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## ABLUTION FURNITURE FOR MULTIPLE USER (AFME)

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### ABSTRACT

Many mosques in Malaysia have several different types of ablutions platform; with a seat or without a seat. The ablution platforms are designed to assist Muslim ritual activity, which are a pre-requisite before performing their 5 times prayer daily. Thus, it is important to have an ergonomic, safe and hygiene ablution platform including its furniture to ensure the effectiveness of the ablution activity. This research recommended AFME as one of the options to help the Muslim users in their ablution activity.

### INTRODUCTION

This ablution seat furniture called as AFME, is an alternative product to assist the ablution activity by users and it is the best option for the mosque cleanliness and comfortableness [fig.1]. The combination of clean design for the seat and its foldable mechanism itself make it as a new innovative design that can improve the practicality of ablution platform in ablution area and its hygiene. AFME is a user-friendly stool, with a simple mechanism concept, which can be folded after being used. The whole body of the seat can be cleaned easily due to its water-proof material. AFME offers the ergonomical seat that can assist the users including the elderly and other PwDs. The design of the seat is inspired by the users who have been facing difficulties in taking their ablution before they pray in the mosque. AFME can be installed to give an easy access to the ablution platform for users when they are not performing the ablution in seating posture. Elderly and PwDs can perform the ablution with the aids of AFME by flipping the top seat. This seat furniture is proposed to be installed permanently in the ablution area. Nevertheless, it can be uninstalled and removed easily. In Islam, the term of "ablution" is a state that where it is prerequisite activities before performing prayer. An ablution is a washing or a cleaning of oneself, for personal hygiene, or a ritual washing or cleaning associated with religious observance (Spahic, 2009).



Figure 1 Ablution Furniture for Multiple User (AFME)

### AIM AND OBJECTIVE

1. To assist elder user in completing their ablution.
2. To make the product ergonomic and friendly user.
3. To design a new ablution platform that assist elder user in completing their ablution.

### METHOD

1. Line up study on ablution platforms.
2. Survey questionnaire on user preference; safety, material and mobility.

## FINDINGS

The line-up study of existing abluion platform discovered that most of the abluion platforms in many mosques in Malaysia are lacked in its function and they are inconvenient in asisting the users in their abluion activity (Table 1). The study also found that most of the abluion platforms are not ergonomically and aesthetically design to fit with the abluion areas and users requirements. Ahmed Mokhtar (2005) has come out with the abluion space design guideline based on the analysis done on the three kinds of abluion space connecting with the prayer hall. It was found that the best abluion space that should be mapping in the mosque need to consider the location of entrance and corridor that connects both abluion and praying areas. This help to avoid slippery, noise, humidity level and wet condition of the entrance. The guideline of the abluion space is useful for the abluion seat design as well especially to avoid the slippery and wet condition in order to ensure the comfort and safety level for abluion space users. By this study, it is hoped that the exsisting abluion platform can be upgraded to be one of the convenient facilities for abluion activity.

