

# User Perception at Different Architectural Office Setting: Case Study at International Islamic University Malaysia

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**Abstract.** A widely accepted assumption is that better interior environment produces better results is designed with due importance to the nature of job and the individuals that are going to work in that office. A various studies have been made by previous researchers that have proved these co-relations but the same studies are still fairly new in Malaysian context. Architectural office therefore represent a challenged in nature of job and the individual as it need to be in the environment that is not just conducive for their task but also a conducive environment that will supports creativity. The main objectives of this study are to find out the user perception of two different office layouts and to get the user perception on the actual condition and other variables associates with office condition. For this purpose, a survey has been conducted with a control group of respondent using questionnaires.

**Keywords:** Office Layout, Office Setting and User Perception.

## 1. Introduction

The environmental psychology of workspace is a rich and diverse field of study that is growing fast. As human beings in all parts of the world spend increasing amounts of time in offices in a wide variety of buildings, the effects of these environments on occupants' performance, health and morale urgently needs to be understood. The knowledge yielded by research in this field will inform employers' decisions as well as corporate investments in the work settings they create, and will assist and improve the building industry as designers, facilities managers; leasing agents and construction professionals acquire it. Business managers also need to understand more about how workspace affects their personnel, as companies need to become more agil and making on-going changes to workspace (Joroff, Porter, Feinberg & Kukla, 2003). A various studies have been made by previous researchers that have proved these co-relations but the same studies are still fairly new in Malaysia context.

In Malaysia, workplace environment and its related issues are significantly neglected. It is evident that there is less importance to office design, incentives and assisting facilities and also it is not available to the employees. These have accumulate into norm and culture that even the staff are not bothered about the layout or the office design as they will never have control over the matter. Human resource professionals in the organizations are well aware of the importance of this issue. In Malaysia context this needs to be highlighted as there are still few studies have been done so far. This huge gap needs to be filled by new research scholars. In doing so, more and more university are starting to provide a conducive environment which best resembles the actual setting in real world. Architectural offices have been chosen as its present a unique work cultures and requirement to be compared with other type of offices. The purposed of this study is to get the user perceptions on the acceptability of the office layout as an architectural design studio.

Ever since computer is widely used in architectural office compare to the past years when manual hand-drafting is popular, architectural office in Malaysia has become more like normal office setting. In a normal office in Malaysia, open plan office layout is the most common practices (Zuraini, 2004). Office rental space which is expensive for any major cities is a hindrance to make office layout be more spacious and

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comfortable. Besides of the disadvantages of visual and acoustical dissatisfaction, the effectiveness of having open plan office in achieving user satisfaction or even high productivity is not known. Thus, the research is essential.

## 2. Research Objectives

The paper attempt to achieve below objectives:

- To study the user perception towards different interior layout
- To investigate the other variables in office environment that leads towards user satisfactions and perception towards provided environment

## 3. Literature Review

An Independent study has been carried out by The American Society of Interior Designers (ASID, 1999) has revealed that the physical workplace design is one of the top three factors, which affect performance and job satisfaction. It is showed that 31 percents of people were satisfied with their jobs and had pleasing workplace environments as reported in that study. 50 percents of people were seeking jobs and said that they would prefer a job in a company where the physical environment is good. (Brill *et al.*, 1984) ranked factors, which affect productivity according to their importance. The factors are sequenced based on the significance: Furniture, Noise, Flexibility, Comfort, Communication, Lighting, Temperature and the Air Quality. (Springer Inc ,1986) stated that “an insurance company in a study revealed that the best ergonomic furniture improved performance by 10 to 15 percent.

In order to achieve good working environmentthat lead to high productivity, office layout (furniture and its arrangement in accordance with the given space) plays an important role in motivating good communication (Omotore, 2010) and getting the well distributed and healthy environmental system.BNet Business Dictionary (2008) defines office design as, “the arrangement of workspace so that workcan be performed in the most efficient way”.Out of many office layout concept, many offices prefers an open plan concept as it allows better communication, encourage good teamwork, allow flexibility for future changes and save lots of space. Researchers agreed good communication can lead to high productivity (Wolfeld, 2010; Sanders and McCormick, 1993). Even though open plan layout is preferred, it has disadvantage of having poor acoustical and visual control. Not having enough privacy visually and acoustically may disturb office workers concentration on their work. (Wolfeld, 2010)

As Malaysian offices commonly practice open plan office layout, study on user preference and their experience requires deeper exploration in order to solve some of the open plan office layout problems.

## 4. Methodology and Procedure

This study uses a questionnaire survey method to gather data on the user perception. Control group of respondent which consist of 60 students within the age between 20-25 years old are selected. A set of questionnaire asking on respondents’ comfort and satisfaction on different office layout were distributed when the students experience the different office setting. Two open plan offices with different layout of individual workstation are identified. The respondents are guided to two selected office interior setting in the faculty; layout A and Layout B. See figure 1. Layout A represents the combination office work station with seating lounge and discussion table. Layout B represents a tight and rigid individual workstation space set in linear arrangement. The respondents are directed to take their seat and they were given 30 minutes to adapt with the environment and answering the questionnaires.

