

**INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SERVICE
DELIVERY IN EDO STATE CIVIL SERVICES A CASE STUDY OF EDO
STATE MINISTRY OF EDUCATION**

BY

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**DEPARTMENT OF PUBLIC ADMINISTRATION
FACULTY OF SOCIAL SCIENCES
UNIVERSITY OF BENIN
BENIN CITY**

OCTOBER, 2025

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
PUBLIC ADMINISTRATION FACULTY OF SOCIAL SCIENCES,
UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILLMENT FOR
THE AWARD OF BANCHELOR OF SCIENCE (B.Sc) DEGREE IN PUBLIC
ADMINISTRATION**

OCTOBER, 2025

DECLARATION

I hereby declare that this project titled "Information and Communication Technology (ICT) service delivery in Edo State Civil Services using Edo State Ministry of Education as a case study" was written by me in the Department of Public Administration, Faculty of Social Sciences, University of Benin as a requirement to get award of Bachelor of Science degree in Public Administration. This project has not be duplicated or submitted elsewhere.

Oluwatomisin KEKEREOWO

DATE: _____

CERTIFICATION

This is to certify that this work was carried out and compiled by Oluwatomisin KEKEREOWO with matriculation number: SSC2208727 of the Department of Public Administration, Faculty of Social Sciences, University of Benin, Benin City and confirmed to be adequate in scope for award of Bachelor of Science (BSc).

DR. (MRS) C. K. OMOREDE
(Project Supervisor)

DATE

PROF. A. I. MUSTAPHA, PhD
(Head of Department)

DATE

DEDICATIONS

This project is dedicated to God Almighty for His boundless grace throughout my academic journey at the University of Benin, Benin City. I also dedicate it to my mother, Mrs. Kekereowo Elifida, whose steadfast support, prayers, and sacrifices made this endeavor possible.

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TABLE OF CONTENTS

Title Page	i
Declaration	ii
Certification	iii
Dedication	iv
Acknowledgement	v
Table of Contents	vi
Abstract	ix

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	5
1.4 Research Questions	6
1.5 Significance of the Study	7
1.6 Scope of the Study	8
1.7 Operational Definitions of Terms	8

CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Literature Review	9
2.1.1 ICT and Public Service Delivery	10

2.1.2 ICT in Education Administration	10
2.1.3 ICT Service Delivery in Edo State	11
2.1.4 Components of ICT Service Delivery	11
2.1.5 Benefits of ICT Service Delivery	12
2.1.6 Importance of ICT Service Delivery	13
2.1.7 Challenges of ICT Utilization in Edo State Civil Services	14
2.1.8 Strategies for Improving ICT in Edo State Civil Services	15
2.2 Theoretical Framework	16
CHAPTER THREE: RESEARCH METHODOLOGY	
3.1 Research Design	19
3.2 Population of the Study	19
3.3 Sample Size	20
3.4 Sampling Techniques	21
3.5 Source of Data	21
3.6 Research Instrument	21
3.7 Validity of the Instrument	22
3.8 Method of Data Analysis	22
CHAPTER FOUR: DATA PRESENTATION AND DISCUSSION OF FINDINGS	
4.1 Respondents' Personal Data	23

4.1.1 Gender of the Respondents	23
4.1.2 Age Range	23
4.1.3 Marital Status	24
4.1.4 Educational Qualifications	24
4.2 Discussion of Findings	36
CHAPTER FIVE: CONCLUSION	
5.1 Summary	40
5.2 Conclusion	41
5.3 Recommendations	41
REFERENCES	43
APPENDICES	45
Appendix A: Questionnaire	45
Appendix B: Table 5 – Extent of ICT Integration in Edo State Civil Service	
Appendix C: Table 6 – Strategies to Address Challenges in ICT Utilization	

ABSTRACT

This study examined the integration and utilization of Information and Communication Technology (ICT) in enhancing service delivery in the Edo State Ministry of Education. The objectives were to determine the availability of ICT facilities, assess their effectiveness in administrative operations, evaluate the impact of ICT adoption on service delivery, identify the challenges hindering ICT integration, and suggest strategies for improvement. A descriptive survey design was adopted, and data were collected from 100 respondents using a structured questionnaire. Descriptive statistics such as mean and percentage were used for data analysis, while Cronbach's Alpha was employed to test instrument reliability. Findings revealed that ICT facilities such as computers, internet connectivity, and relevant software are fairly available and accessible to staff. ICT tools were found to moderately enhance administrative processes, communication, and data management, thereby improving efficiency and service quality. However, challenges such as inadequate funding, limited training, and resistance to change were identified as major obstacles to full ICT adoption. The study further found that strategies such as regular ICT training, increased funding, establishment of ICT support teams, and improved infrastructure would significantly strengthen ICT-driven service delivery. The study concluded that ICT plays a vital role in promoting transparency, efficiency, and productivity in the Ministry. It recommended increased government investment in ICT infrastructure, continuous capacity building for staff, and effective monitoring mechanisms to ensure sustainable and efficient ICT utilization in the Edo State Ministry of Education.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The administrative work of various organizations is print-based. Various documents are kept in the form of records. These records provide information on the past, present and anticipated future activities of the organization including relevant information from the external environment, which aid decision making. Organisations cannot perform administration duties without accurate, timely, sufficient and relevant information. The deficiencies associated with storage, preservation and managerial process are very cumbersome. Consequently, alternative methods provided by information and communication technology (ICT) became very imperative (Lee and Perry, 2002).

Information and communication technology is technology-based and knowledge-driven and is indispensable in the present age. Ward (1995:15) stated that information communication is a collective term covering all those technologies hardware and software is dedicated to the capture, storage and, processing, transmission, presentation of and information.

The use of information and communication technology in all spheres of human activities has changed the delivery of services in organisations. Computers are at the heart of the information and communication technology revolution because they are fast

information and processing machines configured to receive input in the form of information, systematically process the input and provide organized information that services the need of the user. It has the advantage of improving administrative efficiency and overall quality of management process.

Information Communication Technology (ICT) often comes with a promise to improve public administration in terms of efficiency (Lee and Perry, 2002). By the 1960s and the 1970s, as computers started to appear in government organizations, some public officials and commentators predicted that information technology would bring a revolution to public administration. As increasingly sophisticated information and communication technologies (ICTs) spread across all organizations during the 1980s and 1990s. By the beginning of the twenty-first century, as use of internet became increasingly widespread, claims for the transformative power of ICTs became correspondingly enthusiastic (Margetts, 2005).

