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## ELECTRONIC LEADERSHIP AND EFFECTIVENESS OF ORGANISATION DURING COVID-19 PANDEMIC IN SOUTH-WEST, NIGERIA

In a digitalised environment, achieving greater success require a technological driven leader who influence behaviour using advance information technology to ensure organisational effectiveness especially during COVID-19 Pandemic. However, this study investigated electronic leadership and organisational effectiveness during COVID-19 Pandemic, in selected Universities in South-west Nigeria, specifically, the study aims at analysing the role of electronic leadership on organisational effectiveness. Data collection was through structured questionnaire the research utilized simple random sampling techniques to select the study's respondent. Taro Yamane sample size formular was used to determine the sampling size of seven hundred and thirteen (713) from the total population of one thousand eight hundred and forty-five (1,845). Descriptive and inferential statistic was the statistical tools that was adopted for the study. Bio-data of the respondents were analysed using descriptive statistics while the hypothesis was analysed using inferential statistics. Essentially, this study hypothesis was tested at 0.05 alpha level utilizing linear regression. The outcome of the study depict that electronic leadership significantly influenced organisational effectiveness ( $R^2 = 0.038$ ,  $\beta = 0.195$ ,  $F_{(1,632)} = 24.977$ ,  $p < 0.05$ ). The study concluded that electronic leadership significantly influenced organisational effectiveness. It was recommended that selected Universities should prioritize training their academic staff on the use of digital tools, virtual team management and remote management skills for improved organisational effectiveness and effective performance for future crisis.

**Keywords:** Electronic Leadership, organisational Effectiveness, COVID-19 pandemic.

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### Нигерияның Оңтүстік-Батысында COVID-19 пандемиясы кезіндегі ұйымдастырушылық өнімділікті жақсартудағы электрондық басқарудың рөлін талдау

Цифрландырылған әлемде үлкен табысқа жету үшін, әсіресе COVID-19 пандемиясы кезінде ұйымдастырушылық тиімділікті қамтамасыз ету үшін озық ақпараттық технологияларды пайдалану арқылы мінез-құлыққа әсер ететін технологияға бағытталған көшбасшы қажет. Бұл зерттеуде Нигерияның оңтүстік-батысындағы университеттерде COVID-19 пандемиясы кезіндегі электрондық көшбасшылық пен ұйымдастырушылық өнімділік қарастырылады, яғни зерттеу электрондық көшбасшылықтың ұйымдық тиімділіктегі рөлін талдауға бағытталған. Деректер құрылымдалған сауалнама арқылы жиналды; респонденттерді таңдау үшін қарапайым кездейсоқ іріктеу қолданылды. Таро Яманенің іріктеу өлшемі формуласы іріктеу өлшемін анықтау үшін пайдаланылды, ол жалпы 1845 халықтың 713-ін құрады. Зерттеу үшін статистикалық құралдар ретінде сипаттамалық және қорытынды статистика пайдаланылды. Респонденттердің өмірбаяндық деректері сипаттамалық статистиканы қолдану арқылы талданды, ал гипотеза қорытынды статистиканы қолдану арқылы тексерілді. Зерттеу гипотезасы сызықтық регрессияны қолдану арқылы  $\alpha = 0,05$  маңыздылық деңгейінде тексерілді. Зерттеу нәтижелері электрондық көшбасшылықтың ұйымдық өнімділікке айтарлықтай әсер еткенін көрсетеді ( $R^2 = 0,038$ ,  $\beta = 0,195$ ,  $F(1632) = 24,977$ ,  $p < 0,05$ ). Зерттеуде электрондық көшбасшылықтың ұйымдық өнімділікке айтарлықтай әсер еткені туралы қорытынды жасалынды. Жеке университеттерге ұйымдық тиімділікті арттыру және болашақ дағдарыстарда тиімділікті арттыру үшін оқытушылар

дарды, виртуалды командалық басқаруды және қашықтықтан басқару дағдыларын пайдалануға үйретуге басымдық беру ұсынылды.

