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Office Interior Design Concept based on the Development of Communication and Information Technology at PT Indonesian Post (Persero) Makassar

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Abstract. The bureaucratic reform policy requires office activities to run effectively and efficiently. This has implications for the transformation from conventional systems to automation systems. The interior arrangement of an office is no longer just the placement of tables and chairs, but requires several important considerations such as the situation and workplace of the employees as well as the necessary technology support. This article aims to provide information on nine objectivity values that can be considered in determining the choice of place and working methods that will be applied before creating an office interior layout.

The expected results can help interior designers to be able to determine the space program that suits the types of activities and activities in the office to be designed. In addition, it is hoped that the office designer and manager will have the same goal agenda for designing the office. The results showed that nine objectivity values and six topics of discussion regarding location, users, layout, appearance, archive space, and concept standardization can be supporting points in making an efficient office because it is tailored to the needs of those who work in the office.

Keywords: objectivity value, office layout, interior design technology

1. Introduction

An office is an organizational unit consisting of a place, staff, personnel, and administrative operations to assist leaders in carrying out a job [1], [2]–[4]. The many types of office work require employees to work effectively and efficiently, that is, work quickly and accurately as possible without spending a lot of time, effort, and money to achieve optimal results. Activity-based work (ABW) provides office workers with a variety of indoor workspaces specifically designed to accommodate a variety of tasks [4]–[8].

The office is identical to the workspace because in that area all office administration and activities are carried out. One of the supporting factors for office activities is the supporting facilities for the office itself. These facilities can be in the form of office space, office machines, office stationery equipment, and other support for the smoothness of work [1]–[3], [9]–[12].

The layout of the office, and in particular the number and destination of office buildings (for example, printing and meeting rooms), can influence walking time and sitting time characteristics. No



research to date has focused on the role of indoor office layouts in facilitating or inhibiting step count and sitting time characteristics [1], [3], [4], [7], [11], [13], [14].

The quality of the indoor environment (IEQ) has a significant impact on the productivity of office occupants and this impact varies by office type [15]–[18].

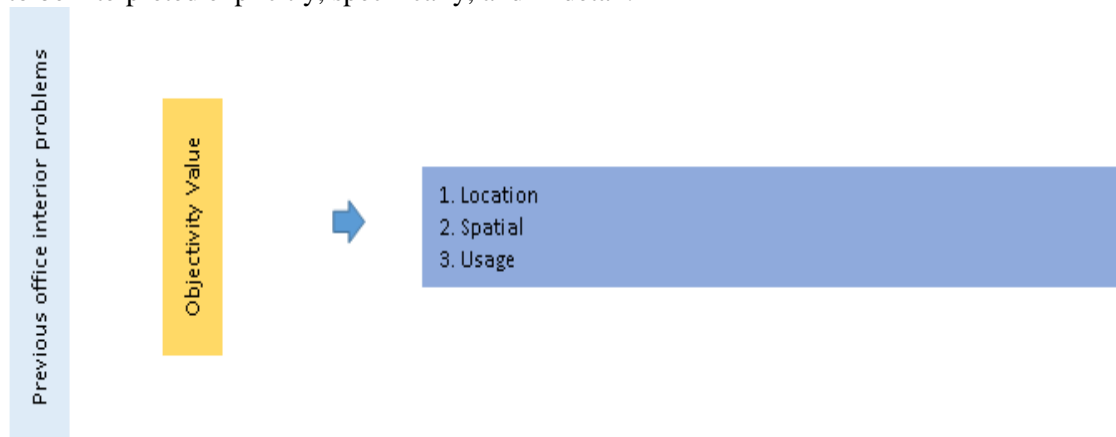
Office spatial facilities and facilities are closely related to office operations. It also informs the possibility for research that combines approaches derived from facilities management and operational management, on the design of specific office layouts or layouts that trigger employee behavior to improve their performance [7], [19], [20].