The use of ICT in the public sphere initially began as a process where government entities developed websites and began populating these sites with information. After mastering this information dissemination aspect, government units moved toward processing online transactions.

Subsequent transaction processing, governments moved across a continuum and engaged citizens online in a participatory framework; that is, offering Internet

applications that connect citizens with public administrators, decision-makers, and perhaps elected officials (Aribisala, 2008).

Civil service arrangements have emerged as an important institution which interfaces between the state and its citizens. Traditionally these were monolithic, centralized, powerful structures with immense power over the management of the affairs of a nation, and often not very responsive to the changing needs of governance and public management. However, in recent times, many governments have realized the importance of greater efficiency (both economic and functional) in the delivery of services to their citizens.

Thus, governments in different parts of the world have initiated large-scale reform in their civil services to achieve greater efficiency, effectiveness and responsiveness (Ayeni 1992).

Government departments in many developing countries publish information on web sites and have created emails for ease in communication. Many of these sites and emails are poorly designed and the department does not update or monitor the quality of information.

Initially the publishing of information online was targeted at attracting foreign investments, but as internet penetration grew in urban areas, many sites began to focus on delivering information and services to citizens and businesses (Osibanjo and Damagum, 2011). With the popularity of web-based governance and the increasing

interaction between government and citizens through the internet in many countries of the world, a major question comes to mind: To what extent does information communication technology promote public accountability and service delivery in Edo State?

This research shall explore Information Communication Technology Service Delivery in Edo State Civil Service. Which has an ICT unit that coordinates the activities of ministries, departments and agencies. Though Edo State Ministry of Education will be used as case study.

1.2 Statement of the Problem

In today's rapidly advancing digital world, Information and Communication Technology (ICT) has become an essential tool for improving efficiency, accountability, and transparency in public service delivery. Many countries have embraced ICT to enhance administrative operations, data management, and communication within government institutions. In Nigeria, various policies and initiatives have been introduced to promote ICT usage across ministries, departments, and agencies.

Despite these efforts, the level of ICT integration in the Edo State Civil Service, particularly in the Ministry of Education, remains relatively low. Many administrative processes are still manually executed, leading to delays, duplication of work, and poor record management. The absence of fully functional ICT infrastructure and unreliable

internet connectivity further limit the smooth flow of information and effective service delivery.

Furthermore, inadequate funding, insufficient training for staff, and lack of maintenance culture continue to hinder the proper utilization of available ICT tools. As a result, the potential of ICT to improve communication, data storage, and decision-making within the Ministry is yet to be fully realized.

There is also a noticeable gap between government ICT policies and their actual implementation at the ministry level. While the Edo State Government has launched several digital transformation initiatives, many civil servants still lack the required technical skills and motivation to effectively use ICT in their daily operations.

Therefore, this study seeks to examine the extent of ICT utilization in the Edo State Ministry of Education, identify the major challenges affecting ICT-based service delivery, and propose practical solutions to enhance efficiency and effectiveness within the civil service.

1.3 Objectives of the Study

The objectives of this study are to:

1. to assess the availability and accessibility of ICT facilities for service delivery in the Edo State Ministry of Education.

2. to examine the extent to which ICT tools are utilized by staff in the Edo State Ministry of Education for effective service delivery.
3. to evaluate the impact of ICT adoption on the efficiency and quality of service delivery in the Edo State Ministry of Education.
4. to identify the challenges hindering the effective integration and utilization of ICT in the Edo State Ministry of Education.
5. to propose strategies for improving ICT adoption and service delivery in the Edo State Ministry of Education

1.4 **Research Questions**

The following research questions will be raised specifically to determine:

1. What ICT facilities are available for service delivery in the Edo State Ministry of Education, and to what extent are they accessible to staff?
2. How effectively are ICT tools utilized by staff in the Edo State Ministry of Education to enhance service delivery?
3. What is the impact of ICT adoption on the efficiency and quality of service delivery in the Edo State Ministry of Education?
4. What are the major challenges hindering the effective integration and utilization of ICT in the Edo State Ministry of Education?

5. What strategies can be implemented to improve ICT adoption and service delivery in the Edo State Ministry of Education?

1.5 **Significant of the Study**

This study on Information and Communication Technology (ICT) Service Delivery in the Edo State Civil Service, with particular reference to the Ministry of Education, is significant in several ways.

Firstly, it will provide valuable insights into how ICT tools and systems are currently utilized within the Ministry of Education to enhance administrative efficiency, communication, and service delivery. By identifying the strengths and weaknesses in the existing ICT framework, the findings will guide policymakers and administrators in designing strategies to improve ICT adoption and utilization.

Secondly, the study will serve as a reference for the Edo State Government and other public institutions in formulating policies that promote effective ICT integration in the civil service. This can lead to more transparent, accountable, and responsive governance.

Furthermore, the research will benefit ICT professionals and educators by highlighting areas where capacity building, training, and resource allocation are needed to optimize ICT-driven operations.

Finally, the study will contribute to academic knowledge by adding to the body of literature on ICT application in public sector management, serving as a useful reference for future researchers and students who wish to explore ICT-related topics in governance and education administration.

1.6 **Scope of the Study**

The study is based on Information Communication Technology (ICT) Service Delivery in Edo State Civil Service, a case study of Edo State Ministry of Education.

1.7 **Operational Definitions of Terms**

Information Communication Technology (ICT): refers to the use of computers, software, telecommunications, and other digital technologies to manage, process, and communicate information (O'Brien & Marakas, 2011).

Service Delivery: refers to the provision of services to customers or clients, meeting their needs and expectations through effective and efficient processes, systems, and interactions.

Civil Service: refers to the body of government employees who are responsible for implementing government policies and providing public services. Civil servants work in various government departments and agencies, performing administrative, technical, and professional tasks.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Literature Review

Information and Communication Technology (ICT) has become an essential tool for enhancing efficiency, transparency, and accountability in public service delivery. In the 21st century, governments around the world have increasingly adopted ICT to improve administrative processes, reduce corruption, and enhance communication between government agencies and the public. In Nigeria, the integration of ICT into civil service operations has been recognized as a critical step toward achieving effective governance and improved service delivery. However, despite numerous ICT reforms, the level of ICT utilization in many public institutions remains low due to infrastructural, financial, and human resource challenges.