**Түйін сөздер:** цифрлық технологиялар, электрондық көшбасшылық, ұйымдастырушылық тиімділік, COVID-19 пандемиясы.

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### Анализ роли электронного управления в повышении эффективности организаций в условиях пандемии COVID-19 на юго-западе Нигерии

В условиях цифровизации для достижения большего успеха необходим лидер, ориентированный на технологии, который влияет на поведение, используя передовые информационные технологии для обеспечения эффективности организации, особенно во время пандемии COVID-19. В данном исследовании изучалось электронное лидерство и эффективность организации во время пандемии COVID-19 в отдельных университетах на юго-западе Нигерии. В частности, исследование направлено на анализ роли электронного лидерства в эффективности организации. Сбор данных осуществлялся с помощью структурированной анкеты; для отбора респондентов использовалась простая случайная выборка. Для определения размера выборки использовалась формула размера выборки Таро Ямане, которая составила 713 человек из общей численности населения в 1845 человек. В качестве статистических инструментов исследования использовались описательная и инференциальная статистика. Биографические данные респондентов анализировались с помощью описательной статистики, а гипотеза проверялась с помощью инференциальной статистики. Гипотеза исследования проверялась на уровне значимости  $\alpha = 0,05$  с использованием линейной регрессии. Результаты исследования показывают, что электронное лидерство оказало значительное влияние на эффективность организации ( $R^2 = 0,038$ ,  $\beta = 0,195$ ,  $F(1,632) = 24,977$ ,  $p < 0,05$ ). Исследование пришло к выводу, что электронное лидерство оказало значительное влияние на эффективность организации. Было рекомендовано, чтобы отдельные университеты уделяли приоритетное внимание обучению своего преподавательского состава использованию цифровых инструментов, управлению виртуальными командами и навыкам удаленного управления для повышения эффективности организации и повышения результативности в условиях будущих кризисов.

**Ключевые слова:** цифровые технологии, электронное лидерство, организационная эффективность, пандемия COVID-19.

## Introduction

The advent and transmission of COVID-19 has resulted in quick growth for numerous employees who work from home, with little time and resources to prepare this change (Maheshwari, et al 2024). COVID-19 also affected companies and individuals worldwide, posing new business challenges for organisations, such as working from home (Caligiuri, et al., 2020). Numerous studies have indicated that leadership has a greater impact on organisational effectiveness since the epidemic spread (Bailey and Breslin, 2021; Contreras, 2021). According to Atalan, (2020) global economic and social situations have been impacted by the COVID-19 Pandemic since 2019. Government across the globe promptly implemented measures to suppress the transmission rate by introducing measures like social distancing, reducing physical contact by implementing lock-

downs and limiting community activities (Bonal. & Gonzalez, 2020). Consequently, the strain on economic conditions had a widespread effect in every region, coupled with conditions that were worse than before (Nyoma & Gede, 2023).

Meanwhile, organisation can only survive in a well-structured and crises free environment, but it is important to note that COVID-19 obstructed businesses and hindered organisations to be effective and efficient especially their decision-making process on account of the restriction (Oginni, Akpor-Oboro & Oghenetega, 2020). That notwithstanding, organisational effectiveness is the extent to which organisation has recorded a milestone achievement overtime. According to Mikelsone & Leila, (2016) organisational effectiveness can be characterized as multidimensional, and it has been realised that organisational effectiveness extends beyond the traditional predictors for success. However, numerous

variables have been identified to be an influencing factor of organisational effectiveness especially during COVID-19 but for the purpose of this study electronic leadership will be examined. Electronic leadership connotes the ability for an individual to use modern information technology to add value to an organization. (Avalio et al. 2000) initially introduced this notion, describing electronic leadership as a socially beneficial process mediated by AIT (advanced information technology) that results in a change in attitudes, feelings, thinking, behavior, and/or performance with people, groups, and/or organizations. They further claimed that electronic leadership may occur at any level of an organization, encompassing both one-to-one and one-to-many interactions via electronic platforms. This leadership style came to reality during COVID-19 where all businesses and institutions were short as result of the pandemic. Moreso, in the literature today, electronic leadership has been identified as e-leadership, electronic leadership and virtual leadership (Sunarsi et al, 2020: Restu and Wibowo, 2022: Nuha and Lim, 2022).

