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SUSTAINABLE BUILT ENVIRONMENT

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STUDY ON PSYCHOLOGICAL EFFECT FROM COLOUR IN INTERIOR SPACES AMONG ARCHITECTURE STUDENTS OF UITM SERI ISKANDAR.

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ABSTRACT

Colour is a part of the main role in interior spaces to give impact to human psychology, performance, and behavior. Colour can also enhance the interior spaces' function and improve the environment in the space. Choosing colour with the concept in mind can also help to create a more aesthetic space and one that is loved by the client. This paper provides a brief conceptual overview of the significance of colour in interior space and how human psychology reacts to it. A study on previous research and references such as books will be done to help providing a fact on the importance aspect of using up colour in interior spaces and its effects to human psychology. Questionnaire will be sort out to the architecture students in UiTM Perak Branch, Seri Iskandar Campus to interpret how the colour psychology give benefits to designing interior spaces. It is hoped that this paper may possibly provide guideline on psychological effect from colour in interior spaces.

Keywords: *Psychology, behavior, performance, colour, interior spaces*

INTRODUCTION

Given how strongly colour influences human psychology, choosing the right colours for a design is essential. According to research, hue, brightness, and chroma are the three basic characteristics of colour, and changes in these characteristics can affect how the brain functions. For instance, whereas cool hues like blue and green tend to have a relaxing impact, heated hues like red and orange can arouse feelings like passion or excitement.

One of the most crucial elements of any room's design is colour. It can set the tone or bring back memories of a far-off location. Even smiling, letting go of worry, and drifting off to sleep are all effects of colours.(Flanagan, 2019)

PROBLEM STATEMENT

Nowadays, designers are unaware on how the colour can affect our emotion, behavior and performance. Currently, many designers based their colour choices on their feelings. Different hues have various emotional meanings and can affect a room's ambience and mood. Darker purple hues, for instance, are linked to wealth and royalty, whilst lighter blue hues are linked to serenity. Most of the architecture students did not know that the color they choose is either compatible with the space or not. This may lead to confusion of the space's function and will affect the user's psychology (Anna, 2019; Foyr, 2020).

Other than that, some of the architecture students did not know how to choose proper colour while designing their interior space. In result, it will decline the user's performance in the area such as study and working area (Anna, 2019).

The primary objectives of this research are as follows: To understand suitable colour for designing interior spaces to enhance the space function as an architecture student; To have a better understanding of how the colour chosen in design can effect human's behavior, performances and psychology. The scope of the study will be carried out among architecture students from UiTM Seri Iskandar, Perak. This study will be using questionnaire survey as a medium to gain data and perspective from architecture students about the colour effect to human psychology. This study also aims to identify the importance of choosing a right colour for interior spaces to overcome discomfort of the space user.

LITERATURE REVIEWS

Introduction To Colour Psychology

The study of how colours affect people's behaviour, performances and psychology. is known as colour psychology. Our responses to colours are the result of a nuanced web of interactions among our individual preferences, our family heritage, and our cultural background. (Rizzi, A., & Bonanomi, C. ,2012)

Subtle changes in perception can be caused by colour. For instance, it can improve or diminish how food tastes. Even the effectiveness of medicines and placebos can be improved with the appropriate colours. For instance, although red or yellow are typically used for stimulants, blue is utilised for relaxing or sleep-inducing medications. (Rizzi, A., & Bonanomi, C. ,2012)

Every company intentionally uses colour in their logo, packaging, ads, and websites. The ability to choose colours that complement the brand and the company's objective is a key component of high-quality graphic design. It is possible and necessary to utilize colour psychology to trigger the desired reactions from customers; this is one of the objectives of the designer.

Figure 1 : Colour Cycle Of Colour Psychology (Source: PMLive , COUCH Health, 2020)

Colour Effects On Human

There hasn't been much in-depth scientific research on how colour affects human psychology. However, colour psychology plays a significant role in interior space and other design fields.

Emotions

Figure 2: Colour And Its Emotion Associations (Source: Meandyou.co.uk, 2019)

Every colour has a unique emotional connotation. People who observe colour palettes can experience different feelings and moods as a result of the use of colour in design. The user experience can be significantly enhanced and desirable behaviours, such as conversion rates, can be increased by using colours properly.(Cameron Chapman, 2019)

It is not clear why colours affect how individuals feel. There are a variety of factors that can affect how someone feels after being exposed to a certain hue. Personal associations with colours are a significant factor. A person might favour blue throughout their life if, for instance, blue was the colour of their childhood favourite stuffed animal. Or, on the other extreme, if they were struck by a blue car when they were young, they can have a strong negative emotional reaction to the colour blue.(Cameron Chapman, 2019)

