



An overview of urban planning experiences in Kuala Lumpur with emphasis on wayfinding

Shima Abedi ¹, Elham Honarmand²

1.1. PhD Student, Department of urban engineering, Mashhad Branch, Islamic Azad University, Mashhad, Iran

2. M. Sc Student of urban Design. Department of Urbanism, Mashhad Branch, Islamic Azad University, Mashhad, Iran

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ABSTRACT

Malaysia has seen many changes in the urban planning system and is one of the countries with a zoning system. Given the country's current success, the present study seeks to examine the current system in Malaysia. In this regard, we will first describe the general characteristics of this country and then we will investigate the background and urban planning system at different levels. The research method of this research is descriptive-analytical and the library-documentary method has been used to collect theoretical foundations. Therefore, this study was conducted by analyzing the content of sources and texts worked in this field, including articles and doctoral dissertations on wayfinding, and at the end, to review the research conducted in the doctoral program to analyze the wayfinding component by searching for sources. Various doctoral dissertations on the topic of wayfinding the blind in urban areas have been selected and also the article on wayfinding techniques for the blind in downtown Kuala Lumpur will be reviewed. In the following, the content of the selected dissertation has been analyzed according to the theoretical foundations and theoretical framework of the research. Among the research findings, we can mention the influence of environmental factors, the direction of the path and the attractiveness of the environment in wayfinding healthy people. Also, the use of the senses, sound signs, and verbal explanations are among the factors influencing the choice of the path of the blind. It is hoped that by identifying and more attention to the components extracted from the study of experiences in the context of wayfinding in the better grounding and fabric for the presence of citizens and tourists to take an effective step in a sustainable economy and society.

Keywords: Urban planning system, zoning, Malaysia, wayfinding.

1. Statement of the Problem

The city centers are the economic and social hubs of cities and are considered as manifestations of the city's identity with the people. At present, the formation of the general structure of cities and their physical expansion does not follow a responsible order and identity, and city centers are constantly changing due to new constructions and ongoing projects. This has greatly reduced the visibility of the city to the people, even those who have lived in the city for a long time.

However, by strengthening the norm of readability in urban environments, people can absorb the emotional manifestations of the city without disturbing their first and original image of the city, and link any new factor with old factors. In general, urban spaces should not only be readable and understandable to their local residents, but also the structure of these spaces should be such that a good image of the city easily for those who are not constantly dealing with these places or for the first time they enter the city also partitioned (Memaran, 2014).

*Corresponding author:
shimaabedi67@gmail.com

Urban environment is an interconnected set of places that are related to a network of spaces and different types of movement. In fact, the dynamism and endeavor of urban life depends on its movement structure (Kashani Joo, 2010: 111). From this view, the perception of the appearance of the city is realized mainly in urban spaces and passages (Kakavand et al., 2013: 112). Every city or any part of it, in order to be able to create a clear image in the minds of its inhabitants, to enable them to easily identify its components and link them in their minds in an interconnected way. In fact, this way; the city can increase the depth and intensity of human experiences of the living environment by increasing its readability and visibility in the minds of inhabitants (Pourjafar et al., 2012: 131). Urban spaces must be designed in such a way that the observer in the environment can ensure that the destination is reached alone and without the help of others.

This issue is more significant in relation to the downtown and service uses (due to the referral of different people with different degrees of familiarity). The importance of proper wayfinding becomes even more apparent when tourists and newcomers to the city or urban space can easily find their way to visit and get to know the environment with a clear visible. wayfinding is one of the most important aspects of daily life and this issue has been neglected and forgotten in cities today. In the past, the surrounding environment was clearly and quite clearly visible and recognizable, while finding the path in today's tissues is complex and difficult. Considering the position of Mashhad as the second metropolis in the country and its religious identity, which attracts a large number of people and tourists every year, the existence of a clear and obvious wayfinding system is doubly important. wayfinding means the ability of a person to achieve his/her spatial goals in new and complex environments, easily and quickly to perform this process in familiar environments. The readability of space and way finding, especially in public places such as shopping malls, airports, railway stations, universities and hospitals, etc., is so important that today when it says to the problem of getting lost in different places, it is associated to the feeling of despair and horror. Achieving and strengthening this capability since the 70s, So far, it has been the subject of many researches in different fields of urban engineering, architecture, environmental psychology, etc. (Khomeh et al.,