According to Ojo et al., (2024) electronic leadership is the ability to lead organisation successfully through digital transformation. Electronic leadership means leading by using advanced information technology to support the existing organisational structure. Carreño (2014) views electronic leadership as an influencing process mediated by AIT that leads to changes in results. Furthermore, it is a new leadership framework in which the head achieves goals of leadership through digital collaboration with teams spread across space and time, with the electronic intermediary supported by computers serving as the primary medium for interacting with leader(s) and followers. The new perspective brings new possibilities, challenges, and procedures (Carreño, 2014; Bush, 2020). Summarily, the reality of this lockdown and limitations on community and organisations activities affected the effectiveness and efficiency of all universities in Nigeria, at the same time, it led to total lockdown and switch to virtual leaning especially in Southwest, Nigeria.

#### Statement of the Problem

COVID-19 opened the eyes of many organisations to new style of work. Despite the fact that the pandemic threatens life and businesses the threatening resulted to new business model which is normal such as working from home, hybrid work and flexible work arrangement. These work arrangements may not be easily practiced without technological driven individual. The ability for this individual to

navigate and influence behaviour using technological tools to connect employees far and near and ensure goals are met is refers to electronic leadership. According to ElSawy et al., (2016) electronic leadership is a new forms of communicating and organising, but this is far different from physical or traditional leadership such as transactional, democratic, autocratic etc. reason been that it is not limited with space and time and emphasis on the use of digital asset and technologies. Despites it again, many organisations still find it difficult to practice it during the pandemic; this affected the effectiveness and efficiency of many organisation. Poor knowledge of technology, negative attitude toward technology and poor perception of technology may be the reason for not adopting electronic leadership (Ojo & Odebode, 2022).

However, it is important know that study of this nature is scanty, for instance, Ojo et al., (2024) examined the role of electronic leadership style on employees work engagement, Elyousfi and Amitabh (2021) analysed the effect of virtual leadership with collaboration on remote collaborative effectiveness in a public organization, Noor and Suhair (2022) investigated the role of electronic leadership in the effectiveness of organisation management. It is based on this the study investigated electronic leadership and organisational effectiveness during COVID-19 Pandemic in South-west Nigeria.

#### Research Question

To what extent will electronic leadership influence organisational effectiveness during COVID-19 in selected universities in Southwest, Nigeria?

#### Research Objective

The objective of the study is to investigate electronic leadership and organisational effectiveness during COVID-19 in selected universities in Southwest, Nigeria.

#### Research Hypothesis

Electronic leadership will not significantly influence organisational effectiveness during COVID-19 in selected Universities Southwest, Nigeria.

### Literature review

#### Concept of Electronic Leadership

Electronic leadership is the effective utilization and integration of electronic and conventional means of disseminating information. According to Odebode et al., (2024) electronic leadership is the style of leadership that operates in multiple dimensions using technological tools. It comprises being aware of current information communication

technology, strategically adopting new information communication technology for oneself and the company, and demonstrating technical competency in the ICTs selected (Wart et al 2016). As a result, effective e-leadership does not necessarily imply using more ICTs; rather, it entails using ICTs when they are beneficial for various reasons, using the most appropriate and effective ICTs available in relation to the value of various resources, using physically present communication channels when appropriate, and using ICTs effectively, such as when we would distinguish a good face-to-face speaker from a poor one on a variety of grounds. Competent e-leaders use a range of information and communication technologies in an array of environments, but they also incorporate them with in-person techniques, identify the most effective ones for the right uses, and are proficient in their usage (Wart et al., 2016).

