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### "Relationship between Work Enviornment And Productivity"

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#### **ABSTRACT**

The paper discusses the quality of the employee's workplace environment that most impacts on the level of employee's performance. The main objective of this paper is to find out the relationship between office design and productivity

Since people are the most important resource and greatest expense of any organization, the long-term cost benefits of a properly designed, user-friendly work environment should be factored into any initial cost considerations

Many enterprises limit their productivity enhancement of employees to the acquisition of skills. However, about 86% of productivity problems reside in the work environment of organizations. The work environment has effect on the performance of employees. The type of work environment in which employees operate determines the way in which such enterprises prosper. The objective of the study is to analyze the impact of work environment on worker's productivity. Investigation revealed that factors in both the external and internal work environment are responsible for the enhancement of labors productivity.

Management's new challenge is to create a work environment that attracts, keeps, and motivates its workforce. The responsibility lies with managers and supervisors at all levels of the organization. Businesses must step outside their traditional roles and comfort zones to look at new ways of working. They have to create a work environment where people enjoy what they do, feel like they have a purpose, have pride in what they do, and can reach their potential.

**KEYWORDS:-**Productivity, Work Environment, Office Design, Ergonomics

### 1. INTRODUCTION

The simple premise behind the movement towards better working environments is that comfortable people are more productive. Comfort, however, is one of those catching words that are easy to use and hard to define. People are comfortable when they feel comfortable, which is a state of mind dependent on both physical sensations and emotional states. Creating effective personal environments must account for both these elements together with the constraints of cost and technology.

The purpose of this study is to examine the relationship between personality, work environment preferences, and the outcome variables, performance and commitment.

The objectives of the study are as follows:

- 1) To determine the impact of work environment on employees' productivity.
- 2) To analyze the impact of office design on employees' performance
- 3) To assess the effect of employees' health on their work performance

"In the coming years, companies will succeed or fail depending on their ability to recruit and retain top skilled workers," said Hoskins. "Therefore, the office environment is taking on an increased responsibility to connect people and support strong corporate cultures that engage workers hearts and minds."

Companies have come to realize the importance of comfort in the workplace environment, improving on functional ergonomic elements in order to retain quality personnel, increase productivity, and maintain a competitive edge.

It is the quality of the employee's workplace environment that most impacts on the level of employee's motivation and subsequent performance. How well they engage with the organization, especially with their immediate environment, influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and, ultimately, how long they stay in the job. The main objective of this study is to find out the relationship between office design and productivity.

The findings of this study show that office design is very vital in terms of increasing employees' productivity. Comfortable and ergonomic office design motivates the employees and increases their performance substantially.

Most people spend fifty percent of their lives within indoor environments, which greatly influence their mental status, actions, abilities and performance (Sundstrom, 1994). Better outcomes and increased productivity is assumed to be the result of better workplace environment. Better physical environment of office will boosts the employees and ultimately improve their productivity.

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It is much higher cost to employ people then it is to maintain and operate a building, hence spending money on improving the work environment is the most cost effective way of improving productivity because of small percentage increase in productivity of 0.1% to 2% can have dramatic effects on the profitability of the company. This research focuses on the relationship between productivity and the indoor environment in the offices

The key factors that effect employees' productivity and performance fall into two categories:

- 1. Those that are driven by procedures, protocols and management requirements (work environment)
- 2. The factors that arise from premises, office or factory design (office design)

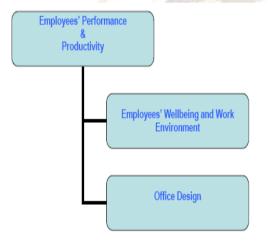


Figure 2: Employees' Performance& Productivity



Figure 3: Employees' Wellbeing and Work Environment

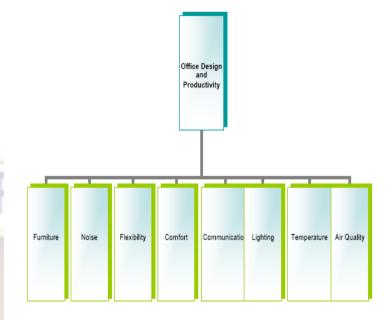


Figure 4: Office design and Productivity

#### 2.METHODOLOGY

The research design is a basic research and it is a field survey through self administered questionnaires. Primary data is collected through a survey. Descriptive statistics are used to analyze the data. Content analysis procedures are used to determine relationships between subjects' answers.