However, because human experiences are universal, it is feasible to foresee how most individuals will react to a particular colour. For instance, because most people have seen plants develop, green is frequently associated with nature and growth. Because it is connected with things like the sky and water, blue is virtually always calming.(Cameron Chapman, 2019)

Cultural influences also exist. For instance, the colour purple is still thought of as being luxurious because it was exclusively worn by royalty because it was so expensive and hard to come by in many ancient cultures. Although it isn't a natural association per se, it was a big part of the cultural zeitgeist for a long enough period of time that it has ingrained itself into the psychodynamic approach.(Cameron Chapman, 2019; Sara O. Marberry & Zagon, 1995)

Performances

Color may have an impact on more than just mood and feelings. Additionally, it may have very real effects on performance. For instance, researchers discovered that the colour red had a detrimental effect on test performance in a study that was published in the Journal of Experimental Psychology. Participants who were assigned a red participant number (as compared to a green or black one) performed 20% poorer on tests than their contemporaries. That's a big difference, and you can utilise it to affect how users feel.(Cameron Chapman, 2019; Vetter, 2019)

Red colour need not necessarily be negative. It seems to be that wearing red uniforms gives a benefit in research of athletic performance. At the 2004 Summer Olympics, jerseys or protective gear were distributed at random to competitors in the four sports of Greco-Roman wrestling, freestyle wrestling, boxing, and taekwondo. 19 out of the 29 weight classes witnessed victories for the athletes in red. The teams wearing red clothes also appeared to have an advantage in similar soccer research.(Cameron Chapman, 2019; Vetter, 2019)

Red's historical associations with aggressiveness and rage may help to explain this. Either the red jerseys make their wearers feel more aggressive, or the red uniforms make their opponents feel more fearsome, which hurts their performance. The outcomes are noteworthy in any case.(Cameron Chapman, 2019; Vetter, 2019)

Behaviours

As was already mentioned, colour has an impact on performance, but it also has an impact on user behaviour as a whole. Numerous case studies comparing the efficacy of various colour selections on topics like calls to action have been conducted. (Cameron Chapman, 2019; Sara O. Marberry & Zagon, 1995)

HubSpot conducted a case study on Performable's website to determine the impact of changing a button from green to red, and the findings were incredibly conclusive. A designer's first intuition might be to use green rather than red since green is connected with "go," whereas red is associated with "stop," which could cause people to hesitate before clicking. However, the data showed that the red button performed 21% better than the green. However, green consistently performs better than yellow or orange in other case studies. (Cameron Chapman, 2019; Vetter, 2019)

Colour In Spaces

A space can be created or shattered by colour. Interior design involves a crucial component called colour selection for a facility's spaces. It's a good idea to have a basic understanding of colour to enhance the functionality of the spaces. (Sara O. Marberry & Zagon, 1995; Facility Management Flooring Quick Read, 2008; Warwick, 2021)

It's crucial to keep the purpose of the area in mind while selecting the colours for the walls and floors. Warm, energising tones might be a nice option to think about, for instance, if energetic activity is being performed in the area. When people may relax, cold tones may be more suitable in break spaces to calm the mind. (Flanagan, 2019; Kopacz, 2012; Mikellides, 2012; Rizzi & Bonanomi, 2012; Management Flooring Quick Read, 2008)

Figure 3 : Colour Used In Dining Area (Source: MIDOR Interior, 2018)

RESEARCH METHODOLOGY

Mix of quantitative and qualitative method will be used in pursuing this research. Data will be gathered through two major methods, analysis and comparison from questionnaire and literature reviews which involve textual or visual analysis from publications. These variables will be analysed to provide data that will form the conclusion of the study.

A questionnaire survey via Google Form is chosen because it allows for adequate flexibility in how one approaches the research while keeping the final result in mind. Specific groups' behaviours, convictions, and observations are recognised, reported, and analysed. People's responses to surveys can also inform us things that are hidden from our immediate view.

To determine the understanding of colour effect to human psychology, this method entails selecting and conducting a survey questionnaire. It will be in the sampling method, which will be distributed among architecture students from UiTM Seri Iskandar.The first 100 samples will be collected, and will be analys and compared to each of the samples. Two sets of questions and issues will be addressed. One set includes general writing prompts and topics such as the basic understanding of colour psychology and its characteristics. The second set is a graphic format with images of interior spaces, each with its own colour scheme that can bring forward the function of the spaces.

The data obtained from the method of questionnaire and literature review will be gathered and compiled in the next chapter of the report. In order to draw a conclusion about the research, the data collected will be compared to earlier research through publications that use visual or textual analysis.