Researchers such as Rudito and Sinaga (2017) and Oberer and Erkollar (2018) have diverse perspectives on the issue of electronic leadership. Some researchers define electronic leadership as giving direction and instructions over the Internet (Holtmann, 2011). Also, digital leadership was described as the ability of a leader to use cutting-edge information technology to influence people's and groups' attitudes, feelings, ideas, behaviours, and performance. According to Caulat (2010), virtual leadership is the phenomena of one individual purposefully influencing other members of an organization in a setting where most interactions take place over the phone and through computers.

#### Concept of Organizational Effectiveness

Organizational effectiveness has been referred to as one component of organizational performance as it is the degree to which a particular organization is accomplishing its planned goals and objectives, or, to put it succinctly, goal achievement (Lee, 2003). Lewin (2000) expounded on the notion of organizational effectiveness, stating that it is a term that is nearly universally employed by academics and is among the most extensively studied topics since the inception of organizational theory. Despite considerable consensus, there is still a great deal of variation in how this idea is operationalised. The method of achieving goals without wasting organizational resources is known as organizational effectiveness. Organizational effectiveness, corresponding to management scholars, has been described as setting objectives, allocating resources, and assessing if the objectives were accomplished.

According to Yankey et al. (2003), organisational effectiveness is established by how well it

performed during the process and how successfully it accomplished its stated goals. Additionally, Malik et al. (2011) revealed that organizational effectiveness is a condensed notion that is nearly impossible to quantify. The organization adopts proxy measures that may be used to indicate efficiency in place of using its own metrics to assess performance. However, it is important to note that effectiveness of staff of universities depend on the approach of leadership introduced during crisis. Electronic leadership has been proven effective and efficient especially during crisis (Noor and Suhair, 2022). Electronic leadership enhances organisational effectiveness by enabling faster communication, greater flexibility and improved collaboration. Sunarsi et al., (2020) noted that organisational effectiveness is a modern context increasingly depend on leader's ability to integrate electronic tools with sound leadership behaviours to drive performance and long-term success.

#### Theoretical review

The underpinning theory for this study was Adaptive Structuration Theory (AST) which was initially proposed by Giddens (1984), but its most influential development came from DeSanctis and Poole (1994). The theory emerged from Giddens' Structuration Theory, which focuses on the interplay between individual actions and social structures. DeSanctis and Poole adapted Giddens' ideas to explain how information technology is used in organizations and how it shapes and is shaped by organizational structures. AST primarily focuses on understanding how individuals and groups use, interpret, and adapt technological structures, emphasizing that technology and organizational structures are co-constructed through social practices. The theory suggests that technology both influences and is influenced by social action, emphasizing human agency in shaping technological outcomes. AST is grounded in several key assumptions, one of which is the concept of human agency. It assumes that individuals within an organization are not passive recipients of technological systems, but rather active agents who interpret and adapt technology to fit their needs (DeSanctis & Poole, 1994). Additionally, AST assumes that structures whether technological or social are neither fixed nor deterministic. Instead, they are seen as dynamic and subject to change through the continuous interaction between human actors and technology. It also assumes that technology is not inherently good or bad; its impact on organizations depends on how it is used. Lastly,

AST proposes that both social structures (such as organizational norms) and technological systems (such as software or hardware) must be understood in their interdependent relationship to explain organizational behaviour and change. The adoption of ICT for teaching, research and administration remains a challenge, applying AST it offers a theoretical view to understand how electric leadership influence the effectiveness of organisation. This connection underscores that effective electronic leadership in Nigerian universities must be adaptive and context-sensitive, guiding the iterative shaping of technology and organisational structure.

