

## Landscape and Environment: The Role and Application of Landscape Design in Mosque

Wan Noor Anira Wan Ali @ Yaacob, Marina Abdullah, Norasikin Hassan

Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Seri Iskandar Campus, Perak, Malaysia

Received: December 22, 2016

Accepted: February 27, 2017

### ABSTRACT

In Malaysia, mosques play a significant role in the spread of Islamic civilization and in the creating a positive ummah socially. However, the community only frequents the mosques during the prayer times and they do not fully utilize the surrounding and the opened spaces available at the mosques. The aim of this research is to evaluate, find the roles and application of the landscape and opened spaces at mosques to the congregation at the mosques. Meanwhile, the objectives of this research are (i) to identify the understanding of the concept of opened spaces at the mosques among the respondents and the congregation of the mosques, (ii) to find the level of importance of the opened spaces concept and the landscape of the mosques to the congregation and (iii) to analyze the elements and the physical components (the application and the roles) that need to be prepared for the opens spaces at mosques. Islam truly an emphasis on beauty and Allah like it. The Prophet SAW says, "Truly, Allah is good, likes anything that is good, clean and likes anything that is clean, honorable and likes anything that is honorable, generous and likes generosity". For some planning and designing of mosques in Malaysia, no opened space is allocated and the surrounding that truly suits the criteria of Islam and the level of functions is at its minimum. Such issue needs to be addressed in every planning and development of a mosque in the future.

**KEYWORDS:** Mosque, Open Space, Congregation, Landscape Elements, Design Application.

### INTRODUCTION

In the history of Islamic civilization, mosques have been the vital elements and assets in the planning and development of a township. Mosques serve as a worshiping place and a place for the Muslims to conduct other activities. Mosques do not only serve as a worshiping place, but also a center for social and economic activities for the Muslims [10]. During the period of the Prophet PBUH, mosques were the center for the development and education of the ummah. Mosques were made the center of worship, the center for the spread of Islam, the centre of knowledge and the centre for developing the akhlak as well as the spirit and the soul. The history of Islam has shown that mosques were not mainly used as a place of worship, but also as a place that offered various facilities for various activities, ages and groups of people. This was proven based on the 62th Hadith from page 33 (Shahin Bukhari):

عن ابن مسعود رضي الله عنه قال: كان النبي صلى الله عليه وسلم يتخولنا بالموعظة في الأيام، كراهية السامة علينا.

which means told by Ibn Mas'ud r.a.: The Prophet Muhammad PBUH chooses the perfect time to summon until we do not feel bored. (The Prophet PBUH does not interrupt us by involving us in religious discussions and knowledge continuously all the time).

Hadith explains that mosques were places of worship and also physical spaces, which were used by the Muslims in various activities that included activities for the development of the spirit and soul. This proves that the applications of opened spaces at the mosques are really needed to encourage the Muslims from various age groups to frequent the mosques. According to [16] mentioned that to encourage Muslims of all age group (children, teenagers, young and old) to frequent the mosques, various facilities and surrounding spaces which are effective, clean and cheerful need to be created. These will make it easier for the community of all ages to do their spiritual activities as well as putting their mind at rest in the surrounding and at the opened spaces of the mosques, despite attracting their interest to come and frequent the mosques.

.....after that, is to balance between the religious classes which are close to the palettes of the old, with religious classes that attract the hearts of the young. Prepare facilities that are needed by the young, as 'baits' for them

give them what they 'want'. Tuition classes, 'sepak raga' courts and counselling sessions are among the services that can be considered.... [14].

However, if we look at the building of most mosques especially in Malaysia, the practice of building the landscape and the outside areas are not given much emphasis. The opened spaces at the mosques' area are significant and important physical elements which serve as an attraction to prosper or frequent the mosques. Research has shown that the congregation will spend time at the opened spaces and consider the landscape as part of the mosques [1]. In [12] explains that mosques do not only functions as a place of worship but they also function as a center of knowledge, education, center for people to congregate and also recreational centers. He also explains that mosques need to be equipped with other facilities such as hostels (funduq), toilets (hammam), hospitals (mushtashfa), cemetery (maqribah), courtyard (maydan) and courtyard gardens.