This study examines office workers in different offices in order to collect information required to meet the objectives of the study, secondary data is obtained from books, articles from journals, and official web sites.

The effects of design features are compared to other organizational factors. Questions are structured to discover which organizational factors (i.e., workplace design features, management support, technology and equipment, and coworker support) in relevant workplace workers perceive to hamper or encourage their ability to perform effectively.

Workspace types such as enclosed cubicles with partition walls, cellular offices with floor-to-ceiling walls, and desks located in open areas were included. A review of the literature on work environment and performance is conducted.

### 3.THEORITICAL FRAMEWORK

Based on the literature review, the relationship between office design and productivity was conceptualized and depicted in Figure below.

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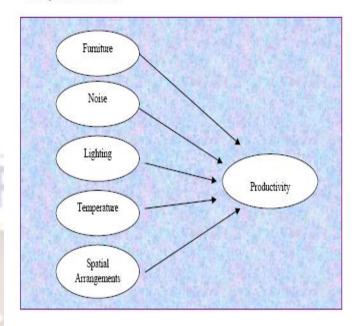
The relationship is defined in such a way that the set of factors impact on an individual, which in turn determine the final outcome in terms of increased or decreased productivity of that individual. These factors have different impacts on different employees.

Five indicators of office design such as furniture, noise, temperature, lighting and spatial arrangement were considered for study in the survey. The overall response for each factor was analyzed. Data was analyzed to identify the factor that have relatively high tendency towards decreasing productivity. Different office design factors such as furniture, noise, lighting, temperature and spatial arrangement were used to determine the extent of the loss in productivity

### 3.1 Furniture

Office furniture comprises of desks chairs, the filing system, shelves, drawers, etc. All these components have a specific role to play in the proper functioning of any office and the productivity and the efficiency of the employees .And, one of the most important thing to be considered while buying office furniture is to ensure whether it is ergonomic or not. Ergonomics of office furniture is important because an employee has to work with them for the entire time that he is in office, and if they are uncomfortable and not user friendly, their working style and efficiency gets hampered considerably, in turn affecting the overall organizations. Non-ergonomic office furniture can also lead to health problems of employees, which again has an adverse effect on the productivity. Ergonomic office furniture ensures that each employee gels well with the things around him, like desks, chairs, computer alignment and even environmental factors. If the employee is uncomfortable due to any reason, his work is bound to get affected. If all factors surrounding the employee are ergonomically correct, then the employee will be comfortable and remain motivated to give his best. These days' organizations consult, and even employ ergonomic experts that advice people on how to improve their office ergonomics and what type of furniture would be suitable to make the ergonomics of a work place better. Having ergonomic office furniture reduces the chances of any risk injury. They are designed in manner that makes them safe to be had around and also reduce the possibility of any accidents in the work place.

Conceptual framework



Independent Variables

Dependent Variable

Figure 7: The effect of five basic elements on productivity

### 3.2 Noise:

It is probably the most frequently forgotten of the environmental pollutants whose effects can be far-reaching. Noise harms us in more ways than we can think of and at times without us even knowing about it. We cannot have a noise free world but we sure can have a noise safe world. There are various sources of noise pollution. In some places noise from construction projects predominate, while in others it is vehicular traffic or noise from airports. Other sources include the noise in occupational settings or even the noise of simultaneous conversations. In our country unleashed loudspeakers disturb the neighborhood on seemingly endless nights, where the laws are either battered in the name of religion or just for fun.

Very often, noise does not produce visible results. That is why probably, people believe that noise does not cause health hazards. But as per different studies, noise creates health hazards affecting children the most, with extremely high noise levels even causing hear loss in newborns.

