

DIGITALIZED WORK ENVIRONMENT AND EMPLOYEE JOB PERFORMANCE: A MODERATING ROLE OF DIGITAL INFRASTRUCTURE OF TEXTILE COMPANIES IN RIVERS STATE

Dr. George Ordua & Gumus Rachael Bodisere
Department of Office and Information Management
Faculty of Business Studies, Ignatius Ajuru University of Education
Port Harcourt, Rivers State, Nigeria

ABSTRACT

The aim of the study was to investigate the relationship between digitalized work environment and employee job performance of Textile manufacturing companies in Rivers State. The objective of the study was to investigate the relationships between the dimensions of digitalized work environment and employee job performance of Textile manufacturing companies in Rivers State. This study is built on two theories: Person-Environment Fit Theory and Socio-Technical Theory. The study revealed that there is strong positive significant relationship between digitalized work environment and employee job performance of Textile manufacturing companies in Rivers State. The study concludes that the utilizing of a digitalized work environment characterized by the presence and use of digital innovations, office social media, and digital access to carry out operations around a textile manufacturing company are viable ways to achieve quality service delivery, job commitment, and customer satisfaction, among others. The study therefore recommended Employees of textile manufacturing firms and other organizations should adopt the use of Cloud platforms in storage and retrieval of vital work-related information, employees should judiciously make use of emailing to message themselves, store, and retrieve vital information, as this will promote their service delivery and customer satisfaction, among other things etc.

Keywords: Digitalized Work Environment, Employee Job Performance, Digital Infrastructure

INTRODUCTION

One of the major challenges faced by textile firms in Nigeria over the years appears to be corporate under-performance. For example, some of the textile manufacturing companies have not been able to improve their products and services by way of diversification and quality improvement (Mohammed *et al.*, 2019). It is observed that a good number of their employees do not comply to organizational standards in carrying out production operations. Accuracy to show quality work is also an issue of urgent concern. Some of them have not been able to innovate better customer services and this seems to have led to downsizing customer base and low sales revenue (market share). Poor commitment on the part of the employees has also become an issue for urgent attention. Additionally, accomplishing daily and weekly tasks are still what some employees are suffering from. Lack of improvement in product lines and downsizing market share makes it difficult for such textile manufacturing companies to secure reasonable return for their shareholders. While the poor performance of employees could be blamable on economic realities, the underperformance of employees in many companies in Nigeria has been attributed to

inadequate adoption of digital transformation (Okechukwu & Okoronkwo, 2018; Al-kharabsheh *et al.*, 2023). Although some textile manufacturing companies in Nigeria and Rivers State have adopted functional digital work environment like office social media, digital innovation, and digital access, workplace digital meeting system, etc. but the level of their adoption has been very low. There appears to be very little deliberate efforts towards employing these digital transformation strategies to boost the performance of their employees.

A second issue that prompted this research study is the fact that many of these textile manufacturing companies who happen to operate in a digitalized work environment are practicing it in low key. This weakness is making it look almost as if there is no digitalized work environment taking place. Explicitly stated, majority of these textile manufacturing companies are yet to incorporate fully functional cloud computing storage, Artificial Intelligence usage, office WhatsApp, office Telegram, Emailing, and regular browsing, amongst others. Seth (2020) in Bariwei (2021) posited that, to a great extent, it becomes hard to find textile manufacturing companies in Nigeria that are fully fortified with all functional digital systems and platforms for management, employees, and customers' use. As a result, there seems to be significant drop in service delivery, job commitment, and customer satisfaction. The poor state of empirical studies bothering around the relationship between digitalized work environment and employee job performance of textile manufacturing companies in Rivers State is another great concern that provoked this study. To evidentially authenticate this claim, Sulistianingtiyas and Djastuti (2022) examined and analyzed the effect of digitization in the workplace on employee performance mediated by employee engagement; Al-kharabsheh *et al.* (2023) investigated the effect of digital HRM practices on employee motivation and hence employee job performance, or in other words, the mediating role of employee motivation between digital HRM practices and employee job performance; Chatterjee *et al.* (2023) investigated the influence of digital workplace on organization performance and the moderating role of digital leadership capability in digitally transforming the workplace; Goswami and Upadhyay (2019) investigated the impact of digital transformation on employee engagement; impact of online banking on the performance of Nigerian banking sector (Auwal (2016); effects of information technology on organisational performance in Nigerian banking industries (Balogun (2016); impact of ATM banking performance on customer satisfaction with the bank in Malawi (Charles, 2016); impact of ICT on the performance of deposit money banks in Nigeria (Nwakoby, Charity & Ofobruku, 2018). However, none of these studies above provided empirical evidence on how dimensions of digitalized work environment, such as digital innovation, office social media, and digital access interact with measures of employee job performance of textile manufacturing companies in Rivers State (quality service delivery, job commitment, and customer satisfaction). This suggests that the relationship between digitalized work environment and employee job performance of textile manufacturing companies in Rivers State have not received sufficient research attention. Here is the knowledge gap that necessitated this study.

