



E-administration and employee service delivery in selected government ministries in Anambra state: 2015-2023

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Abstract

The rapid advancement of digital technologies has transformed public administration worldwide, making e-administration a critical tool for enhancing government service delivery. The study used a survey research design with structured questionnaires to collect data from 294 respondents across four ministries in Anambra State, Nigeria, representing a population of 1,105 employees. Proportionate sampling ensured fair representation from Education (112), Finance (114), Works (38), and Women Affairs (30) ministries. Data was analyzed using SPSS, employing frequency tables, percentages, and independent samples t-tests. The questionnaire was validated by academic experts and pre-tested for reliability, achieving strong internal consistency. The result showed that females constituted 65.6% and males 34.4%. Most respondents (56.5%) had under 15 years of experience. Regarding e-administration's impact on service delivery, 53.1% strongly disagreed that it improved workflows, and 43.9% disagreed that collaboration increased service delivery. However, 43.9% strongly agreed that automation improved service delivery, and 56.5% strongly agreed training was key. Most (90.5%) disagreed with improved digital communication boosted efficiency. Statistical tests showed no significant difference in service delivery scores between employees with less than 15 years (mean=30.48) and over 15 years (mean=29.95) experience ($p > 0.05$), rejecting the hypothesis that experience affects e-administration impact. The results underscore the need for improved ICT infrastructure, targeted training programs, and stronger organizational support to optimize the benefits of digital governance. The study concludes that although e-administration holds substantial potential for improving service delivery in public institutions, its success depends on strategic implementation, continuous staff development, and sustained institutional commitment.

Keywords: e-administration; employee service delivery; digital governance; public sector efficiency; Anambra State Ministries

Introduction

The digital age has ushered in a revolution in the way governments worldwide manage their affairs and interact with citizens. Electronic administration, or E-administration, represents the strategic use of Information and Communication Technologies (ICTs) to modernize and enhance the efficiency of public administration. This transformation has not only reshaped bureaucratic processes but also presents significant opportunities for improving employee service delivery in the public sector. The importance of citizen participation in government cannot be overemphasized (Ufuoma, 2024). Many developing countries, despite infrastructural and financial limitations, have attempted to implement participatory e-administration platforms, though these are often underutilized by stakeholders. Over the past decade, government and public-sector managers globally have recognized ICT as a viable tool for delivering efficient and cost-effective services to citizens, clients, and partners.

The primary mandate of government is to improve the quality of life for citizens through service delivery by ministries, departments, and agencies. These public institutions bear a social obligation to render services and thus citizens have a legitimate expectation to receive quality public goods and services. However, due to the monopolistic nature of these institutions, citizens are often left with no alternatives even when services are subpar (Sekwat & Tacaura, 2024). In recent years, inefficiencies, poor performance, and bureaucratic bottlenecks in government ministries have raised serious concerns among citizens and public administrators. A cursory review of key ministries in Anambra State, namely the Ministries of Education, Finance, Works, and Women Affairs, within the study period of 2015 to 2023, reveals low employee service delivery and underwhelming overall performance. This situation is largely attributed to the failure of these organizations to fully embrace e-government systems, outdated organizational cultures, inadequate human resource capacity for managing e-government initiatives, and persistent budgetary constraints (Ariana et al., 2020). Hence, e-government has been proposed as a viable solution for improving employee service delivery in government ministries.

E-administration is a transformative approach to managing and delivering government services through the integration of ICTs (Hassan, 2023). It involves using digital tools, platforms, and data to streamline administrative processes, improve service delivery, and promote transparency and citizen engagement. At its core, E-administration seeks to bridge the gap between citizens and their governments by making governance more accessible, efficient, and responsive. Through E-administration, citizens can interact with public services, access information, and participate in governance processes through their digital devices (Onwunyi, Obikeze & Victor, 2022). E-administration encompasses several essential strategies and components that contribute to its transformative power. These include the digitization of government records and data (Adetomiwa & Gberevbie, 2022), which enhances data security, improves access, and minimizes the risk of loss of information. It also promotes digital decision-making, online policy formulation, and interactive public engagement through tools such as online surveys, e-voting, and public forums (Hoffman & Cseh, 2020). Additionally, the automation of routine tasks reduces paperwork and administrative burdens, enabling employees to focus on value-adding functions. E-administration enhances transparency by making government actions more visible and accessible to the public (Vanger & Atsunkare, 2021). These core features of E-administration lay the foundation for its growing role in enhancing efficiency and accountability across various sectors of public governance.