The main purpose of an office is to provide support facilities for employees in carrying out activities. It would be even better if the existing infrastructure could use minimal costs with maximum satisfaction [16], [17], [21], [22]. So far, the office function is only a place to work, but now the office has developed as a symbol and a place to socialize. The physicality of the layout and office design can convey the identity of the office organization and also stimulate its employees.

It is important to consider the managers and designers who will design the office concept. Quoting from the book *Planning office space a practical guide for managers and designers* [23], [24]. The purpose of these considerations is to provide a common framework between managers and interior designers in working together to determine the concepts that will be applied in their office interiors, including: the necessary concepts and the benefits gained by applying these concepts; problems to solve and mistakes that existed in the previous office; office concept that is appropriate and related to the needs of organizational development; objectivity and design proposals are clearly communicated to users.

Studies conducted by [3], [5], [8] to understand the impact of the physical environment on voluntary and mandatory levels of physical activity in office buildings, and to gather evidence for design suggestions to encourage the daily activity levels of office workers.

The schematic diagram below illustrates how the value of objectivity can help designers and managers decide which concepts to use and can be used to guide what will be prioritized as a priority. The value of this objectivity becomes important to know together, because an office interior must be able to be interpreted explicitly, specifically, and in detail.



2. Method

This research uses quantitative methods to obtain concepts and theories about modern offices and office interiors, functions, financing, inter-user interaction, stimulation of creativity to support research analysis. To measure the variables in this study, a Likert scale questionnaire was used which was filled in by the respondent according to the variable indicator. The population of this research is the employees of PT. Pos Indonesia (Persero) Makassar totaling 162 employees and a sample of 25% was taken so that a sample of 41 employees was obtained.

3. Results and Discussions

Descriptive analysis is intended to determine the effect of office layout applications on employee motivation at PT. Pos Indonesia (Persero) Makassar. The data presented in this study are data obtained as a result of a score from a research questionnaire related to office layout variables. In the office layout variable, there are four indicators, namely closed office layout, open office layout, panoramic office layout, and partitioned office layout. For more details, see table 1.

Table 1. Overview of Research Results

Indicator	n	N	%	Category
Location	2360	2720	86,76	Very Good
Spatial	1265	1360	93,01	Very Good
Use	1119	1360	82,27	Very Good
Physical appearance	2550	2720	93,75	Very Good
Archive	1240	1360	91,17	Very Good
Standardization of Concepts	1210	1360	88,97	Very Good
Total	9744	10880	89,32	Very Good

Source: Data Analysis Results

3.1. Location

Location is an important factor because to determine an office, it is necessary to consider whether the location is easy for transportation routes, whether it is in an office building environment or just a row of shophouses. By determining a good location, it can provide benefits for the running of a business. For example, by renting or buying an area in an office building will provide easy access for employees or clients to meet. However, now there is also what is known as virtual office and mobile working where the place and way of working can be done anywhere, not in one particular place. The accuracy of office location has a very good effect on employee performance, amounting to 86.76%.

3.2. Layout

The layout of an office is usually determined by the needs of the type of organization in the company. Open layout or commonly known as open layout is applied by the type of company organization that requires communication and teamwork. Meanwhile, layouts with non-open plan concepts are usually needed in corporate organizations whose work requires a high level of concentration and is confidential. There is a result of 93.01% of employees who state that spatial planning is very good.



Fig. 1. Open Employee Workspace

The open arrangement of the space gives the advantage of the open layout of the room that looks big because there is no visible hallway blocking the circulation path from employee mobility. In addition, open layout can minimize the cost of using material for insulation. Another advantage of open layout is that it makes it easier to rearrange your furniture needs if you have to dismantle it and adjust it to work needs. This layout form is suitable for jobs where employees do not require high concentration because the noise between cubicals has the potential to disturb, compared to the sound that works is blocked by walls.