2014). What we deal during the day is the issue of how to find our way in complex environments, that is, planning routes to remote areas and finally returning to our start point. The ability to imagine and reason about changes in objects and their spatial arrangement is essential to successful mastery of our daily lives. To avoid getting lost, the information relates to surveyor, including tokens, stored in long-term memory and then stored in working memory. A token can be viewed as an object or structure to indicate a location that may be used as a reference point. In fact, anything that goes off the scène can be a turning point. wayfinding is a complex process and every element in this process is affected by intensive reactions outside of the actual wayfinding operation. Such a response is an emotional reaction. In fact, emotions affect several factors required in wayfinding (such as decision making, attention, and working memory (Z. Balaban et al., 2018). Getting lost or confusing is normal the first time for visitors.

Relocation depends on the routing strategy to use and will require them to take the time to navigate and find the right route. The whole experience will be much more enjoyable and memorable when they become familiar with their surroundings and can find their way to the exact location. Therefore, they are relying to external information known as world knowledge; wayfinding requires information processing in advance. The main elements of wayfinding tools are the positioning of signs and the use of brochures, maps and other wayfinding aids that encourage visitors to reach their destination as quickly as possible (BintiHashim, 2015). Over the past half century, wayfinding has become a term used to describe the general behaviors of humans navigating space. wayfinding is a set of complex and interconnected sub-tasks, each with corresponding dependent mechanisms and other operational sub-processes that have only been considered as complex systems in the last few years (Lee Tenney, 2013). Special factors play a role in the evolution of attendance. In cities that have a higher readability quality, there are often large numbers of people in urban spaces. Therefore, measures should be taken to provide a suitable platform for the presence of citizens as well as the blind, as well as to identify the tools and measures taken by healthy people and the blind in relation to presence in the urban space.

One of the categories of interest in citizen attendance is the issue of wayfinding. When the blind go to an urban point, since the sense of sight is not active in these people, it causes confusion in their wayfinding in the urban space. Therefore, providing a suitable platform for wayfinding the blind and providing security has been one of the important points in preparing this research; By identifying the factors, tools and actions of the blind and healthy people in wayfinding, to provide a safe environment for users of the environment. Therefore, the purpose of this study is to compare the tools and wayfinding measures of healthy and blind people in urban spaces in Malaysia.

2. LITERATURE REVIEW

Several studies and researches have been done in the field of pathfinding and wayfinding all over the world, but inside the country, no coherent and citation study has been done on this subject and the available sources are non-Persian books and articles., The book of Image of the City of Kevin A. Lynch, that translated by Mozayeni, Wayfinding defined as the concept of path recognition and direction. In 1985, Bentley et al , In book of responsive Environments, referred to the characteristics of responsive locations, such as permeability, diversity, readability, flexibility, visual proportions, sensory richness, and belonging colors, some of the issues raised in this book, including readability and proportions, have been compiled in the theoretical foundations section.

In 1997 , Gary L. Allen in his book identifies and addresses four important issues related to the production and perception of direction in the performance of travel wayfinding to an unfamiliar destination that general structure of the direction sections consists of 4 stages: start-up, route description, security and termination and analysis of part of the content of the route description phase and conventions to transfer wayfinding information and individual differences in production and perception the route direction is. Narges Dehghan, et al (2012), In their paper, investigated the Identifying and providing the strategies used for wayfinding and classification them based on a comparison of readable spatial dimensions on three applied wayfinding strategies.

Rui Li and Alexander Klippel (2014)in their paper entitled wayfinding behaviors in the complex of the effect of environmental readability and familiarity with the environment, which the results of this study, to examine the role of environmental readability and familiarity with space on the wayfinding performance of individuals, are environmental readability and familiarity with space are effective in all stages of wayfinding and for the development of survey knowledge, the third level of spatial knowledge has a more effective role than environmental readability. wayfinding means choosing a path from a set of road networks or finding a path with terms such as Wayfinding or Pathfinding (Carpman and Grant, 2002). wayfinding refers to the process by which a person needs to find a way from one known place to another. It is an essential activity of daily life that provides access to food, work, education, recreation and medical care. However, to succeed on the route, cognitive processing is required to identify, process, store and retrieve relevant information from the environment during the journey (castell, 2017). Facilitating in recognition of direction is one of the first characteristics that should be related to a good image of the environment and is the basis on which connections and emotional memories may be based (Khameh et al, 2014). As Gibson (1979) stated, humans are able to use Wayfinding, in other words, the person knows the place and becomes familiar with it. path finding is related to the feeling of the person in the environment. In the wayfinding process, a number of paths are taken to reach the desired point, walking is an activity that determines the different parts of the path where the rotation of the path takes place (Golledge, 1999). wayfinding signs play an important role in guiding users for moving a virtual environment and help people who walk. If the wayfinding signs are properly placed in the environment to guide you, you will save a lot of time and energy. A plan without remote signs is just as confusing a maze. In a real-world architecture site, common wayfinding aids include signs, landmarks, and a GPS-based mobile navigation system. In a virtual environment, additional virtual road assist devices such as compasses and mini-maps can also be used to facilitate travel wayfinding. (HUANG et al.:2017).

