Millenial Work Behaviour and it’s impact to Office Design

M R Arditia Lubis¹, J F Bobby Saragih¹, B Sakina¹
¹ Architecture Department, Faculty of Engineering, Bina Nusantara University, Jakarta, Indonesia, 11480

Corresponding author: muhammad.lubis@binus.ac.id

Abstract. This paper presents the study how can an office building accommodate the needs of its employee’s in order to increase the employee’s productivity. There are several aspects that affect employee’s performance that is studied in this paper. These aspect are based on what the employee’s need’s and also from some literature : (1) what can be done to meet the needs of the office with the emergence of a dominating new workforce, (2) to study how we can manage to fulfilled the aspect’s that is needed by the employee’s especially those who are from millenial generation (3) to study the best way to fulfill the way of millenial’s generation way of working. (4) Consider the aspect’s to implemented on the Architectural project especially Office Building Project.

Keywords: office, millenial, Behaviour, Design, Architecture

1. Introduction

This study was raised based on one of United Nations Habitat programme that focused to improve sustainability in social aspect. Millenial Generation or Gen Y is the labor force that will dominate in every company in the next few years in Indonesia [1]. The mission in this research is to create a working environment that can accommodate new generation of workers or better known as millennial generation. In the working process Millenial generation is slightly different compared to the previous generation, they prefers to skip the theory and rhetoric and go directly to the main problem and how to solve the problem. In the old working format, an employee usually had a special area for them and they were given their own job everyday. Different from that, in an office with a modern format an employee usually has a project that is done in groups or teams. because the millennial generation and beyond prefer to skip rhetoric theorie’s and go straight to the problem’s then solve it together. [2].

In addition, millenial generation prefer to work together in order to gain clearer results. There are several aspect’s that will be considered in this research [3]:

- Office environment,
- Co-working space,
- Office facility,
- Outdoor multi-function area,
- Architectural factor’s and,
- Employee’s need’s

According to Prajudi Atmosudirdjo (1982), an administrative expert, the office is an organizational unit consisting of a place, personnel staff and administrative operations to assist leadership. There are also several main function of an office, those are : getting information, storing data, organize and providing information and protecting assets. And office main user’s are Employee’s, Office guests, Receptionist, Building management and Tenants.

The changing of working phenomenon is also caused by the high number of new workers rising. According to Badan Pusat Satistik of Indonesia in February 2018 Indonesia's Worker’s force growth
reached 133.94 million, 2.39 million more compared to February 2017. And most of these new employee’s came from the new generation’s.

In architecture design will produce a physical form that can be seen and can be held. Therefore, the architectural design results can be one of the facilitators of the occurrence behavior, but can also be A barrier to behavior [4]. Based on the existing buildings in Jakarta, the majority of offices still using the old format that each person has their own limitations that make it impossible to work together As has been explained previously that millennial generation likes the work done together and tends to be informal. Based on those background we can conclude four problem’s that we can formulate from this research:

1. How to design an office space that is comfortable and fits to millenial behavior?
2. How to implement office employee’s need’s based on the questionnaire given?
3. How can we apply office employee’s need’s to a case study in the form of an architecture project
   Especially office building?

2. Research Problem and Methodology

The main problem that is highlighted in this research is how do provide an office space that available to accommodate the new way of work that is done by mostly millennial generation. the way the millennial generation works, as previously stated, tends to prefer to work together, not with the individual format that was applied like the previously. However, to further clarify this research, a questionnaire was conducted to find out more about the needs of workers. And make this research conducted in the real office zone by complying with existing regulations. Study method’s that used in this research are, based on the activities and needs of resource persons. In addition, the author also looks for related theories from literature and research that have existed before.

| No | Data                                                                 | Purpose                                                                 | Technique       | Resource’s             |
|----|----------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------|------------------------|
| 1  | Information about the office that suits the needs of its users, Information about the Office user itself | Find out how the office suits the needs of its users                     | Questionnaire   | Office Employee’s      |
| 2  | Provisions for what is needed in an office                          | Learn’s the basics about what is an office and how is a good office     | Literature, Journal and refer | Information and theories from the Journal |
| 3  | Site Context as the problem’s                                      | site context is one of the things that need to be considered in designing office buildings | Site Visit      | Analysis on the site and surrounding’s |

Source: Private Document

to get the information that matter’s in this research the method that will be used is by giving questionnaire to 40 office employees. The studies about what does matter’s for an offices that can increase productivity are asked directly to the office workers so we can assume that this is a qualitative research.
3. Result and Discussion

The scope of this research is how to design office buildings that can provide the needs of office workers and apply aspects of behavioral architecture. Then in this report apply a simulation like designed an actual office project.

3.1. Site Context

The scope of this project is to create offices and supporting facilities in the office zone in accordance with the Planning of the South Jakarta area with consideration of the strategic site location because it is close to public facilities. The site chosen for this research is in an area that is not a Central Business District. However, the supporting infrastructure around the site has been sufficiently developed to fit the background of the research.

![Figure 1. The site context](maps.google.com) ![Figure 2. Niaga Hijau I street](Private Document)

The site is located in protocol street Jalan Metro Pondok Indah, it is surrounded by the public transportation facility such as Busway and MRT Lebak Bulus. This site also close to highway access Jakarta Outer Ring-roud. There is also supporting facilities such as Retail’s and a four star Hotel. Cases that often occur in other office buildings around the site, were employees go out of the building area to rest and socialized with each other in the sidewalk area on the Niaga Hijau I Street. This is done because existing office buildings tend to be closed, uses unnatural air system and have no open space.

