Assessment of the Influence of Technology Usage on Administrative Efficiency in Osun State Universities

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Abstract

Technology usage is the level and manner to which workers and organization utilize technology to attain objectives, interact and communicate with the entire world. Therefore, this study examined the influence of technology usage on administrative efficiency in Osun state Universities. The study used quantitative research design to obtain data from the respondents. The population comprised 320 administrative staff in three Universities, Osun State. Simple random sampling technique was used to select 90 administrative staff for the study. Structure questionnaire tagged: Assessment of the Influence of Technology in Enhancing Administrative Efficiency in University (ITEAEU) with the reliability coefficients of 0.71. The data analysis used were descriptive and Regression statistic. The findings of the study found that the university administrators made use of technology and currently technologies have been integrated into the administrative process of the universities in Osun State. Also, it was revealed that experienced technical difficulties, increase in the complexity of administrative task and increased risk of data entry error are the major perceived barriers to the effective adoption and utilization of technology within university administration in Osun State. The finding also showed that administrators have positive perception on the role of technology on administrative efficiency in their respective universities. The finding further showed that there was significant relationship between technologies integrated and administrative efficiency in Universities in Osun State. It was recommended that the Universities should invest in continuous professional development programmes to enhance the skills of academic and administrative staff, which could improve overall efficiency and technology utilisation.

Keywords: *Assessment, Technology Usage, Influence, Efficiency, University Administration, Osun State*

Introduction

The role of technology in higher education has evolved significantly over the past few decades, influencing various aspects of university administration. In Osun State, Nigeria, universities are increasingly recognizing the necessity to adopt technological solutions to enhance administrative efficiency. The Educational land scape in Osun State is home to several higher education institutions that cater for a diverse population of students. As these universities strive to improve their operational efficiency and academic offerings, they face pressures to modernise their administrative processes. The need for effective management is accentuated by rising enrolments and the demand for improved services from students and staff alike.

The integration of technology in university administration aligns with broader educational trends such as remote and blended learning, the use of Learning Management Systems (LMS), and increased reliance on data analytics for decision-making. These trends underscore a global shift towards more agile and responsive educational structures while addressing the needs for greater accessibility and equity in education (Ogunleye, 2021). Technology had grown in importance in recent years as a means of improving administrative effectiveness in educational institutions across the globe. However, Osun State, Nigerian institutions had a difficult time utilising technology to its fullest potential in order to enhance their administrative procedures. Despite the availability of various technological tools and systems designed to streamline administrative tasks, there was a noticeable gap in their effective implementation and utilisation. Despite the advancements, several unresolved issues persist in the context of Osun State universities. Ojo and Adebayo (2022) pointed that the infrastructure challenges are facing many institutions in the country couple with paucity of technological infrastructure.

In fact, the aforementioned scenario has raised concerns regarding the overall effectiveness of administrative functions in these universities, leading to issues such as delayed communication, inefficient data management, and inadequate resource allocation. Ineffective technology use not only disrupted operational processes but also had a negative impact on the standard of services offered to students, which was essential for both their academic performance and the reputation of the institution. Therefore, this serve as a gap filled in this study. Based on this submission, these following research question and hypothesis were formulated.

Research Questions

RQ1: What extent are the current technologies integrated into the administrative processes of universities in Osun State?

RQ2: What are the perceived barriers to the effective adoption and utilization of technology within university administration in Osun State?

RQ3: How do administrators perceive the role of technology on administrative efficiency in their respective?

Hypothesis

$H0_1$: There is no significant relationship between technology usage and administrative efficiency in universities in Osun State.

