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How Workspaces Influence Employee Behaviour: A Study of Office Layouts and Their Psychological Impact on Productivity

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Abstract: ***This study analyses the relationship between worker productivity and office floor plan layouts. The study looks at different layout configurations, such as private office, open-plan, and cubicle layouts, the purpose of this study is to determine the best office design tactics that complement various work activities and work styles. By means of a review of the literature, case studies, and the analysis of research-based data, this study attempts to determine the best office layout techniques that can boost worker productivity and foster a happy work environment. The study investigates the effects of environmental elements on efficiency and well-being in different layouts, including lighting, acoustics, and ergonomic design.***
Keywords: Office layout, employee productivity, employee behaviour, workplace psychology

I. INTRODUCTION

The optimal efficiency of office space is paramount for efficiently managing productivity, employee satisfaction and success of the organization. In a rapidly changing workplace, effectively navigating various office planning framework is growing in importance.
The arrangement of the office can dramatically change employee behaviour, attitudes and ultimately performance. A well-structured workspace promotes communication, collaboration and concentration, while a poorly arranged space can damage productivity and create employee discontent. Haynes (2015) supports this observation, finding that office layout directly impacts both productivity and satisfaction.
During the past ten years, there has been a sustained shift for organizations in how they think about and organize their office planning. While the open-space office left a sea of individual desks and cubes, companies are gravitating to more flexible and collaborative workplace designs that encourage interaction, creativity and a sense of place among employees. There are many drivers for this evolution including, increases to remote work, the importance of more flexible spaces, and even more prominent focus on employee wellbeing and work life balance. Multiple researchers have documented this trend, including Candido et al. (2018) and Kwon & Remøy (2019).

II. LITERATURE REVIEW

A well-designed office space is key to enhancing productivity, communication, and employee well-being. The layout affects how employees interact, balancing openness with privacy to reduce distractions. Good design fosters productivity through comfort, proper lighting, and technology integration. Social communication thrives in collaborative spaces, while privacy is essential for focused work. Psychological well-being is supported by clear, organized environments. Adequate natural lighting boosts mood and energy, and accessibility ensures that all employees can navigate and work comfortably. In short, thoughtful office design improves efficiency and job satisfaction.

A. Parameter 1- Layout

Open-plan offices often increase distractions, impacting concentration and productivity negatively compared to cellular offices. Balancing private and communal spaces is critical. For instance, environments that support distraction-free solo work and informal interactions lead to higher employee satisfaction and productivity (Barry P. Haynes Feb 2015)
The design and layout of office spaces significantly influence productivity. Open-plan layouts often face criticism for increased noise and reduced privacy, which can hinder concentration and task performance. Personal control over environmental factors, such as layout adjustability, is crucial for enhancing comfort and productivity (Barry P. Haynes July 2015)

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Office layouts significantly influence employee productivity, with open and flexible designs promoting collaboration and communication. Additionally, the ability to control lighting and climate in individual spaces enhances comfort and focus, leading to improved work performance. Overall, a well-designed workspace that accommodates various work styles can positively impact employee satisfaction and productivity (Candido et al., 2018).

Enclosed office layouts promote better employee productivity by providing privacy and reducing distractions. Open office layouts, while fostering social communication, often result in more distractions and less privacy, negatively affecting productivity. (Nurbarirah Ahmad 2020) Poorly organized layouts lead to higher "energy maintenance" costs, where people invest emotional energy defending their own space rather than focusing on work. Clear articulation of space, walls, and furnishings improves user satisfaction. Open-plan offices encourage communication, but if not designed well, they can create stress or distractions, as they lack clear boundaries between spaces. .(Michele M Lepore)

B. Parameter 2- Employee productivity

Lack of privacy and territoriality leads to dissatisfaction, which negatively impacts productivity. Employees in cellular offices are 2-3 times more likely to be satisfied with privacy and concentration than those in open or flexible offices (Kwon, Minyoung; Remøy, Hilde 2019)

Home office environment can lead to decreased productivity due to factors like poor work-life balance and increased distractions (Grenčíková et al., 2024). Employees reported challenges such as less physical activity and interruptions, which negatively affect their work output.