Table1: Examining the definitions of routing from the perspective of different theorists

wayfinding definition	philosopher
(Lynch) has defined Wayfinding in the sense of path recognition and navigation.	Lynch, 1960
Ability to find a route to a specific place	Golledge,2000
wayfinding means choosing a path from a set of path networks or finding a path.	Carpman and Grant,2002
wayfinding is used to describe the general behaviors of human being's wayfinding space, and is a set of complex and interconnected subset tasks, each with corresponding dependent mechanisms and other operational sub-processes.	Lee Tenney,2013
wayfinding requires information processing in advance.	BintiHashim,2015
wayfinding refers to the process by which a person needs to find a way from one known place to another.	castell,2017
wayfinding is a complex process, and every element in the process is subject to intense reactions outside of the actual wayfinding process.	Z. Balaban et,al,2018
wayfinding is representative of the planning and decision-making components of wayfinding.	Dalton et al,2019

3.Readability

Readability is the ease with which can to understand, or in other words, the ease with which the signs or features needed to guide movement-related decisions in a coherent pattern can be organized. Readability affects the learning of the environment (GOLLEDGE et al, 2000). Bentley stated that readability is a quality of environment that makes a place comprehensible and is important at both the physical form and pattern of activity (Bentley, 2003: 113).

According to Lynch's theory(1960), the subject of readability In the recent decade, as a basis has been proposed in the fields of urban design, urban planning, architecture, and environmental wayfinding in the more readable environment is easier (Lynch, 1960). Lynch emphasizes that navigation is easier to do in a more readable environment. The readability of an environment (e.g., ease of understanding wayfinding) is an essential component of urban design and is related to success in using a space (Lynch, 1960 and D. Smith , 2020 Ahmadpoor In the following years, readability has been proposed as one of the desirable qualities of urban space (Cross, 2007, p.339; Devlin, 2001; Ewing, et al., 2006, p.237). Readability is a spatial quality, its users easily understand readable environments, and visitors can be easily wayfinding within it and provides a clear image of the wider world (Coan 216, 1386). Readability is an important condition in understanding the spatial shape and logical relationships in spatial composition. (NIU, Leiqing XU, Zhong TANG, 2008,386). Readability allows to understand and remember an urban space. (Lynch, 1960) the studies of Urban spatial widely emphasize that the urban

structure and the characteristics of physical will lead to ease or limit the determination of the route and move in the environment (Long and Baran, 2011). By readability, we can have a coherent and integrated pattern to guide decision-making and movement between the elements of the path (Golledge, 1999). A legible city is a city where neighborhoods, signs, and roads are easily identifiable, and the person in the urban space can easily draw a pattern and a general image of the collection of these elements in their mind (Lynch , 1960) ways; The most readable element in the image of the city. The observer walks along linear forms such as streets, sidewalks, canals or railways. Observers experience the city as they move through it. The path element creates a relationship between other elements. Edges; They create a line between two or more nearby areas or areas in a linear gap, it can be beaches, railroad cuts and walls. This element is not as strong as paths, but for observers it is an important character in organizing features. Neighborhoods: Groups of urban landscapes that have similar or common personalities. Nodes are points; They can be intersections or junctions between paths where observers can enter points, for example, an enclosed square. This is a movement disorder. Signs are landmarks that simply define a physical object: signs, buildings, mountains, or shops. Some elements can be seen remotely, but some are very simple objects that are familiar to observers. SoaresLOPES,2012) & Hollanda CAVALCANTE & 2014: HENRIK KARLSSON &DAMAYANTI,2015 G. Filomena, et al.,2019

