THE INFLUENCE OF SENSATION OF ORIENTATION ON URBAN PARK VISITATION

Faezeh Mohammadi Tahroodi [1] and Norsidah Ujang [2*]

[1]Farnahad Consultant Engineering Company,
No. 26 Kosar Alley, North Bahar St. Tehran, Iran
[2]Department of Landscape Architecture, Faculty of Design and Architecture,
Universiti Putra Malaysia, UPM, 43400 Serdang, Selangor, Malaysia.

*Corresponding author:
norsidah@upm.edu.my

ABSTRACT

A sensation of orientation is a sense that provides way-finding ability and seamless experience of urban spaces including public parks. This paper examines the relationship between the sensation of orientation attributes and urban park visitation pattern. The sampling areas of the study are the Taman Tasik Titiwangsa (TTT) and the Perdana Botanical Garden (PBG), located in the city center of Kuala Lumpur, Malaysia. The study applied photo questionnaires survey involving 330 park users to determine the extent of place engagement in Activity Nodes (ANs), familiarity with legible elements, and the purpose of visiting the parks. Statistical-graphical analysis verifies that social activity is the primary purpose of visiting the parks, which is highly related to the extent of familiarity with Activity Nodes (ANs) and place engagement. The findings inform the importance of legible elements and social activities in designing urban parks to increase place attraction and to encourage park visitation.

Keywords : Sensation of Orientation; Activity Nodes; Social Activities; Way-finding; Urban Park

1. INTRODUCTION

Urban parks are social spaces and regarded as significant aspects of urban civilization (Khan, 2014; Legeby, 2013). In this respect, urban parks' perception of social activity results from people's interactions with their environmental settings (Peters, Elands, & Buijs, 2010). Good quality park design could cater to public needs and satisfaction (Legeby, 2013). The careful design could enhance visitations to urban parks (Madanipour, 2013) by providing meeting opportunities (Aleksandra, 2013). However, today the design of urban parks could not support its function as social integrators despite planned with modern infrastructure (Moulay & Ujang, 2016; Moulay, Ujang, & Said, 2017). Underutilized parks in Kuala Lumpur (CHKL, 2004, p.8-5) reveal that the design of these areas would not support users' social experiences (Karuppannan & Sivam, 2013).

Recent studies on urban parks mainly concentrated on the importance of social sustainability in different aspects of the quality of life. Examples include ensuring healthy city environments by protecting urban biodiversity or evaluating park accessibility and its uses (Ngang, Pereira, & Halimaton Saadiah Hashim, 2014). However, fewer studies have been conducted on how users' sensation of orientation can enhance the primary purpose of visiting an urban park for social activities.

People need to become aware of the presence of others in urban parks to perform any social activities. But how could this awareness be shaped and boosted through the social design of urban parks?

2. LITERATURE REVIEW

2.1 Social activities

Social activities are outdoor activities that depend on people's presence, comprising two types, dynamic social activities, and stationary social activities (Legeby, 2013). Meanwhile, dynamic ones are shaped simultaneously through bodily observation of other users while the experiencing of public spaces occurs through movement within paths. Stationary social activities are formed when park users are staying and gathering within Activity Nodes (Legeby, 2013; Khan, 2014; Rahman, Shamsuddin, & Ghani, 2015). Fundamental spatial activities like walking, standing, sitting, etc. offer engaging social activities. These activities are mostly the preliminary point of almost all other activities (Khan, 2014).

2.2 Sensation of Orientation

The sensation of Orientation (SO) is a sense which provides way-finding ability and causes seamless movement while experiencing public spaces such as urban parks. Accordingly, the internal reflection and reconstruction of path structures and relationships among spaces in thought and remembering the information to assess the built environment cause this sense (Topcu & Topcu, 2012). On the other hand, Goffman (2017) states that the experiential aspect of social activities as the reciprocated perception among people, engage them to become aware of each other in passive and active ways. He mentions that without this awareness, perceiving the presence of other people could not happen (Mehta, 2013; Legeby, 2013). Accordingly, to perform social activities, park users should become knowledgeable about where they are, where they want to go, and they need to be able to justify the opportunities for involving in events and benefiting from the further usages of the urban park (Mehta, 2013; Moulay & Ujang, 2016).