Therefore, the planning and the designing of opened spaces of mosques should consider comfort and provide the facilities for the community from all walks of life. There were suggestions to relive the roles of mosques and their surroundings back to the era of the Prophet Muhammad SAW where mosques were not only a place of worship, but they were the centers for the development of the spirit and soul as well as for the social development of the Muslims [5]. To function effectively and to attract people from all walks of life to frequent the mosques, the opened spaces and the surrounding areas of mosques have to be designed and built according to the current needs. The planning and the design of the opened spaces of the mosques have to consider the vital elements of the landscape as the attraction. This research is also carried out to expose and provide useful information to the authorities and the administrators of mosques, as well as the federal and local governments in implementing and designing opened spaces around mosques in the future.

## LITERATURE REVIEW

### **Landscape: Mosques' Opened Spaces**

The landscape elements include all existing elements such as material things, sounds, colors and anything that is either man-made or natural. The elements of landscape also consist of the two elements which inanimate or animate objects. Animate objects include plants and as for inanimate objects, they include soil, sand, rocks and other elements which are solid or liquid (ibid). All these elements are placed in the spaces available at the mosques.

Space is the basic medium that is needed to perform or carry out activities. The existence of space is its interior or exterior space is highlighted through the factors hierarchy and the size of space, its function and the content as well as the occupants of the space itself. The Opened Spaces, Green Opened Space, Public Space have relatively the same interpretations. Whereby, in theory, opened spaces do not possess physical enclosure (gate) for humans to carry out their activities, individually or collectively as well as for the flora and fauna to continuously prosper.

According to [1], mosques are worshipping buildings with an orientation towards the 'qiblat' in Mecca. The opened spaces at mosques are crucial in creating a quality surrounding of a mosque as a centre of worshipping. The opened spaces are focal points where the community can conduct their daily activities. The creation of opened spaces is crucial for the community as a place to communicate formally and informally.

A public opened space needs to consider the various classes and status of the needs of the community and also fulfils the various needs of the various level of the community from the rich to the poor and from the young until the old [2]. According to [7], the spaces at mosques are designed with the concept of "Hablum minnallah" where the placement of the mosques, other buildings and the gardens are actually a macro cosmos union (world, humans and the galaxy in the outer space) which is created in a micro cosmos (mosque and gardens) environment. The incorporation or union of the opened spaces (green spaces) with the mosques can increase the quality and the functions of the space and indirectly, adds on to the aesthetic significance of a mosque in a community.

### **The Importance of the Surrounding and Opened Spaces in the Design of a Mosque**

The opened spaces bring about several significant effects on the community and the ecosystem of the surrounding environment. In [15] in their observation state that there are three other subsidiary functions of the prayer (worshipping) areas, which are as education area, comfort and happiness area as well as a refuge area for the Muslims. Among the activities carried out at the opened spaces of mosques are (a) as a place to foster relationship or 'silaturahmi', (b) as a resting place for travellers, (c) as a place for children to play, and (d) as a place to conduct activities by the community such as to educate, to recite the Quran, 'istighotsah', 'haul' or the exchange of vows in marriage or 'akad nikah.'

Other than that, the mosques' opened spaces also function as a center of balancing the ecosystem and the environment, where oxygen is produced, rain water is absorbed, air is circulated to comfort the congregations as well as for health. Apart from that, they stress on the importance of social and culture through the expression

culture and recreation that offers the congregation a place to communicate. Indirectly, the aesthetic importance highlights the beauty of the design and its architecture.

### **Mosque as the Center for the Development of Ummah**

A mosque is an institution which is very important and has played a huge role ever since during the period of the Prophet Muhammad PBUH. Mosques are not only places for the Muslims to perform their worshipping activities such as praying, reciting the Quran and activities alike, but also places to develop the Muslims as a whole. According to the history of Islam, when the first mosque was built in Madinah during the pilgrimage of the Prophet Muhammad PBUH, besides functioning as a place to perform the 'Solah' (prayer), mosques also functioned as a community center where the community conducts various social activities such as the of the first Islamic Administration Centre, schools, hospitals, rehabilitation center, community center and also as a place for recreation during that period [12]. In a book entitled, "Issues in the History and Character of the Islamic Built Environment: The Holy Qur'an and the Built Environment" [14], the author mentioned that the mosques institutions are not only to be used as a place to perform the 'solah' but also to give the sermon to the congregation, but also as a place to conduct religious and community activities. Generally, from the perspective of Islam, mosques are not only places for worshipping Allah and religious activities but they also cater as a place to conduct discussions and meetings pertaining to the issues of the 'ummah' [6]. Amongst the researches which have been done where the concepts of education in schools, whereby mosques and school surroundings were seen not to emphasize on the functions of distributing and dispersing knowledge. Indirectly, this has led to the idea of using the spaces in mosques or 'mussolah' areas in schools as a center of knowledge in Islam from the social context aspects of the education.