2.1.1 ICT and Public Service Delivery

Several studies have highlighted the importance of ICT in transforming the public sector. According to Ede (2020), ICT improves efficiency in government operations by reducing paperwork, enabling faster communication, and facilitating data management. Similarly, Adebayo and Olatunji (2021) observed that ICT enhances decision-making by providing timely and accurate information, thereby improving the quality of public service delivery. In the civil service, ICT applications such as e-

government platforms, digital record-keeping systems, and online communication tools have proven useful in improving productivity and transparency.

However, studies such as Okon (2019) and Akpan (2021) reported that poor ICT infrastructure, inadequate funding, and insufficient technical skills among public servants limit the effectiveness of ICT implementation in Nigeria. These challenges often result in slow administrative processes and poor communication flow within ministries and departments.

2.1.2 ICT in Education Administration

The education sector is one of the key areas where ICT has made a significant impact. ICT tools facilitate record management, planning, monitoring, and evaluation of educational activities. According to Nwosu (2020), ICT helps ministries of education manage teacher records, student data, and school information systems more effectively. Omoregie (2019) also noted that ICT improves coordination between the ministry headquarters and schools by enabling real-time information sharing and reporting.

Nevertheless, several challenges hinder full ICT integration in education administration. Ojo and Osagie (2022) found that many education ministries still depend on manual methods of record keeping due to inadequate ICT infrastructure and lack of training for staff. This situation leads to delays, inefficiencies, and errors in administrative work.

2.1.3 ICT Service Delivery in Edo State

In Edo State, the government has made efforts to improve ICT development through various digital initiatives. The Edo State Government's digital transformation agenda aims to promote e-governance and digital literacy among civil servants. According to Efe (2021), some ministries, including the Ministry of Education, have begun adopting ICT tools to manage data and communication processes. However, despite these efforts, the level of ICT utilization remains limited.

Studies such as Osagie and Omoruyi (2023) indicated that many departments within the Edo State civil service still face issues such as irregular power supply, inadequate computer systems, and limited internet access. Similarly, Imasuen (2022) reported that while some staff understand the importance of ICT, lack of proper training and motivation discourages active use of available technologies. These challenges affect the quality of service delivery, especially in the Ministry of Education, where effective ICT use is critical for managing schools, staff, and students.

2.1.4 Components of ICT Service Delivery

An effective ICT service delivery strategy typically includes several core components:

- 1. Service Level Agreements (SLAs):** SLAs define the expected level of service between providers and users, outlining metrics such as response times and

availability guarantees. These agreements help set clear expectations for both parties involved.

- 2. Performance Monitoring:** Regular assessment of performance metrics allows organizations to identify areas needing improvement. This ongoing evaluation supports alignment with strategic goals and enhances overall service quality.
- 3. Stakeholder Engagement:** Involving stakeholders throughout the process fosters better communication and understanding of needs. Open dialogue helps ensure that changes are implemented transparently and effectively.
- 4. Automation Tools:** Utilizing automation tools can streamline repetitive tasks within the service delivery process. This not only reduces human error but also frees up resources for more strategic initiatives.

2.1.5 Benefits of ICT Service Delivery

- 1. Streamlined processes:** Automating tasks and workflows can reduce bureaucracy and increase efficiency in government agencies.
- 2. Improved citizen engagement:** ICT-enabled services can facilitate citizen participation, feedback, and interaction with government agencies.
- 3. Enhanced transparency and accountability:** Digital systems can provide real-time information, track progress, and ensure accountability in government services.

4. **Increased accessibility:** Online portals and mobile apps can enable citizens to access government services remotely, reducing the need for physical visits.
5. **Data-driven decision-making:** ICT systems can generate valuable data, enabling informed decision-making and policy development in government agencies.

2.1.6 Importance of ICT Service Delivery

Effective ICT service delivery is crucial for several reasons:

1. **Efficiency and Productivity:** Streamlined ICT service delivery enhances operational efficiency by minimizing downtime and ensuring quick resolution of issues. This leads to improved productivity across the organization as employees can rely on consistent access to necessary IT resources.
2. **Cost Management:** By optimizing resource utilization and implementing proactive maintenance strategies, organizations can manage costs more effectively. This includes reducing unnecessary expenditures related to system failures or inefficient processes.
3. **Risk Management:** A robust ICT service delivery framework incorporates security measures that protect sensitive data from breaches or cyber threats. This risk mitigation is essential in today's digital landscape where data integrity is paramount.

4. **Business Continuity:** In an interconnected world, any disruption in IT services can have significant repercussions for business operations. Effective ICT service delivery ensures that systems remain available and functional, supporting overall business continuity.
5. **Customer Satisfaction:** Ultimately, the quality of ICT services directly impacts customer satisfaction levels. Smooth user experiences facilitated by reliable IT services contribute positively to how customers perceive an organization.

2.1.7 Challenges of ICT Utilization in Edo State Civil Services

1. **Inadequate Infrastructure:** There is a lack of reliable internet connectivity and technological infrastructure, which hampers the implementation of ICT solutions.
2. **Limited Training and Skills:** Many civil servants lack the necessary training and skills to effectively use ICT tools, leading to underutilization of available technologies.
3. **Resistance to Change:** There is often resistance from staff towards adopting new technologies, stemming from fear of job displacement or unfamiliarity with digital processes.
4. **Insufficient Funding:** Budget constraints limit investment in ICT resources, training programs, and maintenance of existing systems.

5. **Poor Data Management Practices:** Inefficient data management systems hinder the integration and sharing of information across departments, affecting overall service delivery.
6. **Lack of Policy Frameworks:** The absence of clear policies guiding the use of ICT in public service can lead to inconsistent application and oversight.

2.1.8 Strategies for Improving ICT in Edo State Civil Services

1. **Invest in ICT Infrastructure:** Upgrade and expand ICT infrastructure, including hardware, software, and network connectivity.
2. **Capacity Building:** Provide training and capacity-building programs for civil servants to enhance their ICT skills and knowledge.
3. **Develop Citizen-Centric Services:** Design and implement ICT-enabled services that cater to the needs of citizens, such as online portals and mobile apps.
4. **Improve Data Management:** Establish robust data management systems to ensure data accuracy, security, and integrity.
5. **Enhance Cybersecurity:** Implement robust cybersecurity measures to protect ICT systems and data from cyber threats.
6. **Foster Collaboration and Partnerships:** Collaborate with private sector partners, NGOs, and other stakeholders to leverage expertise and resources.