Improved indoor air quality (IAQ) directly correlates with enhanced cognitive function and productivity. Case studies indicate that businesses implementing effective IAQ strategies, such as better ventilation and air purification, experience measurable productivity gains (Vaidhya, 2024).

Medium-height panels and enclosed spaces allow for focused work and confidential discussions without isolation. Incorporating plants and natural elements in office design is noted to improve employee well-being, reduce stress, and enhance productivity. (Erzsébet Szeréna 2014)

Productivity is tied to comfort in the office environment. Open-plan offices encourage communication, but if not designed well, they can create stress or distractions, as they lack clear boundaries between spaces.(Michele M Lepore)

Confusing layouts can cause stress and dissatisfaction, especially when users struggle to find their way through the building. Lighting plays an indirect role by influencing visibility within spaces, affecting both the ease of movement and the overall comfort of the environment. (Faris Ali Mustafa 2022)

C. Parameter 3- Lighting

Adjustable lighting controls cater to individual preferences, leading to increased satisfaction and self-reported productivity. Poor lighting conditions, such as inadequate brightness or excessive glare, can strain employees and reduce task efficiency. (Barry P. Haynes July 2015)

Desk location near windows (closer than 2m) can cause discomfort due to glare, negatively affecting concentration and overall satisfaction. Natural lighting positively impacts psychological well-being, but excessive exposure, especially in poorly oriented layouts (e.g., south-facing desks), can lead to visual discomfort (Kwon, Minyoung; Remøy, Hilde 2019)

Adequate light levels and quality contribute to physical well-being and improved mood, which can enhance productivity, while natural light is linked to better sleep quality and overall vitality (Boubekri et al., 2014; Viola et al., 2008).

Well-designed lighting contributes positively to employee well-being and productivity, emphasizing the importance of integrating spatial arrangement and illumination in office design (Colenberg, Jylhä, & Arkesteijn, 2021)

III. CONCLUSION

The design of office spaces significantly influences employee satisfaction, productivity, and well-being. A balanced approach to layout, environmental comfort, and lighting is essential for creating effective work environments. While open-plan offices promote collaboration and communication, they can also lead to distractions and reduced privacy, hindering focus. Cellular layouts, on the other hand, offer better privacy and support concentration, highlighting the need for adaptable designs that balance individual and collaborative needs. Employee productivity is enhanced by factors like privacy, comfort, and control over the work environment. Features such as improved indoor air quality, integration of natural elements, and flexible layouts reduce stress and boost cognitive function.

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IV. METHODOLOGY

The methodology in this study comprises two key components, which collectively provide a robust framework for understanding the influence of office design on employee satisfaction and productivity

A. Online Survey

An online survey was administered to collect data on employee experiences in various office settings. The questionnaire consisting of 22 questions was compiled in an online questionnaire platform called google forms.