E-administration is now widely recognized as a means of improving transparency, administrative efficiency, and public service delivery in sectors such as transportation, health, power, water, security, and municipal governance (Adetomiwa & Gberevbie, 2022). Governance itself has always been supported by technology in its broadest sense—tools, techniques, and knowledge systems—as well as the physical devices and networks that transmit and store information. As Coleman (2008) noted, the increasing scope and complexity of governance have necessitated more sophisticated technical systems for storing and disseminating knowledge. Curristine, Lonti, and Jourmard (2007) identified E-administration as a structural tool for driving efficiency in the public sector. While debates persist regarding how efficiency should be measured in the public sector, particularly regarding the balance between inputs and outputs and the definition of public value, efficiency remains a central criterion in evaluating government performance. Anazodo, Okoye, and Chukwuemeka (2012) emphasized that public service goals extend beyond mere cost-benefit analysis to include the delivery of value to citizens. Consequently, the quality of governance is heavily influenced by how well public employees deliver services.

Obi (2023) observed that from 2015 to 2023, Anambra State made notable strides in adopting E-administration practices in the Ministries of Education, Finance, Works, and Women Affairs, especially in efforts to improve employee service delivery. In the modern workplace, employee service delivery is a core determinant of organizational success (Anyadike, 2013). It is not solely about increasing output; it reflects the effective utilization of employee skills, time, and resources to meet both individual and institutional goals (Igudia, 2021). It includes elements such as innovation, task prioritization, problem-solving, and timely performance (Ezeamama, 2019). Public sector reforms aim to strengthen the capacity of government institutions to deliver quality services effectively and efficiently. According to Olasanmi, Olajide, and Ojubanire (2021), the overarching goal of these reforms is to enhance the quality and consistency of service delivery, which in turn supports the broader socio-economic development goals of Nigeria.

Despite these reform efforts, there is still limited empirical evidence on how well these initiatives have translated into improved employee service delivery in Anambra State's Ministries of Education, Finance, Works, and Women Affairs. This study responds to the need for a comprehensive assessment of E-administration implementation at the state level. Existing literature has largely focused on national-level initiatives, overlooking the challenges and opportunities unique to subnational entities like Anambra State. Consequently, there is a lack of clarity on the extent of digital transformation in the selected ministries, and where gaps exist. Furthermore, there is a pressing need to evaluate whether E-administration has had a measurable impact on employee service delivery. While its potential benefits are widely discussed (Osakede, Ijimakinwa, Arijenwa, Adesanya & Ojo, 2017; Adetomiwa & Gberevbie, 2022), a dearth of empirical research limits our understanding of actual outcomes. The study also seeks to bridge the gap between E-administration policy and practical implementation.

Employee service delivery is closely linked to employee skills, organizational capacity, and other contextual factors (Maqsoom et al., 2021). Identifying these enabling or inhibiting factors is crucial for developing effective digital governance strategies. Without such insights, policymaking may lack the specificity needed to support successful implementation. Based on the foregoing, this study investigates the effect of E-administration on employee service delivery in Anambra State's Ministries of Education, Finance, Works, and Women Affairs, from 2015 to 2023.

This study hypothesizes that the effectiveness of e-administration in enhancing employee service delivery is influenced by the number of years employees have spent working within government ministries in Anambra State during the period from 2015 to 2023.

