

GOVERNMENT POLICY AND IMPLEMENTATION OF DIGITAL TECHNOLOGIES IN EDUCATION IN ENUGU STATE

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Abstract

The study focused on the influence of government policy on implementation of digital technologies in Enugu State. Two research questions guided the study. Descriptive survey research design was adopted for the study. The population for the study comprised 11,404 respondents which consisted of 4811 male and 6593 female teachers. The sample size for the study was 1140 respondents which consisted of 481 males and 659 female teachers. The teachers' population was sampled using a stratified proportionate simple random sampling technique. The instrument for data collection was a structured questionnaire developed by the researchers and titled "Influence of government on implementation of Digital technology Questionnaire (IGIDTQ)". To establish the validity of the instrument, three experts were chosen to carry out the exercise. Two of them were from the Department of Educational Management, while the third expert was from the Department of Mathematics and Computer Science Education, all in the Faculty of Education at Enugu State University of Science and Technology (ESUT), Enugu. To ascertain the reliability of the instrument, the researcher employed the Cronbach alpha approach for computing internal consistency. The rationale behind choosing the Cronbach Alpha statistic was its ability to determine the internal consistency by calculating the average correlation among items in a survey instrument, providing a measure of its reliability. The computation yielded 0.81 for cluster A, 0.83 and for cluster B, 0.79. The overall reliability index was 0.81. This showed high reliability index and suitable for data collection from the respondents. The research questions were answered using mean scores and standard deviation. The t-test statistic was employed to test the null hypotheses, with a significance level of 0.05. The findings of the study showed revealed that influence of government policy on the implementation of e-payment in secondary schools. This indicates that policies can establish guidelines for secure, reliable, and efficient e-payment systems, reducing the risk of fraud and errors, effectively integrate e-payment systems into school operations, e-payment systems, ensuring quality and effectiveness in secondary schools, policies can facilitate partnerships between government and private sectors and E-payment systems can reduce transaction costs associated with traditional payment methods, such as cash and checks. Based on the findings, the researcher recommended that teachers should be educated more on how to use digital technologies in teaching and learning in Enugu State since government policy facilitates the use of digital technologies in teaching and learning and that to avoid theft of government revenues, e-payment should be implemented in all level of education in Enugu State. Since e-payment have a high significant position in government policy in Enugu State.

Keywords: Government Policy, Implementation, Digital technologies, Secondary Schools

Introduction

Today, the need for digital technology is on it rise and this calls for immediate implementation of digital technology in Secondary schools within Enugu State. Digital technology plays a vital role in modern society, offering numerous benefits and opportunities. Some key aspects of digital technology include: Communication, information access, economic opportunities, healthcare and education. Education, as the overarching structure, facilitates the

provision of specialized knowledge and skills crucial for individuals' academic and personal growth, with secondary education serving as the specific stage for this process. Secondary education refers to the period of schooling that comes after primary education, including both Upper Basic and Senior Secondary. Abdulrasheed and Bello (2015) defined secondary school education as the form of education, which children receive after primary education and before the tertiary level. According to Chidobi (2015), secondary education is established for refining human beings at their youthful age in terms of skills, behaviour and all round excellence in order to fit into society where they live through the help of teachers and educational managers. A teacher is an educator who imparts knowledge, fosters skill development, and guides students in their academic and personal growth. Because of the important of education, teachers at all levels of education are required to have digital knowledge as to improve the system of Education, through government policies (Unachukwu & Odumodu, 2015).

The Enugu State government has implemented several policies and initiatives to integrate digital technologies in education. Some key developments include: - mandatory registration on statewide education portal, digital literacy training for teachers, smart green school's initiative, AI-based digital Infrastructure, teacher training and Support which the government has approved ₦30m for teachers' training, highlighting its commitment to capacity building and digital readiness for educators (Chidobi (2015)). The significance of digital technology in education, government, social and economic development, and the growing concern over data collection and privacy issues have led to its heightened prominence and extensive discourse in international politics (Unachukwu & Odumodu, 2015). Recent advances in the use of electronic technologies, the understanding that the current strategy used by governments and businesses to control the Internet and implement electronic transformation raises a number of issues and challenges, hacking cases, growing concern over privacy concerns, and the strength of this new industry all serve to highlight the significance and challenges of the digital age (Albanna, 2022). Alkrajji (2021) opined that digital technologies frequently necessitate the provision of training, restructuring, and the establishment of novel functions within governmental entities. The term "digital transformation" is frequently employed as a comprehensive concept encompassing various initiatives within organizations. However, it can exert an influence on several distinct facets of the enterprise, as its implementation may necessitate the incorporation of novel digital technological solutions (Flyverbom, 2017).