Literature Review

Technology Acceptance Model as Underpinning Theories

This study is grounded on theoretical framework which is The Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) serves as a foundational framework in understanding the factors that influence user acceptance of technology (Granic & Marangunic, 2019; Mogaji et al., 2024). TAM posits that perceived ease of use and perceived usefulness are the primary determinants of technology acceptance. Perceived ease of use relates to the degree to which a user believes that utilising a specific technology would require minimal effort, while perceived usefulness pertains to the extent that a user believes the technology enhances their job performance (Vorm & Combs, 2022; Aburbeian et al., 2022). In fact, the acceptance and the use of information technologies has monumental effect on the performance of workers. The adoption and acceptance of TAM for organisation performance became popular in the four decades. The model point that when users are provided with a new technology, numerous factors influence their action on how to use it for organisation. The model revealed two factors such as perceived usefulness and perceived ease of use.

a. The Perceived Usefulness (PU): This is referred to the someone believe that using this technology would lead to effective performance (Davis, 1989; Aburbeian Aet al., 2022). It is necessary to for someone to perceives the technology which they want to use for organisation.
b. Perceive Ease-of-Use (PEOU): Davis (1989) opined that PEOU means the degree to which someone believes in the using new technology without much effort. If the system is easy to use, then the problem has been defeated. If the system is not easy to use, the interface is difficult.

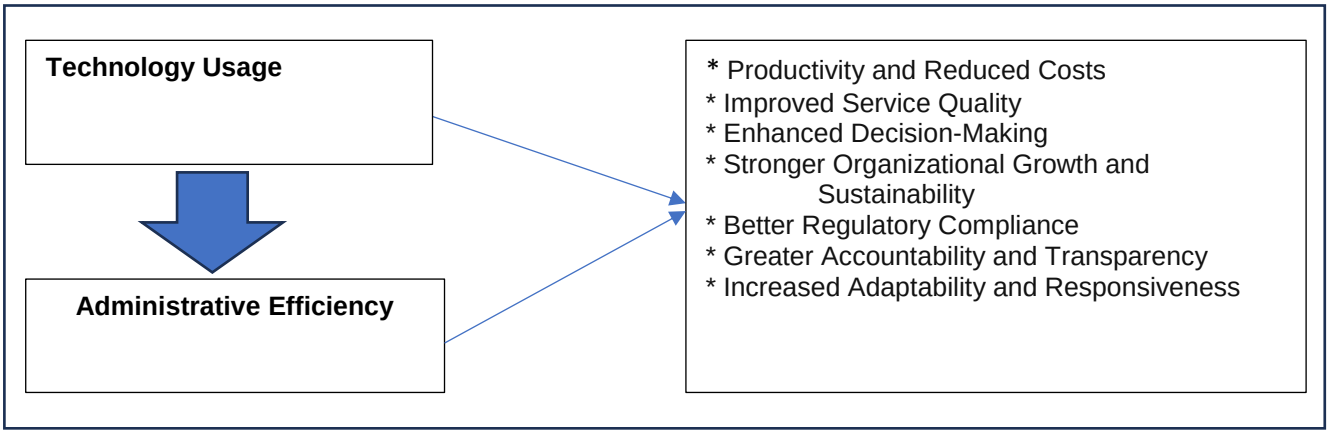
Ma and Liu (2004) asserted that since its inception, the model has been used in various discipline and has become the most widely applied model of user acceptance and usage. More of empirical studies have been investigated on TAM since its inception. There have been tens of empirical studies conducted on TAM since its introduction. TAM is believed to be more parsimonious, predictive, and robust (Venkatesh & Davis, 2000; Mogaji, et al., 2024). According to Davis (1989) who conducted numerous experiments to validate TAM by using PEOU and PU as two independent variables and system usage as the dependent variable. The study found that PU was positively related to both self-reported current usage and self-predicted future. Ajibade et al. (2021) also conducted study on the use of TAM to examine the implementation of e-governance within Nigeria's public sector. The study revealed that user perceptions directly impacted the success of digital service delivery. Also, Suleiman et al. (2023) worked on students' behavioural intentions toward virtual meeting technologies with the use of TAM theory which found that perceived ease of use and usefulness strongly influenced students' readiness to adopt virtual learning tools. These analyses have shown TAM theory has significant impact on the technology utilisation.

Conceptualising Technology Usage

Organization is changing quickly due to technology integration in the way we perform the job. Technological advancements have led to significant changes in society (Gu et al., 2021). Technologies have contributed to human welfare through increased prosperity, improved comfort and quality of life. In fact, we are in digital world where everything we do is based on technology. Learning on how to use technology for effective work, workers of the 21st century must be conversant with the use of technology in their work place (Aina & Ogundele, 2014; Gu et al., 2021). Technology will make our work to be more organized, less time wastage, effective, and efficient. It facilitates remote work and learning, promotes personal growth through skill development and wellness tools, and supports innovation and economic development by improving productivity and creating new business opportunities.