Office space conditions that tend to be closed and use artificial ventilation are considered less good and can cause the effects of sick building syndrome [5]. In this case the sidewalk is one of the environment that we want to keep to its original use. This location is the K1 zone which is an office zone. With the following development provisions:

| Function | Trade Center, Office & Services |
|----------|---------------------------------|
| KDB      | 50% x 4.658m2 = 2.329 m2        |
| KLb      | 3 x 4.658m2 = 13.974 m2         |
| KB       | 16 Floor                        |
| KDH      | 35% x 4.658m2 = 1.630,3m2       |
| KTB      | 50% x 4.658m2 = 2.329 m2        |

The major steps involved in construction of an Office building apart from analysis and design are site selection, survey of the site, orientation of the building. Selection of site plays a major role in many construction. The factors effecting site selection are topography, nature of soil, position of ground water table, facilities, neighbourhood, vegetation, shape of the site. Surveying includes preliminary survey and quadratic survey [6].
3.2. Employee’s Age Range

This research was done based on the results of a survey of 40 Office Employee’s the method that is used is an online questionnaire given to office employees from a variety of different work backgrounds. And 57.5% of them were 21-30 years old. So it can be concluded that the majority of the Office Employee’s are in the Z generation and Millennial age range.

![Chart showing age distribution]

Source: Office Employee’s Questionnaire

In designing office in architectural context, the things that must be considered are the user’s needs and behaviour’s. Then for new office buildings it is necessary to pay attention to the needs of prospective users who are from various generations, especially the millennial generation and generation z who will become the new workforce in the future.

3.3. Architectural Factor’s that affect’s Employee’s performance

There are 8 architectural factors that can affect employee performance at work including: color, view, noise, privacy, vegetation, lighting, temperature and furniture. Based on the case study there is an additional factor that can be considered to put to the list, that factor is “open space area”. Because Office designs that have open areas tend to provide spontaneity, creativity and pleasure for its employees [7]. After gaining these nine factor we ask 40 office employee’s whether these factors are important and have been fulfilled these factors in existing office’s. These employee’s came from various office’s.

![Bar chart showing importance]

Source: Office Employee’s Questionnaire

![Bar chart showing satisfaction]

Source: Office Employee’s Questionnaire
Based on the result’s from the questionnaire above, we can conclude that there are several aspect’s that we can consider in this research. Those aspect’s are Vegetation and Open Space Aspect, Noise Aspect, View Aspect and Co-working Space Aspect.

3.4. Vegetation and Open Space Aspect

The three aspect’s that is not fulfilled yet based on the questionnaire of forty office employee’s are Vegetation and Open Space Area. This aspect can be used in non-formal hours and also can be used for vegetation and make an artificial view. This solution can be used to manage the employee’s behaviour to think more creative and keep the surrounding’s like the pedestrian sidewalk to be used properly.

![Open Space Area](image1)

**Figure 3. Open Space Area**

**Source:** Private Document

The picture above is an open space area in the Office building site. In the selected site, the main problem of the site is the pedestrian pathway that is used by the Office Workers during office break hours. The green open space in a building not only can be used for vegetation but also used for creating a better behaviour for the office worker’s to spend the break hours in the open space area.

3.5. Noise Aspect

![Noise Aspect](image2)

**Figure 5. Noise Aspect**

**Source:** Private Document

To reduce excess noise which is quite active, the building site will apply vegetation which used as a buffer. the mass of the building is leaning backwards and the front area is used as a zone for public circulation. The back area of the site are used for Open Space Area, this area were putted in the back area in order to avoid directly opposite the protocol road which is quite noisy.
3.6. View Aspect

Apart from being Important based on the answers on the questionnaire, the view aspect is also considered important. The view orientation on the southern part of the building is made outward facing the Metro Pondok Indah Street. In addition, this building applies an artificial view, used as an open space and can be used as an interaction space. So these open space can be used as Vegetation, Open Space area for the Office Worker’s and also considering view aspect.

3.7. Co-Working Space

By the new working phenomenon shown by millennial generation it seems that implementing co-working space in the building is needed. The space needed is space that can be used to work and increase ideas and productivity. In office design it is necessary to consider aspects of the co-working space which is one of the new needs at work. In creating a co-working space, there are several ways to achieve it, including:

1. In an office we can Combined a co-working space with an individual workspace without any formal boundaries. Like the picture below [8]:

| No | Schematic | Description |
|----|-----------|-------------|
| 1  | ![Schematic](image) | The office space in this scheme consists of three layers. The outermost layer is the individual workspace, the second layer is circulation and the deepest layer is the general workspace. |

Figure 6. View Aspect
Source: Private Document

Figure 7. Schematic 1
Source: Personal Data
In contrast to this space scheme the outer layer is the general workspace, the second layer is circulation and the deepest layer is the individual workspace.

Source: Personal Data

2. the second way is to separate the work space and work space together with the floor level. In an office with leasing space concept, this is the most possible way. Because the lease area can be used based on the needs of the tenants.

Source: Personal Data

Figure 9. Co-working space area seperated by level’s
Source: Private Doucment

Figure 10. Co-working space Illustration’s
Source: Private Doucment
Based on the questionnaire as well as on open questions, several informants stated that office space can be made less formal. That way, someone has a variety of spaces when working so as to avoid fatigue while working.

5. Concluding Remarks
Based on the research that have been done conclusions that can be used to make an office building that respond the needs of millennial generation are:
- Dividing the leasing space and the co working space with levels.
- Make’s an outdoor space inside the site area that act’s as a socialize and interaction area. This space can also used for artificial view and vegetation.
- Seperating the public and private area of the building to consider the noise aspect.
- In order to add the open space area inside the site, the building can be made slimmer and higher considering the maximum floor height on the site is 16 floor high. So that The remaining site area are used for open space area.

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