3.3 Use of Facilities

The use of facilities in the office can be differentiated from employees and their working hours (office hour). There are employees who work 7 hours a day (9.00-17.00) or employees who work shifts (shifts) in the office who run their business for 24 hours. Apart from that, the status of employees can also be differentiated as permanent (in house / full time workers) or not permanent (outsource / part timer workers). How to work is also an influence in determining the design, namely the types of employees with high levels of mobilization or low mobilization, for example employees of the marketing division or employees of the financial division. The relationship between this information and interior decisions is that the designer must be able to find out the type of employee or the type of work in each division of the office, this is adjusted so that the calculation of the required area is optimal.

3.4 Physical Appearance

Office buildings are one of the biggest parts that have a bad impact on the environment, such as producing a lot of waste, especially paper waste and other garbage thrown away by hundreds of employees. For this reason, it is necessary to reconsider the office to reduce paper documents and start switching to work with digital archives.

In addition, offices are also the largest energy users such as electricity, air conditioning, heating and water. Offices use AC for almost 8 hours a day and 5 working days a week, but this waste can be minimized by good spatial planning, and using several windows that can still be used to use natural air and natural light in order to save electricity usage.

3.5 Archives

In the past, the area for storing archives or documents was one of the most used of other spaces. This is because many document storage cabinets are still in paper form (paper work or physical document). Offices are now able to reduce paper documents (paperless offices) due to the growing

development of computer technology. UPS (uninterruptible power system) is a form of non-paper document storage computer technology.

3.6 Standardization of Concepts

Sometimes the determination of interior design standards has been determined, such as for example the choice of color, shape, type of carpet, wallpaper and type of office furniture in a bank that already has its own manual. It is not possible for the same bank brand to use different concept designs in their branch offices.

To create a concept for a PT.Pos office, no matter where the branch is, they will use the same type of color, shape of furniture and materials as well. This standardization is usually done to provide a corporate identity for the offices that have branches. PT.Pos uses the characteristic orange color in all of its office designs and layouts.



Fig. 2. Orange as The typical Color of Post Office

4. Conclusions

With the translation of nine priority values and six other important values, it can bridge, communicate, involve, combine, pay attention to the needs of the office employees by fulfilling the required facilities in the office interior. In addition, designers also need to follow or know technological developments that will make the operational activities of an office easier, for example, such as how to clean, maintain, and maintain these facilities with the latest technology.

Interior designers should also discuss with the maintenance team (facility management) to discuss how to maximize the interior so that it is in line with office operations. It is important to know that activities in the office are from the first time you open the door to lock the office door. The operational needs referred to are any needs for servicing an office, such as the entry of garbage, storage of cleaning equipment, and storage of gallon water for employees.

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References

- [1] S. Ornstein, "The Hidden Influences of Office Design.," *Acad. Manag. Exec.*, 2011, doi: 10.5465/ame.1989.4274765.
- [2] S. Zerella, K. von Treuer, and S. L. Albrecht, "The influence of office layout features on employee perception of organizational culture," *J. Environ. Psychol.*, 2017, doi: 10.1016/j.jenvp.2017.08.004.