Table2: Examining the definitions of readability from the perspective of different theorists

Definition of readability	philosopher
Readability allows to understand and remember an urban space.	Lynch,1960
The ease with which signs or features needed to guide movement-related decisions can be organized in a coherent pattern.	Golledge,2000
It is the quality of the environment that makes a place understandable	Bentley,2003
Readability is one of the desirable qualities of urban space.	Cross, 2007
Readability is an important condition in understanding spatial form and logical relationships in spatial composition	NIU, Leiqing XU, Zhong TANG,2008

4.Methodology

This research is among the functional researches that in terms of methodology are in the field of qualitative methods. The aim of this study is to make a comparative comparison of wayfinding of healthy and blind people in Malaysia.

The Procedure includes document review, documentary, and library studies (content analysis). The review of information in this study consists of two stages:

1. Reviewing of Malaysia's urban planning system:

Experts have accepted it after reviewing documents and theoretical studies about the planning system of Malaysia.

2: Reviewing of doctoral dissertation on wayfinding experience in Kuala Lumpur Business Center As well as reviewing the article on wayfinding techniques for the blind.

5.Research Field

Malaysia is a country in Southeast Asia and Kuala Lumpur is the national capital .Malaysia, with an area of 758,329 square kilometers, Malaysia, with an area of 758,329 square kilometers, consists of two parts, namely the Malaysian Peninsula (Western Malaysia) and Eastern Malaysia (Sabah and Sarawak) (Shirzadi, 2010).

As the new federal administrative capital of Malaysia, Putrajaya is the new home to all federal-level government ministries. Malaysia is a tourist, industrial country that has well understood the information era.

It has a tropical climate with monsoon rainfall and a population of about 24 million. Its neighbors are

Thailand, Brunei, Indonesia, Vietnam and the China Sea. It has a monarchy and its currency is the Ringgit. Malaysia declared independence on August 21, 1957 and was liberated from British rule. Malaysia, with its dense tropical forests, mountains and clean coastlines, has created a suitable area for the passage of large trade lines. Malaysia includes 33 states of Malaya as Western Malaysia and Sabah and Sarawa as Eastern Malaysia. (Ghaffari and Afshari, 2016)



Malaysia is a federation of 13 states and the governor of each province is called the "Shah". Kuala Lumpur remains the seat of parliament as well as the country's commercial and financial center, with other major cities including Penang, George Town, Ipoh, Johor Bahru, Koching, Kotakinabalu and Alurastar, "Kotabaharo" and the city of "Malacca". The two distinct parts of Malaysia are separated by the South China Sea, both west of the Malaysian Peninsula and east of Malaysia, with very similar views of the high coastal plains, often covered with dense forested hills and mountains (www.iuea.ir).

Introducing the urban planning process (urban development structure) in Malaysia

After Malaysia's independence in 1957, the Malaysian Executive (government) system was divided into three levels: the federal government, the state government, and the local government. The powers of each level of government are set out in the constitution and parliamentary bills. Planning issues are agreed upon in the list, which is the responsibility of both the federal and state governments. At the federal level, the Ministry of Housing and the local government, which is responsible for formulating, oversee the Federal Office for Urban and National Planning and implementing all national policies related to urban and national planning. At the state level, the State

Office of Urban and National Planning is an advisory body to state governments in the Malaysian Peninsula. Land use planning is therefore a state issue, and the federal government

has an oversight role for all land use planning activities.

In this part of the research, the characteristics of Malaysia's planning system are examined.

Table3: Features of Malaysia planning system

Context	Component	Malaysia
Planning system	Theoretical and value-based approach to planning documents	National development planning with emphasis on council committees and high oversight role
	Horizon and planning period	Long-term, medium-term and short-term
	The nature of the custodian of planning	An organization with the nature and dominance of economic approach
	The dominant approach of the development vision statement	A multidimensional view with the dominance of economics
	Degree of public participation	Much
	Type and contribution of actors	The private sector and the public sector with a large contribution and the public sector with a medium contribution
Spatial planning system	Planning levels	National, regional and local
	Approach and mechanism of spatial planning	Strategic and participatory planning with emphasis on monitoring and evaluation
	Execution and monitoring system	Existence of effective and intense implementation and monitoring loop
	Organizational Structure	Top-down hierarchy, divergence among organizations and planning institutions

