve to orient travelers on the market street, denoting a special place. The market street is a strong reference point and orienting feature in the city, offering iconic views to key features, including the building, bridge, tower, and so forth (BMS, 2011). Re-Streets (2011) emphasized on the street way-finding and its essential role in addressing the need of people to orient themselves in the landscape, to navigate between destinations and to understand their next move. He mentioned that different way-finding elements were necessary to create a street environment where information seamlessly filled navigational gaps, heightened the sense of place and helped people interpret their surroundings. Way-finding allows both the pedestrian and people using all other types of transportation to successfully navigate in the environment. Therefore, he endeavored to design way-finding features, including styles, materials, colors, and such, to strengthen the sense of place as well as minimize undesirable clutter in the places.

The clarity of orientation is influenced by soft landscape features, particularly greenery and rivers, because their location creates clarity of orientation (Ja'afar et al., 2012). The clarity of orientation is also affected by the diversity and variety of greenery features such as types, singularity, location, color, and size. Five features support the quality of orientation: signage, pavements, outdoor cafes, stages, and public toilets. The pavement design at the building frontage and the junction support the clarity

of orientation. According to South Dublin County Council (2011), the selections of surface material help to distinguish the character of the place, which makes the street readable. Signage contributes to clarity of orientation through location and visibility of design appropriateness.

**METHODS**

The research’s aim is to determine theoretical framework of the roles of the physical characteristics of commercial streets in giving the sense of place in city centers. To form this theoretical framework, this reviewing study tries to explain variables related to the physical characteristics, their roles, then how to measure these roles in relating to the sense of place. This is done through showing related previous literatures and methodologies.

Previous research shown in Table 1 that focused on perception, evaluation, imageability of place, sense of place, place attachment, and place identity found that the

nature of street location, street buildings, landscape features, and quality of views in streets are considered as physical elements, which are the first contributor in creating unique sense of place in cities.

Based on the aforementioned literature reviews and methodologies, identifying street characteristics should be measured by asking users about their perceptions and feeling in the streets since people are a major element in performing the place. In terms of street location the respondent will be asked many questions like; can you access to this street easily? If yes, why? If no, why? And which of the places or features do you help to find the street and worthy of being pointed out to a person who wants to access to this street easily? While in recognition buildings and non-building elements, the researcher needs to know which building and non-building elements in this street do people find distinctive? How important of them when do people want to recognize them? And what aspects of them do people find most distinctive?

Table 1  
*How previous researchers studied the physical characteristics and their roles in streets*

Researcher(s)	Year	Variables and their roles in streets
Abbaszadeh	(2011)	Building, building appearances, location, landscape features, trees, and street furniture are physical characteristics to recognize the street environment.
Baghi	(2011)	Environmental comfort on the street, seating, physical artifact, sidewalk width, attractiveness and interesting appearance, sense of safety are physical elements that create vibrant street.
Shamsuddin	(1997)	Physical appearance, quality of views, strategic locations of the street create place identity than in turn contribute in making sense of place.
Ja’afar and Usman	(2009)	Buildings, and non-building elements are the types of street elements enhanced in traditional streets in attracting visitors. These elements contribute in making identity and character of place.
Ujang and Shamsuddin	(2008)	The physical element, activity and meaning are intertwined in the people experience of place. And their roles in making accessibility, legibility, vitality, diversity, transaction, distinctiveness, and comfort.

In addition, the role of landscape features can be measured by asking people about their feeling like: do you feel safe while on this street? If yes, why? If not, why? Do you feel comfortable walking along this street? If yes, why? If no, why?

Thus, this research asks people about how they feel, recognize, understand, and use the street. Hence, it can be said that this research determines key subjects including perception of place, street characteristics, sense of place, and concepts of place to find

very close previous research and methods that are used as evidence in adoption of the methodological approach of the study.

### CONCLUSION

This study reveals that location, physical appearance, landscape features, and quality of views are the physical characteristics in streets (Figure 1). Each of them plays its own role in creating sense of place in the street.