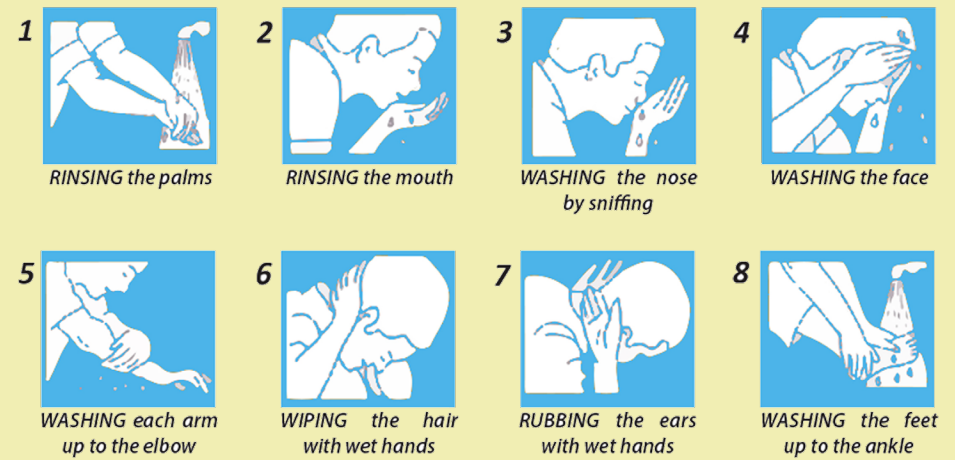


Figure 2 Process of ablutions

Ablution process involves some actions in certain sequences. As mentioned by Ahmad Mokhtar (2000), there are eight steps in abluion process. Firstly, rinsing the palms. Secondly, rinsing the mouth. Followed by washing the nose by sniffing. Then, started to wash the face, washing each arm up to the elbow, wiping the hair with wet hands, rubbing the ears with wet hands and finally wash the feet up to the ankle. These steps of abluion are usually performed on a designated abluion platform. The abluion platforms of Malaysia mosques are usually equipped with stool in fixed position and non-mobility. Furthermore, the stool are not fitly designed with ergonomic requirement for the users. In other cases, the abluion spaces have no stool on the abluion platform that could assist the PwDs including elderly in the abluion process. Therefore, mosques in Malaysia needs to have a new kind of seat furniture to assist the multiple users in their abluion process especially for those who are PwDs.