### Empirical review

Electronic leadership and Organizational Effectiveness

Nuha and Lim (2022) carried out a research on Effectiveness, electronic leadership styles and Skills in E-Business. This study examined effectiveness of e-leadership and skills in e-business and how it influenced performance of employees. Aualitative techniques accompany with secondary means of data collection was employed. Also, open ended questionnaire was created to collect data from the respondent which serves as primary means of data collection. The result of the study revealed that coaching in electronic leadership is the most effective style to increase effectiveness. The study therefore concluded that training, skills, experience are encouraged for effective practices of team to ensure organisational goals are met. Bandana et al., (2018) investigated leadership role and effectiveness which was carried out on food processing company in India. The aim of the study was to examine the relationship between various leadership styles and organisational effectiveness in india food processing companies. Primary source of data collection was employed using structured questionnaire. the sample size consists of two hundred and twenty-seven (227) was used for the study. Study's outcome showed that employees leadership style and supervisor had a positive impact on organisational effectiveness in an Indian processing food industry. The study concluded that strong relationship exists between leadership style and effectiveness of organisation.

The influence of electronic leadership style, service of organisation effectiveness in Indonesian school was carried out by Sunarsi et al., (2020). The study adopted qualitative research method using smart PLS version 3.0 as a processing tools. Online questionnaire was used to collect data using snow-

balling sampling techniques. The result of the study shows electronic leadership, organisational effectiveness and quality service significantly impacted the performance of teachers in Indonesian schools. Conclusion of the study stated that electronic leadership, effectiveness of organisation and quality service influenced the performance of teachers in Indonesia significantly. The study concluded that e-leadership, organizational commitment and service quality significantly influence school performance. Leidner (2017) examine effectiveness of leadership in global digital team. Purpose of the study was to identify factors related to effective team leadership in digital team environment. The use of secondary means of data collection was adopted for the study. Effective team leaders were able to handle paradox and contradiction by balancing different leadership responsibilities, according to the study's findings. It was concluded that detailed and prompt communication should be embraced. The work of Oginni, Ayantunji, Lanre-Babalola, and Balogun (2022) on employee silence and industrial conflict in unionized organisations using Lagos State as the unit of analysis corroborated this, however, drew the attention of leaders to the silence from employees to avoid hoarding of information that may be inimical to the overall survival of the organisation.

Noor and Suhair (2022) investigated the effect of digital leadership in the effectiveness of managing organisation. The study adopted the descriptive exploratory approach, 160 respondents were sample, the study adopted questionnaire, personal interview to collect data from the respondents. The result revealed a strong statistical influence of electronic leadership on effectiveness of organizational management. It was concluded that digital insight came in with the highest score among the dimensions of the study for all variables.

Elyousfi and Amitabh (2021) examined how team dynamics and electronic leadership affected the success of virtual teams at a public company. The convenient sample and snow bow sample were used for the purpose of this research. The study population stood at two hundred and twenty-two (224). According to the study's findings, electronic leadership significantly impacted the quality of the job. It was concluded that electronic leadership significantly influenced work engagement. Ojo et al., (2024) investigated the influence of digital leadership on engagement of employees in Uniosun. Structured questionnaire was the major means of collecting data from the respondents, 117 respondents participated in the study, collected data was analysed by

using descriptive statistics and inferential statistics. The statistical tool that was used was T-test which was used to run the analysis. It was therefore concluded that employees work engagement will increase when trust of a leader and effective communication of leader were adopted in the organization since the study recorded positive influence of digital leadership on engagement of employees.

Odebode et al., (2024) investigated influence of digital leadership on organizational effectiveness among staff of private university in Ogun State, Nigeria. The aim of the study was to examine how electronic style of leadership influenced the effectiveness of organization during COVID-19 pandemic. The research design adopted by the study was ex post-facto research design. Data was collected using structured questionnaire. Simple random sampling technique was used to select respondents. The study utilised descriptive and inferential statistics to analyse the data collected. The findings revealed that electronic leadership significantly influenced the effectiveness of organisation during COVID-19.