Technology usage is the level and manner to which workers and organisation utilise technology to attain objectives, interact and communicate with the entire world (Lai & Bower, 2019; Lai & Bower, 2020). This includes the adoption, acceptance, and integration of technological tools, from daily digital tasks like managing finances to specialized applications in education, agriculture, finance, healthcare, business and communication. Also, technology usage means the degree at which technology is integrated which include adherence, acceptance, and acceptability (Nepo, 2017; Cloete, 2017; Tuma, 2021). It involves measuring parameters like the number of sessions attended, interactions recorded, and completion of exercises to evaluate the effectiveness of technology in a given context. Zhang et al. (2023) expressed that in the period of digital transformation, the utilization of technology can effectively remove organizational barriers and present the groundworks for organization to achieved organizational objectives. Innovation in the organization through information restructuring, organizational change, and modernizing their production methods has been tools to succeed in competitive environment (Nambisan et al., 2022). With the improved and continued innovation in and development, the technology has become more effective in improving workers productivity. Below is the conceptual framework of the study.

Conceptual Framework



Concept of Administrative Efficiency

The importance of administrative efficiency has drawn a lot of attention among the researchers, especially as businesses look to improve their processes and adjust to quickly altering circumstances. Administrative efficiency, basically, is the capacity of an organisation to accomplish its objectives with minimal use of waste of time, money, and human resources. This effectiveness is essential for increasing output and making sure that businesses can react to opportunities and problems in a meaningful way. Ogunyemi (2022) posited that the Federal Civil Service Strategy and Implementation Plan (FCSSIP25) represents a pivotal shift towards improving administrative efficiency within the Nigerian public sector. The strategy's core objectives, which center on e-government initiatives, aim to reduce inefficiencies and promote transparency in government operations. A key component of these reforms is the introduction of the Integrated Personnel and Payroll Information System (IPPIS), a tool designed to modernize payroll management, eliminate fraud, and ensure proper resource allocation within public institutions.

Ogunyemi (2022) reported that IPPIS plays a significant role in enhancing administrative efficiency by addressing long-standing issues of payroll mismanagement and financial irregularities. As the public sector continued to evolve, the role of Information and Communication Technology (ICT) became increasingly critical. Adedeji and Olaleye (2022) highlighted reported how ICT implementation in local government councils automated administrative processes, reduced bureaucratic delays, and boosted service delivery efficiency in Nigeria. Similarly, Azuka and Akpomuvire (2024) found that integrating ICT into public administration significantly streamlined operations and promoted productivity in Delta State's public service. They emphasize that the widespread use of digital technologies has resulted in faster processing times, reduced paperwork, and enhanced communication within government agencies. These advances, they argue, are essential to improving the efficiency of government services and meeting the demands of a rapidly evolving administrative landscape.

Further, examination of the Nigerian public sector in 2024 revealed that structural reforms also play a critical role in enhancing administrative efficiency. Okoye (2024) investigated the effect of agency mergers which were introduced as part of broader efforts to eliminate redundancy and improve coordination between government bodies. These mergers were designed to streamline operations, reduce overhead costs, and facilitate more effective resource management. Okoye noted that the restructuring of agencies also led to better alignment of objectives across different branches of government which in turn contributed to enhanced operational efficiency. Moreover, the introduction of the Transparency and Integrity Index in 2024 served as a vital mechanism to assess and promote accountability within the public sector, further reinforcing the drive toward administrative efficiency. Adebayo et al. (2025) opined that how integration of these technologies can address many of the inefficiencies that persist in the public sector. The use of artificial intelligence is expected to reduce human error in decision-making processes, automate routine tasks, and enhance the accuracy of data-driven decisions. The adoption of these innovative technologies could mark a significant step toward achieving a more efficient, transparent, and accountable public administration system in Nigeria.