B. Data Analysis

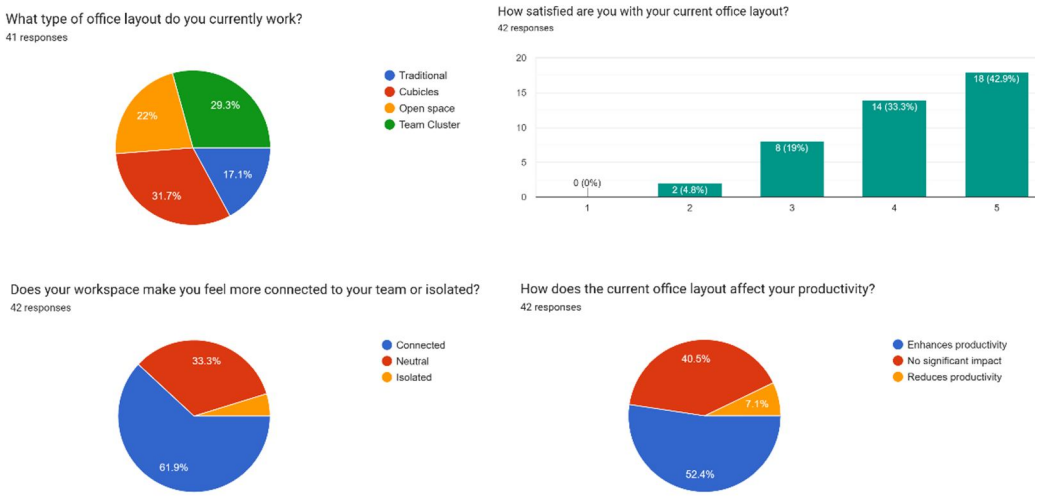


Figure 1.Demographic information of the responses with questions

The study employed an online survey with 42 participants to assess employee perceptions of office layout and its impact on privacy, collaboration, and productivity. The survey included closed-ended questions for quantitative data and open-ended questions for detailed feedback, focusing on satisfaction with the layout, privacy for focused work, and collaboration opportunities. A significant majority of employees expressed satisfaction with the overall layout, considering it conducive to teamwork and having a positive or neutral impact on productivity. However, employees sharing workspaces highlighted a need for more privacy to support focused tasks.

Response	Traditional	Open-plan	Team Cluster
Enhances productivity	61%	31%	57%
Neutral impact	24%	28%	26%
Hinders productivity	15%	41%	17%

This confirms my hypothesis that layout directly affects perceived productivity. Open-plan workers are more than twice as likely to report that their layout hinders productivity (41%) compared to traditional workers (15%).

V. CASE STUDIES

A comprehensive review of existing building was conducted to establish the theoretical foundation and identify key factors affecting workplace satisfaction and productivity.

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A. Case Study 1

RMZ Eco World stands as a prime example of sustainable urban development in Bengaluru, India. This mixed-use development, spearheaded by RMZ Corp, integrates energy-efficient design, innovative workspace solutions, and community development. By prioritizing sustainability, the project has significantly reduced its carbon footprint, enhanced employee satisfaction, and stimulated economic growth. The development's focus on flexible workspaces, state-of-the-art amenities, and public spaces has transformed a previously underdeveloped area into a thriving urban center. The office layout at RMZ Ecoworld is designed to cater to large IT/ITES companies and multinational corporations, emphasizing flexibility and collaboration. The buildings feature open-plan layouts that optimize space utilization while encouraging teamwork and interaction. Modular furniture and glass partitions are commonly used to balance openness with the need for privacy in certain areas. The layout includes clearly defined zones for private offices, coworking spaces, meeting rooms, and open workstations, ensuring functionality for diverse workstyles. Breakout zones, lounges, and cafeterias are strategically placed to foster informal interactions and provide relaxation spaces for employees. Circulation within the campus is highly efficient, with multiple entry/exit points, elevators, and wide corridors accommodating high footfall seamlessly. The integration of green spaces, recreational areas, and wellness zones further enhances the user experience, creating a holistic work environment.

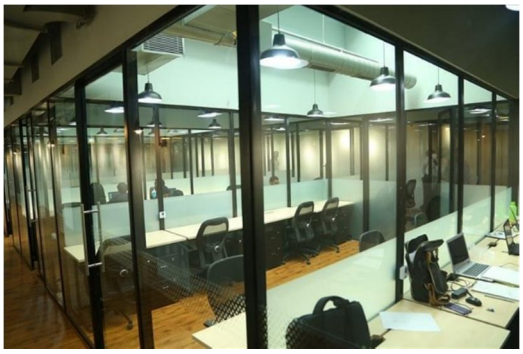


Figure 2.Office layout in RMZ Eco world

Source:https://www.newofficeasia.com/details/serviced-offices-rmz-ecoworld-building-6a-outer-ring-road-bellandur-bangalo