Concept of Digitalized Work Environment

Over the years, the workplace has evolved from referring to a physical space including offices, meeting rooms, and desk phones, to being focused on always connected

environment with instant access to what employees need to work. Many office documents and projects have gone online. Instant messaging has become a popular communication choice within office communities and email is heavily used mode of correspondence. Today, employees often work in environments that are geographically dispersed in diverse locations. This recent trend is due mainly to new technology and greater accessibility of online tools, but it is also because people want to find a balance between their personal and professional lives. Human Resource today must, therefore, make an effort to engage teams that are dispersed in various locations, but working on the same project.

Though digital technology is often seen as dehumanizing relationships between people, it can, on the contrary, become a real opportunity to increase a feeling of belonging, develop a company's culture and ensure contact between employees working from various different locations (Montamat, 2019). Human Resource teams also have to deal with individuals who will not hesitate to leave their jobs if they get a better offer with better career opportunities or conditions and challenges that better suit their needs.

The term "Digitalized work environment" is coined from "Work environment" and "Digital". Talking about a work environment, it is defined by Wikipedia (2020) as a location where someone works for their employer or themselves, a place of employment. Such a place can range from a home office to a large office building or factory. For industrialized societies, the workplace is one of the most important social spaces other than the home, constituting "a central concept for several entities: the worker and his/her family, the employing organization, the customers of the organization, and the society as a whole. The development of new communication technologies has led to the development of the virtual workplace or remote workplace, a workplace that is not located in any one physical space. A workplace or place of employment is a location where people perform tasks, jobs and projects for their employer (Dennis, 2018). Types of workplaces vary across industries and can be inside a building or outdoors. Workplaces can be mobile, and some people may work in different locations on various days. The growth of technology has led to a new type of workplace, a virtual one, allowing people to work remotely. A workplace can be an office, home office, factory or distribution centre, farm or outdoor location, store, etc. Workplaces help businesses deliver their products or services to consumers in an efficient way. Corporate team members use their place of work to collaborate and develop new ideas, products and services to offer to their customers. Businesses use factories to create their product and distribution centers to coordinate the shipment of the product to stores or directly to the consumer. Stores exist to sell the product to consumers by giving a space for customers to physically see the product

Concept Employee Job Performance

Performance is a means of getting better results from the whole organization or teams or individuals within it by understanding and managing performance within an agreed frame work of planned goals, standards and competence requirements (Armstrong, 2016). Performance is the accumulated end results of all the organization's work processes and activities (Santos & Brito, 2012). It is about how effectively an organization transforms inputs into outputs and comprises the actual output or results as measured against its intended outputs. Liptons (2013) proposes that performance is the ability of the firm to prevail. There is hardly a consensus about its definition, and this limits advances in research and understanding of the concept of performance (Santos & Brito, 2012). As the

debate on what organization performance rages on, the approach on how to measure it has attracted even more scholarly attention (Liptons, 2013).

Employee job performance in an organization, institution, firm, etc. is a very important area in the workplace. It can help them (organization, institution, firm, etc.) increase and utilize the capacity of the human resources they have. It translates into good service delivery, high level of performance, high level of productivity and interaction in which affects every area of the organization. To achieve this, institutions and organizations need to make policies that will encourage employee performance. An employee's job performance depends on or is a consequence of some combination of ability, effort, and opportunity. But, the measurements can be done in terms of outcomes or results produced (Griffin *et al.*, 2018).