In the research done by [18], based on the previous research conducted by [13], it was stated that the present community needs to highlight the importance of mosques in the life of the Muslim community. According to [19] without the confused perception of the mosques, they will always be the center of life of the Muslim community. There are two justifications that are given to support the argument related this. Firstly, the very nature of the human beings that worship their creator while the second justification is the tendency of the human beings to communicate socially amongst them. A congregation is done in mosques to strengthen the bond amongst the community and the believers and to look after the welfare of individuals and the community without them realizing it.

## **METHODOLOGY**

This research was done at two mosques namely a mosque at Universiti Teknologi MARA (Perak branch), Seri Iskandar and An-Nur Mosque, Universiti Teknologi Petronas (UTP) in Tronoh, Perak. These two mosques were chosen as the places for the case study and comparison, to study the elements of physically opened spaces at mosques available at public and private institutions.

Initially, the research was done by visiting the two mosques and conducting detailed observation using the inventory and site analysis by having a checklist and by analyzing the pictures of the mosques. To get relevant data, this research has chosen respondents amongst the mosque goers such as the students, lecturers, staff and the outsiders to be given the structured questionnaires which have been prepared. As many as 86 respondents from UiTM Perak branch and UTP were selected as respondents. The data was analyzed and tabulated using SPSS and Microsoft Excel and were presented in charts and tables.

## **RESULTS AND DISCUSSION**

### **The Demographic of the Respondents**

From the findings, the highest frequency of the main goers for both sites, UiTM (Perak branch) and UTP (Tronoh) are students with 58.14%. Followed by 27.91% (lecturers), 11.63% (staff) and the outsiders who live nearby the site of 3%. The focus of the research centers onto the male and female mosque goers between the ages of 18 to 35 years of age. The highest respondents are the respondents between the ages of 18 to 25 and the second highest is between the ages of 30 to 35 and above with 36%. In this research, it is also found that the male frequent the mosques with 65% as compared to the female with only 35%.

This research also takes into account the frequency of the respondents go to the mosques to perform the "sollah" at every prayer time, in a day and in a week. These aspects are also taken into consideration to identify the percentage of the respondents frequent the mosques at the two sites. The majority of the respondents frequent the mosque to perform the 5 times a day "Jemaah sollah" and the Friday prayer. This is based on the findings that show 67.3% of the respondents from UiTM (Perak branch) and 79.6% from UTP (Tronoh) are among the congregation (Jemaah) who perform the five times a day Jemaah sollah. The correlation of the research of  $65\% \geq 90\%$  proves that the data collection analysis is correct because the frequency of the gender of the respondent (male) and the day (Friday) correlates. Friday is the day when many of the male respondents

frequent the mosques to perform the Friday prayer with 40% from the respondents from UiTM (Perak branch) and 50% from UTP (Tronoh). The frequency and the rate of the frequency of the respondents frequenting the mosques from Monday to Thursday is only 35.6%. While on weekends which are Saturdays and Sundays, the average score is the lowest which is at 5.2% only. Based on the data collection, it shows that the usage of the mosques at both sites is only high during the working day.

### **The Role of Opened Spaces: The Activities Conducted at the Mosques**

The findings of the research on the applications and the roles of opened spaces at mosques, the frequency and the activities were conducted at the mosque at UiTM (Perak branch) and the An-Nur Mosque at Universiti Teknologi Petronas (UTP) are also taken into account. The findings will prove the roles and functions of the opened spaces, which support every activity that was conducted outside or around the area of the mosques. The level of frequency of the activities was conducted at both mosques at the sites of the research based on the perception of the respondents can be referred to in Table 1.