Kevin Lynch proposed the theory of "imageability" in the early period of cognitive approaches. He defined imageability as a consequence of mutual interaction among humans and the environment through perception. This interaction and experience are the results of the legibility of the situation, providing way-finding (Khan, 2014; Moulay, Ujang, & Said, 2017).

Way-finding refers to the ease of movements through distinct elements comprising of Landmarks (Ls), Views (Vs), Defined Paths (DPs), and Activity Nodes (ANs) and encourages people to experience the environment (Vaez, Burke, & Alizadeh, 2016). Path structure configures the DPs, ANs, and Ls. The integration of uses and social activities within path structure causes people to see and memorize distinct elements by linking them to their common usage. These constituents then obtain the functional cues and could enhance movement towards them (Thwaites, Helleur, & Simkins, 2005; Zhai & Baran, 2016). This possibility helps people make more accurate decisions in way-finding and sketch mapping (Amorim, Barros Filho, & Cruz, 2014; Zhai & Baran, 2016). Therefore, way-finding is a sense-based process of connecting a mental image with social activities (Abdelbaseer, 2012; Sevİnç & Bozkurt, 2015).

Way-finding, through legibility, considers spatial forms by isolating them from their social context. However, it fails to assess the cognitive characteristics of legibility elements in terms of evaluating social interaction (Mehta, 2013). Moreover, the environment's legibility without consideration of the clarity of activities could negatively influence natural human movement by making the environment homogeneous and boring (Portugali, 2010; Legeby, 2013; Topcu & Topcu, 2012; Khan, 2014). Thus, way-finding and Sensation of Orientation depends on functional motivations rather than pure physical stimuli (Mehta, 2013).

The Sensation of Orientation, therefore, refers to the individual's dedicated experience of the Defined Paths (DPs) as places (Ujang, 2014) due to its function and specific Landmarks (Ls), and Views (Vs) (Kevin Thwaites, Mathers, & Simkins, 2013; Baharuddin, Nadia Rusli, & Othman, 2014).

In line with the above statement, Norberg-Schulz's place sensation notion manifests human activities to distinct elements (Madanipour, 2013). The design of landscape could add social functioning to the spatial experience by paying attention to the bodily habits and making people aware about this experience via their sense of actions (Kevin Thwaites & Simkins, 2007; Kevin Thwaites et al., 2013)

Following the above discussion and the fact that sociability is an essential human function, this study aims to examine the influence of the Sensation of Orientation in enhancing visitation to urban parks in Kuala Lumpur city, Malaysia.

There have been numerous social studies in urban design highlighting the quality of public social spaces (Moulay, Ujang, & Said, 2017; Legeby, 2013; Kevin Thwaites et al., 2013; Moulay & Ujang, 2016). However, there have been little empirical studies on the Sensation of Orientation concerning social activities within urban parks. (Topcu & Topcu, 2012).

3. METHODS

The study utilizes the survey method as defined by its research questions (Yin, 2015; Creswell, 2013; P: 145). The survey method is an adaptive combination of an experiential landscape method coined by Lynch (2006) and Thwaites (2007 and 2013). The experiential landscape method includes field observation methods to determine the legible elements in the Taman Tasik Titiwangsa (TTT) and Perdana Botanical Garden (PBG). A photo survey questionnaire elicits the purpose of urban parks' visitation and the extent of the sensation of orientation attributes.

The dependent variable in this study is the purpose of the visit, while independent variables are the sensation of orientation attributes. The study applies the Excel statistical-graphical analysis application to analyze the relationship between variables. When presenting data in the form of charts or graphs, this software can be helpful to include average lines, which explicitly shows the key trends emerging from the information.

3.1 The Sampling Areas and Population

The selected study areas are two urban parks, located in Kuala Lumpur city center, Malaysia: the Taman Tasik Titiwangsa (110 Hectares), and the Perdana Botanical Garden (59 Hectares). These two urban parks were chosen based on their sizes (between 40 to 100 hectares), and their locations (within or close to Kuala Lumpur city center). They also incorporated a demographic region of more than 50,000 people as defined in a hierarchy of parks and open public spaces in Malaysia (Abdul Malek, 2011). Figure 1 shows the location of the mentioned urban parks. Moreover, these urban parks' selection was due to their significant role in shaping Kuala Lumpur's urban park history. The Malaysian Federal Government gives special attention to these parks' design attributes as models (Bakar, 2002) to design other parks to achieve a World-Class Kuala Lumpur Garden City (CHKL, 2004; page 3-3).