Method

The study employed survey research design using structured questionnaires to gather data from respondents. This method was chosen for its ability to summarize large datasets using numerical and graphical techniques and to interpret and explain trends observed within the data. The survey facilitated both the collection of raw data and the exploration of meaning behind respondent feedback. The research was conducted in Anambra State, located in Nigeria's South-East geopolitical zone. Bordered by Delta, Imo, Enugu, and Kogi States, Anambra consists of three senatorial zones, North, Central, and South, with 21 Local Government Areas. The region is predominantly inhabited by the Igbo ethnic group. While rural dwellers are mainly farmers and artisans, urban residents are mostly civil servants and business professionals. The study focused on four key ministries—Education, Finance, Works, and Women Affairs, whose employees and management formed the sample group.

The population of the study comprised all employees in the selected ministries, totaling 1,105 as provided by the respective permanent secretaries. The distribution was as follows: Education (421), Finance (429), Works (142), and Women Affairs (113). To make data handling feasible and reduce errors associated with large populations, the sample size was determined using Yaro Yamane's statistical formula with a 5% margin of error, resulting in a sample of 294 respondents. A proportionate sampling technique was employed to ensure each ministry was represented according to its population size. This ensured fairness and accurate reflection of employee perspectives from each ministry: Education (112), Finance (114), Works (38), and Women Affairs (30).

Data was gathered from primary and secondary sources. Primary data came directly from ministry employees via structured questionnaires. Secondary data was obtained from library resources and relevant documents that offered background on e-administration and employee service delivery. The questionnaire, the principal instrument of data collection, used a Likert scale ranging from 1 (Strongly Agree) to 4 (Strongly Disagree). It contained close-ended questions and was divided into two sections: demographic details and questions relating to the impact of e-administration. A total of 294 questionnaires were distributed and collected with a 100% return rate. Responses were coded and analyzed using SPSS software.

To ensure validity, the questionnaire was pre-tested and reviewed by a supervisor and two academic experts at Chukwuemeka Odumegwu Ojukwu University. Their feedback guided revisions for clarity, relevance, and comprehensiveness. Reliability was tested using a trial sample of 30 staff from the Ministry of Health, chosen for its similarities with the target ministries. The internal consistency of the instrument was measured using Cronbach's alpha, ensuring that the items reliably measured the intended constructs. For data analysis, the study employed frequency tables, percentages, and the independent samples t-test to test hypotheses. The t-test helped determine if differences between group means were statistically significant. The decision rule was to accept the null hypothesis if the computed t-value was less than the critical t-value, otherwise reject it.

Results and Discussion

Analysis of the Characteristics of the study

Table 1 outlines the gender distribution of respondents in a study, indicating the number and proportion of male and female participants. One notable observation is that there is a significant gender imbalance among the respondents. Females constitute a majority, accounting for 65.6% of the total respondents, while males represent a smaller proportion at 34.4%. This gender disproportion is a crucial aspect to consider when interpreting the study's findings. The validity of responses in terms of gender is highlighted by the fact that all responses are considered valid, as indicated by the "Valid Percent" column. This suggests that there were no missing or invalid gender-related responses in the dataset, ensuring the integrity of the gender distribution figures (Li, Wu, Liu, Tang, & Chen, 2020). A closer look at the table also reveals how cumulative percentages contribute to understanding the overall composition of respondents.

Table 1. Gender Profile of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	101	34.4	34.4	34.4
	Female	193	65.6	65.6	100.0
	Total	294	100.0	100.0	

The "Cumulative Percent" column in Table 1 indicates the running total of respondents, showing how each category adds up to the overall sample. This column helps to understand how much of the total sample each gender category represents. After accounting for male and female respondents, the cumulative percentage reaches 100%. In practical terms, the gender distribution in the sample has implications for the generalizability of the study's results. Since the majority of respondents are female, any conclusions or findings drawn from this study may be more representative of the female population or could potentially reflect gender-specific perspectives or behaviors (Pearson, McNamara & Nunn, 2019). This highlights the importance of considering demographic characteristics when interpreting the study's overall findings.

Table 2 presents the demographic characteristics of respondents categorized by their years of experience. It shows that the majority (56.5%) of the respondents have less than 15 years of service, while 43.5% have more than 15 years of service. This division based on experience can be crucial in understanding the perspectives and expertise of the respondents.

