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THE PREFERENCES OF EMPLOYEES ON SURROGATE WINDOW AND VIEW IN WINDOWLESS OFFICE

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Abstract

Window and view significantly influence the visual comfort in the workspace. It is important to ensure an effective working environment as the employees normally spend one third of their daily life in the working space. Lacking of windows with appropriate view in the Malaysia offices, especially the intermediate shop offices lead to the problem of windowless working environment. It is essential to have natural view through window for contributing the visual comfort. Objective of this study is to identify the important of visual comfort and the preferences of employees on surrogate window and view in windowless office. The inexistence of real view through window may require surrogate view as replacement. This study proposed surrogate window and view as an immediate solution to improve the problem. A survey has been done in five selected case studies by using the online questionnaire that is more convenient and effective. The result reveals that the most preferred surrogate window and view is the window with sea view (mean=2.938, S.D=0.244); the least preferred voted by employees is surrogate window with riverine view (mean=0.088, S.D. = 0.284). In conclusion, this study proved that the preferred surrogate window and view among employees is the view to sea, gender and age do not affect the result in this study. Sea view should be applied in a windowless office as a surrogate window and view to improve the visual comfort in the working environment.

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Keywords: Effective working environment, preferences on view, surrogate window and view, windowless office.



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1. Introduction

Nowadays, offices in Malaysia are not only located at office building. It can be located at shop-lot, apartment, also studio that may affect the effectiveness of working environment. Working environment is very important to every employee. For employees nowadays, high salary is not really important compare with a comfortable working environment. A healthy working environment can help to maintain a long term career but high salary can only be achieved with working experience and productivity of work. (Raza, Akhtar, Husnain, & Akhtar, 2015). Employees prefer a comfortable working environment compare to high salary position with uncomfortable working environment. Employees think health is much more important. Working in a comfortable indoor environment can raise the productivity of employees. However, visual comfort plays an important role to achieve a comfortable working environment. It is not only affecting the productivity of employees, but also has impact on health issues and well-being of the occupants in the working space. In this day and age, employees in office almost everyone have computer on desk and employees spend most of their time in office doing task by using a computer. This causes physical and psychological effect to employees. By spending a long period with computer can cause eye strain. The main reason by having eye strain is lack of interaction with nature. There are numbers of office with minimum access to window affects employees' mood during work. The majority of offices have problem with accessibility of view through window. It is good for employees in office interact with natural environment. Since that natural view is hard to get in Malaysia offices, surrogate view is proposed in this study as a replacement towards window. Surrogate view is rarely used at the working environment. But it has already been used in hospital for many years. Visual art in hospitals heals the patient psychologically as an extended medium of health care to patient and improve patient satisfaction (Nielsen, Fich, Roessler, & Mullins, 2017). Surrogate view has healing effect to human. Human can be affected by the thing they see. So, surrogate natural view in the office can help to enhance the productivity of employee and improve the quality of life of employees. The reason of this study focuses on wall articulation is because the occupants face the walls at eye-level while working. In the meantime, visual comfort has always been related to the glare, but view is an issue that has yet been paid attention to. While behaviors can be influenced by wall articulation, in certain human interactions, it can also have an effect on job satisfaction. Job satisfaction can be affected by employees' emotion. A positive emotion can lead to higher productivity on work (Locke, 1976). Job satisfaction is related to the satisfaction of physical environment. When the working environment is comfortable and achieve satisfaction of employees, it will be more effective to complete a job. (Veitch, Charles, Farley, & Newsham, 2013). An effective working environment should satisfy employees with physical environment that follow their needs (Vischer, 2008).

1.1. Surrogate Window and View

Surrogate window and view is medium of interaction between human and nature. Surrogate window and view is a replacement of window in windowless space especially windowless working environment. Surrogate window and view have been used in hospital for healing purpose since long time ago. Surrogate window and view is a kind of spiritual communication between human and nature.

1.2. The Importance of Surrogate Window and View

Surrogate window and view can consider as an art therapy which has healing power that integrated with health care. By applying surrogate window and view is an easier way to enhance visual comfort in windowless working environment. There are some factors that can affect by surrogate window and view:

- Therapy and Healing
- Wayfinding
- Productivity of employees
- Creativity of employees

1.3. Content of Surrogate Window and View

Surrogate window and view should be nature view which is landscape view. Landscape view is the view that fills with natural things such as forest and clear blue sky. In this study, there are five different types of landscape view which are just available in tropical countries due to the place identity:

- Riverine
- Sea
- Mountain
- Rainforest
- Built scape

2. Problem Statement

Nowadays, a lot of offices in Malaysia are facing problem of windowless working environment. Offices in the shop houses and apartment aim at cutting the cost more compared to having an office in an office building. Besides the leasing costs of the commercial properties, the tenants will also pay for the other expenses. It is common for the tenants in Malaysia to pay for the utilities, especially electricity and water bills. However, in some other locations, tenants are required to pay something else which is called Common Area Maintenance (CAM). It is a maintenance fee that has to be paid in the office buildings. This fee includes cleaning the hallways, trash removal, restocking the bathrooms. Most of the employees in the offices also face health problems such as fatigue and eye strain. This is because the employees focus on the computer screens for a whole day long. They do not have the opportunity to look at the natural elements outside the windows. The ciliary muscles tighten when focusing on the tasks that are visually intense, such as continuing to focus on a book or computer monitor. This will irritate the workers' eyes and make their eyes feel uncomfortable. Giving the eyes a chance to focus on an object which is far away at least once an hour can alleviate the problem. However, eye strain is a common phenomenon in the office. This can cause the employees to make wrong judgment, get distracted during working, and also affect the ability to handle stress. Eye strain and fatigue do not have any remedies.