As mentioned in Huang *et al.* (2014), performance refers to the characteristics of an individual's success in their work. It usually involves the calculation of the individual output level for example, sales or production, or to assess the level of success compared with the expectations of the organization (Ilgen & Pulakos, 2016). Jena and Pradhan (2014) stated that performance is something that is done or the products or services produced or provided by a person or group of people. By the researcher's definition, performance is a result that can be achieved by a person in doing the work of their duties. Then, all the results were evaluated by the company or supervisor. This is a feedback by the company or supervisor towards employees about their job performance. It is different with Lawler and Worley (2016), as they stated that performance is a result or consequence of an activity for a period of time. Job performance is a record of the results obtained from the function of a specific job or activity during specific time period. Employee job performance is a result of the actions that have been set to achieve goals based on certain standards (Mone & London, 2013). This usually involves the actions or behavior of all mental processes that are not observable. This includes problem solving, decision making, program planning, and reasoning. Overall assessment on the performance of the employees is usually involving the performance result and work processes such as evaluating how the employees do the work and results achieved from that second process is considered as performance (Ilegen & Pulakos, 2016). An organization needs high performance of its employees, so as to meet its goal and be able to achieve competitive advantage (McCook, 2017). According to business dictionary, employee performance is the job related activities expected of a worker and how well those activities were executed. Conceptually, employee job performance is the effectiveness, quality and efficiency at which an employee carries out his task and responsibility. This implies that employee performance entails the end product of an employee's effort, as well as the manner with which he/she uses to achieve results. Employee performance is the ability to achieve the set objectives within the required timelines and parameters (Yusuf *et al.*, 2014). Sundi (2013) proposed five primary criteria that could be used to measure performance, namely; work quantity, work quality, work independence, timeliness and individual relationships. Many researchers focused on the relationship linking job performance and satisfaction in the area of Organizational Psychology and found out that the employees' performance depended on employees' satisfaction (Yahaya *et al.*, 2012). This indicated that great employee performance can be achieved by a high level of job satisfaction (Insan *et al.*, 2013). Yahaya *et al.* (2012) concluded that for the employees to remain motivated as well as to boost their job satisfaction, the employers should provide a good environment.

However, this work measures employee performance in terms of time efficiency, task completion and problem solving.

Concept of Digital Infrastructure Availability

Due to the intense competition in today's corporate world, it is obvious that all companies are working to digitize. The best way to think of digital infrastructure is as the natural development of the workplace (Alter, 2017). The technology that individuals or groups of individuals utilize in the workplace today is all included in the definition of the "digital workplace." As a result of their activities, education, skill development, knowledge, and even the expectations of their superiors, clients, customers, and even the general public, employees are now raising their competency levels to best fit appropriate performance. The position of office professionals has significantly changed as technology in offices throughout the world continues to advance (Butler, 2012).

Notwithstanding, the availability of digital resources within a company is a key indicator of how well-versed its staff is in using information and communication technology (ICT). According to Bamidele's (2006) theory, ICT is a revolution that uses computers, the internet, and other telecommunications technologies in all spheres of human endeavor. ICT was defined as handling and processing information (text, photos, graphs, instructions, etc.) for usage, using electronic and communication equipment like computers, cameras, and telephones by Ozoji and Ofodu (2007). ICT is similarly defined by Ofodu (2007) as electronic or computerized devices that can be utilized for a variety of teaching and learning activities as well as for personal usage, helped by human and interactive materials. ICT could be summed up by these definitions as the use of various technologies for the processing, exchange, and communication of information. In order to accomplish this, modern workplaces make use of computer systems/laptops, smart phones, wifi, and other types of information-sharing and communication tools to make sure that they can handle their jobs effectively. According to Aribasala (2016), ICT are becoming a more significant factor in how well organizations and society are able to create, access, accept, and use information. However, because of their capacity to promote the transfer and acquisition of knowledge, they are being hailed as the resources or tools for the post-industrial age and the cornerstones of a knowledge economy. In order to emphasize the value of ICT use in the workplace, Aribasala (2016) proposed that some digital needs have been satisfied through ICT, changing the requirements of prospective processes. The majority of businesses do not often need to construct the digital workplace from scratch because they currently employ many of these digital components. In fact, operating a digital workplace appears to be closer than most people believe if organizational staff responds to emails from smart mobile devices such smart phones, ipads, Pamtops, etc. and checks their pay stubs online (Odu, 2017).

The idea of digital infrastructure is defined differently by different authors. The most modern equipment offered by an organization for simple task execution is referred to as digital infrastructure in the condensed Oxford English dictionary, which is published in London, United Kingdom. According to Boampong (2016), the use of workplace digital resources refers to the provision of digital equipment that entails the use of integrated systems to automate workplace facilities in an organization for administrative purposes. According to Spencer (1981), the availability of particular facilities to replace human labor with that carried out by machines or systems created to carry out a specified combination

of action automatically or frequently in a workplace constitutes digital infrastructure. Digital office equipment allows secretaries a distinct professional path and a prominent position in the organizational hierarchy (Aromolaran, 2013).