Based on social survey research, by considering 5% sampling error and 95% confidence (Moulay & Ujang, 2016), the total sample population for both sample parks will include 330 respondents in the photo survey questionnaire. The researcher chose respondents randomly and asked them to select Malay or English languages.
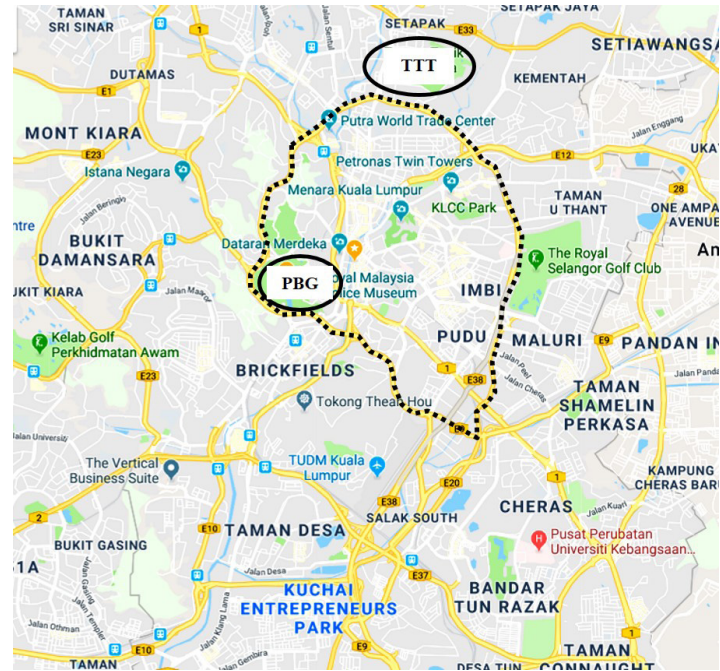

Figure 1: The location of TTT and PBG

3.2 Determining the Legible Elements

Field observation provided data to determine the legible elements in TTT and PBG. For this data collection process, the researcher applied the field recording and static snapshots. The next process was to prepare salient photos from activity nodes, designated paths, landmarks, and views for the photo survey questionnaire. The field recording process included reading and directly experiencing urban parks by observing distinct elements. Taking photos on weekdays, social evening time at 5 to 6.30 pm ascertained the legible elements because parks were not too crowded. When the observer could focus more on the physical-spatial dimension of the sensation of the orientation of urban parks rather than its social aspects (patterns of activities). Figure 2 depicts the legible elements in TTT and PBG.
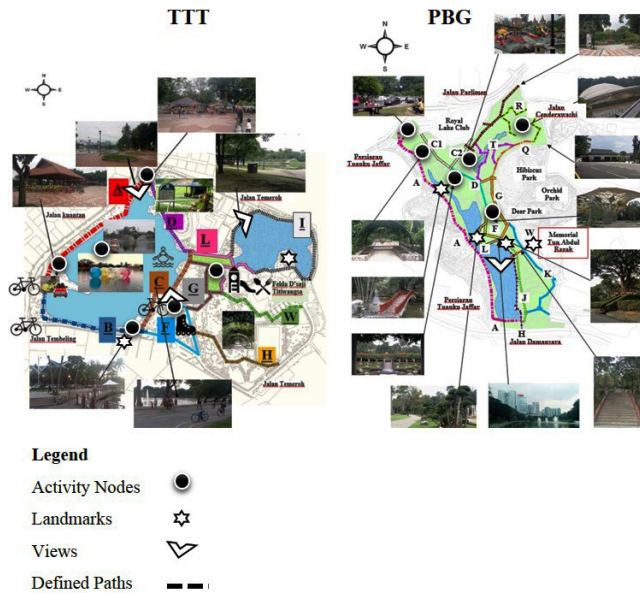
Figure 2: The Legible Elements in TTT and PBG

3.3 Determining the Purpose of Visit

This part of the questionnaire includes two main questions with five response choices. At first, the survey asks the respondents to underline or choose only one answer. The first question is about how often users visit the park. This question determines the respondents' familiarity with the park and has four possible explanations: 1) every day, 2) at least once a week, 3) at least once a month, and 4) two or three times a month (Abdelbaseer, 2012; Ngesan, Karim, & Zubir, 2013).