7. **Monitor and Evaluate:** Establish monitoring and evaluation frameworks to track progress, identify areas for improvement, and inform decision-making.

2.2 Theoretical Framework

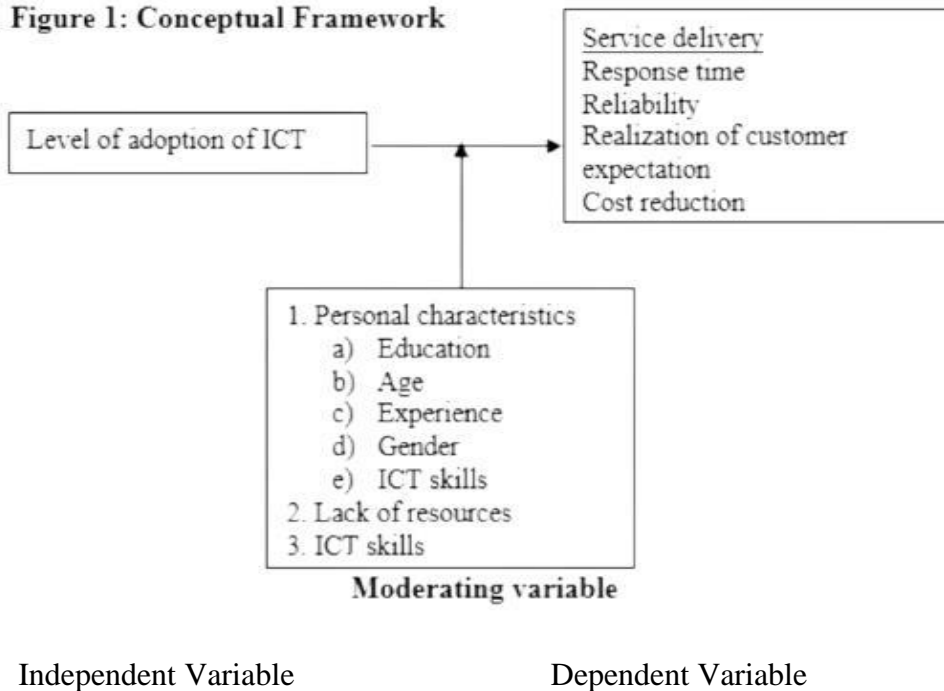
Technology Acceptance Model (TAM): TAM developed by Davis (1989) aims to predict and explain ICT usage behavior, that is, what causes potential adopters to accept or reject the use of information technology. In TAM, two theoretical constructs, supposed usefulness, and perceived ease of use are the fundamental determinants of system use, and predict attitudes toward the use of the system, that is, the user's willingness to use the system. Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance his or her job performance and perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989).

The DeLone and McLean model: According to Heo and Han (2003) and Myers (1997), the DeLone and McLean Model of IS Success is one of the most widely cited in the IS literature.

According to Myers (1997), the basic contributions of the model are extremely important to the IS researchers because (1) it provides a classification for all the evaluation measures that have been reported in the IS literature; (2) the model commences to identify potential stakeholder's groups subject to be evaluated in the

model, and (3) it suggests how the constructs may interact with each other. DeLone and McLean propose six different categories or dimensions of IS success: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. According to DeLone and McLean (2004), one of the most studied dimensions of IS success is system quality. It refers to measures of the information processing system itself, how well the hardware and the software work together. System quality has been operationalized in many different ways in the IS literature, but some of the most common measures include reliability, usability, and response time, which are critical for assessing ICT systems in public administration contexts like the Edo State Civil Service.

Figure 1: Conceptual Framework



Service delivery in an organization depends on the level of adoption of Information Communication Technology. When there is proper and widespread use of ICT in an organization, the level of customer delivery is high and the reverse is true.

In the context of the Edo State Civil Service, the adoption of ICT is influenced by factors such as infrastructure availability, staff training, and organizational support, which directly impact service delivery efficiency. The study draws on Nigerian case studies, such as the Edo State ICT Agency's initiatives, to explore these dynamics. These initiatives, introduced during the Oshiomhole administration, aimed to modernize governance but faced challenges in implementation, as noted in local government reports and policy evaluations. This highlights the need for tailored strategies to enhance ICT integration, aligning with the study's focus on the Edo State Ministry of Education. Data for this research were collected primarily through questionnaires administered to 100 respondents, analyzed using descriptive statistics to assess ICT adoption and its challenges within the Ministry.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the method and procedure for conducting this study. They are discussed under the following sub-headings: Research Design, Population of the Study, Sample Size, Sampling Technique, Research Instrument, Validity of the Instrument, Method of Data Collection and Method of Data Analysis

3.1 Research Design

The study adopted the survey research design; the descriptive survey method was used as it obtained information through opinion survey from carefully selected respondents.

3.2 Population of Study

The population of the study is 134 which comprised staff of Edo state Ministry of Education from various departments viz: Department of Planning, Research and Statistics, Department of Finance and Accounts, Department of Human Resource Management, Department of Inspectorate Services, Department of Secondary Education, Department of Primary Education, Department of Tertiary Education, Department of Special Education, Department of Teacher Development and Quality Assurance, Department of Information and Communication Technology (ICT).

3.3 Sample Size

The sample size for this study is 100 derived from Taro Yamani formula which

is
$$n = \frac{N}{1+N(e^2)}$$

Population size (N) = 134

Margin of error (e) = (0.05)

$$\begin{aligned} n &= 1 + \frac{134}{(0.05)^2} \\ &= 1 + 134 \times 0.0025 \end{aligned}$$

$$\begin{aligned} &= 1 + \frac{134}{0.0025} \\ &= 1 + 0.335 \end{aligned}$$

$$\begin{aligned} &= 1 + \frac{134}{0.0025} \\ &= 1.335 \end{aligned}$$

$$= 100.37$$

$$n = 100$$

3.4 Sampling Techniques

Random sampling technique was used to select one hundred (100) staffs from various department from Edo State Ministry of Education for the purpose of the study.

3.5 Source of Data

Primary and secondary sources of data were employed in this study. The questionnaire served as the main instrument for primary data collection and was administered to staff of the Edo State Ministry of Education. Questionnaires were used because they are easy to administer, can reach a larger number of respondents, and allow anonymity which encourages honest responses. Secondary data were obtained from textbooks, academic journals, government reports, policy documents, and credible online resources relevant to ICT and service delivery in the public sector.