B. Case Study 2

Novel Business Park is a mid-tier commercial space catering to small and medium-sized enterprises (SMEs) and startups. It offers basic amenities such as parking, cafeteria services, and security but lacks the advanced facilities and sustainability. The office layout at Novel Business Park is compact and practical, tailored to the needs of small and medium enterprises (SMEs) and startups. The spaces are typically cubicle-based, with options for customization to suit smaller teams or specific tenant requirements. Shared facilities, such as meeting rooms, reception areas, and pantries, are centralized to reduce redundancy and promote cost efficiency. The circulation is straightforward, with staircases and elevators providing easy access to different floors and ensuring smooth movement within the building. Unlike larger business parks, Novel Business Park emphasizes affordability and simplicity, offering basic amenities such as cafeterias and parking areas. The layout is functional and straightforward, catering to companies that prioritize utility over expansive features.

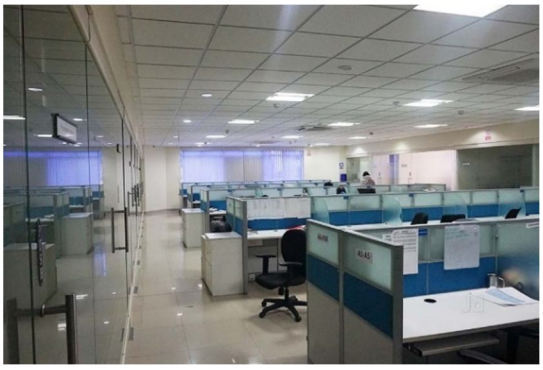


Figure3. Office layout in novel business park

Source: https://settlersindia.com/properties/novel-business-park-baldwins-road-bangalore-1

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C. Key Comparisons

Parameter	RMZ Ecoworld	Novel Business Park
Layout	Well-zoned, hybrid, and biophilic.	Compact, basic, with limited zoning.
Employee Productivity	Enhanced by ergonomic design and wellness zones.	Sufficient for small teams but lacks advanced support.
Lighting	Natural and energy-efficient, glare-controlled.	Standard, with limited natural light.
Privacy	High, with dedicated quiet zones and partitions.	Limited, leading to distractions.
Technology	Advanced smart features and IoT integration.	Basic infrastructure for operational needs.
Social Communication	Collaboration-friendly with informal interaction areas.	Limited opportunities due to fewer communal spaces.
Psychological Effects	Stress-reducing biophilic and ergonomic design.	Lacks elements to promote mental well-being.

Table 1: Comparison between RMZ eco world and Novel Business park

RMZ Ecoworld stands as a modern, employee-centric business park, offering flexibility, advanced technology, and wellness-driven design. It supports productivity, collaboration, and mental health but comes with a higher price tag, making it ideal for larger organizations and multinational corporations.

Novel Business Park, while functional and cost-effective, caters primarily to startups and SMEs. Its compact and basic design is sufficient for smaller operations but lacks the advanced features necessary for fostering long-term employee satisfaction, collaboration, and productivity.

VI. CONCLUSION

The layout of an office is a foundational element that significantly influences how employees interact with their surroundings and accomplish tasks. While team cluster encourage communication and foster social interactions, they often fall short in providing privacy and minimizing distractions. These shortcomings can lead to stress, dissatisfaction, and reduced focus, especially for tasks requiring deep concentration. On the other hand, traditional office space, which offer enclosed spaces, excel in supporting concentration and providing territoriality, making them ideal for work requiring high levels of focus. However, their enclosed nature may limit opportunities for spontaneous collaboration.

Hybrid office designs, such as combi-offices that blend private and collaborative spaces, is an effective solution. These layout offer dedicated zones for focused work alongside communal areas that facilitate teamwork and social interaction. Incorporating clear demarcations, ergonomic furniture, and adaptable layouts can further enhance comfort and efficiency, ensuring that employees feel supported regardless of their task or role.