Another question is about the meaning or function of urban parks (Kevin Thwaites & Simkins, 2007). This question is to verify the primary purpose of users visiting the parks. This item has five possible answers: 1) to pass through on the way elsewhere, 2) to work, 3) to relax, 4) to jog or ride a bike, 5) to meet and spend time with friends and family.

The purpose of the item is to reveal whether coming to the park is due to necessity (1 &2), for recreation (3 & 4) or social activities (5) (32; Khan, 2014). The researcher calculated the percentage values from the total number of respondents (330) for each question via Excel Software 2013.

3.4 Determining the Extent of Sensation of Orientation Attributes

Previous researches have proven that the Scene Recognition Test is a suitable technique for examining mental images (Lynch, 2006; Thwaites, 2013). The researcher identified the visual symbols as Activity Nodes (ANs), Landmarks (Ls), and Views (Vs) for each urban park.

To assess the extent of familiarity with each Activity Node, Landmark and View, respondents were asked to circle the photos which they are familiar. Figures 3 and 5 display the pictures of Activity Nodes in PGB and TTT and, Figures 4 and 6 illustrate the images of Landmarks and Views in these urban parks. Then, the questionnaire asked respondents to answer three questions to determine place engagement in activity nodes: Q1, which one of these places they frequently visit; Q2, where do they meet their friends and Q3: where do they feel comfortable in interacting with strangers. The Sensation of Orientation attributes' evaluation through a photo-questionnaire survey was done via Excel software (Excel 2013).

The maximum percentage value of familiarity with Activity Nodes (ANs), Landmarks (Ls), and Views (Vs) were assigned to each Defined Path (DP) of urban parks to determine the extent of familiarity. For this assessment, the nodes must have direct visual access to the Defined Paths (DPs). It means that while respondents passed along the DPs, they could see activities performed within the ANs. The DPs, without any direct visual access to the ANs, did not gain any familiarity with ANs. Columns and combo charts illustrated the percentage values for attributes of the Sensation of Orientation and purpose of the visit.

The researcher summed up the frequency of scores related to every three indicators and calculated the mean values to determine the extent of place engagement for each Activity Node. The percentage value was calculated by dividing the mean value to the total number of respondents (165) and multiplying it by 100. This percentage determines the proportions of respondents from the total number who assigned place engagement to each Activity Node.