Methodology

Research design

The research design for this study is quantitative methods. This is used in this study to determine the influence of technology usage on administrative efficiency. The population of the study comprised of 1102 administrative staff in Osun state universities. Multi-stage sampling techniques was used in the study. Stratified random sampling technique was used to select three federal, state and private university. Therefore, simple random sampling technique was used to select 30 respondents each from universities. The total number of sample size used in the study was 90 respondents. The section B was tagged technology usage (TUQ) while section C tagged administrative efficiency (AEQ). The five-point scale Likert scale ranging from of strongly Agree (SA=1), Agree (A=2), Undecided (U=3), Disagree (D=4), and Strongly Disagree (SD=5) were used. There were three experts validated the instruments and the reliability results met the acceptable value as recommended by Hair et al. (2017). The researcher personally distributed the questionnaires to the study respondents. The research questions developed in the study were analyzed with descriptive statistics while research hypothesis was analyzed with Pearson Product Moment Coefficient.

Findings and Discussion

Research Question 1: What are the current technologies integrated into the administrative processes of universities in Osun State

To answer research question 1, responses on the extent which current technologies are integrated into the administrative processes of universities in Osun State. Based on the benchmark of grand mean of 3.90. To achieve this, average of the numerical points for the response options were obtained as (5+4+3+2+1)/5. In which 5 stands for Strongly Agree, 4 stands for Agree, 3 stands for Undecided, 2 stands for Disagree, and 1 for Strongly Disagree. The analysis is presented in Table 1.

Table 1:

Percentage and Mean analysis on the extent which current technologies are integrated into the administrative processes of universities in Osun State

S/N	Variables	SD n(%)	D n(%)	U n(%)	A n(%)	SA n(%)	Mean	Rank
1.	I use computer software for student record keeping.	-	2(2.2)	2(2.2)	47(52.2)	39(43.3)	4.37	1st
2.	I utilize digital personnel management systems and human resource software for staff record keeping.	-	2(2.2)	9(10.0)	56(62.2)	23(25.6)	4.11	5th
3.	I utilize accounting software and digital financial management	1(1.1)	3(3.3)	19(21.1)	45(50.0)	22(24.4)	3.93	8th

	systems for financial record keeping.							
4.	I use inventory management software and barcode scanning systems to track and manage inventory.	2(2.2)	4(4.4)	18(20.0)	41(45.6)	25(27.8)	3.92	9th
5.	I use cloud storage services, document management software, and digital filing systems to manage and store documents.	-	10(11.1)	14(15.6)	40(44.4)	26(28.9)	3.91	10th
6	I utilize online scheduling tools, digital calendars to manage appointments and meetings	-	4(4.4)	5(5.6)	46(51.1)	35(38.9)	4.24	3rd
7	I utilize online application portals, admission management software, and student information systems to track and manage student admissions.	1(1.1)	6(6.7)	4(4.4)	49(54.4)	30(33.3)	4.12	4th
8	I utilize data analysis software, reporting tools, and business intelligence systems to generate reports and analytics.	-	5(5.6)	26(28.9)	39(43.3)	20(22.2)	3.82	15th
9	I use benefits administration software to track employee benefits.	3(3.3)	9(10.0)	15(16.7)	39(43.3)	24(26.7)	3.80	18th
10	I use student information systems to manage track student grades and transcripts.	2(2.2)	6(6.7)	14(15.6)	49(54.4)	19(21.1)	3.86	13th
11	I use library management software to track library books and resources.	5(5.6)	7(7.8)	14(15.6)	42(46.7)	22(24.4)	3.75	19th
12	I use ID card creation software to generate student ID cards.	5(5.6)	11(12.2)	14(15.6)	35(38.9)	25(27.8)	4.27	2nd
13	I use financial aid management software to manage student financial aid and scholarships.	2(2.2)	8(8.9)	22(24.4)	41(45.6)	17(18.9)	3.70	22nd
14	I use performance management software to track employee performance.	3(3.3)	16(17.8)	10(11.1)	40(44.4)	21(23.3)	3.67	24th
15	I utilize attendance tracking software to generate and manage student attendance reports.	4(4.4)	10(11.1)	16(17.8)	41(45.6)	19(21.1)	3.68	23rd