Operationally, digital infrastructure availability refers to the readiness and accessibility of the technological components and systems that support digital operations, services, and connectivity. It encompasses the reliability and functionality of various digital assets, such as hardware, software, networks, and data centers, to ensure they are accessible and operational when needed. Digital infrastructure availability is a critical aspect of modern business operations and the functioning of digital services.

Person–Environment Fit Theory

Lewin and Edwards' Person–Environment Fit Theory was popularized in 1962 as cited in Osita (2018). This theory of psychological stress describes the interaction between the person and environment ($P \times E$) as the key to comprehending people's cognitive,

emotional and behavioural reactions such as stress as well as operational productivity level. The relevant assumptions of this theory as deemed fit for this work are as follows:

- i. A mismatch between a person and his work environment will lead to tension and uneasiness capable of hampering his level of productivity;
- ii. Worker's capabilities (skill sets) will determine the level of work pressure and how environmental stress affects their output (Lewin and Edward as cited in Odu, 2018). This is the phase of the theory that strengthens the fact that the ability of an employee in a textile manufacturing company to effectively and efficiently utilize the digital tools at his disposal in the workplace will influence how stressful the work will be, as well as influence quality service delivery, job commitment, and customer satisfaction in the organization.

The implication of the first assumption is that an employee with low expertise on use of digital platforms and gadgets in terms of innovative digital tools, office social media, and digital access will be greatly challenged in coping with a workplace environment fortified with hi-tech digital technologies. Such individual will need to sharpen himself so as to be fit to efficiently and effectively utilize all of those technologies at his disposal to run activities, thereby enhancing their performance, especially in in terms of quality service delivery, job commitment, and customer satisfaction, amongst others.

Adopting this theory as the major theoretical framework for this study is based on the fact that the theory is related to digitalized work environment, which is the independent variable here. Another point that make this theory appropriate to be adopted as the theoretical foundation of this study is the fact that it explains and predicts that the more acquainted an employee is with digital platforms and gadgets in a digitally-inclined work environment, will determine whether the employee will be able to achieve results and in what degree.

CONCLUSIONS

Based on the results of the analyses and discussion of findings, the study concludes that the utilizing of a digitalized work environment characterized by the presence and use of digital innovations, office social media, and digital access to carry out operations around a textile manufacturing company are viable ways to achieve quality service delivery, job commitment, and customer satisfaction, among others. Trending work digitalization in a textile manufacturing company characterized by the adoption of digital innovations, office social media, and digital access promotes the performance of employees. It becomes incumbent on textile manufacturing companies to make provisions of digital infrastructures, such as computer systems, wifi, etc. to create an enabling environment for digitalization to thrive, thereby enhancing the job performance of their employees.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. Employees of textile manufacturing firms and other organizations should adopt the use of Cloud platforms in storage and retrieval of vital work-related information.
2. Artificial intelligence tools should be used by employees of textile manufacturing companies to enhance their creativity and innovativeness, hence promoting

their job performance, among other things.

3. Employees of textile manufacturing companies should religiously adopt the culture of using office telegram for information dissemination among themselves, so as to translate this into enhanced customer satisfaction, job commitment, and quality service delivery.

4. Management of textile manufacturing firms should ensure that its employees undergo adequate training on digital literacy from time to time in order to enable them adapt and be profitable in utilizing digitalized work environment, thereby promoting their job performance.

5. LinkedIn usage should be encouraged among the employees, as this will go a long way to promote their career and enhance their expertise.

6. Management should ensure that office Whatsapp is created to enhance virtual access and sharing of official information, thereby enhancing teamwork and increased performance of employees.

7. Management should provide digital incentives in form of smartphones, paid data subscription to enable employees to properly make use of social media applications to enhance interaction between them through video calls, conference calls, etc. Employees should judiciously make use of emailing to message themselves, store, and retrieve vital information, as this will promote their service delivery and customer satisfaction, among other things.