Table 2. Demographic Characteristics of Respondent based on Years of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<15 years in service	166	56.5	56.5	56.5
	>15years in service	128	43.5	43.5	100.0
	Total	294	100.0	100.0	

Research Question: How does the adoption of e-administration enhance employee service delivery within the selected government ministries of Anambra State between 2015 to 2023?

In Table 3, respondents' perspectives on the statement about e-administration adoption and its impact on employee service delivery, including streamlining workflows, reducing manual tasks,

and enhancing data accessibility in Anambra State ministries, are presented. The majority, 53.1%, "Strongly Disagrees," indicating a perception that e-administration adoption did not significantly improve employee service delivery. Additionally, 2.0% "Disagree," 32.7% "Agree," and 12.2% "Strongly Agree." This reflects diverse opinions, with a significant portion expressing strong disagreement with the statement.

Table 3. E-Administration Adoption Improved Employee Service Delivery by Streamlining Workflows, Reducing Manual Tasks, and Enhancing Data Accessibility in Anambra State Ministries

Option	Respondents	Percentages (%)
Strongly Disagree	156	53.1
Disagree	6	2.0
Agree	96	32.7
Strongly Agree	36	12.2
Total	294	100.0

In Table 4, respondents' opinions on the statement about enhanced collaboration through e-administration tools leading to increased service delivery among employees in government ministries from 2015 to 2023 are presented. A significant portion, 43.9%, "Disagrees," indicating a perception that enhanced collaboration did not significantly increase service delivery. Additionally, 25.5% "Strongly Disagrees," 27.9% "Agree," and 2.7% "Strongly Agree." This indicates a range of opinions, with a substantial portion expressing disagreement with the statement.

Table 4. Enhanced Collaboration Through E-Administration Tools Resulted in Increased Service Delivery Among Employees from 2015 to 2023 in Government Ministries

Option	Respondents	Percentages (%)
Strongly Disagree	75	25.5
Disagree	129	43.9
Agree	82	27.9
Strongly Agree	8	2.7
Total	294	100.0

In Table 5, respondents' perspectives on the statement about e-administration's impact on employee service delivery through the automation of routine tasks are presented. The majority, 43.9%, "Strongly Agree," indicating a consensus that automation positively impacted employee service delivery. There are only 1.0% "Strongly Disagree" responses, and 18.4% "Disagree," with 36.7% "Agree." This suggests a dominant opinion of agreement with the statement, with a significant portion strongly agreeing.

Table 5. E-Administration's Automation of Routine Tasks Allowed Employees to Focus on More Value-Added Activities, Positively Impacting Their Service Delivery

Option	Respondents	Percentages (%)
Strongly Disagree	3	1.0
Disagree	54	18.4
Agree	108	36.7
Strongly Agree	129	43.9
Total	294	100.0

In Table 6, respondents' opinions on the statement about the impact of improved information sharing and communication through digital platforms on employee efficiency in Anambra State ministries during the study period are presented. The majority, 90.5%, "Disagrees," suggesting a consensus that such improvements did not significantly boost employee efficiency. There are only 0.3% "Strongly Disagree" responses, and 9.2% "Agree," with no "Strongly Agree" responses. This indicates a dominant opinion of disagreement with the statement.

Table 6. Improved Information Sharing and Communication Through Digital Platforms Boosted Employee Efficiency in Anambra State Ministries During the Study Period

Option	Respondents	Percentages (%)
Strongly Disagree	1	.3
Disagree	266	90.5
Agree	27	9.2
Strongly Agree	0	0
Total	294	100.0

Table 7 presents respondents' perspectives on the impact of e-administration on decision-making and service delivery within government ministries in Anambra State. A majority of 58.2% agreed that e-administration facilitated faster decision-making and improved service delivery, while 24.1% strongly agreed. In contrast, 9.5% disagreed and 8.2% strongly disagreed. These results indicate a consensus that e-administration positively influenced decision-making processes.