### Methodology

Ex-Post Facto research design was considered appropriate for the study. The study area consists of three (3) selected Universities in South-west Nigeria namely, University of Lagos Akoka, Lagos State, Osun State University, Osogbo and Covenant University, Ota. The target population comprises of academic staff. The justification for chosen these universities was base on the fact that academic activities were carried out virtually. Majorly online during COVID-19. The population stood at one

thousand eight hundred and forty-five (1,845). This figure was gotten from administrative department of the selected universities, simple random sample techniques and stratified sample techniques was adopted to select respondents, the entire sample size of the study was seven hundred and thirteen (713) using Taro Yamane sample size formular. The methods of data collection were structured questionnaire which was divided into three parts namely: the first part focused on the socio-demographic characteristics of the respondent, the second section of the questionnaire entails information on electronic leadership developed by (Elyousfi et. al., 2021) this scale has five likert rating scale from Strongly Disagree (SD) to Strongly agree (SA) with reliability coefficient of 0.78. The third section of the questionnaire comprises of information on organisational effectiveness developed by Trierweiler, (2012) the scale consisted of five-point rating scale with Cronbach 's alpha of 0.91 as reported by the author of the scale. A pilot study was conducted on the two scales to make sure the instrument consistently measures the variables it meant to measure. Both descriptive and inferential statistics were adopted to analyse the data collected. Descriptive was used to analysed the respondent information while inferential statistics was adopted to analysed the stated hypothesis, specifically, linear regression was used to analysed the hypothesis at 0.05 significant levels.

### Results and discussion

#### Hypothesis Testing

Electronic leadership will not significantly influence organisational effectiveness in selected Universities South-west, Nigeria.

**Table 1** – A Summary Table Showing the F ratio of the Predictive Influence of Electronic Leadership on Organisational Effectiveness

| ANOVAa  |                |           |             |           |         |       |
|---|----------------|-----------|-------------|-----------|---------|-------|
| Model   | Sum of Squares | df        | Mean Square | F         | Sig.    |       |
| 1   | Regression     | 13982.169 | 1           | 13982.169 | 168.368 | .000b |
|   | Residual       | 52484.727 | 632         |           | 83.045  |       |
|   | Total          | 66466.896 |             |           | 633     |       |
| a. Dependent Variable: ORGANISATIONAL EFFECTIVENESS |                |           |             |           |         |       |
| b. Predictors: (Constant), ELECTRONIC LEADERSHIP    |                |           |             |           |         |       |

Source: Source: Author 's Field Survey (2024)

Table 1 above revealed a significant prediction of organisational effectiveness by the electronic leadership variable. The F-statistic of  $F(1, 632) = 168.368$ , with a significant value which is less than 0.05, signifies that the entire regression model demonstrates a high level of statistical significance in terms of its goodness of fit. This is supported by the fact that the calculated F-statistic ( $F_{cal}$ ) surpasses the critical F-value ( $F_{tab}$ ). This result therefore, suggests that electronic leadership significantly explains variance in organisational effectiveness. This showed that with the introduction of electronic leadership during COVID-19 the effectiveness of staff in selected universities increases.

This study evaluated electronic leadership and organisational effectiveness during COVID-19 Pandemic in selected University Southwest, Nigeria. The first hypothesis stated that electronic leadership will not significantly influence organisational effectiveness during COVID-19 in selected Universities Southwest, Nigeria. However, the results showed that electronic leadership will significantly influence organisational effectiveness in selected Universities South-west, Nigeria. The findings concur to the outcome of the research of Maheshwari, et al, (2024), who affirmed that electronic leadership style was

positively significant to employee work outcomes in higher education sector during COVID-19 and beyond in Vietnam. Also, the findings of Odebode et al., 2024 concur with this study.

### Conclusion and recommendations

This study has examined the importance of electronic leadership on organizational effectiveness during the COVID-19 pandemic. The pandemic acted as a catalyst for organisations to rapidly shift to digital platforms, remote work, and virtual leadership, providing a unique context to explore how electronic leadership affects employee outcomes in a crisis scenario. The critical role played by electronic leaders especially, during uncertainty like the COVID-19 Pandemic in shaping organisational effectiveness as revealed by the study. Therefore, the study recommended that management of the selected Universities should prioritise training their academic staff on using electronic equipment, virtual team management and remote management skills for improved organisational effectiveness. Also, the management of the selected universities should equip their staff with technological tools so as to be effective and efficient during and post crisis.

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