(Source: Mir Gholami et al., 2019)

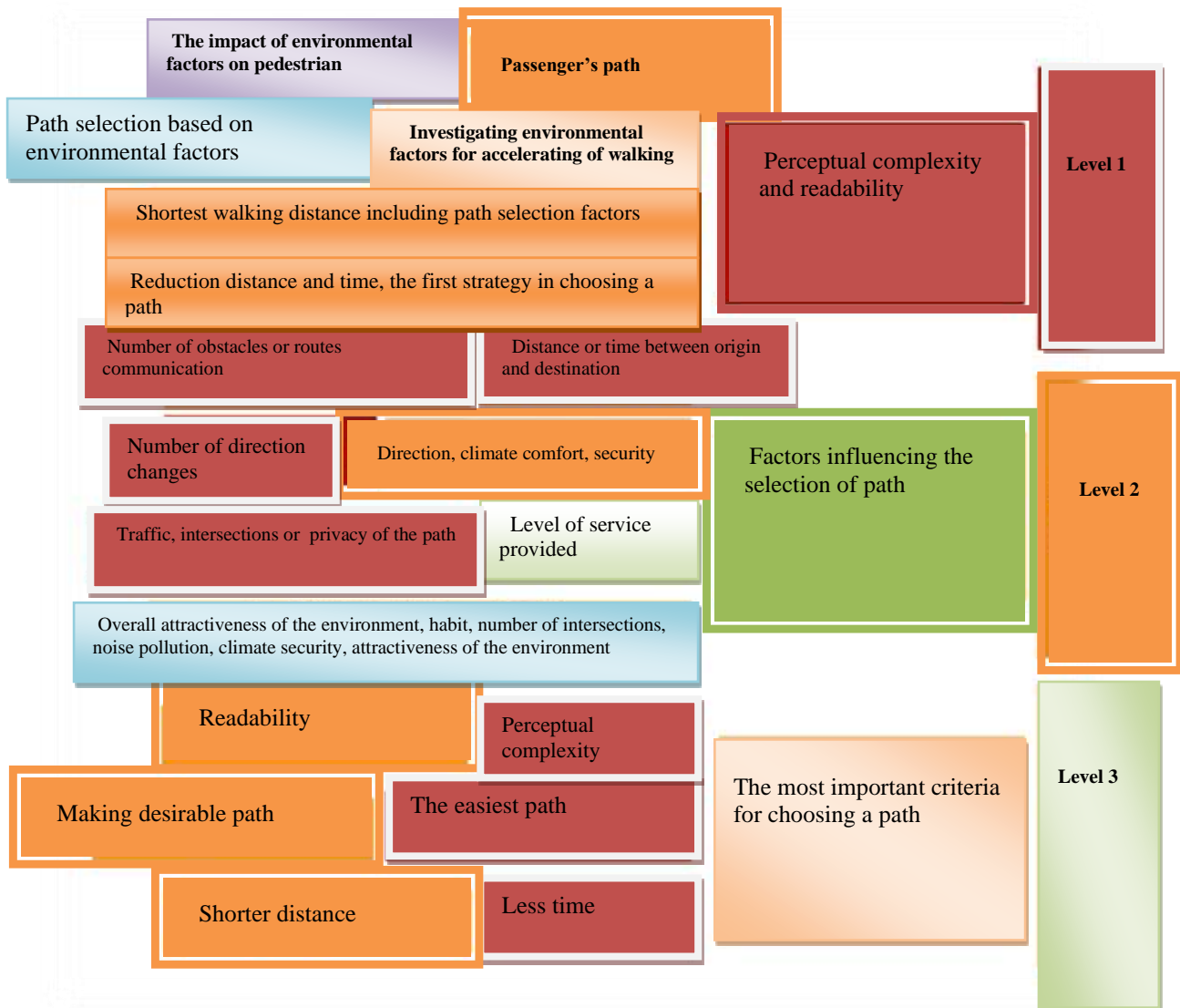
6. Review of research experiences

In this section of the research, a doctoral dissertation and an article on the subject of wayfinding in Malaysia are reviewed.

Doctoral dissertations by Mohammad Paydar (Perceived Complexity and Readability in path selection by Pedestrian)

In this section of the research, the doctoral dissertation of Mr. Mohammad Paydar (2013), which is the Malaysian University for obtaining a doctorate in architecture on the subject of selecting the path and the complexity of the environment and the topic of readability has been studied.