Table 1:Percentage of activity frequency at UiTM mosque and An-Nur mosque, UTP

Activity	Frequency (%)
Awal Muharram	4.5%
Forum/Talk	15.7%
Maulidur Rasul	7.2%
Yassin Recitation	12.2%
Ihya Ramadhan	5.9%
Motivation Camp	0
Israk Mikraj	3%
Q'urban (Aidiladha)	3%
Haj' Courses	0
Al-Quran Classes	5.5%
<b>Others:</b>	
a. Friday Prayer	23%
b. Five times a day prayer	20%
<b>Total of Frequency (%)</b>	<b>100%</b>

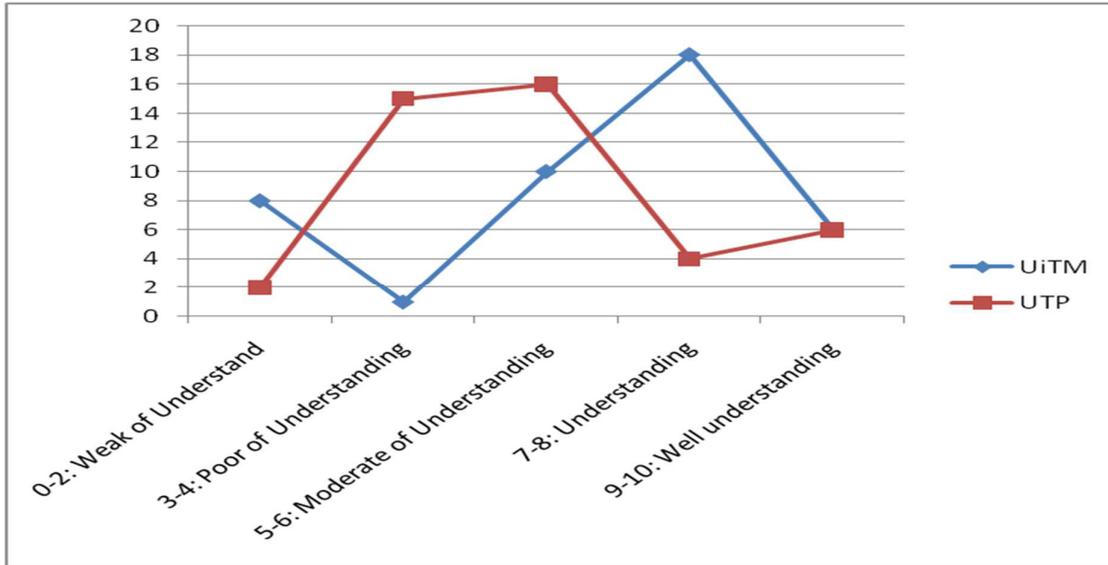
As can be seen in Table 1, only a few programs are frequently and actively conducted at both mosques like forums, talks, 'yassin' recitation, the five times a day prayer and Friday prayer. From the data collected, the findings show that the opened spaces at the mosques are not fully utilized by the respondents or the congregations (Jemaah) at the mosques. The analysis strongly suggests that indoor activities which utilize the interior spaces of the mosques are actively participated by the respondents.

The finding also proves that there are several factors in the designing and applying the opened spaces of the mosques that are not being taken into consideration. This has resulted in the congregations, users and the visitors as well as the respondents assume that the opened spaces at mosques do not give any importance and do not influence the official and social activities that are conducted at the compound of the mosques. Based on the research by [4], the public needs to have a common area to communicate amongst them, as well as spending their free time. They also stress that the mosques should be interpreted with a purpose to integrate the mosques with the life of the Muslims' community. For example, as long as the mosques remain as a venue for the believers to perform their prayers and do other social-cultural and socio-economic activities which are disengaged from the institutions of mosques, the mosques cannot perform their roles and functions in generating strong bond with the community like what is suggested in the Quran and Hadith. As mentioned by [16], the problem is there is no such thing as the mosques being more sacred if the Islamic community is only allowed to conduct certain ritual and religious activities in the mosques.

Therefore, this research is further extended to the analysis of the perceptions of the respondents of the opened spaces at mosques by providing a checklist of the elements of the landscape which is available at the mosque at UiTM (Perak branch) and An-Nur Mosque in UTP (Tronoh). Several other factors are also analyzed such as what are the elements of landscape needed and what to be upgraded onto the existing opened spaces at the mosques.