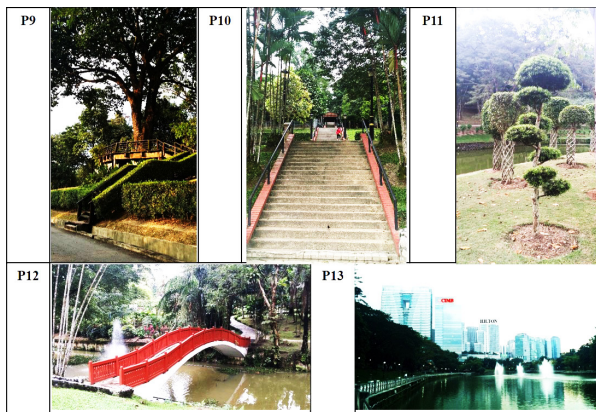**Figure 3:** *PBG- Activity Nodes*

Figure 5: *TTT- Activity Nodes*

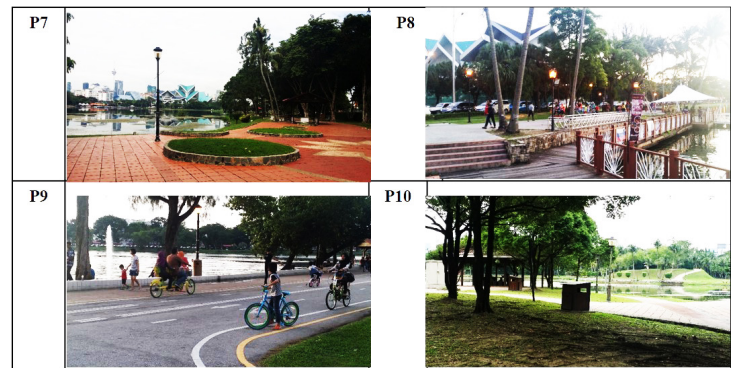

Figure 4: *PBG- Landmarks and Views*

Figure 6: *TTT- Landmarks and Views*

4. RESULT

4.1 Purpose of Visit

In terms of familiarity with the parks, the highest percentage of survey population at around 54.5% (n=90) for the Taman Tasik Titiwangsa (TTT) and 34.5% (n=57) for the Perdana Botanical Garden (PBG) visits these parks at least once a month. Those who visit these parks everyday make up the least of the sampled population (Figure 7). The result reaffirms the fact that these parks had well-qualified design and catered to types of recreational activities as well as social activities that made visitors welcoming enough at least once a month. However, the results declare, respondents were more familiar with TTT in comparison with PBG since they monthly visited this park 20% more than PBG.
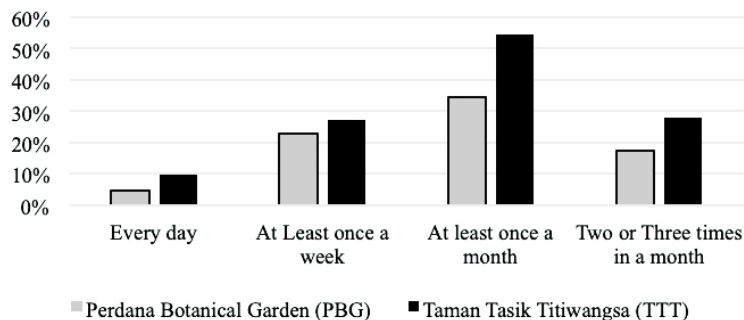

Figure 7: Familiarity with PBG and TTT

Figure 8 illustrates that 46.8% (n=77) of visitors for the Taman Tasik Titiwangsa (TTT), and 38.4% (n=63) for the Perdana Botanical Garden (PBG) came to these parks for meeting and spending time with families or friends, which was the highest amount compared to the remained rates. Moreover, results indicate that people who came here to work or pass by elsewhere were the least number (3% and n=5). Thus, the primary function of these two parks for the respondents was social activities defining the reason for coming to these places.

The results also show that the TTT, where park users visited it more than the PBG, offered more meeting opportunities. It verifies the significant function of urban parks as social places. Subsequently, it is evident that if urban parks do not fulfill this visitors' primary goal, they become less used.
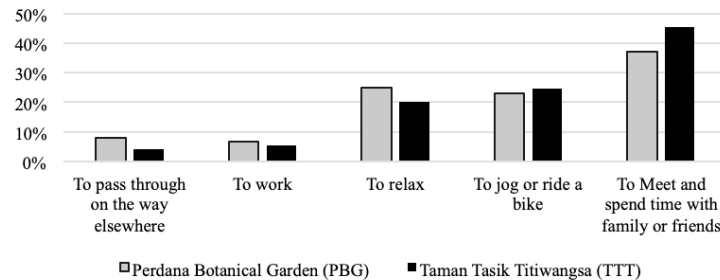

Figure 8: Purposes of Visiting for PBG and TTT

4.2 The Extent of Sensation of Orientation Attributes

4.2.1 The extent of Familiarity with Activity Nodes, Landmarks and Views

Figure 9 and Figure 10 show the highest values for familiarity with Activity Nodes (ANs), Landmarks (Ls), and Views (Vs) designated to each Defined Path for TTT and PBG, respectively. As these Figures indicate, Defined Paths H, W, and I in TTT and Defined Paths K, W, Q, R, and T in PBG did not have any direct visual access to the Activity Nodes. These Defined Paths (DPs) scored the least values for familiarity with Ls and Vs. Furthermore, most of the DPs in the Perdana Botanical Garden (PBG) gained less than 40% familiarity with Landmarks and Views. However, except for three DPs in the Taman Tasik Titiwangsa (TTT), other DPs increased familiarity value of 60% and 80%. Thus, the Sensation of Orientation attributes is more significant in TTT than PBG. The opportunity of being more legible led more users to visit the TTT than the PBG monthly showing that the ease of movement through familiarity with landmarks, views made more intention to choose the DPs, and accordingly made more familiarity with urban parks.