RESULTS AND FINDINGS

This chapter will show the data gathered from questionnaire survey conducted before. The data gathered are collected from architecture students from UiTM Perak Branch, Seri Iskandar Campus, Perak. The data consist of variable answer regarding colour effects on human psychology and emotion.

Respondent's Profile

From the Figure 4 below, 100 respondents of data were collected from architecture students in UiTM Perak Branch, Seri Iskandar Campus. 52% of respondents are female and the rest are male. The majority of the respondents are from Semester 5 & 6, which is 49% overall. 25% of the respondents are from Semester 3 & 4. 18% of the respondents are from Semester 1 & 2, while another 8% are from Semester 7 & 8.
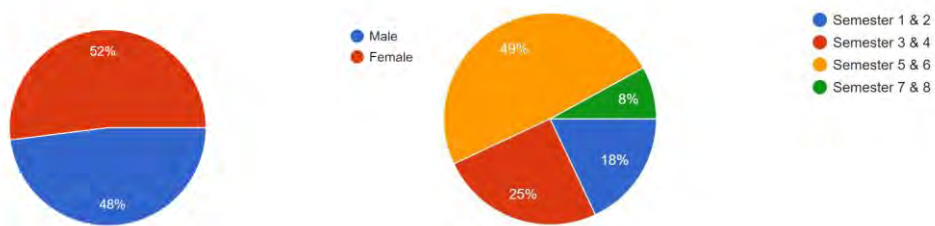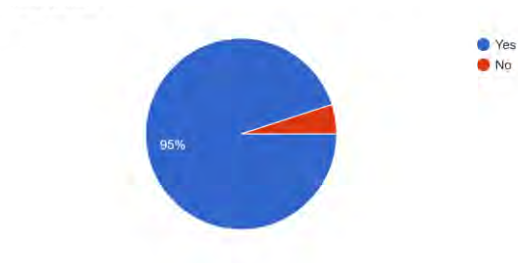
Figure 4 : Respondents' profile

Interior Space Colour Understanding

The respondents were asked about their opinion about colour affecting human psychology. Based on Figure 5, 95% of respondents agree that colour can affect human psychology. However, another 5% of respondents did not agree that colour can affect human emotions, behavior, and performance.

Figure 5 : Respondents's answer

The responders were asked to provide the best explanation for why it is critical to choose the right colour when creating interior spaces. According Figure 6, 65% of respondents believe that colour has an impact on human psychology and that it is critical to choose the right colour to avoid confusing the user in the places. Another 21% of respondents believe that colour can improve the space's functionality to meet its needs. While the majority of respondents agree that colour should be chosen carefully to make the environment more visually appealing.
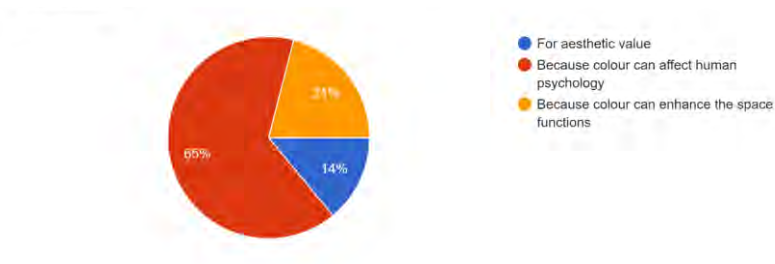
**Figure 6 : The importance of colours in interior spaces**

The respondents were asked to choose the best solution to the issue of how colour affects human psychology. According to Figure 7, 73% of respondents agree that colour may play a vital part in expressing information, producing various moods, and even influencing people's decisions. Color, according to 11% of respondents, may have a wide range of affects, from enhancing our moods to triggering anxiety. While the rest of the respondents agree that colour can be utilised to boost worker productivity.
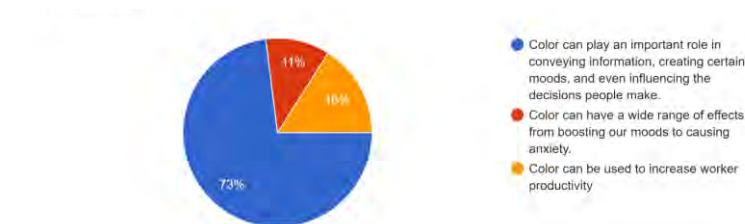