Digital technology refers to the use of digital systems, tools, and platforms to process, store, and communicate information. Hardware and software that enable digital processing and storage, Global networks that facilitate communication and data exchange, smartphones, tablets, and other portable devices, audio, video, images, and text created, edited, and shared digitally and tools and techniques for analyzing and interpreting digital data (Flyverbom, 2017). Digital technologies are centralizing in terms of people, businesses, and communities. The most striking examples of our growing reliance on digital technologies are the ways we travel around the city, communicate with friends, and do informational searches (Faulkner, 2019). Digital technology also change the way work is done through job automation, providing new opportunities for businesses to assess and improve their "information"-related activities. Faulkner (2019) opined that in both every day and organizational settings, digital technologies encourage new kinds of vision, improved editing possibilities especially in Enugu State were digital technology is highly articulated in both educational sector and other major sectors in the State. According to Abdulrasheed and Bello (2015) The utilization of digital technologies in teaching and learning has the potential of enhancing greater achievement among students and lecturers in teaching and learning of Economics through collaborations/improved communication with students/researchers in other institutions and opening of wider opportunities to share information (Faulkner, 2019). The utilization of Digital technologies in

teaching and learning expands the range of choices and opportunities by facilitating greater access to educational resources. It also opens up equal opportunities as well as helps to level the playing field by increasing the students' participation in economic and human development. The ineffective use of digital technologies in teaching and learning limits the learning process and outcomes (Faulkner, 2019). Studies on the availability and utilization of digital technologies have shown their importance in the education system. Upon the benefit of digital technology in the society, government policies still play a very important role in both development and usage of digital facilities in the State. Therefore, the present study aimed at identifying the influence of government policy on implementation of digital technologies in Enugu State.

Statement of the Problem

Government policy in Secondary education in Nigeria especially in Enugu State has been faced with numerous challenges ranging from low teachers' productivity to low students' performance. For sometimes now in Enugu state, many teachers are complaining immensely concerning the trending compulsory use of digitalized facilities in teaching and learning in secondary schools. This policy made by the incumbent government is too numerous and uncomfortable for many teachers that are not digital native. Some secondary education stakeholders have argued that these poor performances are due to students' engagements in school activities. This engagement has been traced to lack of integrating technology into students' education. Most of the secondary school students in Enugu State do not really get the necessary exposure in order to excel in their classroom activities in terms of students' records and students' personnel management with technology. Technology has now become integral part of the education of students in secondary schools. It provides opportunities for both teachers and students to learn how to operate in an information and technological age. The problem of this study put in question form is, therefore, "what is the influence of government policy on implementation of digital technologies in Enugu State.

Purpose of the Study

The main purpose of this study is to sought out influence of government policy on implementation of digital technologies in Education in Enugu State.

Specifically, the study sought to:

1. Examine the influence of government policy on the implementation of digital technologies in teaching and learning in Enugu State
2. Ascertain the influence of government policy on the implementation of school e-payment in Enugu State.

Research Questions

The following research questions guided the study

1. What are the influence of government policy on the implementation of digital technologies in teaching and learning in Enugu State?
2. What are the influences of government policy on the implementation of e-payment in secondary schools in Enugu State?