### 4.1. Scope of Research

In this study, the researcher only focuses on three variables of office interior settings. The questionnaire is design to get the user perception of three main areas which are: Spatial Arrangement, Furniture and Temperature only. The Spatial Arrangement section will cover on whether the office layout is promoting

communication between colleges as communications is an important factor in architecture student's nature of work. This section will also cover the perception of privacy acceptability. The second section which is the Furniture, the researcher is trying to get the user perception on the flexibility and comfortability of the furniture for extra working hour. The last section is to get the user perception on the office temperature and whether that temperature affected their focus.

The location and detail information on the meter reading for the experiment are best described in the table below:

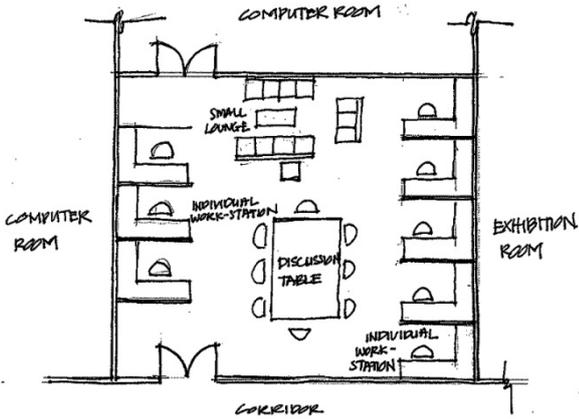
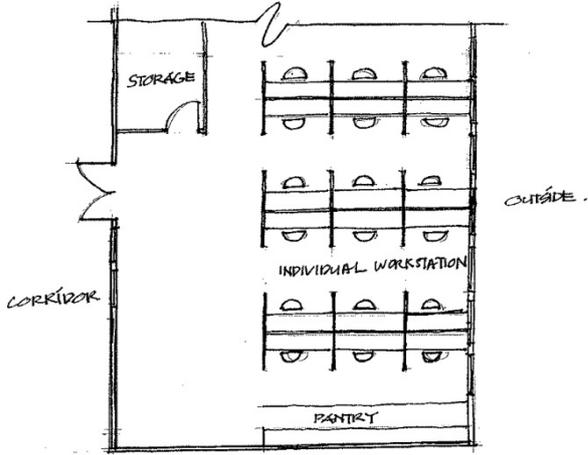
	
	
<p><b>a) Layout A</b>          Individual workstation is arranged at the side and more flexible seating at the centre for discussion and leisure</p> <p>Time : 11.15 am          Temperature = 23 degree Celsius          Humidity= 64%</p>	<p><b>b) Layout B</b>          Workstation is designed in linear arrangement, Save space</p> <p>Time : 11.45 am          Temperature = 26 degree Celsius          Humidity= 65 %</p>

Fig. 1: The table above shows two types of office layout that has been tested for this experiment together with the temperature and humidity readings at the time of the experiment.

## 5. Result and Analysis

The summary of the result is presented in Table 1.

Table 1: The table above shows the percentage of acceptability results for the office layout A and B

QUESTIONAIRES	PERCENTAGE OF USER ACCEPTABILITY	
	LAYOUT A	LAYOUT B
<b>Spatial Arrangement</b> 1. PROMOTE COMMUNICATION 2. OVERALL LAYOUT 3. PRIVACY	56% 38% 41%	46% 33% 53%
<b>Furniture</b> 1. FLEXIBILITY TO ADJUST, REARRANGE OR REORGANIZE MY WORKSPACE. 2. COMFORTABILITY TO WORK EXTRA HOUR	47% 55%	30% 41%
<b>Temperature</b> 1. EFFECT ON THE TEMPERATURE ON THIER FOCUS 2. PERCEPTION OF OVERAL TEMPERATURE	68% 55%	58% 50%

The result above shows that Layout A has almost a higher percentage of acceptability in all three sections except on the privacy where only 41% respondent had accepted. Layout B with linear arrangement and more enclosed partition scored 53% of acceptability in terms of Privacy. However, if the communication factor is the main concern for the facilities provider, for this case, the university management, then Layout B is getting a higher score to be adapted in the near future. Both of the layouts have scored below than 50% for flexibility of the furniture. This should be taken into consideration that the flexibility of the furniture in terms of arrangement and ergonomics should be upgraded or improved. Both offices had scored more than 50% acceptability in terms of temperature and that the temperature did not affected their focuses.

## 6. Limitations of the Study and Direction for Future Research

Following are a few limitations of the study

- The office layout, setting and facilities are not comprehensive enough to resemble the architecture design studio
- There are limited variable cannot be tested as the office layout is already fixed
- The data collected was based on subjective productivity measurement; some other objective method of collecting data can also be used

Data was collected by employing the simple method of structured questionnaires; other methods could have been used for collecting data.

In order to establish a greater understanding of these research, a combination of human resource management, workplace layout and performance management, needs to be developed. Within the indoor environment, lighting and thermal environment have the biggest influence on employees' perception. It would therefore make sense to develop, in the near future, an experiment or survey in a better control environment where better model in which at least the thermal environment in combination with the lighting conditions as well as different types of layout can be evaluated. User comfort and productivity can also be linked together in the next research.

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