16	I use academic reporting software to generate and manage student performance reports.	6(6.7)	3(3.3)	15(16.7)	44(48.9)	22(24.4)	3.81	17th
17	I use a computer as a means of technology to record files for administrative purposes.	2(2.2)	11(12.2)	10(11.1)	46(51.1)	21(23.3)	3.81	16th
18	I use a laptop as a means of technology to communicate with colleagues and students through email.	-	3(3.3)	22(24.4)	36(40.0)	29(32.2)	4.01	6th
19	I use a mobile device as a means of technology to access and manage administrative data.	1(1.1)	10(11.1)	18(20.0)	43(47.8)	18(20.0)	3.74	20th
20	I use cloud computing to access and analyze large datasets.	-	4(4.4)	19(21.1)	46(51.1)	21(23.3)	3.93	7th
21	I use AI-powered tools for data analysis and insights.	1(1.1)	8(8.9)	14(15.6)	45(50.0)	22(24.4)	3.88	12th
22	I use IT sensors for collecting and analyzing environmental data.	4(4.4)	10(11.1)	22(24.4)	31(34.4)	23(25.6)	3.66	25th
23	I use cloud-based applications for work-related tasks.	3(3.3)	7(7.8)	17(18.9)	47(52.2)	16(17.8)	3.73	21st
24	I use AI-based predictive models for forecasting and decision-making.	2(2.2)	10(11.1)	14(15.6)	40(44.4)	24(28.7)	3.82	14th
25	I use IT devices for monitoring and controlling physical systems.	-	8(8.9)	17(18.9)	42(46.7)	23(25.6)	3.89	11th
Grand Mean							**3.90**	

Key: SA= Strongly Agree, A= Agree, U=Undecided, D= Disagree, SD= Strongly Disagree

Table 2 shown the result of descriptive statistics on current technologies integrated into the administrative processes of universities in Osun State. The above the grand mean of 3.90, respondents agreed that they use computer software for student record keeping (4.37), they were of the opinion that they use ID card creation software to generate student ID cards (4.27), the supported that they utilize online scheduling tools, digital calendars to manage appointments and meetings (4.24). Respondents agreed that they utilize online application portals, admission management software, and student information systems to track and manage student admissions (4.12), they supported that they utilize digital personnel management systems and human resource software for staff record keeping (4.11), and were of the opinion that they use a laptop as a means of technology to communicate with colleagues and students through email (4.01). It was agreed by the respondents that they utilize accounting software and digital financial management systems for financial record keeping and they use cloud computing to access and analyze large datasets (3.93), it was supported that they use inventory management software and barcode scanning systems to track and manage inventory (3.92), also supported that they use cloud storage services, document management software, and digital filing systems to manage and store documents (3.91). Below the grand mean, respondents were of the opinion that they use IT devices for

monitoring and controlling physical systems (3.89), they agreed that they use AI-powered tools for data analysis and insights (3.88), they agreed that they use student information systems to manage track student grades and transcripts (3.86) and they believed that they use AI-based predictive models for forecasting and decision-making (3.82). The result revealed that the university administrators use computer software record for students mainly and it has been integrated into the administrative process of the universities in Osun State.

Research Question 2: What are the perceived barriers to the effective adoption and utilization of technology within university administration in Osun State?

To answer research question 2, responses on the perceived barriers to the effective adoption and utilization of technology within university administration in Osun State. Based on the benchmark of grand mean of 3.73. To achieve this, average of the numerical points for the response options were obtained as (5+4+3+2+1)/5. In which 5 stands for Strongly Agree, 4 stands for Agree, 3 stands for Undecided, 2 stands for Disagree, and 1 for Strongly Disagree. The analysis is presented in Table 2.