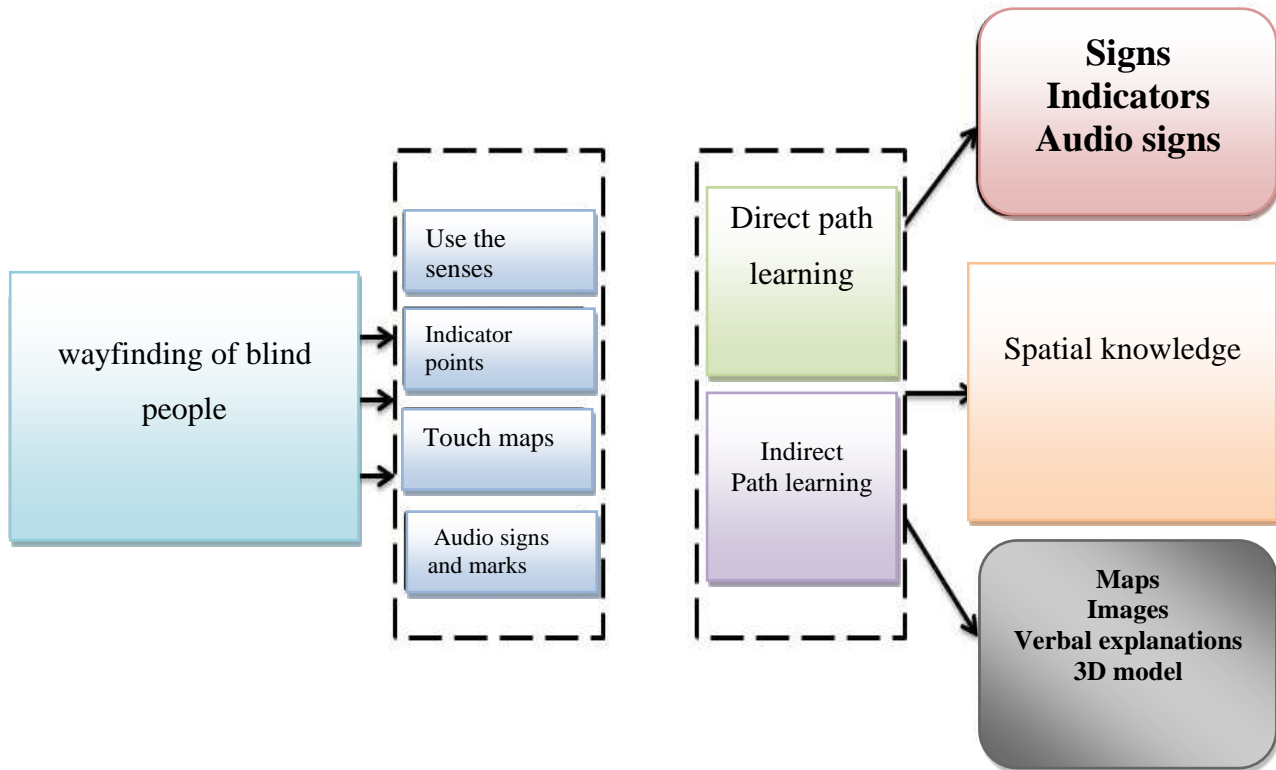
In this study, two perceptual factors (perceptual here means perceived or imagined by the individual) namely perceptual complexity and perceptual non-complexity in relation to the selecting of the path of daily travelers (travelers who take a certain route every day On the Central Trade Exchange (CBD) in Kuala Lumpur, Malaysia. In the first chapter, we address the issue of research and the purpose and objectives of this study. In addition, in this chapter we will have an overview of the field of study and the method used to examine the objectives of this research. In addition, the types of study limitations as well as the importance of this study are described.