Table 7. E-Administration Facilitated Faster Decision-Making Processes, Contributing to Increased Service Delivery Within Government Ministries in Anambra State.

Option	Respondents	Percentages (%)
Strongly Disagree	24	8.2
Disagree	28	9.5
Agree	171	58.2
Strongly Agree	71	24.1
Total	294	100.0

In Table 8, respondents' views on the statement about enhanced document management systems reducing paperwork and resulting in time savings and improved service delivery for employees are presented. The majority, 46.9%, "Strongly Agree," indicating a consensus that enhanced document management systems had a positive impact on service delivery. There are 16.3% "Strongly Disagree" responses, 22.4% "Disagree," and 14.3% "Agree." This suggests a dominant opinion of agreement with the statement, with a significant portion strongly agreeing.

Table 8. Enhanced Document Management Systems Reduced Paperwork, Resulting in Time Savings and Improved Service Delivery for Employees

Option	Respondents	Percentages (%)
Strongly Disagree	48	16.3
Disagree	66	22.4
Agree	42	14.3
Strongly Agree	138	46.9
Total	294	100.0

In Table 9, respondents' opinions on the statement about real-time access to data and information via e-administration tools empowering employees to make informed decisions and improve their efficiency are presented. The overwhelming majority, 97.6%, "Disagrees," suggesting a consensus that real-time access did not significantly empower employees. There are only 1.4% "Strongly Disagree" responses, and 1.0% "Agree," with no "Strongly Agree" responses. This indicates a dominant opinion of disagreement with the statement.

Table 9. Real-Time Access to Data and Information Via E-Administration Tools Empowered Employees to Make Informed Decisions and Improve Their Efficiency

Option	Respondents	Percentages (%)
Strongly Disagree	4	1.4
Disagree	287	97.6
Agree	3	1.0
Strongly Agree	0	0
Total	294	100.0

In Table 10, respondents' perspectives on the statement about the role of employee training in e-administration tools and techniques in realizing service delivery gains in Anambra State ministries are presented. The majority, 56.5%, "Strongly Agree," indicating a consensus that employee training played a key role in realizing service delivery gains. There are 11.2% "Strongly Disagree" responses, 21.1% "Disagree," and 11.2% "Agree." This suggests a dominant opinion of strong agreement with the statement.

Table 10. Employee Training in E-Administration Tools and Techniques was a Key Factor in Realizing Service Delivery Gains in Anambra State Ministries

Option	Respondents	Percentages (%)
Strongly Disagree	33	11.2
Disagree	62	21.1
Agree	33	11.2
Strongly Agree	166	56.5
Total	294	100.0

In Table 11, respondents' views on the statement about the effect of e-administration adoption on fostering a culture of accountability and its contribution to heightened employee service delivery from 2015 to 2023 are presented. A substantial portion, 39.5%, "Disagrees," suggesting a perception that e-administration did not significantly foster accountability and service delivery. Additionally, 38.8% "Strongly Disagree," 17.7% "Strongly Agree," and 4.1% "Agree." This reflects diverse opinions, with a significant portion expressing disagreement with the statement.

Table 11. The adoption of E-Administration Fostered a Culture of Accountability, which Contributed to Heightened Employee Service Delivery from 2015 to 2023

Option	Respondents	Percentages (%)
Strongly Disagree	114	38.8
Disagree	116	39.5
Agree	12	4.1
Strongly Agree	52	17.7
Total	294	100.0

In Table 12, respondents' opinions on the statement about the overall effect of e-administration adoption on enhancing employee service delivery by simplifying processes and improving information management in government ministries of Anambra State are presented. The majority, 86.4%, "Disagrees," indicates a consensus that e-administration did not significantly enhance service delivery. There are only 0.3% "Strongly Disagree" responses, 1.4% "Agree," and 11.9% "Strongly Agree." This suggests a dominant opinion of disagreement with the statement.