- [3] Z. Kong, D. M. Utzinger, K. Freihoefer, and T. Steege, "The impact of interior design on visual discomfort reduction: A field study integrating lighting environments with POE survey," *Build. Environ.*, 2018, doi: 10.1016/j.buildenv.2018.04.025.
- [4] R. Goldstein, A. Tessier, and A. Khan, "Space layout in occupant behavior simulation," in *Proceedings of Building Simulation 2011: 12th Conference of International Building Performance Simulation Association*, 2011.
- [5] B. Haynes, L. Suckley, and N. Nunnington, "Workplace productivity and office type: An evaluation of office occupier differences based on age and gender," *J. Corp. Real Estate*, 2017, doi: 10.1108/JCRE-11-2016-0037.
- [6] C. Anderson, C. Bailey, A. Heumann, and D. Davis, "Augmented space planning: Using procedural generation to automate desk layouts," *Int. J. Archit. Comput.*, 2018, doi: 10.1177/1478077118778586.
- [7] A. Laing, D. Craig, and A. White, "High-performance office space," *Harv. Bus. Rev.*, 2011.
- [8] Y. Hua and E. Yang, "Building spatial layout that supports healthier behavior of office workers: A new performance mandate for sustainable buildings," *Work*, 2014, doi: 10.3233/WOR-141872.
- [9] J. Kim, R. de Dear, C. Cândido, H. Zhang, and E. Arens, "Gender differences in office occupant perception of indoor environmental quality (IEQ)," *Build. Environ.*, 2013, doi: 10.1016/j.buildenv.2013.08.022.
- [10] J. P. Gilbert, "Construction Office Design with Systematic Layout Planning," 2nd World Conf. POM 15th Annu. POM Conf. Cancun, Mex., 2004.
- [11] J. Kim, C. Candido, L. Thomas, and R. de Dear, "Desk ownership in the workplace: The effect of non-territorial working on employee workplace satisfaction, perceived productivity and health," *Build. Environ.*, 2016, doi: 10.1016/j.buildenv.2016.04.015.
- [12] C. Candido, L. Thomas, S. Haddad, F. Zhang, M. Mackey, and W. Ye, "Designing activity-based workspaces: satisfaction, productivity and physical activity," *Build. Res. Inf.*, 2019, doi: 10.1080/09613218.2018.1476372.
- [13] S. Kang, D. Ou, and C. M. Mak, "The impact of indoor environmental quality on work productivity in university open-plan research offices," *Build. Environ.*, 2017, doi: 10.1016/j.buildenv.2017.07.003.
- [14] L. Widodo, Leonardy, and M. N. Setiawan², "PERANCANGAN RUANG KANTOR SERBA GUNA ERGONOMIS," *J. Kaji. Teknol.*, 2013.
- [15] S. M. Liu and Q. Yuan, "The Evolution of Information and Communication Technology in Public Administration," *Public Adm. Dev.*, 2015, doi: 10.1002/pad.1717.
- [16] J. A. Jakubiec and C. F. Reinhart, "The 'adaptive zone'-A concept for assessing discomfort glare throughout daylight spaces," *Light. Res. Technol.*, 2012, doi: 10.1177/1477153511420097.
- [17] I. A. Sakellaris et al., "Perceived indoor environment and occupants' comfort in European 'Modern' office buildings: The OFFICAIR Study," *Int. J. Environ. Res. Public Health*, 2016, doi: 10.3390/ijerph13050444.
- [18] J. Day, J. Theodorson, and K. Van Den Wymelenberg, "Understanding controls, behaviors and satisfaction in the daylight perimeter office: A daylight design case study," *J. Inter. Des.*, 2012, doi: 10.1111/j.1939-1668.2011.01068.x.
- [19] S. A. Samani, "The Impact of Personal Control over Office Workspace on Environmental Satisfaction and Performance," *J. Soc. Sci. Humanit.*, 2015.
- [20] D. Nagy et al., "Project discover: An application of generative design for architectural space planning," in *Simulation Series*, 2017, doi: 10.22360/simaud.2017.simaud.007.
- [21] I. Bournas, M. Abugabbara, A. Balcerzak, M. C. Dubois, and S. Javed, "Energy renovation of an office building using a holistic design approach," *J. Build. Eng.*, 2016, doi: 10.1016/j.job.2016.06.010.
- [22] Public Health England, "The impact of physical environments on employee wellbeing – topic overview About Public Health England," 2015.

- [23] M. Rashid, J. Wineman, and C. Zimring, "Space, behavior, and environmental perception in open-plan offices: A prospective study," *Environ. Plan. B Plan. Des.*, 2009, doi: 10.1068/b33034.
- [24] C. J. G. Marquardt, J. A. Veitch, and K. E. Charles, "Environmental Satisfaction with Open-plan Office Furniture Design and Layout," 2002.