REFERENCES

- Alter, J. (2017). Workplace environment and its impact on organizational performance in public sector organizations. *International Journal of Enterprise Computing and Business Systems*, 5(1), 1-20.
- Bariwei, B. I. E. (2021). *Digital workplace environment and organizational health of airline operators in Rivers State*. A Research Dissertation Submitted to School of Postgraduate Studies, Ignatius Ajuru University of Education, Port Harcourt in Partial Fulfillment of the Requirements For the Award of Master of Science (M.Sc.) Degree in Management.
- Boampong, O. (2016). *Discovering computers 2004: A gateway to information*. Course technology.
- Butler, J. G. (2012). *A history of information technology and systems*. McMillan.
- Dennis, F. U. (2018). *Whatis considered a workplace? A few definitions*. <https://www.indeed.com/recruitment/c/info/what-is-considered-a-workplace-a-few-definitions>
- Griffin, M., Parker, S. & Mason, C. (2018). Leader vision and the development of adaptive and proactive performance: A longitudinal study. *Journal of Applied Psychology*, 95(3), 174–182.

- Goswami, B. K., & Upadhyay, Y. (2019). *An empirical study on digital transformation and its impact on employee engagement*. Proceedings of 10th International Conference on Digital Strategies for Organizational Success, <https://ssrn.com/abstract=3320668> or <http://dx.doi.org/10.2139/ssrn.3320668>
- Huang, J. L., Ryan, A. M., Zabel, K. L. & Palmer, A. (2014). Personality and adaptive performance at work: A metaanalytic investigation. *Journal of Applied Psychology*, 99(2), 162–179.
- Ilgen, D. R. & Pulakos, E. D. (2016). *Employee performance in today's organizations*. Jossey-Bass Press.
- Insan, A. N., Astuti, E. S., Raharjo, K. & Hamid, D. (2016). The effect of transformational leadership model on employees job satisfaction and performance at perusahaanlistriknegara(plnpersero) in south Sulawesi, Indonesia. *Information and Knowledge Management*, 3(2), 135–142.
- Jena, L. K. & Pradhan, R. K. (2014). Deliverables towards HR Sustainability: A conceptual Review. *European Journal of Business Management*, 6(23), 95–102.
- Lawler, E. E. & Worley, C. G. (2016). *Built to change: How to achieve sustained organizational effectiveness*. Wiley Press.
- Liptons, M. (2013). *Guiding growth: How vision keeps companies on course*. Harvard Business School Press.
- McCook, K.D. (2017). *Performance management system in organizations*. Unpublished doctoral dissertation. Louisiana State University and Agricultural and Mechanical College.
- Mone, U. O. & London, R. (2013). *Management (First Edition)*. The Dryden press. Montamat, V. (2019). *The Digital Workplace: The ultimate digital work environment*.
<https://blog.soprahr.com/en/the-digital-workplace-the-ultimate-digital-work-environment/>
- Nwakoby, N.P., Charity, P.S., & Ofobruku, S.A. (2018). Impact of information and communication technology on the performance of deposit money banks in Nigeria. *International Journal of Management and Sustainability*, 7(4), 225-239.
- Odu, S. (2018). *Technostress and office/information managers job effectiveness in tertiary institution in Rivers State*. Unpublished m. Sc dissertation, department of information management. IAUOE.

- Ofodu, E. O. (2007). Information communication technology. A tool for effective management in Nigerian Universities. *Journal of Educational Management, 8*(1), 80-87.
- Okechukwu, E. U., & Okoronkwo, B. O. (2018). Evaluation of technological environment on organizational performance among selected medium scale enterprise in Enugu State. *International Journal of Academic Research in Economics and Management Sciences, 7*(3), 267–280.
- Santos, J. B. & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *Brazilian Administrative Review, 9*(6), 95-117.
- Spencer, D. D. (1981). *Introduction to information processing*. Charles E. Meril Publishing Co.
- Sulistianingtiyas, I. & Djastuti, I. (2022). The effect of digitalization in the workplace on employee performance mediated by employee attachment (Study on employees of the Center for Product Processing Research and Marine and Fisheries Biotechnology, Central Jakarta). *Budapest International Research and Critics Institute-Journal (BIRCI-Journal) 5*(2), 15121-15136.
- Wikipedia (2020). *Workplace*. <https://en.wikipedia.org/wiki/Workplace>
- World Bank (2016). *World development report 2016: Digital dividends*. Washington, DC: World Bank.
- Yahaya, A., Yahaya, N., Bon, A. T., Ismail, S. & Noor, N. M. (2018). The relationship between big five personality with work motivation, competitiveness and job satisfaction. *Elixir Psychology, 44*(1), 7454-7461
- Youseff, L., Butrico, M. & Da-Silva, D. (2008). *Toward a unified ontology of cloud computing, in grid computing environments workshop*. Austin, Texas: GCE'08, IEEE.