Methods

Descriptive survey research design was adopted for this study. Descriptive survey research design is a method used to collect and analyze data to describe characteristics of a population or phenomenon systematically (Nworgu, 2018). This study was conducted in Enugu State. Enugu State, located in the southern part of Nigeria, it is known for its diverse culture and rich natural resources, particularly Coal. The state capital is Enugu. Enugu North, Enugu South and Enugu East are major commercial cities in Enugu State. The population for the study comprised

11,404 respondents which consisted of 4811 male and 6593 female teachers. The 298 public secondary schools are distributed unequally among the 11 education zones in Enugu State (Ministry of Education, Enugu State, 2024). The sample size for the study was 1142 respondents which consisted of 482 males and 660 female teachers. The teachers' population was sampled using a stratified proportionate simple random sampling technique. The instrument for data collection was a structured questionnaire developed by the researcher and titled "Influence of government policy on implementation of digital technologies Questionnaire (IGPIDTQ)". To ascertain the validity of the instrument, the questionnaire was given to three validators. Two of them were from Department of Educational Management and one was from the Department of Mathematics and Computer Education, all from Faculty of Education, Enugu State University of Science and Technology (ESUT), Enugu. To ensure the reliability of the instrument, a trial test was conducted on 18 males and 22 female teachers in public secondary schools in Ebonyi State. The choice of Ebonyi State was made because it has the same educational characteristics with the area of the study. The researcher used Cronbach Alpha statistic to determine the internal consistency of the instrument which yielded 0.81 for cluster A, 0.83 and for cluster B, 0.79. The overall reliability index was 0.81. This showed high reliability index and suitable for data collection from the respondents. The researcher, along with a team of five research assistants, was responsible for administering the copies of questionnaire to the respondents who are male and female teachers. The researcher used mean scores and standard deviations in answering the research questions. To calculate the mean, each response option was assigned a numerical value based on real limit of numbers: Strongly Agree (SA) = 2.50 and above is regarded as Agree while 2.49 and below is regarded as disagree.

Results

Research Question One: What are the influence of government policy on the implementation of digital technologies in teaching and learning in Enugu State?

Table 1: Mean scores and standard deviation of male and female teachers on the influence of government policy on the implementation of digital technologies in teaching and learning in Enugu State

Items		Male – 446		Female-643		Overall – 1089		Dec
S/N	Influence of government policy on the implementation of digital technologies in teaching and learning in Enugu State:	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{x}$	SD	
1	Government policies lead to investment in digital infrastructure.	2.66	.88	2.65	.86	2.66	.87	HE
2	Policies prioritize professional development for educators.	3.01	.82	3.05	.81	3.03	.82	HE
3	Policies facilitate access to digital resources, such as e-learning platforms,.	3.02	.82	3.01	.82	3.01	.82	HE
4	Government initiatives can aim to reduce the digital divide by providing technology access to disadvantaged schools and students.	3.07	.79	3.00	.83	3.03	.81	HE
5	Policies can promote innovation and entrepreneurship in education,	2.58	.91	2.61	.94	2.60	.93	HE
6	Government policies establish standards for digital technologies in education, ensuring quality and effectiveness..	2.60	.90	2.62	.91	2.61	.91	HE

7	Policies can facilitate partnerships between government, private sector, and civil society to enhance technology adoption in education..	2.54	.89	2.60	.86	2.58	.88	HE
8	It allocate resources and funding for digital technology initiatives	2.63	.88	2.67	.86	2.65	.87	HE
9	It supports implementation and sustainability.	2.58	.91	2.61	.94	2.60	.93	HE
10	It encouraging the development of new digital technologies and solutions.	2.60	.90	2.62	.91	2.61	.91	HE
Cluster Mean/SD		2.79	.86	2.81	.86	2.80	.86	HE

Table 1 shows that items such as "Government policies lead to investment in digital infrastructure." (mean = 3.06) and " Policies prioritize professional development for educators " (mean = 3.03) were rated highest, policies facilitate access to digital resources, such as e-learning. Both male and female teachers showed similar perceptions across all items, with minimal differences in their mean scores, indicating a consensus on the influence of government policy on the implementation of digital technologies in teaching and learning. Items like "establishing standards for digital technologies in education, ensuring quality and effectiveness " (mean = 2.60) and " It allocate resources and funding for digital technology initiatives " (mean = 2.58) were rated lower, though still classified as high extent (HE), suggesting areas for potential improvement. The data in Table 1 reveals that government policy in Education in Enugu State is highly regarded as a determinant of digital technology in secondary schools in Enugu State, as reflected by the overall cluster mean of 2.80 and standard deviation of 0.86. The low level of the standard deviation indicates that the respondents are homogenous in their responses. Overall, the findings confirm that government policy significantly enhances digital technology in secondary schools in Enugu State.

Research Question Two: What is the influence of government policy on the implementation of e-payment in secondary schools in Enugu State?