Table 12. The Adoption of E-Administration Significantly Enhanced Employee Service Delivery by Simplifying Processes and Improving Information Management in Government Ministries of Anambra State

Option	Respondents	Percentages (%)
Strongly Disagree	1	.3
Disagree	254	86.4
Agree	4	1.4
Strongly Agree	35	11.9
Total	294	100.0

Hypothesis: The extent to which e-administration enhances employee service delivery will depend on employees' years of experience within the government ministries in Anambra State between 2015 and 2023.

Table 13 provides group statistics related to the effect of e-administration on employee service delivery based on employees' years of experience within government ministries in Anambra State from 2015 to 2023. These statistics are instrumental in assessing whether the effectiveness of e-administration systems varies significantly based on employees' years of service. The table shows that employees with less than 15 years in service (166 respondents) have a mean service delivery score of 30.4759, while those with more than 15 years in service (128 respondents) have a slightly lower mean service delivery score of 29.9453. The standard deviation for the first group is 5.72999, and for the second group, it is 5.59008. The standard error of the mean is 0.44473 for employees with less than 15 years in service and 0.49410 for those with more than 15 years.

Table 13. Group Statistics on the Extent to Which E-Administration Enhances Employee Service Delivery Depends on Employees' Years of Experience Within the Government Ministries in Anambra State between 2015 and 2023

Years of experience	N	Mean	Std. Deviation	Std. Error Mean
<15 years in service	166	30.4759	5.72999	.44473
>15years in service	128	29.9453	5.59008	.49410

Table 13 suggests that, on average, employees with less than 15 years in service have slightly higher service delivery scores related to e-administration compared to their more experienced counterparts. This finding may indicate that younger employees, who are potentially more tech-savvy, find it easier to adapt to e-administration systems (Oni & Oni, 2014). The standard deviation values for both groups are relatively similar, indicating that there is a comparable spread of service delivery scores in both categories. This suggests that the variation in service delivery scores is consistent, regardless of employees' years of experience (Olasanmi, Olajide & Ojubanire, 2021). To determine whether the observed differences in mean service delivery are statistically significant, further statistical tests, such as t-tests, were conducted as shown in Table

14. These tests would assess whether the differences in delivery scores in service scores are meaningful or could have occurred by chance.

Table 14 provides the results of an independent samples test assessing whether the extent to which e-administration enhances employee service delivery depends on employees' years of experience within government ministries in Anambra State from 2015 to 2023. This statistical analysis aims to determine whether there are statistically significant differences in service delivery based on years of experience. Levene's Test for Equality of Variances assesses whether the variances in service delivery scores for employees with different years of experience are equal. The test yields an F statistic of 0.763 and a significance level (Sig.) of 0.383. This indicates that the assumption of equal variances is not significantly violated ($p > 0.05$), suggesting that the variances in service delivery scores for both groups (less than 15 years and more than 15 years of experience) are relatively similar.

Table 14: Independent Samples Test for the Extent to Which E-Administration Enhances Employee Service Delivery Depends on Employees' Years of Experience Within the Government Ministries in Anambra State between 2015 and 2023

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.763	.383	.796	292	.427	.53059	.66690	-.78196	1.84314
Equal variances not assumed			.798	276.46	.425	.53059	.66477	-.77806	1.83925

The t-test for Equality of Means evaluates whether there is a statistically significant difference in mean service delivery scores between employees with different years of experience. When equal variances are assumed, the t-test results in a t-statistic of 0.796 with 292 degrees of freedom. The associated p-value (Sig. 2-tailed) is 0.427, which is greater than the typical significance level of 0.05. This suggests that there is no statistically significant difference in mean service delivery scores between employees with less than 15 years and those with more than 15 years of experience when equal variances are assumed. When equal variances are not assumed, the t-test results in a t-statistic of 0.798 with 276.46 degrees of freedom. The associated p-value is 0.425, which is also greater than 0.05. This indicates that even when equal variances are not assumed, there is no statistically significant difference in mean service delivery scores between employees with different years of experience.