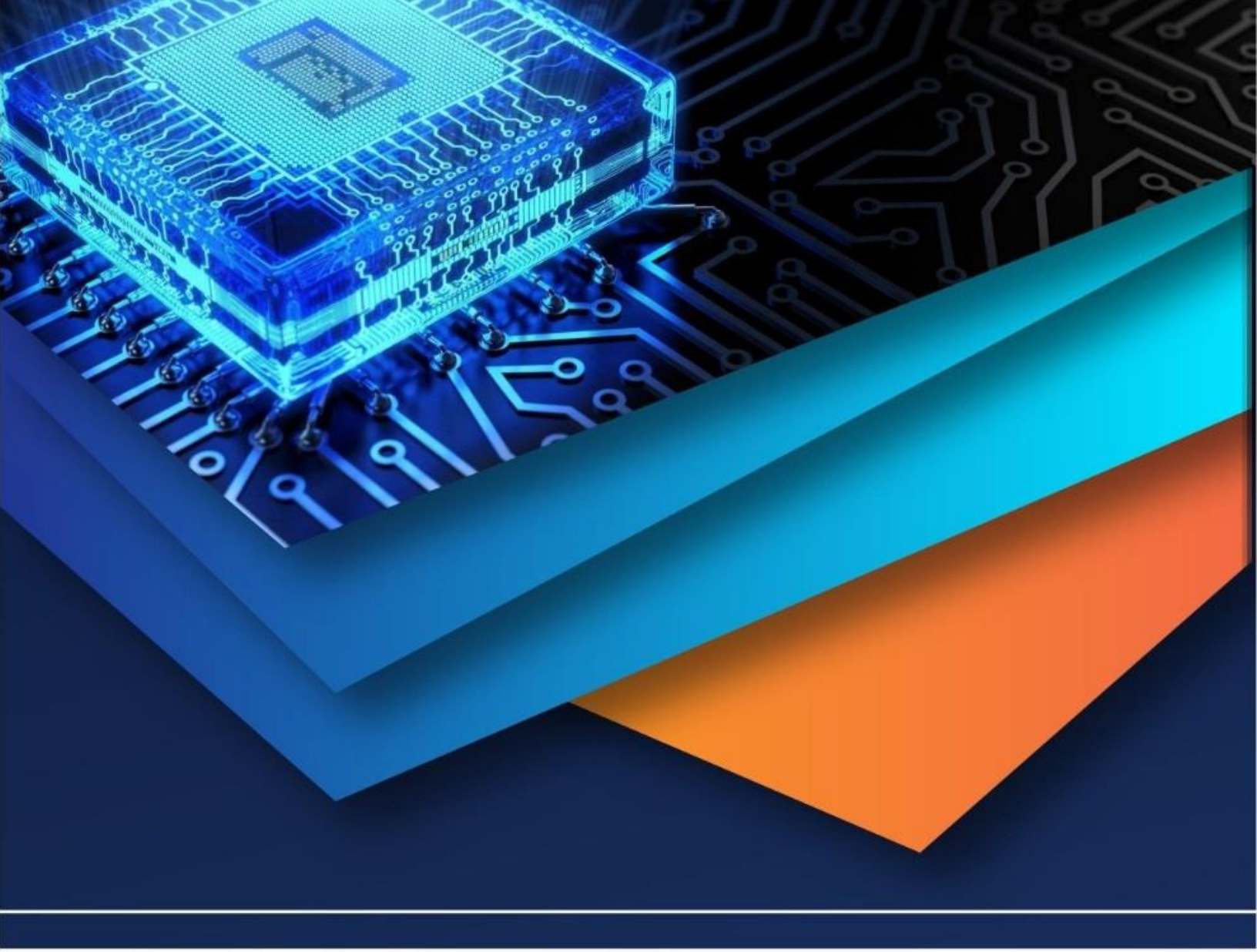
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