### 3.3 Light intensity:

Up until recently, the only purpose of indoor lighting was to aid with visually directed tasks when there wasn't enough external light. But a recent discovery has shown that light has an impact beyond merely helping us see. Non visual receptors in the

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retina of the eye form nerve pathways that directly influence our biological clock, the part of our brains that controls and moderates sleep and wakefulness, directly affecting our levels of alertness.

It is now being suggested that modern working conditions can make these symptoms worse, as many workers spend the majority—if not all—daylight hours indoors, exposed to little, if any, natural light.

Common knowledge, backed up by scientific research proves that the quality of indoor lighting in the office can have significant effects on the performance and the well-being of employees.

In just the last few years, the understanding of how light impacts upon our health have grown by leaps and bounds. The brightness of office light effects alertness, concentration, and task performance. Adjusting the type and quality of light can significantly improve working experience and productivity.

### 3.4 Temperature and Humidity:

What temperature works best for one's productivity depends on one's body. For a thin person, a higher temperature might be better. But for someone not as thin, a lower temperature may work better.

Possible Effects of Temperature/Humidity:

High Temperature Levels:

Employee lethargy and tiredness as a result of increased body temperature lead to possible efficiency decreases.

Low Temperature Levels:

Low Temperature Levels decrease in efficiency due to cooler body heat and shivering.

High humidity

In itself may not be a direct problem, but it does increase our susceptibility to high temperature levels as evaporation of body sweat is impeded.

Low Humidity

Levels have a debilitating effect on our ability to breathe and swallow without discomfort as our mouths and noses can become dry due to the increased level of evaporation in the surrounding environment

### 4. FINDINGSAND CONCLUSION

The results of these survey showed that nine out of ten believed that a workspace quality affects the attitude of employees and increases their productivity. Employees in different organizations have different office designs. Every office has unique furniture and spatial arrangements, lighting and heating arrangements and different levels of noise. The purpose of this study is to analyze the impact of the office design factors on employees' productivity. The study reveals that good office design has a positive affect on employees' productivity .This

study finds out the effects of office design on employees' productivity.

#### **REFRENCES**

- 1. Brill, M. Margulies S, Konar E, BOSTI (1984) Using Office Design to Increase Productivity. Vol. 1, 1984: Vol.Burke, L. and L. Witt. 2002. "Moderators of the Openness to Experience-Performance Relationship." Journal of Managerial Psychology 17 (8): 712-722.
- 2. Carnevale, D.G., (1992), Physical Settings of Work. Public Productivity and Management Review, 15, 4, 423-436
- 3. Clements-Croome, D., Kaluarachchi, Y. (2000) An Assessment of the Influence of the In-door Environment on the Productivity of Occupants in Offices Design, Construction and Operation of Healthy Buildings, pp.67
- 4. Clements-Croome, D.J., (1997). Specifying Indoor Climate, in book Naturally Ventilated Buildings
- 5. Dorgan, C.E. (1994) productivity Link to the Indoor Environment Estimated Relative to ASHRAE 62-1989
- 6. http://www.managementissues.com/2006/8/24/research/poorworkplace-design-damages-productivity.asp
- 7. Huges, J. (2007, July). Office design is pivotal to employee productivity. Sandiego source the daily Transcript.
- 8. Public Productivity & Management Review. Vol 22. No. 4, 537 553
- Sackett, P. R. and C. J. DeVore. 2001. "Counterproductive Behaviors at Work." Chapter in Handbook of Industrial, Work, and Organizational Psychology, Vol. 1. Eds. N. Anderson, D. S. Ones, H. K, Sinangil and C. Viswesvaran. London, UK: Sage. pp. 145-164.
- 10. Sundstrom, E., Town, J.P., Rice, R.W., Osborn, D.P. and Brill, M. (1994), Office noise, Satisfaction, and Performance, Environment and Behavior, 26(2), pp. 195-222.
- 11. Sutermeister, R.A. (1976) People and Productivity, 3rd end, New York
- **12.** Uzee, J (1999), the inclusive approach: creating a place where people want to work. Facility Management