Based on the results of the independent samples t-test, the hypothesis that the extent to which e-administration enhances employee service delivery depends on employees' years of experience is not supported. The analysis shows that there are no statistically significant differences in service delivery scores between these two experienced groups. Therefore, the hypothesis is

rejected. These findings align with prior research indicating that the effect of e-administration on employee service delivery is not strongly correlated with years of experience (Okong'o & Kyobe, 2018). The results suggest that organizations can implement e-administration systems without significant variations in service delivery based on employees' experience levels.

The integration of technology into child-rearing practices has led to a profound transformation in how parents and educators monitor children's behavior. Various technological tools, including mobile applications, wearable devices, AI-powered platforms, and smart surveillance, are increasingly deployed to track and analyze children's activities, emotions, and interactions. While the potential for improved safety and behavior management is evident, studies have highlighted both benefits and concerns, often with contrasting conclusions. In a recent study by Adetomiwa and Gbirevbie (2022), parents using AI-driven apps for monitoring screen time and app usage reported improved control over their children's digital exposure and behavior. These tools allow for real-time notifications and behavioral trend analysis, enhancing parental oversight. In contrast, Olasanmi et al. (2021) found that constant digital monitoring can foster distrust and reduce children's autonomy, leading to adverse psychological effects. This divergence in findings underscores the importance of context and parental approach in the deployment of such technologies.

In a related study, Maqsoom et al. (2021) evaluated the effectiveness of GPS-enabled wearable devices for monitoring children's outdoor movements. Their findings supported the argument that such devices enhance physical safety and reduce parental anxiety, especially in urban environments. However, in contrast, Olasanmi et al. (2021) argued that excessive surveillance via wearables can contribute to anxiety in children, particularly when they are aware of being constantly tracked. They emphasized that over-surveillance might limit exploratory behavior and social development, advocating for more balanced monitoring strategies. The educational setting also presents a nuanced perspective. In a comparative analysis by Obi (2023), AI-based behavior analysis platforms used in classrooms helped teachers identify signs of emotional distress and inattentiveness more efficiently than traditional observation methods. This agreed with Ariana et al. (2020), who found that facial recognition and emotion-tracking software in schools improved targeted behavioral interventions and teacher responsiveness. Nevertheless, both studies raised concerns about data privacy and the need for clear ethical frameworks in data collection and interpretation.

Additionally, the integration of natural language processing (NLP) tools in analyzing children's text and voice messages for early signs of cyberbullying or depression has shown promise. Hassan (2023) demonstrated that NLP-based tools identified risky behavioral patterns earlier than human supervisors in social media and messaging apps. Yet, in contrast, Ufuoma (2024) cautioned that such systems may flag false positives or lack contextual understanding, which could lead to unwarranted parental intervention or misjudgment of children's intentions. Despite technological advancements, a common thread across literature is the necessity for balancing surveillance with respect for children's autonomy and privacy. The use of technology must be complemented with open communication and trust-building between parents, educators, and children. Over-reliance on automated systems without understanding children's developmental needs may hinder rather than help behavioral growth.

Conclusions

In conclusion, this study examined the influence of e-administration on employee service delivery within selected government ministries in Anambra State between 2015 and 2023, revealing mixed outcomes. While elements such as task automation, document management, timely decision-making, and employee training were perceived as beneficial, critical areas like information sharing, real-time data access, and digital collaboration tools failed to meet expectations. Although employees acknowledged the potential of e-administration to enhance service delivery, persistent challenges related to usability, infrastructure, and organizational readiness continue to hinder its effectiveness. Notably, the study found no significant relationship between years of experience and perceptions of e-administration impact, suggesting that institutional support and capacity play a more crucial role than individual tenure. These findings underscore the need for consistent investment in employee training and digital literacy, along with robust ICT infrastructure to support reliable e-administration tools. To ensure successful implementation, ministries must adopt change management strategies that engage staff, overcome resistance, and foster a culture receptive to digital transformation. Future research should explore the qualitative aspects of adoption of e-administration through interviews and case studies, while also evaluating the cost-effectiveness of such initiatives to guide sustainable digital governance practices.

Data Availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

All authors in this publication declare no conflict of interest regarding the title, data, location, and results of the research.

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Supplementary Materials

This study does not include any supplementary materials.

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