Table 2:

Percentage and Mean analysis on the perceived barriers to the effective adoption and utilization of technology within university administration in Osun State

S/N	Variables	SD n(%)	D n(%)	U n(%)	A n(%)	SA n(%)	Mean	Rank
1.	I experience technical difficulties	2(2.2)	4(4.4)	11(12.2)	33(36.7)	40(44.4)	4.17	1st
2.	Technology has created new challenges and increased the complexity of administrative task.	1(1.1)	4(4.4)	18(20.0)	44(48.9)	23(25.6)	3.93	2nd
3.	Insufficient training	2(2.2)	9(10.0)	23(25.6)	38(42.2)	18(20.0)	3.68	8th
4.	Data migration difficulty	2(2.2)	5(5.6)	23(25.6)	40(44.4)	20(22.2)	3.79	3rd
5.	Insufficient security measures	-	11(12.2)	36(40.0)	29(32.2)	14(15.6)	3.51	12th
6	Increased risk of data entry error.	1(1.1)	9(10.0)	19(21.1)	43(47.8)	18(20.0)	3.76	4th
7	Difficulty in keeping up with the latest technological advancement and trends .	2(2.2)	5(5.6)	31(34.4)	34(37.8)	18(20.0)	3.68	7th
8	Reduction of autonomy	2(2.2)	8(8.9)	27(30.0)	38(42.2)	15(16.7)	3.62	10th
9	Reduced personal interaction	3(3.3)	15(16.7)	19(21.1)	38(42.2)	15(16.7)	3.52	11th
10	Technology has increased the risk of cyber-attacks and data breaches .	3(3.3)	11(12.2)	18(20.0)	38(42.2)	20(22.2)	3.68	6th
11	Independence of administrative staff	4(4.4)	6(6.7)	22(24.4)	43(47.8)	15(16.7)	3.66	9th
12	Increased reliance on digital communication	5(5.6)	7(7.8)	18(20.0)	38(42.2)	22(24.4)	3.72	5th
Grand Mean							**3.73**	

Key: SA= Strongly Agree, A= Agree, U=Undecided, D= Disagree, SD= Strongly Disagree

As shown in Table 2, in the perceived barriers to the effective adoption and utilization of technology within university administration in Osun State. The above the grand mean of 3.73, respondents agreed that experience technical difficulties is one of the barriers to the adoption and utilization of technology (4.17), they were of the opinion that Technology has created new challenges and increased the complexity of administrative task (3.93), they supported that data migration difficulty is the barrier (3.79) and other believed to be increased risk of data entry error (3.76). Below grand mean, respondents agreed that increased reliance on digital communication is the barrier (3.72), they were of the opinion that insufficient training and difficulty in keeping up with the latest technological advancement and trends are the barriers to adoption of the technology (3.68), it was also agreed that Technology has increased the risk of cyber-attacks and data breaches (3.68), independence of administrative staff was also agreed to be the barrier (3.66). Respondents were of the opinion that reduction of autonomy (3.62), reduced personal interaction (3.52) and insufficient security measures (3.51) are the barriers. Result shows that experience technical difficulties, increase in the complexity of administrative task and increased risk of data entry error are the major perceived barriers to the effective adoption and utilization of technology within university administration in Osun State.

Research Question 3: How do administrators perceive the role of technology on administrative efficiency in their respective universities?

To answer research question 3, responses on the perception of Administrators on the role of technology on administrative efficiency in their respective universities. Based on the benchmark of grand mean of 4.05. To achieve this, average of the numerical points for the response options were obtained as (5+4+3+2+1)/5. In which 5 stands for Strongly Agree, 4 stands for Agree, 3 stands for Undecided, 2 stands for Disagree, and 1 for Strongly Disagree. The analysis is presented in Table 3.

Table 3:

Percentage and Mean analysis on the perception of Administrators on the role of technology on administrative efficiency in their respective universities

S/N	Variables	SD n(%)	Dn(%)	Un(%)	n(%)	SA n(%)	Mean	Rank
1.	Technology has improved the accuracy of my administrative tasks.	-	3(3.3)	2(2.3)	42(46.7)	43(47.8)	4.39	1st
2.	Technology has increased the efficiency of my administrative tasks through Scheduling appointments, Managing email and communication.	1(1.1)	-	8(8.9)	46(51.1)	35(38.8)	4.27	3rd
3.	Technology has reduced the time spent on administrative tasks.	1(1.1)	4(4.4)	18(20.0)	38(42.2)	29(32.2)	4.00	7th