### **The Perception of the Respondents of the Landscape and the Surroundings: Opened Spaces at the Mosques**

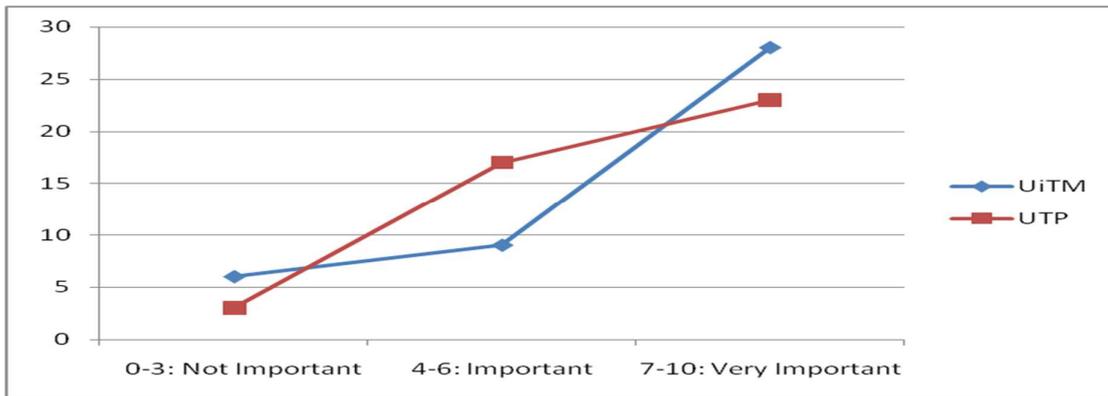
This research also studies the level of understanding of the respondents on the roles and applications of the opened spaces at the mosques. The research shows that only 30.2% of the total 86 respondents does not or lack the understanding of the concept of opened spaces at mosques and their applications. On the other hand, about 69.8% of the respondents is in the category of 'understand a bit', 'understand' and really understand the concept and the applications as well as the roles of opened spaces at mosques (refer to Figure 1).



**Figure 1: The understanding of the respondents of the roles of open space at UiTM mosque and An-Nur Mosque (UTP)**

The research also focuses on the perceptions of the respondents of the importance and the applications of the opened spaces at the mosque in UiTM (Perak branch) and An-Nur Mosque in UTP (Tronoh). These factors are studied to find out the correlation between the activities conducted and the level of understanding and satisfaction of the respondents of the open spaces available at the sites of the research areas (refer to Figure 2).

Amongst the 86 respondents, only a small percentage which is 10.5% who stated that the opened spaces at the mosques are not important. This is because considered the opened spaces at the mosques are only used for religious and spiritual activities. These respondents consider that the existence of the opened spaces at the mosques will increase the management costs and the expenditure of the mosques will increase.



**Figure 2: The perceptions of the respondents of the importance and the applications of the opened spaces at the mosque in UiTM (Perak branch) and An-Nur Mosque (UTP)**

According to [3, 7], the reason for lack of functions of the opened spaces at the mosques in conducting social activities, increasing congregations and developing the community is because of the fact that people who are left in charge of managing and administering the mosques are not really qualified. In their research, they suggested that the opened spaces and the surrounding areas of the mosques need to be given due to consideration and attention because the development of the community that centers around the mosques will be able to realize the concept of ‘amar makruf’ and ‘nahi mungkar’ in Islam.

However, the majority of the respondents said that the roles and the applications of the opened spaces at mosques are important with 30% said ‘important’ whilst 59.5% said ‘very important’. The findings from the data shows that the respondents support and agree with the notion of the roles and applications of the opened spaces at the mosques do play a part in developing the social side of the ‘ummah’ or community of Islam. The

mentioned that opened spaces of the mosques can be utilized for various purposes and can benefit the Islamic community. The open spaces of the mosques also become the attraction for the respondents to frequent the mosques. The findings are also supported by [1], where he stated that amongst the attraction of the congregations of the mosques is the availability of opened spaces at the mosques that fulfils the needs of the congregation, spiritually, physically and mentally coupled with the planning and designing of the surrounding landscape that is unique and safe.