Activity Nodes obtained a familiarity value of more than 50% in the TTT and the PBG, indicating that the ANs generated much more noticeable Sensation of Orientation rather than Landmarks (Ls) and Views (Vs). With this regard, besides the legibility of urban parks through Views (Vs) and Landmarks, the direct visual access to the Activity Nodes (ANs) or the functional motivation of Defined Paths (DPs) had the most significant impact on a sense of navigation and orientation as park visitors recalled these places mostly. Due to these places, the intention of visiting urban parks would enhance.
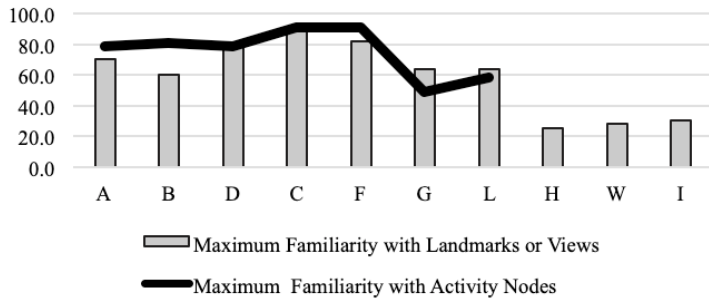
Figure 9: TTT- The Highest Values for Familiarity with Activity Nodes, Landmarks, and Views
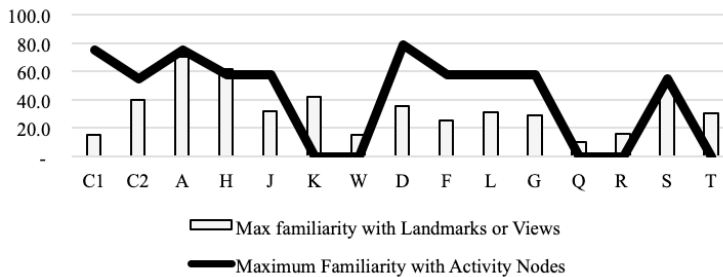

Figure 11: TTT- Place Engagement with Activity Nodes

Figure 10: PBG- The Highest Values for Familiarity with Activity Nodes, Landmarks or Views

4.2.2 The Extent of Place Engagement with Activity Nodes

More than 70% of the respondents verified that Activity Node P1, P4, P5, and P6 in TTT and Activity Node P3, P4, and P7 in PBG, facilitated the frequency of visit, meeting friends, and feeling comfortable with strangers (Figures 11 and 12). The results indicate that these Activity Nodes (ANs) gave the highest percentages in terms of place engagement, meaning that these nodes provided the most choices of places to sit and the most activities. Furthermore, these nodes had a unique and distinctive appearance and facilitated observing people, bumping into the crowd, and events. Subsequently, these places significantly engaged visitors to meet and interact with others owe to mentioned supporting activities. Accordingly, these nodes supplied kinds of social activity comprising stationary social activity (gathering through sitting and standing) and dynamic social activity (bodily observation of other people through walking). However, Activity Node P2 had the lowest percentage value (44.4%) in TTT, meaning that this node did not accommodate meeting opportunities via providing places to sit and diversity of activities.
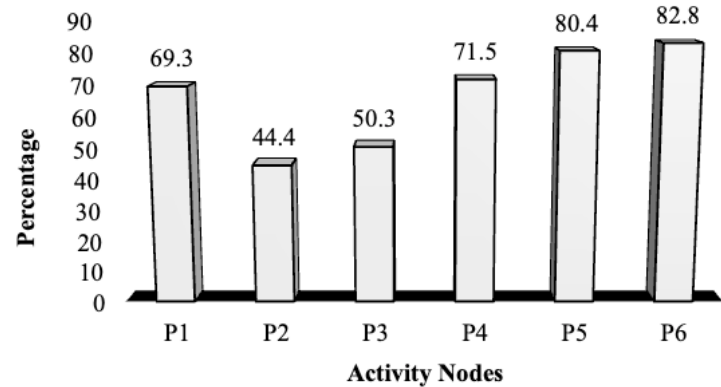
In the same vein; 30% of respondents mentioned that Activity Nodes P8 and P9 in PBG contribute to place engagement. This engagement might be because Activity Node P8 is a large green field and furnished with canopies suitable for large social groups doing picnics. Park users with small groups could not feel comfortable interacting with them. Meanwhile, Activity Node P9 is a compact green space with few sitting areas. Activity Node P9 does not have any visual permeability to the surrounding. Therefore, these nodes could not provide proper places for everyday urban park use, like meeting friends and could not afford the feeling comfortable with strangers (see Figure 3).
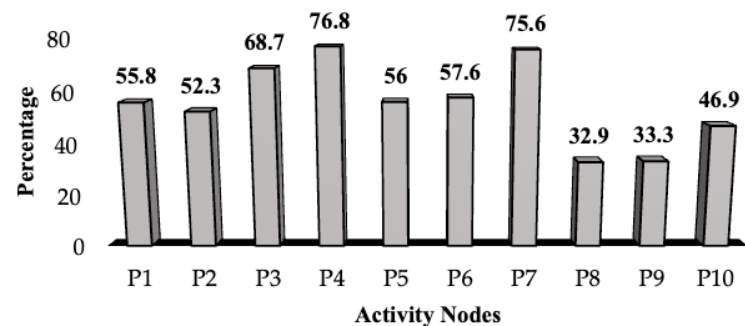