4.	Technology has improved the organization of my administrative tasks on Managing and tracking student progress.	-	5(5.6)	17(18.9)	37(41.1)	31(34.4)	4.04	5th
5.	Technology has increased the productivity of my administrative tasks .	-	-	6(6.7)	45(50.0)	39(43.3)	4.37	2nd
6	Technology has improved the communication among administrative staff through Email and instant messaging.	-	1(1.1)	17(18.9)	45(50.0)	27(30.0)	4.09	4th
7	Technology has reduced the errors associated with administrative tasks .	-	4(4.4)	19(21.1)	43(47.8)	24(26.7)	3.97	12th
8	Technology has improved the customer service provided by administrative staff on Responding to student inquiries and concerns.	1(1.1)	1(1.1)	27(30.0)	34(37.8)	27(30.0)	3.94	13th
9	Technology has increased the job satisfaction of administrative staff .	3(3.3)	2(2.2)	16(17.6)	49(54.4)	20(22.2)	3.90	14th
10	Technology has improved the overall quality of administrative tasks on Enhancing accuracy and attention to detail.	2(2.2)	7(7.8)	17(18.9)	41(45.6)	23(25.6)	3.84	15th
11	Technology has reduced the costs associated with administrative tasks .	1(1.1)	5(5.6)	20(22.2)	32(35.6)	32(35.6)	3.99	9th
12	Technology has improved the transparency of administrative tasks.	-	7(7.8)	13(14.4)	46(51.1)	24(26.7)	3.97	11th
13	Technology has increased the accountability of administrative staff on Tracking and monitoring progress and performance.	1(1.1)	4(4.4)	15(16.7)	42(46.7)	28(31.1)	4.02	6th
14	Technology has increased the autonomy of administrative staff .	3(3.3)	4(4.4)	15(16.7)	37(41.1)	31(34.4)	3.99	8th

15	Technology has improved the adaptability of administrative staff to changes.	2(2.2)	5(5.6)	13(14.4)	43(47.8)	27(30.0)	3.98	10th
	Grand Mean						**4.05**	

Key: SA= Strongly Agree, A= Agree, U=Undecided, D= Disagree, SD= Strongly Disagree

As shown in Table 3 on the perception of Administrators on the role of technology on administrative efficiency in their respective universities. Above the grand mean of 4.05, respondents agreed that technology has improved the accuracy of administrative tasks (4.39), they were of the opinion that technology has increased the productivity of administrative tasks (4.37), they believed that technology has increased the efficiency of administrative tasks through scheduling appointments, managing email and communication (4.27) and supported that it has improved the communication among administrative staff through Email and instant messaging (4.09). Below the grand mean, respondents were of the opinion that technology has improved the organization of administrative tasks on managing and tracking student progress (4.04), they agreed that it has increased the accountability of administrative staff on tracking and monitoring progress and performance (4.02), they supported that technology has reduced the time spent on administrative tasks (4.00). Respondents agreed that technology has increased the autonomy of administrative staff and has reduced the costs associated with administrative tasks (3.99), it was agreed that it has improved the adaptability of administrative staff to changes (3.98) and they believed that it has improved the transparency of administrative tasks. Result shows that Administrators has positive perception on the role of technology on administrative efficiency in their respective universities as they were of the opinion that technology has improved the accuracy of administrative, increased the productivity of administrative tasks, increased the efficiency of administrative tasks through scheduling appointments, managing email and communication.

Testing of Research Hypothesis

Research Hypothesis: There is no significant relationship between technology usage and administrative efficiency in universities in Osun State.

Table 4

Technology Usage and Administrative Efficiency

Variable	N	Mean	df	Cal. r-value	Cal. p-value	Decision
Technology Usage	90	19.10				
			305	.664	.000	Ho rejected
Administrative Efficiency	90	19.67				

**. Correlation is significant at the 0.05 level (2-tailed).

As shown in Table 4 of this study, Pearson Product Moment Correlation (PPMC) was used to determine the relationship between technology usage and administrative efficiency using SPSS version 22. According to correlations assumptions, r =1 indicates perfectly positive correlation, r = -1 imply perfectly negative correlation and r = 0 mean no correlation. Based on the result

of correlation analysis on the relationship between technology usage and administrative efficiency revealed that r =. 664, n= 307, p = <.000 indicate statistically significant at $\alpha = 0.05$. Thus, the null hypothesis which stated that there is no significant relationship between the technology usage and administrative efficiency in Osun state Universities was rejected. This shows that significant relationship exists between technology usage and administrative efficiency. With this, hypothesis one is significant in this current study.