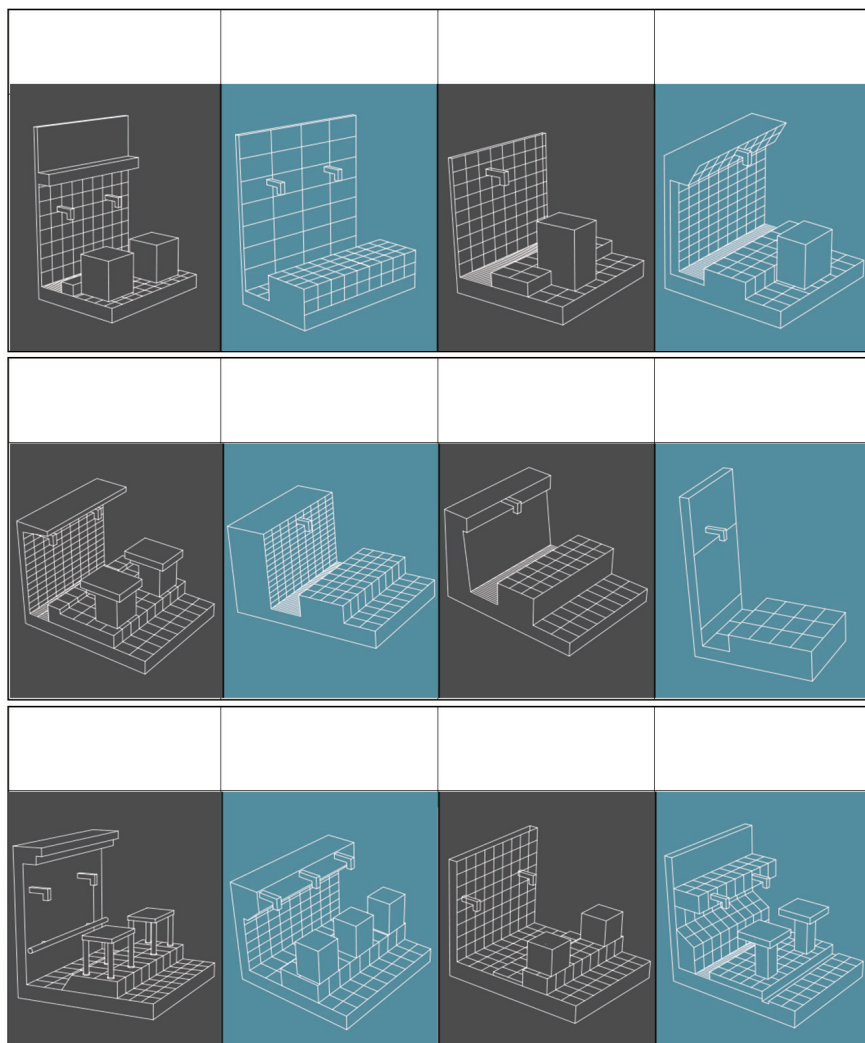


Table 1 Line-up of existing abluion platform

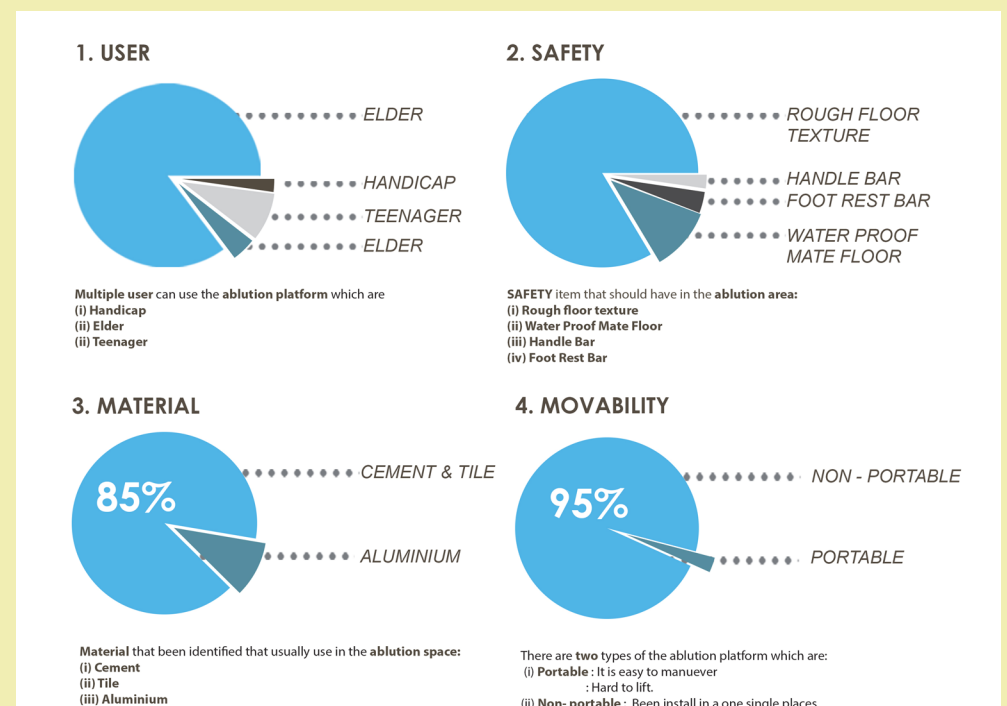


Figure 3 Analysis and finding

This new design for ablution seat started with several sketches for idea development stage [fig.5]. Basically, the ideations were varied according to several mechanisms of the seat which is collapsible. Manual sketches of the design idea have been developed to study the mechanism of the seat. In relation to this, several mock-up models have been developed in order to give an initial image on the overall design of the seat including the shape, dimension and the mechanism [fig.5].

During this mock-up study, the material selection for the final model making has been explored as well [fig.5]. The selected design has been further illustrated using 3D software, which was the Rhinoceros 5 to visualize the potential seat design proposal. At this stage, the suitable materials and dimension of the seat were finalized according to the concept [fig.8]. After the construction of the model, rendering process has been done to according to the selected material, pattern and color scheme.