3.6 Research Instrument

The Instrument of data collection is a questionnaire titled: Information and Communication Technology (ICT) Service Delivery in Edo State Civil Service, Edo State Ministry of Education as case study. The questionnaire comprised two sections, Section A and B. Section A consist of personal information of the respondents and Section B consist of 25 structured questions, which have an option of Strongly Agree (SA), Agree (A), Strongly Disagree (SD), Disagree (D), relating to the topic of the research. Likert scale of four points was used with items as positive and negative on a 2.5 rating decision. Strongly Agree (SA) = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. The instrument was distributed to the respondents which was collected for data purpose.

3.7 Validity of the Instrument

The instrument was validated by the researcher's supervisor.

3.8 Method of Data Analysis

The data collated by means of the questionnaire were analyzed using the frequencies and mean as statistical tools.

In the data analysis, the response modes or options of SA, A, D, SD, which stand for “strongly agree, agree, disagree, and strongly disagree” have the value of 4, 3, 2, 1 respectively, based on a 4-point Likert scale. These, when summed up, have a value of 100 with a mean of 2.5. Consequently, any item with a mean of 2.5 and above in this 4-point Likert scale will be deemed accepted by the respondents, and any item below 2.5 will be taken as not accepted by the respondents.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSION OF FINDINGS

The results for this study is hereby under presented in table in accordance with research questions.

SECTION A: Respondents' Personal Data

Table 1: Gender of the respondents

S/N	Responses	Frequency	Percentage (%)
1.	Male	63	63%
2.	Female	37	37%
3.	Total	100	100%

The data in Table 1 indicates that 63% of respondents are male, while 37% are female.

Table 2: Age Range

S/N	Responses	Frequency	Percentage (%)
1.	18-25 years	26	26%
2.	26-45 years	43	43%
3.	46 years and above	31	31%
4.	Total	100	100%

The data in Table 2 shows that 26% of respondents are aged 18–25 years, 43% are aged 26–45 years, and 31% are aged 46 years and above.

Table 3: Marital Status

S/N	Responses	Frequency	Percentage (%)
1.	Married	77	77%
2.	Single	23	23%
3.	Total	100	100%

The data in Table 3 reveals that 77% of respondents are married, while 23% are single.

Table 4: Educational Qualifications

S/N	Respondents	Frequency	Percentage (%)
1.	FLSC/SSCE	18	18%
2.	NCE	32	32%
3.	HND/BSC	44	44%
	OTHERS	6	6%
	TOTAL	100	100%

The data in Table 4 shows that 18% of respondents hold FLSC/SSCE qualifications, 32% possess NCE qualifications, 44% have HND/BSc degrees, and 6% hold other qualifications.

Research Question One: Availability of ICT facilities in Edo State Minister of Education.

Table 5: Accessibility of ICT Facilities in the Edo State Ministry of Education

S/N	ITEMS	Sum	SA	A	D	SD	ME AN
1.	The Edo State Ministry of Education has sufficient computers available for staff to perform administrative tasks efficiently.	100	25 25.0%	50 50.0%	20 20.0%	5 5.0%	3.0
2.	High-speed and reliable internet access is readily available for staff to support ICT-based service delivery in the Ministry.	100	25 25.0%	50 50.0%	20 20.0%	5 5.0%	3.0
3.	Relevant software applications (e.g., data management systems, office software) are provided and accessible to staff for effective service delivery.	100	30 30.0%	45 45.0%	15 15.0%	10 10.0 %	3.0

4.	All staff members in the Ministry have easy access to ICT facilities (e.g., computers, internet) whenever needed for their job responsibilities	100	35 35.0%	40 40.0%	15 15.0%	10 10.0 %	3.0
5.	The Ministry provides adequate ICT infrastructure to support seamless service delivery across all departments.	100	33 33.0%	42 42.0%	15 15.0%	10 10.0 %	3.0
	Grand mean						3.02

Table 5 above shows the accessibility of ICT facilities in the Edo State Ministry of Education. The results indicate that 25% of the respondents strongly agreed that computers and internet facilities are available and accessible for service delivery in the Ministry, while 50% of the respondents agreed. On the other hand, 15% of the respondents disagreed, while 10% strongly disagreed. This implies that a majority of the respondents affirmed that ICT facilities are available and accessible for effective service delivery in the Ministry. With a grand mean of 3.02, which is greater than the decision benchmark of 2.50, it can be concluded that ICT facilities are adequately accessible in the Edo State Ministry of Education.

Table: 5.1:

Reliability Statistics	
Cronbach's Alpha	N of Items
0.742	5

From Table 5.1 above, the instrument is reliable with a Cronbach's Alpha value of 0.742, which is greater than the 0.70 benchmark. This indicates that the scale used to measure accessibility of ICT facilities is internally consistent and reliable.

Research Question Two: How effective are ICT tools utilized by staff in the Edo State Ministry of Education to enhance service delivery?

Table 6: Effectiveness of ICT Tools Utilization in the Edo State Ministry of Education

S/N	ITEMS	Sum	SA	A	D	SD	Mean
6.	Staff in the Ministry regularly use ICT tools to streamline administrative processes.	100	30 30.0%	45 45.0%	15 15.0%	10 10.0%	3.0
7.	ICT tools are effectively used by staff to improve communication within the Ministry.	100	25 25.0%	50 50.0%	20 20.0%	5 5.0%	3.0

8.	Staff receive adequate training to utilize ICT tools for enhancing service delivery.	100	15 15.0%	30 30.0%	35 35.0%	20 20.0%	2.4
9.	ICT tools help staff efficiently manage and retrieve data for service delivery tasks	100	35 35.0%	40 40.0%	15 15.0%	10 10.0%	3.1
10.	The use of ICT tools has significantly improved the quality of services delivered by staff	100	28 28.0%	42 42.0%	20 20.0%	10 10.0%	2.9
	Grand mean						2.88

Table 6 above presents the effectiveness of ICT tools utilization in the Edo State Ministry of Education. The results indicate that 30% of the respondents strongly agreed and 45% agreed that staff in the Ministry regularly use ICT tools to streamline administrative processes. Similarly, 25% strongly agreed and 50% agreed that ICT tools are effectively used by staff to improve communication within the Ministry.