Discussion of Findings

Administrative efficiency is the capacity of an organisation, like a university, to efficiently manage its people, procedures, and resources in order to accomplish its objectives with the least amount of waste and the highest possible production. The study identified the current technologies integrated into the administrative processes of universities in Osun State, it was well clearly shown that larger percentage of the university administrative staffs utilized computer software for student record keeping, it was also found from this study that they use ID card creation software to generate student ID cards, the utilization of online scheduling tools, digital calendars to manage appointments and meetings could not be overemphasizing in the study. Result further revealed that the university administrators are make use of technology and currently technologies have been integrated into the administrative process of the universities in Osun State. The utilization of online application portals, admission management software, and student information systems by the university administrative staffs has easy the track and manage student admissions, also the utilization of digital personnel management systems and human resource software has making staff record keeping more effective and efficiency. Adequate usage of a laptop as a means of technology to communicate with colleagues and students through email could not left out of the innovation brought to the university. Utilization of accounting software and digital financial management systems has make the financial record keeping more efficiency in the university system in Osun State. The finding of this study was in line with the study conducted by Okoye (2024) that technology's integration into administrative functions also contributed to better resource management, allowing government agencies to allocate and track funds more effectively

Also, many barriers such as experience technical difficulties, increased the complexity of administrative task, data migration difficulty and increased risk of data entry error were ascertained to the effective adoption and utilization of technology within university administration in Osun State. Results were also found increased reliance on digital communication, insufficient training and difficulty in keeping up with the latest technological advancement and trends as the barriers to adoption of the technology. Increased the risk of cyber-attacks and data breaches. Sani, et al. (2024) highlighted that training deficiencies as another critical barrier to the successful adoption of technology in Nigerian universities. Their research showed that many universities fail to provide comprehensive training programs for both administrative staff and faculty members. Without sufficient training, even the most advanced technological tools cannot be used effectively. Further, Sani et al. (2024) pointed that the lack of digital literacy and ICT skills among staff and faculty members exacerbates the challenges associated with technology adoption.

Additionally, study revealed positive perception of administrators on the role of technology on administrative efficiency in their respective universities as they were of the opinion that technology has improved the accuracy of administrative, increased the productivity of administrative tasks, increased the efficiency of administrative tasks through scheduling appointments, managing email and communication. Okoye (2024) supported the findings of the study that the adoption of digital tools, including automated financial management systems and electronic document management systems, enhanced administrative efficiency by streamlining financial reporting processes, reducing manual errors, and promoting accountability. Okoye (2024) emphasized that technology's integration into administrative functions also contributed to better resource management, allowing government agencies to allocate and track funds more effectively. The study of Akinwale and Akintoye (2023) corroborated with the finding of this study that integrations of technology and other technology-based educational platforms that could enhance efficiency in the universities.

Conclusion

Based on the findings from this study, it was concluded that the university administrators use computer software for students mainly and it has been integrated into the administrative process of the universities in Osun State. Experienced technical difficulties, increase in the complexity of administrative task and increased risk of data entry error are the major perceived barriers to the effective adoption and utilization of technology within university administration in Osun State. Administrators have positive perception on the role of technology on administrative efficiency in their respective universities and there was relationship between technologies integrated into the administrative processes and efficiency in Universities in Osun State.

Recommendations

Based on the results of the study, it is hereby recommended that:

1. Universities that prioritize ICT training for staff and students and invest in the required technological infrastructure experience smoother transitions and higher success rates in their adoption efforts.
2. Lack of financial support hampers efforts to integrate technologies effectively, leading to sporadic and uneven adoption across institutions, therefore adequate funds should make available for the purpose.
3. Universities should invest in continuous professional development programs to enhance the skills of academic and administrative staff, which could improve overall efficiency and technology utilization.

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