Virtual vs. Physical Office: Which One Increases Productivity the Most?

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Abstract. This study aims to compare the effects of virtual and physical office environments on employee productivity by conducting qualitative interviews with employees in both types of work environments. The interviews will find out how the employee feels about their work environment, how they work, and how productive they are overall. A qualitative method, such as thematic analysis, was used to look at the collected data to find patterns and themes about how the office environment affects productivity. The results of this study will give us a better idea of how employees feel in both offices and help us decide how to design and run offices in the future.

Keywords: Office · Physical · Virtual · Productivity · Effectively · Efficiently

1 Introduction

There have been significant changes in the workplace in recent years, particularly due to technological advancements and the growing acceptance of virtual office settings [1]. These two factors have played a significant role in bringing about these changes. A "virtual office," also referred to as "telecommuting" or "remote work," is a work arrangement in which employees work from a location other than the conventional office, such as their homes or another remote location. A "work from home" or "work from home arrangement" is an alternative term for what is more commonly referred to as a "virtual office" [2]. Using technology, employees of a virtual office can communicate and collaborate with their coworkers while working remotely from their homes or other remote locations [3].

There are numerous advantages to working in a virtual office, including a shorter commute, greater flexibility, and reduced costs for businesses [4]. Despite these advantages, there are concerns about how this work environment affects employee productivity. When employees are in different physical locations, it may be easier for them to concentrate on their work. On the other hand, physical office settings have the advantage of

facilitating face-to-face communication and collaboration, but they can also be distracting and stressful for employees [5]. Virtual office environments are growing in popularity [6]. A physical office provides a working environment that is more traditional and structured, and employees are expected to work in a shared space [7]. In today's modern workplace, the question of which style of an office environment is most conducive to increased productivity is gaining importance [8].

When it comes to determining whether an office's physical or virtual environment has a greater effect on the productivity of the employees working in that office, previous studies have produced inconsistent results. According to the findings of other studies, a physical office environment is associated with higher levels of face-to-face interaction and collaboration, both of which can boost productivity [9]. Many studies have shown that working in a physical office environment increases productivity [10].

Other studies, on the other hand, have found that working in a virtual office environment can increase productivity due to fewer distractions and greater flexibility [11]. According to Hill [4], working in a virtual office will be very disturbing because there is no home and workplace separation. It can be concluded that virtual office work distracts employees, preventing them from increasing productivity. In order to address this knowledge gap, the purpose of this study is to compare the effects of physical and virtual office environments on employee productivity using qualitative interviews with employees in both types of work environments.

2 Research Method

This research focuses on comparing the effects of physical and virtual office environments on employee productivity, with the ultimate goal of filling an existing knowledge gap in the field. To achieve this objective, interviews will be conducted with employees from these distinct work environments. The data collected will be analyzed using qualitative methods, such as thematic analysis, to identify patterns and topics relating to the effect of the office environment on productivity. These topics and patterns will be associated with the office environment's effect on productivity. This research will lead to a greater understanding of employees' subjective experiences in both physical and virtual office settings.

3 Results and Discussion

Table 1 shows qualitative research questions answered by seven respondents (workers as informants) will address. Only seven respondents (informants) were chosen because finding workers with working experience in virtual and physical offices was difficult. The informants interviewed were IT programmers, data scientists, and graphic artists, all of whom could operate from physical and virtual locations. The interview questions for respondents are exhibited in Table 1.

Table 1. Interview Questions

No	Questions
1	Can you describe your experience working in a physical office environment?
2	How does working in a physical office impact your productivity?
3	Can you describe your experience working in a virtual office environment?
4	How does working in a virtual office impact your productivity?
5	How do you feel about the flexibility and autonomy offered by virtual offices?
6	What do you believe are the advantages and disadvantages of working in a virtual office?
7	How do you think virtual offices can be improved to enhance productivity?
8	Do you believe that virtual offices can replace physical offices in the future?

4   Results and Discussion

Open coding was examined by reading each interview multiple times to identify similarities and differences across informants and then summarizing them into first-order categories. Then, we configure the theme's second-order coding. In addition, we gather and build second-order themes for third-order aggregate dimensions, allowing us to create a theoretical framework that connects the concepts, themes, and aggregate dimensions to pertinent literature in order to discover new concepts from case studies [12].
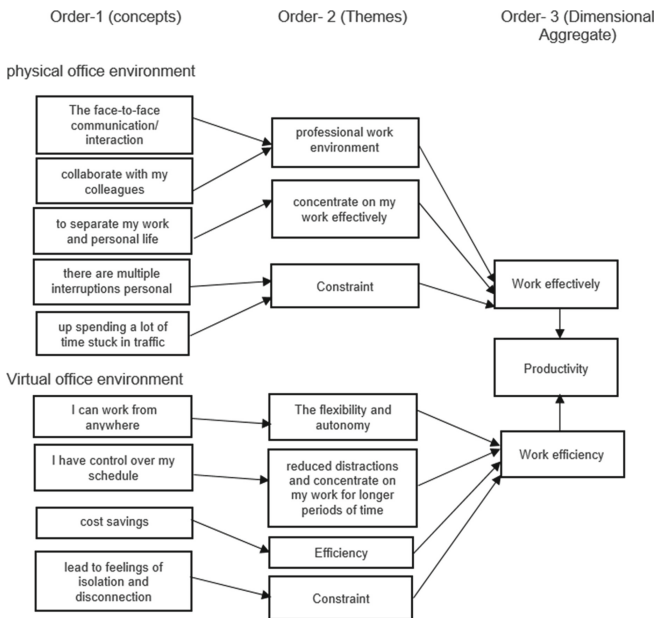
Fig. 1. The Data Structure of physical and virtual office environment

Figure 1 depicts the data structure, with the first order referring to informants' data on concepts, themes, aggregated dimensions of experience working in virtual and physical offices, and new results. In the aggregate dimension, we established three basic notions that are interconnected with the experience of working in virtual and physical offices: working effectively and efficiently, which impacts productivity. However, we also highlighted various disadvantages of working in virtual and physical offices, such as frequent personal interruptions, spending much time in traffic, and feelings of isolation and detachment. Some of these difficulties are novel discoveries since other scholars rarely discuss them. In addition, employees who work in physical offices are more effective at attaining job performance goals due to their increased focus, interaction, and collaboration with coworkers. Those who work in virtual workplaces benefit from greater flexibility, the ability to work from anywhere, and increased productivity.

5   Conclusion

The question of whether a physical office or a virtual office environment leads to greater productivity remains nuanced and diverse. This question may be answered by the fact that both environments result in higher productivity. The physical and digital office environments each have advantages and disadvantages, and the impact on an employee's level of productivity might vary based on the type of job being performed and the employee in question. According to the results of this study, there is no conclusive answer to whether this type of work environment results in higher levels of productivity. Future research should focus on the exact characteristics that contribute to higher productivity in each setting and might include investigating virtual offices in a Metaverse using a Virtual Reality headset. This information can be used to inform office design and administrative decisions, enabling firms to create work environments that promote employee health and productivity. This information can be utilized to inform office design and administration decisions, thereby supporting organizations in creating working environments that are beneficial to employee health and productivity.

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