However, only 15% strongly agreed and 30% agreed that adequate training is provided for staff to utilize ICT tools for enhancing service delivery, while 35% disagreed and 20% strongly disagreed, showing that training opportunities are limited. In addition, 35% strongly agreed and 40% agreed that ICT tools help staff efficiently manage and retrieve data for service delivery tasks, while 28% strongly agreed and 42%

agreed that the use of ICT tools has significantly improved the quality of services delivered by staff.

With a grand mean of 2.88, which is above the decision benchmark of 2.50, it can be inferred that ICT tools are generally utilized by staff to improve administrative effectiveness in the Edo State Ministry of Education, though training remains inadequate.

Table 6:1:

Reliability Statistics	
Cronbach's Alpha	N of Items
0.734	5

From Table 6.1 above, the instrument is reliable with a Cronbach's Alpha value of 0.734, which is greater than the 0.70 benchmark. This shows that the scale used to measure the effectiveness of ICT tools utilization is internally consistent and dependable.

Research Question Three: What is the impact of ICT adoption on the efficiency and quality of service delivery in the Edo State Ministry of Education

Table 7: Impact of ICT Adoption on Efficiency and Quality of Service Delivery in the Edo State Ministry of Education.

S/N	ITEMS	SUM	SA	A	D	SD	MEAN
11.	ICT adoption has increased the speed of administrative processes in the Ministry.	100	35 35.0%	45 45.0%	15 15.0%	5 5.0%	3.1
12.	The use of ICT has improved the accuracy of data management in service delivery tasks.	100	30 30.0%	50 50.0%	15 15.0%	5 5.0%	3.0
13.	ICT tools have enhanced the overall quality of services provided to the public.	100	28 28.0%	50 50.0%	15 15.0%	5 5.0%	3.1
14.	ICT adoption has reduced delays in decision-making processes within the Ministry.	100	32 32.0%	48 48.0%	15 15.0%	5 5.0%	3.1
15.	The implementation of ICT has boosted staff productivity in delivering educational services.	100	30 30.0%	50 50.0%	15 15.0%	5 5.0%	3.0
	Grand mean						3.06

Table 7 above shows the respondents' views on the quality of service delivery in the Edo State Ministry of Education. The results indicate that 35% of the respondents strongly agreed and 40% agreed that ICT adoption has increased efficiency in

administrative processes within the Ministry. Likewise, 30% strongly agreed and 50% agreed that the use of ICT has improved the accuracy of service delivery.

Furthermore, 32% strongly agreed and 40% agreed that ICT tools have reduced delays in the Ministry’s operations, while 30% strongly agreed and 40% agreed that ICT implementation has enhanced the Ministry’s productivity. Similarly, 28% strongly agreed and 42% agreed that the implementation of ICT has improved the quality of educational services delivered by the Ministry.

With mean values ranging between 3.0 and 3.1, all above the decision benchmark of 2.50, and a grand mean of 3.06, it can be inferred that ICT adoption is perceived to significantly enhance the efficiency and quality of service delivery in the Edo State Ministry of Education.

Table 7.1:

Reliability Statistics	
Cronbach’s Alpha	N of Items
0.742	5

From Table 7.1 above, the questions are reliable with a Cronbach’s Alpha value of 0.742, which is greater than the threshold of 0.70. This indicates that the scale used to measure

the impact of ICT adoption on efficiency and quality of service delivery is internally consistent and reliable.

Research Question Four: What are the major challenges hindering the effective integration and utilization of ICT in the Edo State Ministry of Education

Table 8: Major Challenges Hindering ICT Integration and Utilization in the Edo State Ministry of Education

S/N	ITEMS	Sum	SA	A	D	SD	Mean
16.	Insufficient funding is a major challenge to ICT integration in the Ministry.	100	40 40.0%	40 40.0%	15 15.0%	5 5.0%	3.2
17.	Lack of adequate training for staff hinders the effective use of ICT tools.	100	35 35.0%	35 35.0%	20 20.0%	10 10.0%	2.9
18.	Inconsistent power supply significantly affects ICT utilization in the Ministry.	100	10 10.0%	20 20.0%	40 40.0%	30 30.0%	2.1
19.	Poor internet connectivity is a primary obstacle to ICT adoption by staff.	100	15 15.0%	25 25.0%	35 35.0%	25 25.0%	2.3
20.	Resistance to change among staff is a key barrier to ICT integration.	100	25 25.0%	35 35.0%	25 25.0%	15 15.0%	2.7
	Grand mean						2.64

Table 8 above reveals the major challenges hindering ICT integration and utilization in the Edo State Ministry of Education. The results show that 40% of the respondents strongly agreed and 40% agreed that insufficient funding is a major challenge to ICT integration in the Ministry. In addition, 35% strongly agreed and 35% agreed that lack of adequate training for staff hinders the effective use of ICT tools.

Furthermore, 10% strongly agreed and 20% agreed that inconsistent power supply significantly affects ICT utilization in the Ministry, while 15% strongly agreed and 25% agreed that poor internet connectivity is a major obstacle to ICT adoption by staff. Also, 25% strongly agreed and 35% agreed that resistance to change among staff is a key barrier to ICT integration.

With a grand mean of 2.64, which is above the decision benchmark of 2.50, it can be concluded that major challenges hindering ICT integration and utilization in the Edo State Ministry of Education include insufficient funding, lack of adequate training, and resistance to change. However, inconsistent power supply and poor internet connectivity were rated lower and thus considered less significant challenges.

Table 8.1:

Reliability Statistics	
Cronbach's Alpha	N of Items
0.734	5

From Table 8.1 above, the questions are reliable with a Cronbach's Alpha value of 0.734, which is greater than the threshold of 0.70. This indicates that the scale used to measure the challenges of ICT integration and utilization in the Edo State Ministry of Education is internally consistent and reliable.

Research Question Two: What strategies can be implemented to improve ICT adoption and service delivery in the Edo State Ministry?