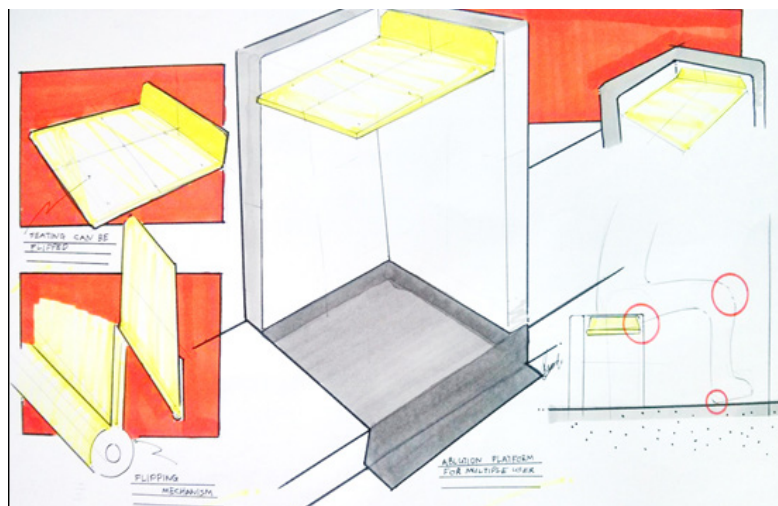
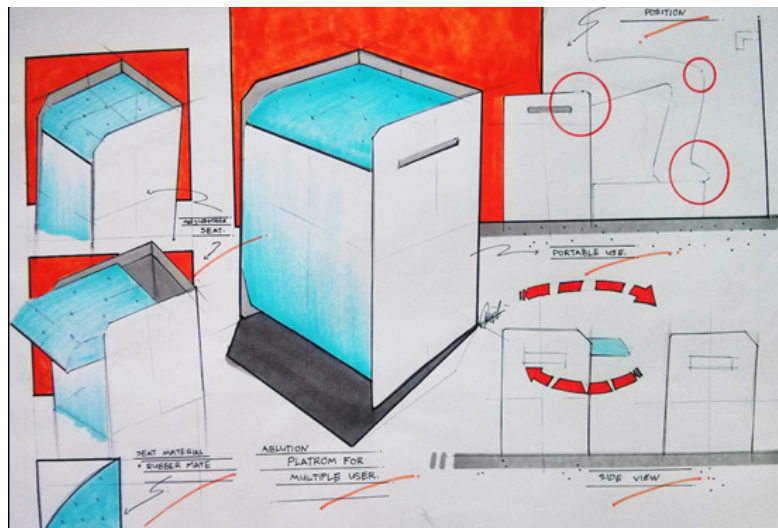
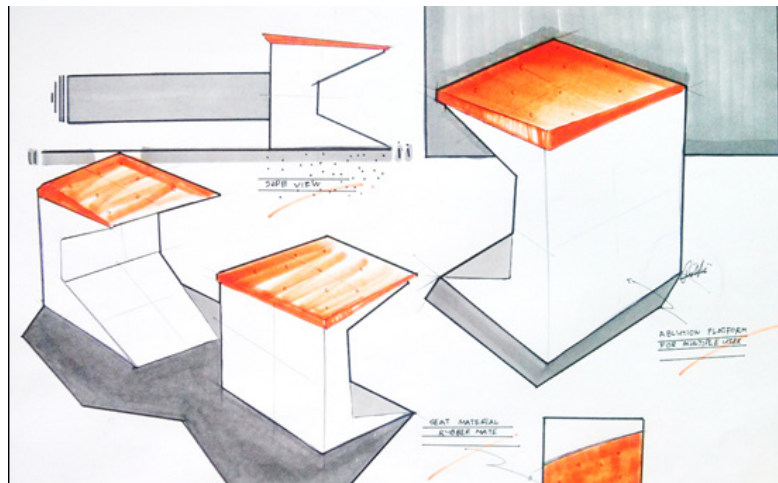