Figure 12: PBG- Place Engagement with Activity Nodes

5. DISCUSSION

This study deals with two urban parks in Kuala Lumpur, Malaysia, namely the Taman Tasik Titiwangsa (TTT) and the Perdana Botanical Garden (PBG). The purpose of visiting urban parks is engaging in social activities, and the Sensation of Orientation (SO) could fulfill this aim. This Park users has seamlessly experienced the urban parks through distinct elements and social events. As finding shows, urban parks with more Activity Nodes (ANs) and Landmarks (Ls) are more visited, which is in consent with Kevin Lynch (1960). He stated, each setting's imageability made it more recognizable and familiar and brought more interest to use. It reveals that direct visual access to ANs contributes to urban parks' users to find their ways easier since they are the most critical legible elements to support kinds of social activities. Choices of places to sit, diversity of events, unique appearance serve the possibility of interaction among park users. This engagement links to the latest publications of Christopher Alexander (2004). From his lens, ANs are significant locations with distinctive functional characteristics from their context. These nodes engage people in social activities by facilitating meeting opportunities and social communications.

Therefore, implementing the sensation of orientation in the design of urban parks would appropriately solve the problem of less use of some paths within these spaces than other routes and fulfill the purpose of visiting urban parks. These findings agree with William H. Whyte's view that 'people-watching' attracts people to use and visit urban public spaces. Watching people gives park users more information to become involved in activities (Zhai & Baran, 2016). Thus, visitors to urban parks will be more knowledgeable by perceiving the layout of activities within parks and recalling these through Landmarks and Views to motivate them to act and perform social activities.

6. CONCLUSION AND RECOMMENDATIONS

This research presents how the Sensation of Orientation (SO) attributes could influence the users' purpose and pattern of visiting urban parks. The findings provide evidence that Activity Nodes (ANs) and distinctive Landmarks (Ls) and Views (Vs) play a significant role in making places more sociable and imageable to ascertain social activities as the primary function of urban parks. The study contributes to the body of literature on the Sensation of Orientation concerning urban park legibility and social activity.

Furthermore, the findings can also create awareness among urban designers and planners regarding distinct elements that provide way-finding in parks. This study's conclusions suggest that Sensation of Orientation attributes should be fully understood and integrated with urban design and planning practices to enhance social activities. Urban designers need to incorporate proper landmarks in terms of appearance and function that support the sequences for experiencing urban parks. If there are views, use them to make the experience of the designated paths intuitively and continuously. As a result, users will engage in these paths, thus increase the possibility of dynamic social activities to the place. It is also recommended that urban designers locate ANs with direct visual access to the defined paths. Therefore, designing activity nodes as places for frequently meeting friends could enhance these significant locations' engagement. These nodes are the areas where urban park users are comfortable interacting with strangers. To foster stationary social activities within activity nodes, they must have specific appearances and be pleasant places to support various sitting activities, whether under the sun or shade. Landmarks and views should furnish activity nodes and paths and assign proper functions to them. Further consideration emphasizes that these nodes must sustain and foster people's intensity in the various casual gathering, actively participating, and spending time with families.

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