Figure 7 : Colour effect on human psychology

The responders were asked about the benefits of the warm colour. According to Figure 8, 96% of respondents feel that warm colours are positively related with positivity, passion, happiness, enthusiasm, and energetic, while the minority of those polled disagreed with the claim.
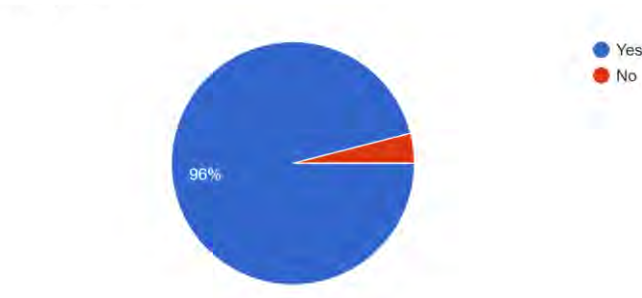

Figure 8 : Respondents's answer

The respondents were questioned about the advantages of the cool colour. According to Figure 9, 95% of respondents believe that cool colours are connected with reserved, relaxed, professional, and calming characteristics. The remaining respondents were divided on the statement.
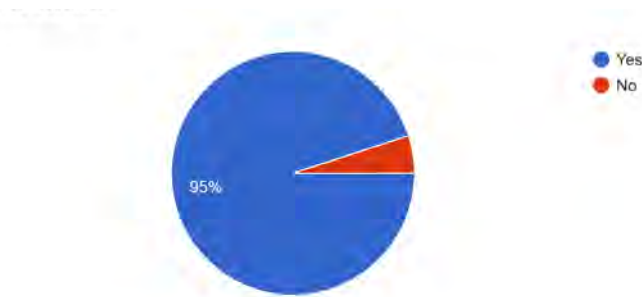

Figure 9 : Respondents's answer

The respondents were asked about which colour is suitable for a learning environment. Based on Figure 10, 54% of the respondents agree that warm colours are suitable for learning spaces. 27% of respondents believe that cold colours are appropriate for a learning environment, while the remaining 19% believe that neutral colours are more appropriate.
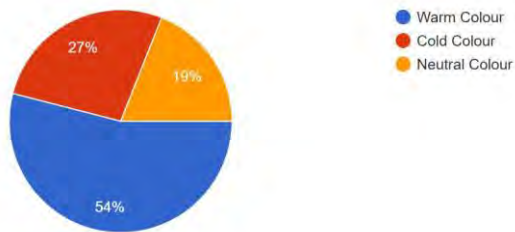
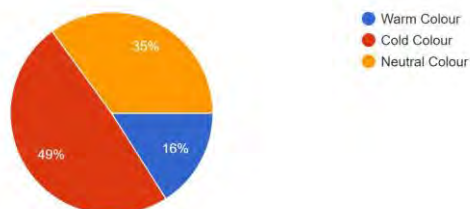**Figure 10 : Suitable colour for learning environment**

The respondents were asked about which colour is suitable for a dining environment. Based on Figure 11, 64% of the respondents agree that warm colours are suitable for dining area. 25% of respondents believe that neutral colours are appropriate for a dining area, while the remaining 11% believe that cool colours are more appropriate.
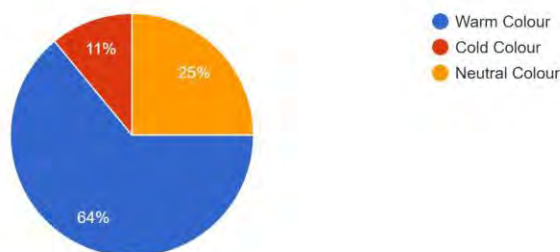
Figure 11 : Suitable colour for dining environment

Finally, respondents were asked which colour is best for a working setting. According to Figure 12, 49% of respondents believe that cool colours are appropriate for dining areas. According to 35% of respondents, neutral colours are ideal for a working environment, while the remaining 16% say warm colours are more appropriate.

Figure 12: Suitable colour for working environment

CONCLUSION AND RECOMMENDATION

In conclusion there is a factor that must be considered in order to create excellent design in interior spaces. A good idea and concept from designers should be the most important aspect in designing an interior space, followed by their approach to selecting the proper colour and a greater knowledge of human psychology. Aside from that, the colour tone chosen must be appropriate for the function of the area to avoid confusion. Furthermore, because the purpose of this research study is to gain a better knowledge of human behaviour, performance, and mood in relation to colour in interior spaces, it is believed that the proper colour can genuinely increase human performance and mood in certain locations. Cool colours, for example, are better suited for working areas and high-pressure environments since they help soothe the user's mind and soul. It is also critical to design interior spaces around social activities, as warm colour is more suitable with activity area as it can improve the breath circulation and give more energy.

It is recommended for UiTM Seri Iskandar to use a suitable colour in the studio and study hall to enhance the students' behavior and performances and boost students' psychology to study and work in comfortable environment. This way, the students may give more good reviews of the UiTM in the future regarding the facilities provided.

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Sekian, terima kasih.

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setuju.

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Saya yang menjalankan amanah,

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