Research article by Nazatul Naquiah and Wan Adilah Wan Adnan and Alistair Edwards Fariza Hanis Abdul Razak (DOI: 10.1109 / IUSER.2016.7857952) entitled Introduction to Current wayfinding Learning Techniques: A Case Study in the Malaysian Association for the Blind

(MAB) in 2016 has been published. To preparation blind people to move to the real world, they must be equipped with knowledge and skills in mobility and orientation. The aim of this study was to investigate current wayfinding learning techniques for the blind in Malaysia

Summation of suggestions in the selected article



(Source: Author adapted by research article)

Comparative Comparison

In this section, after reviewing the dissertation and the selected article on the topic of wayfinding, a

comparative comparison of the wayfinding components of healthy and blind people is performed.

healthy people wayfinding	blind people wayfinding
Use of signs	Use of the senses (touch, hearing and smell)
Influence of environmental factors	Use of indicator points
attractiveness of the environment	Use of touch maps and sound maps
Use of maps and symbols	Audio signs
Use of boards	
Pay attention to urban elements	

By reviewing the results obtained in the order of the components of healthy people, wayfinding can be done to things such as :a) overlooking of signs B: the presence of signs , and the presence of commercial complexes C) the use of environmental factors d) the use of maps guides pointed out. Given that, the overlooking of index elements has a great impact on the wayfinding process of healthy people. In addition, the

presence of signs and symbols at the area level has a great impact because of wayfinding is a planned and classified matter. The presence of signs and marks makes wayfinding easier. Existence of suitable landscape, suitable views, and the view of the index elements in all parts of the range also increases the level of familiarity with the environment and ease of wayfinding.

In the continuation of blind people wayfinding, prominent points, including the components used in the senses, are resulting of blind wayfinding. Using the non-visual senses of the blind in wayfinding, this includes pauses, movements, forms and shapes in flooring. In the wayfinding process, audio signs are used in urban areas. The senses component is one of the most important components influencing the wayfinding behavior of the blind. Then blind people use touch maps and audio maps in the wayfinding process.

7. Conclusion

According to Grent's view concerning wayfinding in 2002, wayfinding means choosing a path from a set of road networks or finding a path, Tversky's view (1993), orientation the ability to plan and follow a path from a Point to point. Successful orientation requires the coordination and integration of different subjects in the mind, which are: perception, movement and memory of subjects in the mind, Beecher's view(2004)about wayfinding ,an access or tool that can help the process, which among the factors in the wayfinding process can be to select the route and search for information that is through the path and the origin and destination, from Helvacioğlu's point of view in 2008, surrounding space is an important issue to find your way in the environment. wayfinding is the process of reaching a destination in both familiar and unfamiliar environments. wayfinding as an organization and communication is our dynamic relationship between space and the environment. wayfinding is an activity that requires full involvement in the environment. In the process of navigating, paying attention to the signs is one of the basic points that the signs are the most prominent points in any environment. They act as key elements in increasing the ability to move in an environment. The availability of various cues in easy understanding and support of oral routes, and helps in improving the spatial, visual and verbal memory of navigation knowledge. To distinguish different signs in environments, there are many important features of existing identities such as color, texture, marking, size and shape. Feeling familiar is the most important factor in predicting wayfinding and architectural design elements, and graphics and wayfinding are affected. According to De Marchi in 2015, wayfinding requires more than maps and street numbers, that is, it involves understanding the

spatial organization of a place. wayfinding is the process of gathering information about the environment and where we want to go and where we want to go. Signs are landmarks in the environment that can be identified and understood from different geographical locations in the environment. According to the view of beremen in 2010, landmarks and indicators are used in the wayfinding process, including the old one. The most comprehensive forms of assistance in navigation are geographic maps. And according to Makri's view in 2015, signs are considered as helpful factors in navigation and the sign is in creating a mental representation of an important space in the process. wayfinding plays an important role. According to the view of zheo in 2012, signs are significant elements that are in the path of human access and they can use elements in the wayfinding process. According to the view of paydar & kamani fard in 2016, which was a case study in Kuala Lumpur, it shows that citizens' satisfaction plays a key role in the process of choosing a route and also factors such as the presence of buildings, their height and appearance help guide citizens. H. Najafpour et al. In 2017, the choice of route options is made with emphasis on the spatial cognition of the citizens. Therefore, in the citizens' route, the level of familiarity and attachment to the place is also one of the main factors in wayfinding people.

One of the categories considered in walking in urban space is the issue of wayfinding, which due to the fact that humans come to a point are not familiar with the environment and lack of sufficient familiarity while navigating their place of residence causes them confusion. A suitable platform for human wayfinding and security has been one of the important points in the study of this research.

In designing the environment, it is necessary to mention such things as installing legible signs, proper design of buildings on sidewalks.

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