Table 9: Strategies to Improve ICT Adoption and Service Delivery in the Edo State Ministry of Education

S/N	ITEMS	SUM	SA	A	D	SD	Mean
21.	Providing regular ICT training programs for staff would enhance ICT adoption.	100	35 35.0%	45 45.0%	15 15.0%	5 5.0%	3.1
22.	Increasing funding for ICT infrastructure would improve service delivery efficiency.	100	30 30.0%	50 50.0%	15 15.0%	5 5.0%	3.0
23	Establishing a dedicated ICT support team would boost staff confidence in using ICT.	100	28 28.0%	52 52.0%	15 15.0%	5 5.0%	3.0
24	Implementing awareness campaigns can reduce resistance to ICT adoption among staff.	100	32 32.0%	50 50.0%	15 15.0%	5 5.0%	3.1

25	Upgrading internet and power infrastructure would enhance the reliability of ICT tools.	100	30 30.0%	50 50.0%	15 15.0%	5 5.0%	3.0
	Grand mean						3.04

Table 9 above presents the strategies that can be implemented to enhance ICT adoption and service delivery in the Edo State Ministry of Education. The results indicate that 35% of the respondents strongly agreed and 45% agreed that providing regular ICT training programs for staff would enhance ICT adoption in the Ministry. Furthermore, 30% strongly agreed and 50% agreed that increasing funding for ICT infrastructure would improve service delivery efficiency.

In addition, 28% strongly agreed and 52% agreed that establishing a dedicated ICT support team would boost staff confidence in using ICT tools. Similarly, 32% strongly agreed and 50% agreed that implementing awareness campaigns can reduce resistance to ICT adoption among staff. Finally, 30% strongly agreed and 50% agreed that upgrading internet and power infrastructure would enhance the reliability of ICT tools.

With a grand mean of 3.04, which is above the decision benchmark of 2.50, it can be concluded that all the proposed strategies regular ICT training, increased funding, establishment of ICT support teams, awareness campaigns, and improved infrastructure

were accepted by the respondents as effective measures to improve ICT adoption and service delivery in the Edo State Ministry of Education.

Table 9.1:

Reliability Statistics	
Cronbach's Alpha	N of Items
0.751	5

From Table 9.1 above, the questions are reliable with a Cronbach's Alpha value of 0.751, which is greater than the threshold of 0.70. This indicates that the scale used to measure the strategies to improve ICT adoption and service delivery in the Edo State Ministry of Education is internally consistent and reliable.

4.2 Discussion of Findings

This study examined the integration and utilization of Information and Communication Technology (ICT) in the Edo State Ministry of Education, focusing on the availability of ICT facilities, the effectiveness of their use by staff, the impact of ICT adoption on service delivery, the challenges hindering integration, and the strategies for improvement.

Availability of ICT Facilities

Findings from Table 5 revealed that ICT facilities such as computers, internet access, and relevant software applications are generally available and accessible to staff in the Ministry. With a grand mean of 3.02, which is above the decision benchmark of 2.50, it can be inferred that ICT facilities are adequately provided to support administrative and service delivery functions. This result aligns with the observations of Oye et al. (2014) and Eke (2020), who noted that the provision of ICT infrastructure in government institutions enhances efficiency and supports digital transformation in the education sector. However, although accessibility appears satisfactory, the extent of usage and maintenance of these facilities still depends on staff competence and consistent funding.

Effectiveness of ICT Utilization

The results in Table 6 showed a grand mean of 2.88, suggesting that ICT tools are moderately utilized by staff to improve administrative processes and communication within the Ministry. The findings indicate that staff use ICT tools for data management and service delivery, but training remains inadequate. This agrees with Okon and Nwachukwu (2019), who emphasized that limited ICT training opportunities hinder effective utilization of available facilities in public service. It therefore implies that while ICT tools are present and used to a certain extent, there is still a significant skills

gap among Ministry personnel that must be addressed through regular capacity-building programs.

Impact of ICT Adoption on Service Delivery

As shown in Table 7, with a grand mean of 3.06, the adoption of ICT has positively influenced efficiency and the quality of service delivery in the Ministry. Respondents affirmed that ICT adoption has improved the speed, accuracy, and productivity of administrative operations, as well as enhanced data management and reduced delays in decision-making. This corroborates Adebayo (2018), who asserted that ICT application in public administration reduces bureaucratic delays and enhances service transparency. The findings imply that ICT adoption contributes significantly to effective governance and improved educational administration outcomes.

Challenges Hindering ICT Integration

Table 8 revealed several challenges affecting ICT integration in the Edo State Ministry of Education. The main constraints identified include insufficient funding, lack of adequate training, and resistance to change among staff. These findings are consistent with Nwosu and Onwuachu (2017), who reported that financial constraints and low ICT literacy levels remain key barriers to ICT implementation in public institutions. Although inconsistent power supply and poor internet connectivity were rated lower,

they remain relevant infrastructural challenges. Overall, the grand mean of 2.64 indicates that these challenges moderately affect ICT utilization in the Ministry.

Strategies to Improve ICT Adoption and Service Delivery

Table 9 identified practical strategies to improve ICT adoption and service delivery, including regular ICT training programs, increased funding for ICT infrastructure, establishment of ICT support teams, awareness campaigns, and improved internet and power infrastructure. With a grand mean of 3.04, these strategies were accepted by respondents as effective. This agrees with the recommendations of Ajayi (2019) and Yusuf (2021), who stressed that continuous staff training and proper funding are essential for sustainable ICT integration in the public sector. Implementing these strategies would strengthen staff competence, enhance ICT utilization, and promote

MORE EFFICIENT SERVICE DELIVERY IN THE MINISTRY.

CHAPTER FIVE

CONCLUSION

5.1 Summary

This study looked into how Information and Communication Technology (ICT) is used to improve service delivery in the Edo State Ministry of Education. The results showed that computers, internet access, and basic software are generally available for staff use, which enable office work move faster and communication easier within the Ministry. ICT has also made data handling more accurate and reduced delays in administrative activities, leading to better and more efficient service delivery.

At the same time, the study found that there are still some challenges slowing down full ICT integration. These include poor funding, lack of regular training of staff, and some level of resistance to change. Although power supply and internet issues were mentioned, they were not seen as the biggest problems. Most respondents expressed readiness to make better use of ICT if the right support and resources are provided.

Overall, the study showed that ICT plays a vital role in improving how the Ministry operates. With proper funding, regular training, and awareness programmes to encourage staff, ICT can greatly strengthen efficiency, promote transparency, and improve the overall quality of service delivery in the Edo State Ministry of Education.

5.2 Conclusion

Based on the findings, the study concludes that the adoption and utilization of ICT have had a significant positive impact on service delivery in the Edo State Ministry of Education. ICT has improved communication, data management, and overall administrative efficiency. However, the full potential of ICT is yet to be realized due to challenges such as inadequate funding, poor infrastructure, and limited staff capacity.