Figure 4 Sketches of idea development

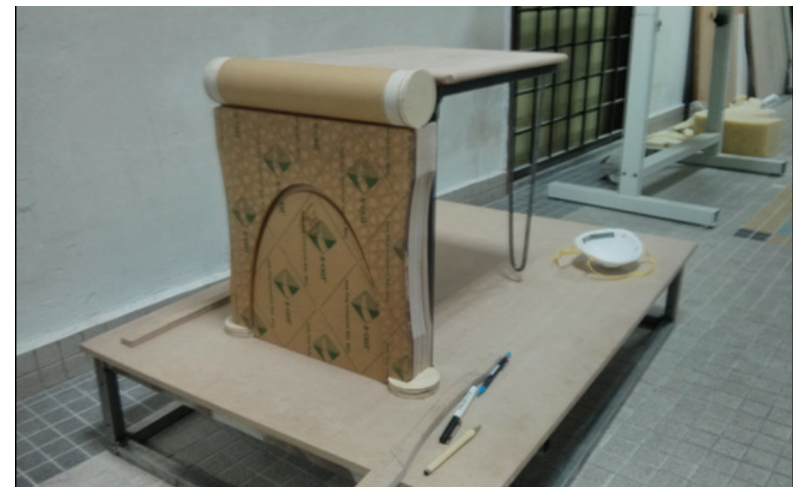


Figure 5 Model making process for final design



Figure 6 Final Product

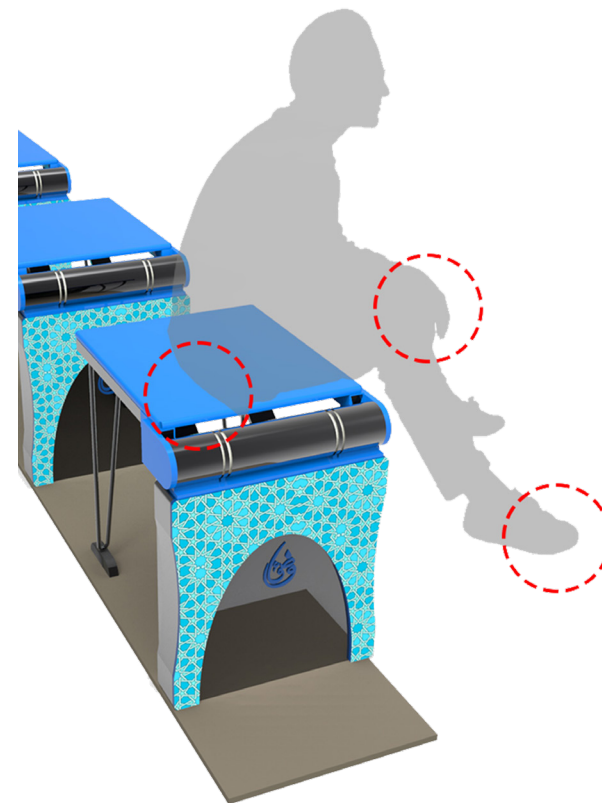


Figure 7 Three points of physical human body that always been encountered when performing abluition in sitting position

## CONCLUSION

AFME give the idea of easy-to-fold abluition seat, which can help to enhance the spacious of the abluition area. After the seat being used, it can be folded easily. AFME has a stopper which is made from a silicon on the ground base to give more support to its structure. A decorative Islamic pattern is applied to boost its unique and aesthetic value and it is synchronized with the abluition space in the Ahmad Shah Mosque, International Islamic University Malaysia Gombak. The top seat of AFME was made by the plastic injection molding and coating by a special rubber finishing to create the water-resistant effect. It will also prevent the slippery condition created by the seat. The seat can be folded and flipped by installing the hinge in its mechanical structure. AFME can be placed not only in the said mosque but in various abluition areas.

## REFERENCES

- Spahic Omer. 2009. Islam, Architecture and Urban Planning, Arah Publications:Kuala Lumpur  
Ahmad Mokhtar 2000, Design Guideline for Ablution spaces in Mosques and Islamic Praying Facilities)  
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