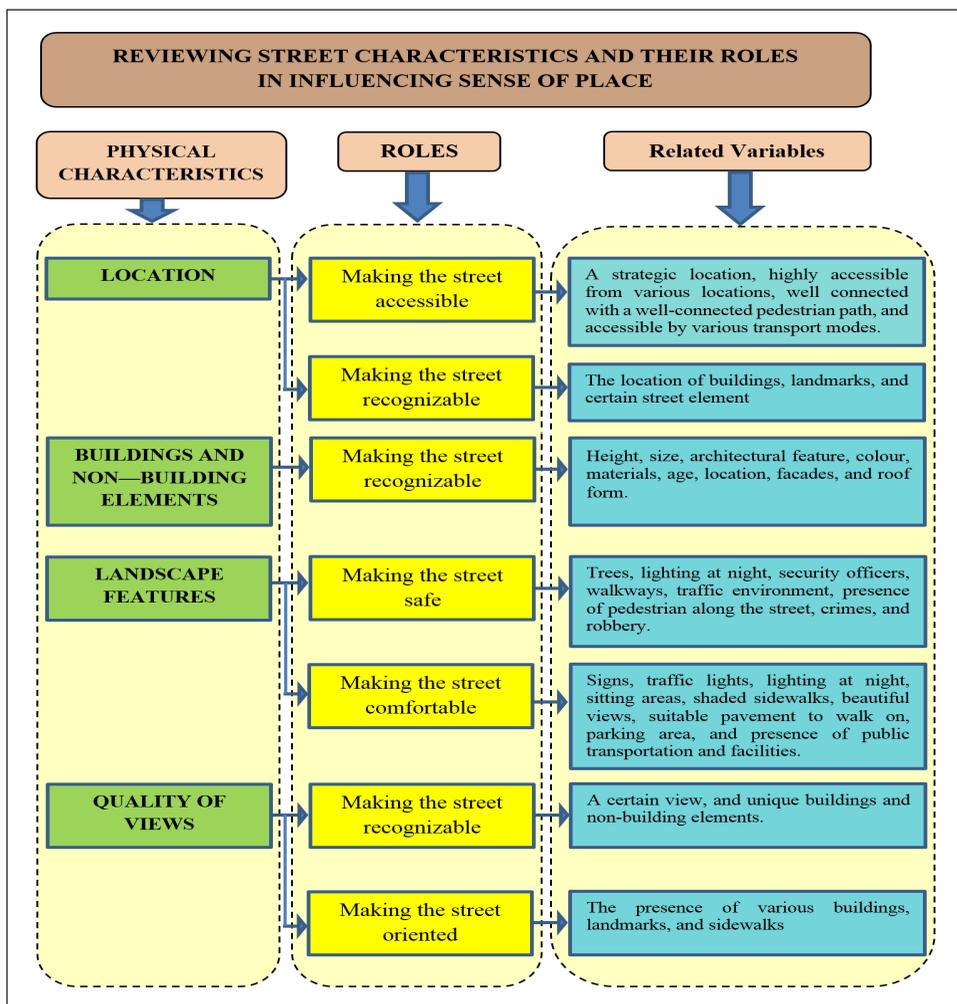


Figure 1. Theoretical framework

Location plays two important roles: firstly making the street accessible through being characterized with a strategic location, highly accessible from various locations, well connected with a well-connected pedestrian path, accessible by various transport modes; and secondly making the street recognizable when people recognize the location of its buildings, landmarks, and certain street element.

Physical appearance has a role in making the street recognizable through height, size, architectural feature, color, materials, age, location, facades, and roof form. Landscape features have two roles: making the street safe and comfortable. Trees, lighting at night, security officers, walkways, traffic environment, presence of pedestrian along the street, crimes, and robbery contribute in making the street either safe or not. On the other hand, signs, traffic lights, lighting at night, sitting areas, shaded sidewalks, beautiful views, suitable pavement to walk on, parking area, and presence of public transportation and facilities contribute in making the street comfortable.

Quality of view plays two roles: making the street visible and oriented. A certain view or certain activities, and unique buildings can make the street visible. The presence of various buildings, landmarks, and sidewalks that guide people can make a street oriented. In this research, quality of view is considered as one of the physical characteristics of the street that have a role in creating a distinctive and unique sense of place.

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