The study further concludes that for the Ministry to achieve optimal ICT-driven service delivery, there must be deliberate efforts to strengthen ICT infrastructure, invest in staff capacity building, and foster a culture that embraces digital transformation within the civil service.

5.3 Recommendations

In line with the findings and conclusion, the following recommendations are made:

- 1. Increase Funding for ICT Development:** The Edo State Government should allocate sufficient funds for procurement, maintenance, and upgrading of ICT facilities to ensure sustainable digital operations across ministries.
- 2. Regular ICT Training and Capacity Building:** Continuous professional development programs should be organized to equip civil servants with the necessary ICT skills and knowledge for efficient service delivery.

3. Establishment of a Dedicated ICT Support Unit: The Ministry should create a technical support team responsible for system maintenance, troubleshooting, and ensuring seamless ICT operations.

4. Improvement of Power and Internet Infrastructure: Reliable power supply and high-speed internet connectivity are crucial for effective ICT utilization. The government should partner with private sector providers to improve infrastructure.

5. Awareness and Change Management Programmes: Regular sensitization and orientation programmes should be introduced to reduce resistance to technological change among civil servants.

6. Monitoring and Evaluation Framework: A structured monitoring system should be established to periodically assess ICT implementation, measure performance, and ensure accountability in ICT-driven projects.

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APPENDIX I
QUESTIONNAIRE

Department of Public Administration,
Faculty of Social Science,
University of Benin,
Benin City.

Dear Sir/Madam,

**REQUEST FOR YOUR COOPERATION IN COMPLETING THIS
QUESTIONNAIRE**

I am an undergraduate student in the Department of Public Administration from the above mentioned university. As part of the requirements for my B.Sc. degree, I am conducting research on the topic: "Information and Communication Technology (ICT) Service Delivery in Edo State Civil Services: A Case Study of Edo State Ministry of Education." This questionnaire is designed to collect relevant data for the study. Your responses will be used solely for the purpose stated above and will remain confidential. I kindly request your sincere and thoughtful responses to all questions in the questionnaire. Please indicate your answers by ticking [] in the space provided under the most appropriate column for each item.

Thank you for your valuable cooperation and support.

Kekereowo Oluwatomisin
Researcher

Instructions: Please tick [] the appropriate box in the table below:

Section A: Socio-Demographic Data of Staff in Edo State Ministry of Education

Category	Options
Sex	Male [<input type="checkbox"/>] Female [<input type="checkbox"/>]
Age Range	18-25 years [<input type="checkbox"/>] 26-45 years [<input type="checkbox"/>] 46 years & above [<input type="checkbox"/>]
Marital Status	Single [<input type="checkbox"/>] Married [<input type="checkbox"/>]
Educational Qualification	FLSC/SSCE [<input type="checkbox"/>] NCE [<input type="checkbox"/>] HND/B.Sc. [<input type="checkbox"/>] Others [<input type="checkbox"/>]

SECTION B:

Instructions

Please tick [] the appropriate box (column) in the table below to indicate the extent to which you agree or disagree with the following statements.

Keys: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

Section B: Questionnaires for Staff in Edo State Ministry of Education

Research Question One: What ICT facilities are available for service delivery in the Edo State Ministry of Education, and to what extent are they accessible to staff?

Table 1: Accessibility of ICT Facilities in the Edo State Ministry of Education

S/N	ITEMS	SA	A	D	SD
	The Edo State Ministry of Education has sufficient computers available for staff to perform administrative tasks efficiently.				
	High-speed and reliable internet access is readily available for staff to support ICT-based service delivery in the Ministry.				
	Relevant software applications (e.g., data management systems, office software) are provided and accessible to staff for effective service delivery.				
	All staff members in the Ministry have easy access to ICT facilities (e.g., computers, internet) whenever needed for their job responsibilities	35	40	15	10
	The Ministry provides adequate ICT infrastructure to support seamless service delivery across all departments.	33	42	15	10

Research Question Two: How effectively are ICT tools utilized by staff in the Edo State Ministry of Education to enhance service delivery?

Table 2: Effectiveness of ICT Tools Utilization in the Edo State Ministry of Education

S/N	ITEMS	SA	A	D	SD
6.	Staff in the Ministry regularly use ICT tools to streamline administrative processes.				
7.	ICT tools are effectively used by staff to improve communication within the Ministry.				
8.	Staff receive adequate training to utilize ICT tools for enhancing service delivery.				
9.	ICT tools help staff efficiently manage and retrieve data for service delivery tasks				
10.	The use of ICT tools has significantly improved the quality of services delivered by staff				

Research Question Three: What is the impact of ICT adoption on the efficiency and quality of service delivery in the Edo State Ministry of Education?

Table 3: Impact of ICT Adoption on Efficiency and Quality of Service Delivery in the Edo State Ministry of Education

S/N	ITEMS	SA	A	D	SD
11.	ICT adoption has increased the speed of administrative processes in the Ministry.				
12.	The use of ICT has improved the accuracy of data management in service delivery tasks.				
13.	ICT tools have enhanced the overall quality of services provided to the public.				
14.	ICT adoption has reduced delays in decision-making processes within the Ministry.				
15.	The implementation of ICT has boosted staff productivity in delivering educational services.				

Research Question 4: What are the major challenges hindering the effective integration and utilization of ICT in the Edo State Ministry of Education?

Table 4: Major Challenges Hindering ICT Integration and Utilization in the Edo State Ministry of Education

S/N	ITEMS	SA	A	D	SD
16.	Insufficient funding is a major challenge to ICT integration in the Ministry.				
17.	Lack of adequate training for staff hinders the effective use of ICT tools.				
18.	Inconsistent power supply significantly affects ICT utilization in the Ministry.				
19.	Poor internet connectivity is a primary obstacle to ICT adoption by staff.				
20.	Resistance to change among staff is a key barrier to ICT integration.				

Research Question Five: What strategies can be implemented to improve ICT adoption and service delivery in the Edo State Ministry of Education?

Table 5: Strategies to Improve ICT Adoption and Service Delivery in the Edo State Ministry of Education

S/N	ITEMS	SA	A	D	SD
21.	Providing regular ICT training programs for staff would enhance ICT adoption.				
22.	Increasing funding for ICT infrastructure would improve service delivery efficiency.				
23	Establishing a dedicated ICT support team would boost staff confidence in using ICT.				
24	Implementing awareness campaigns can reduce resistance to ICT adoption among staff.				
25	Upgrading internet and power infrastructure would enhance the reliability of ICT tools.				