### **The Importance of the Elements: Landscape and Environment of the Interior Opened Spaces of the Mosques**

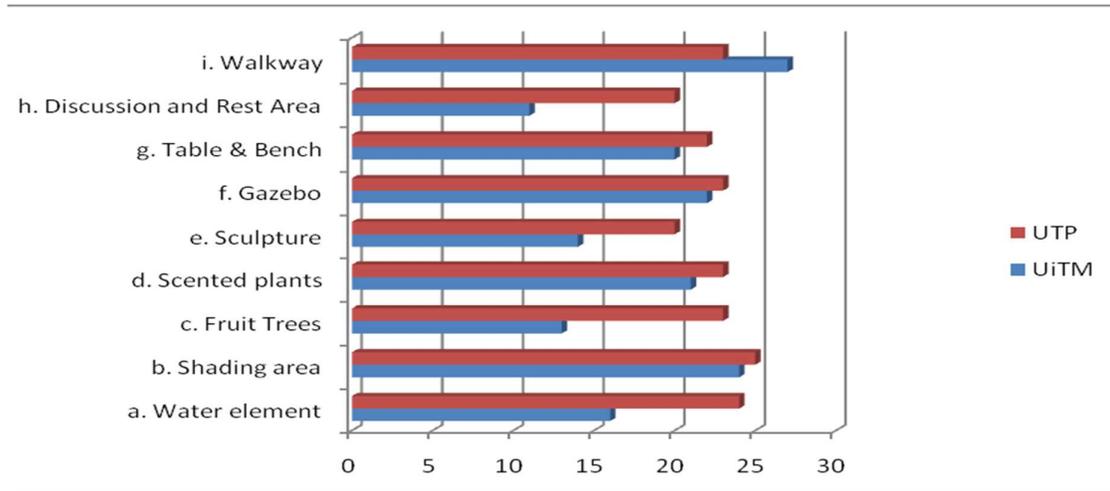
The overall analysis of the data shows about 62.68% of the respondents from UiTM (Perak branch) and 52.05% of the respondents from UTP (Tronoh) have chosen the scale 5 (totally agree) for all the elements of landscape that have been suggested in the questionnaire to be develop and upgraded at the opened spaces of the mosques. Such elements are water, covered areas, fruits, rocks/sculpture, gazebo, tables and chairs, resting areas and discussion areas outside of the mosques as well as a walkway which is more systematic. The findings also suggest that the elements and components of the landscape can evoke the interest for the respondents to carry out spiritual activities, as well as physical and spiritual activities around the surrounding areas of the mosques.

The respondents also agree of the important roles of the landscape on the opened spaces of the mosques that would create a unique, healthy and cheerful surrounding at the mosques, apart from giving motivation to the congregation to be present and frequent the mosques. The application and the roles of the opened spaces of the mosques also give an emotional effect to the mosque goers where the respondents feel cheerful and happy coming and being at the mosques. The respondents also stated the importance of the opened spaces at the mosques in transmitting the image and Islamic concept. According to a research done by [9], the elements of the designs and architecture are clearly depicted in the concept of Garden of Eden (Taman Firdaus) which is a garden that is designed not only to cater for the food and water of its occupants but also for the animals and birds that come into the garden, the trees, plants that bare fruits and aromatic herbs and small shrubs that give shade that are needed. The opened spaces are also able to give a chance for the people conduct active and passive recreational activities.

As can be seen in Figure 3, this research focuses on the importance of the elements of landscape in the application of the opened spaces at both mosques at the sites of the research areas. The findings shows that the elements have a higher percentage of 'very important' to be created at the opened spaces of the mosques since they provide the element of shades and greenery with the frequency of 70%, followed by gazebo with 62.5%, aromatic plants with 60.5%, water elements with 57.5% and tables and chairs with 57%. The element of shade gets the highest percentage because the respondents stated that the tress and the plants would be able to improve the environment and the macro climate of the mosques.

The data analysis shows that the opened spaces at the mosques will naturally attract the attention of the people going to the mosques if they are equipped with various facilities such as gazebo, water fountain, trees for shades and garden chairs. Based on the research done, 75% of the mosque goers or the community has shown interests and favoured the elements such as green plants, water flowing sound, rocks, flowers and the sounds of birds that exist at the open spaces of the mosques [9]. This clearly shows the importance of the surrounding areas of the mosques in being more natural to the mosque- goers or the community as a natural agent of health therapy [11].

The overall analysis of the average percentage of the existing and non-existing element of the landscape at both mosques which are under the observation is as shown in Table 2. The comparative correlation between the two mosques shows that there are several critical elements of landscape that are not presented according to the needs and suggestions of the respondents (refer to Figure 3 and Table 2) such as trees or fruit trees, aromatic and the elements of the landscape such as gazebo. There are other elements that are presented in the field areas of the research but they are in limited quantity and insufficient. Therefore, as a guideline based on the data analysis summary, the planning and the designs of the opened spaces at mosques need to consider several aspects. Some of the aspects are mentioned in verse Ar-Rahman at lines 48-76 which mentioned the characteristics of heavens which can be adopted in the application and the building of the opened spaces at mosques which are:



**Figure 3: The importance of the elements of landscape in the application of the opened spaces at Mosque UiTM and An-Nur Mosque (UTP)**

