

**UNIVERSITI TEKNOLOGI MARA**

**PSYCHOLOGICAL AND  
PHYSIOLOGICAL COLOUR  
IMPACTS ON MALAY STUDENTS IN  
THE UNIVERSITY HOSTEL  
ENVIRONMENT**

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Thesis is submitted in fulfilment  
of the requirements for the degree of  
**Doctor of Philosophy**

**Faculty of Architecture, Planning and Surveying**

September 2016

## ABSTRACT

Colour is an environmental stimulus that exerts an influence on human beings in a multitude of ways. The colour effect has been abundantly unequivocally demonstrated in previous research on the integration of multimodal approaches, such as from the psychological, performance and non-performance and preferences assessments. Nevertheless, little research has been conducted locally on the university students with the integration of physiological assessment and consideration of subjects' living ecology, this being particularly true in the field of design. The fact that no specific colour scheme recommended for the interior of public buildings and double standard perceptions of the importance of visual stimulations are contributing to the monotonous looks at most hostel rooms in public universities. The condition becomes a norm to the students although numerous of research has posited the view that environmental stimuli are correlated with better performances and engagements while the existing white environment contributes to salient negative implications. Worse, inappropriate colours could cause low performances; indirectly affecting moods, *dysphoria* or depression and health problems among others. In this regards, physiology is another option in understanding the nature of human's responses to their environments and, in this context, the coloured environment. This is because studies have postulated that colours are detectable in other modality, such as through parasympathetic activities and sympathetic activities, in the human autonomic nervous system (ANS). The aim of this study was to propose an optimal colour for the hostel environment of female university students from their heart rate responses. The objectives of this study were to identify the colour effects of four coloured environments and its effect patterns in a specific duration of exposures across various lengths of exposures. It also intended to determine the appropriate colours for the hostel rooms that evidently significant in performance, physiologically as well as psychologically. The colours used were strong red, bluish-green, pink - as it is the most preferred colours among female students obtained from a conducted survey, and white as the existing students' environment. A test and re-test method of assignment were conducted to 24 female students in their coloured rooms or ecology, and changes in their performance, emotional responses and physiological responses were recorded. They were divided according to three types of exposures; short-term exposure, long-term exposure with one to two weeks of stay, and sustainable exposure, where subjects live in the coloured rooms for more than three weeks. The results showed that each colour has different effects with positive changes over time. In fact, some of the colours were capable of overturning adverse influences into positive responses. Based on the consistency patterns and their advantages points, the findings found that the bluish green colour is the most appropriate colour for longer to sustainable dwelling periods and therefore is the most suitable for the hostel room for this focused group. Based on the differences found in each colour, this study has suggested a few recommendations that can possibly contribute to a better stimulating coloured environment. Findings from the study may become the best practice for designers as well as universities' management themselves in designing conducive learning environment for better students' engagements and productivities.

## ACKNOWLEDGEMENTS



In the name of Allah, the Most Gracious and the Most Merciful

First and foremost, I would like to express my praise and gratification to Allah (*Subhana huwa taala*), the Creator of all mankind for His blessing, knowledge and ease throughout my PhD journey.

There are number of people to thank for their belief, assistance, guidance, support, wisdom and friendship throughout the research. Most of all, I am indebted to Assoc. Prof. Dr. Rodzyah Binti Hj. Yunus, my supervisor and my second supervisor, Assoc. Prof. Dr. Normahdiah Sheik Said from the Universiti of Putra Malaysia (UPM) for their guidance, encouragement and support throughout the process. Their belief in my ability, profound knowledge and their constructive comments on my research has leads me to this stage.

My deepest appreciation to Asst. Prof. Dr. Mimi Iznita Binti Iqbal, the Clinical Psychologist from the Psychological Department at the International Islamic University Malaysia (IIUM), and Dr. Ramzi Sunil Bin Abdullah (MD) from Amar Clinic, for their expertise, valuable advices and constructive comments. To En. Hasnor Bin Mohd. Jan from the UiTM Student Affairs, En. Nor Azlan Bin Mohammed from the UPM Student Affairs, the staffs at the students' residential from both universities and especially the management staff of Kolej Seroja UiTM, I am extremely gratitude for their kind cooperation and time. My deepest gratitude to the students who participated in the experiment, thanks for your cooperation and those who contributed directly or indirectly but their names are not mentioned here.

My special thanks also go to the International Islamic University for the study leave, the Ministry of Higher Learning Malaysia for the given scholarship and the Universiti Teknologi MARA for the Excellent Fund given to support some expenses of the research. My friend Zalina Samadi and colleagues, thank you for your support, sharing moment and encouragement.

Last but not least, I would like to extend special thanks to my beloved parents, Hajjah Kasmah binti Mohd. Diah and Haji Abdul Jalil bin Isnin, for raised me with unconditional love. Not forgetting to my sisters, brother and their family, especially Dr. Habibah, who was always willing to teach me and helping me with the out sourcing work. It is absurd to complete this work without her help. Most importantly, I would like to extend my gratitude and love to my husband, Nurul Hamiruddin bin Salleh and my wonderful children, Nur Fatini, Amir Muzaffar, Amir Muhsin and Nur Fadhilah for their patient and support for all this while. I am grateful for their devoted love and support in making this work possible. Without their love, I could not finish this study.

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