3. Research Questions

As a result of the shortcomings identified in the literature and in practice, this research has raised the following research questions:

- How can the visual comfort in windowless office improved?
- What are the reasons that make office could not achieve visual comfort?
- Will surrogates window and view works instead of having natural view?

4. Purpose of the Study

The purpose of this study is to enhance the important of visual comfort of windowless office by using surrogate window and view. This can achieve by understanding of factors of surrogate window and view. People live indoor most of the time, so it is highly demanded to create a pleasant environment to prevent disease, lack of motivation and sometimes even sickness. Previous study shows that if window is the primary medium of visual comfort in office, there are huge improvements on productivity among the employees. The goal of this research is to awaken public opinion to the importance to reach a high visual comfort quality, especially in the windowless office environment, to improve performance and satisfaction at work. In order to achieve the research aim, two key objectives were set. The objectives are;

- Identify the important of visual comfort in windowless office.
- Evaluate the preference of surrogate window and view in the windowless office in Malaysia.

5. Research Methods

Survey method is conducted in study and there are five selected sample from specific office employees in Johor Bahru and Selangor, Malaysia. Online questionnaire is applied in this study to find out the preferences of surrogate window and view among employees who work in windowless working environment. In the questionnaire, there are two different sections, which are demographic section and the preferred surrogate window and view. The question carry out different gender and different age group might have different preference on view. Section of preferred surrogate window and view, there are five different landscape can vote by the respondent which is view to sea, riverine, rainforest, mountain, builtscap. View in Malaysia were chosen in this study due to place identity. People easily get affect by what they familiar with. (Purcell & Nasar, 1992).

6. Findings

In this section, there will be five different categories of view for respondent to choose which are riverine, sea, mountain, rainforest and builtscap. Starting from 0 points to 4 points, 0 points is not preferred at all while 3 points is most preferred. For each of the category have there are two different content placed in the questionnaire.

Table 01. Distribution of sample according to preferred surrogate view of employees in office.

Category	Frequency (Points)	Percentage	Mean	Std. Deviation
Builtscap	86	14.93%	1.075	0.265
Mountain	161	27.95%	2.013	0.251
Sea	235	40.80%	2.938	0.244
Riverine	7	1.22%	0.088	0.284
Rainforest	87	15.10%	1.088	0.284

Table 1 shows that view to sea is the most preferred view among employees. In order for nature to play its best relaxing role, it has to be a preferable place for employees, so that it works well. The nature view can directly benefits to the viewer. Office environment with view to nature brings positive emotion to the worker and healthier at work (Kaplan & Rachel, 1993). Dr. Marc Tay, medical director and senior ophthalmic consultant surgeon at The Lasik Surgery Clinic had mentioned that people are misunderstood that looking at greens can relax our eyes, the truth is looking at distant object can relax the eye muscle View to sea with full of blue colour can brings employees calm down and also sea view normally is a far view, it has a same theory of looking green. So, sea view is the view with quite a distance, it can relax our eye muscle while looking on it.

Table 02. Distribution of sample according to preferred surrogate view of different gender employees in office

Category	Female(Mean)	S.D	Male (Mean)	S.D
Builtscap	1.05	14.93%	1.11	0.311
Mountain	2.00	27.95%	2.03	0.162
Sea	2.95	40.80%	2.92	0.273
Riverine	0.10	1.22%	0.08	0.273
Rainforest	1.10	15.10%	1.08	0.273

Table 2 shows the comparison of preferred surrogate view in different gender. One possibility is that personality differences between men and women, such as those embodied in the gender schemas discussed above, are reflected in gender differences in surrogate window and view preferences. For example, if women do indeed tend to be more sentimental and submissive in personality, and men more dominant and forceful, then these personality differences could underlie some of the differences with forcefulness being expressed in a preference for linearity. But in this result, the most preferred surrogate window and view two different gender are same. Gender does not have any significant effects on the choice of preferred surrogate window and view.

Table 03. Distribution of sample according to preferred surrogate view of different age group employees in office

Category	Age under 18 (Mean)	S.D	Age 18-30 (Mean)	S.D	Age 31-50 (Mean)	S.D
Builtscap	1.17	0.408	1.08	0.279	1.04	0.196
Mountain	2.17	0.408	1.98	0.251	2.04	0.196
Sea	3	0	2.98	0.144	2.85	0.368
Riverine	0	0	0.13	0.334	0.04	0.196
Rainforest	1	0	1.06	0.245	1.15	0.368

The results in table 3 indicate that there are no any significant differences in the surrogate window and view preferences of different age groups although different people require different environments in order to perform well, depending on personal factors and the task they are performing. Different users have different preferences in choosing surrogate window and view. Even employees in different age group have different needs to satisfy a comfortable working environment. But in this result, different age group seems to have same preferences on choosing surrogate window and view.

7. Conclusion

This research explores the importance of visual comfort and preference of employees on surrogate window and view in windowless office environment. Different types of offices in Malaysia were the targeted in this research, as offices in Malaysia are not only located in office building, it can be located at shop house and also apartment. Window is an important communication medium in office environment to provide visual comfort to employees. It is also an element that subsequently affects employees' quality of life. Visual comfort not only can affect physical effect and also psychological effects to employees.

The research identified the factors of windows and view functioning in the working environment. The research seeks to evaluate the preference of surrogate window and view in the windowless offices in Malaysia. Different background of the employees can affect the preference on view of the employees. The research also proposed the types of surrogate window and view to further improve the visual comfort in the windowless working environment.

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