**Table 2: Verse Ar-Rahman lines 48-76, mentioned about the characteristics of heavens**

<b>Allah says which means:</b>	“Both heavens have a variety of trees and fruits” (Translation of Verse Ar-Rahman:48)
<b>Allah says which means:</b>	“Both heavens have two water sources that shine” (Translation of Verse Ar-Rahman:50)
<b>Allah says which means:</b>	“They lie down on rugs which the inner layers are made of thick silk. And the fruits from both heavens can be picked from a short distance”(Translation of Verse Ar-Rahman:54)
<b>Allah says which means:</b>	“They (the fruits) seem like gems of ‘yakut’ and ‘marjan’” (Translation of Verse Ar-Rahman:58)
<b>Allah says which means:</b>	“Both heavens look dark green in colour” (Translation of Verse Ar-Rahman:64)
<b>Allah says which means:</b>	“In both heavens have two water sources that shine” (Translation of Verse Ar-Rahman:66)
<b>Allah says which means:</b>	“They lie down on pillows which are green and rugs which are beautiful” (Translation of Verse ar-Rahman:76)

Based on the characteristics of the heavens that have been said by Allah in the verse above, there are several elements that need to be applied in the designing and building of opened spaces at mosques. The other attractions that could vary the functions of the opened spaces at mosques are by providing recreational facilities, recreational areas or light sports such as courts for ‘sepaktakraw’ or ‘silat’ (Malay traditional martial art) [17]. The facilities indirectly can attract the interest of the various generation, especially the teenagers to come to the mosques. The facilities can cater for the needs of all the Muslim generation spiritually, physically and mentally [1]. This is indirect can help in increasing the number of the congregation or people coming to the mosques. However, at the same time, the elements that were applied in the opened spaces at mosques needs to be stressed on and given proper thoughts and planning.

### CONCLUSION

This research as a whole enable the respondents to evaluate the importance of opened spaces at mosques and give the exposure to them of the functions of the opened spaces at mosques in attracting the people to come to the mosques. Through this research, the researchers are able to instil the understanding the mosques are one of the most important monuments in the Islamic civilization. Mosques are seen as a symbol of the existence of Islam in the areas. With the existence of the mosques, the general community will be able to see of the existence and development of the Islamic community in the area. The understanding that mosques have bigger and superior roles to the Muslims and not only as places of worship, especially to perform the daily prayers and ‘i’tikaf’ needs to be instilled in the young generation. The new generation and at large people need to know that once upon a time, mosques were the centers of administration, centers of culture, financial institutions and centers for the preaching of Islam, centers of community activities, places of recreations and also the centers of education for the Islamic community. The findings from the research show that the roles and applications of the opened spaces at mosques give positive impacts to the respondents from both mosques. They want the landscape and the opened spaces at mosques, as well as the surrounding areas of to be more conducive and attractive. This

is because the various opened spaces at mosques will be able to provide a space for them to get close to their Creator, to communicate and socialize amongst them. They would also be able to get close to the nature and healthy and cheerful surroundings, whilst doing beneficial activities during their stay at the mosques waiting for the time to pray. The various activities that could be done based on the functions of the mosques can also be involved by the various people from different walks of life including the handicap, old, young, children, men and women. Therefore, the designs of the opened spaces at mosques need to be given a considerable attention so that they would provide comfort and facilities to the people in the community without discriminating the age, social status and health. This study provides a valuable insight and impact to the application, planning and designing of the opened spaces at mosques in Malaysia. The findings can provide a sample and guideline in building and planning, as well as improve the opened spaces at mosques by the state and local authorities. As stated in the hadith of the Prophet Muhammad PBUH about mosques and the building world, there are two hadiths which have the message about the characteristics of the Islamic community during the area of the Prophet which was told by Abu who said that the prophet (PBUH) said, "whoever divides the community and the period of time, it is like trapping Islam at its neck." While Jabir reported that the Prophet (PBUH) said, "If a Muslim plants a tree, soon there will be a reward for him, for what is being eaten is a 'sedekah' or donation; what is being stolen from the tree, what is being eaten by the animals from the tree, what the birds eat is all a 'sedekah' for him. In short, there is no losing for him but a good deed on behalf of the Muslim. This hadith clearly shows how the surrounding and landscape can give benefits and have a huge function to the human beings with his Creator with other humans and the surrounding as well as the ecology. Besides that, Allah will bestow a huge 'syafaat' to His subjects. This study proves that the opened spaces at mosques are crucial and useful to the congregation at the mosques. The architectural designs become the inspiration to the strength of the 'ummah' of Islam from various ages. It is hoped that from the study, various parties will understand the approach and the roles as well as the importance of opened spaces at mosques so that the study would serve as a useful guideline in the designing of the mosques in Malaysia generally.

#### REFERENCES

1. Aldrin, A., A. Aida and B. Azizi, 2007. People's Perception of the Use, Function and Design of Open Space Surrounding the Mosque: A Case Study of Penang. In the Proceedings of the 2007 Seminar Kebangsaan Rupa Bandar Malaysia, pp. 359-364.
2. Destanto, K., 2004. Studi persepsi masyarakat terhadap tingkat kepentingan penyediaan ruang terbuka public, Phd thesis, Universitas Diponegoro Semarang, Indonesia.
3. Harjin, A.A., S. Asghar, A. Rashid, A. Rahman and A. Muin, 2002. Pengurusan masjid negeri Perlis: Satu tinjauan. Universiti Teknologi MARA, Perlis, Malaysia.
4. Jafari, N. and N. Utaberta, 2015. Identifying Functional Factor for Developing the Community Centre in Kuala Lumpur. *Applied Mechanics and Materials*, 747: 141-144.
5. Jamaludin, H. and N. Ahmad, 2009. Keselesaan dan Keselamatan Pengguna Masjid. In the Proceedings of the 2009 Seminar Kebangsaan Tamadun Islam, pp. 375-380.
6. Jasmi, K.A. and M. F. Ilias, 2011. Penggunaan Masjid dan Persekitaran Sekolah dalam Amalan Pengajaran dan Pembelajaran Guru Cemerlang Pendidikan Islam Sekolah Menengah di Malaysia. *Applied Mechanics and Materials*, 747: 141-144.
7. Joga, N. and Y. and Antar, 2007. Komedi lenong: Satire ruang terbuka hijau. PT Gramedia Pustaka Utama.
8. Mahazan, A.M. and M.F.A.W.R. Wan, 2003. Model pengimarah dan prestasi masjid di Malaysia: Satu pengenalan awal kajian. In the Proceedings of the 2007 Seminar Kebangsaan Pengajian Akidah dan Agama, pp. 160.
9. Masthurhah, N. and W.N. Anira, 2012. Model rekabentuk ruang terbuka masjid berdasarkan konsep Taman Firdausi dalam Al-Quran. Universiti Teknologi MARA, Perak, Malaysia.
10. Nooraini, N., H. Noor and M. Mashitah, 2009. Peranan masjid dalam kecemerlangan ummah berdasarkan sorotan sejarah. In the Proceedings of the 2009 Seminar Kebangsaan Tamadun Islam, pp. 475-482.
11. Olds, A.R., 1989. Nature as Healer. *Children's Environments Quarterly*, 6(1): 27-32.
12. Omer, S., 2005. Issues in the history and characters of the Islamic. Research Centre of International Islamic University, Selangor, Malaysia.
13. S. Omer, 2010. Some Lessons from Prophet Muhammad (SAW) in Architecture: The Prophet's Mosque in Madinah. *Intellectual Discourse*, 18(1): 115-140.
14. S. Omer, 2013. *Studies in the Islamic built environment*. IIUM Press, Selangor, Malaysia.

15. Yulia E.Putrie and L. Maslucha, 2012. Masjid berbasis masyarakat dan signifikansinya sebagai ruang publik. PT Gramedia Pustaka Utama.
16. Rasdi, M.T., 1999. Peranan, kurikulum dan reka bentuk masjid sebagai pusat pembangunan masyarakat. MS Thesis, Universiti Teknologi Malaysia, Johor.
17. Rasdi, M.T.H.M., 2010. Rethinking Islamic architecture. Strategic Information and Research Development Centre, Selangor, Malaysia.
18. Utaberta, N., N. Asif, M.T.M. Rasdi, M.Y.M. Yunus, N.A. Ismail and S. Ismail, 2015. The Concept of Mosque Based on Islamic Philosophy: A Review Based on Early Islamic Texts and Practices of the Early Generation of the Muslims. *Advances in Environmental Biology*, 9(5): 371-374.
19. Utaberta, N. and N. Spalie, 2015. Understanding the Potential of Modern Community Center as Social Architectural Spaces in Malaysia. *Applied Mechanics and Materials*, 747: 52-55.