Table 2: Mean scores and standard deviation of male and female teachers on influence of government policy on the implementation of e-payment in secondary schools

ITEMS		Male – 446		Female- 643		Overall – 1089		
S/N	Influence of government policy on the implementation of e-payment in secondary schools:	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{x}$	SD	Dec
14	Policies can establish guidelines for secure, reliable, and efficient e-payment systems, reducing the risk of fraud and errors.	2.99	.83	3.04	.83	3.03	.83	HE
15	Effectively integrate e-payment systems into school operations	2.97	.83	3.04	.83	3.02	.83	HE
16	e-payment systems, ensuring quality and effectiveness in secondary schools	3.01	.79	2.99	.82	2.99	.81	HE
17	E-payment systems improve transparency and accountability in school financial management..	3.02	.81	3.02	.80	3.02	.80	HE
18	Reducing the risk of corruption and mismanagement.	2.95	.80	3.02	.83	3.00	.82	HE
19	Government policies can streamline financial transactions.	2.95	.84	3.05	.80	3.03	.81	HE
20	Reducing administrative burdens and improving the efficiency of school	2.99	.82	2.97	.81	2.98	.82	HE

	operations..							
21	E-payment systems can reduce the risk of cash handling	2.52	.85	2.51	.88	2.52	.87	HE
22	It improve the security of financial transactions in schools.	2.99	.83	3.04	.83	3.03	.83	HE
23	Government policies can promote the use of data analytics to inform decision-making in secondary schools.	2.97	.83	3.04	.83	3.02	.83	HE
24	It improves educational outcomes	2.50	.86	2.55	.88	2.52	.87	HE
25	Policies can facilitate partnerships between government and private sectors.	2.57	.86	2.58	.84	2.57	.85	HE
26	e-payment system adoption in secondary schools	2.51	.91	2.56	.92	2.51	.92	HE
27	Government initiatives can prioritize digital literacy training .	2.50	.86	2.55	.88	2.52	.87	HE
28	E-payment systems can reduce transaction costs associated with traditional payment methods, such as cash and checks.	2.57	.86	2.58	.84	2.57	.85	HE
Cluster Mean/SD		2.80	.84	2.84	.84	2.82	.84	HE

Table 2 shows the mean and standard deviation scores for male and female teachers' on influence of government policy on the implementation of e-payment in secondary schools. The overall mean scores for individual items range from 2.50 to 3.03, with most items indicating a "High Extent" (HE) of influence. The highest-rated areas include Policies can establish guidelines for secure, reliable, and efficient e-payment systems, reducing the risk of fraud and error (3.03), Effectively integrate e-payment systems into school operations (3.03), and e-payment systems, ensuring quality and effectiveness in secondary schools (3.03). Conversely, items like E-payment systems improve transparency and accountability in school financial management (2.51) and e-payment improve the security of financial transactions in schools. (2.52) received lower ratings but still fall within the "High Extent" category. The overall cluster mean of 2.82 with a standard deviation of 0.84 suggests that teachers generally responded to a high extent that government policy significantly determines digital technology in secondary schools. The standard deviation of 0.84 is minimal showing that the variations of the scores from the means are insignificant.

Discussions

The findings of the study revealed that government policies lead to investment in digital infrastructure. policies prioritize professional development for educators, policies facilitate access to digital resources, such as e-learning platforms, government initiatives can aim to reduce the digital divide by providing technology access to disadvantaged schools and students, government policies establish standards for digital technologies in education, ensuring quality and effectiveness, it allocate resources and funding for digital technology initiatives, it supports implementation and sustainability and it encouraging the development of new digital technologies and solutions. The finding aligns with the works of Alkraihi (2021) who opined that digital transformations frequently necessitate the provision of training, restructuring, and the establishment of novel functions within governmental entities.

The findings of the study revealed that influence of government policy on the implementation of e-payment in secondary schools. This indicates that policies can establish guidelines for secure, reliable, and efficient e-payment systems, reducing the risk of fraud and errors, effectively integrate e-payment systems into school operations, e-payment systems, ensuring quality and effectiveness in secondary schools, policies can facilitate partnerships between government and private sectors and E-payment systems can reduce transaction costs associated with traditional payment methods, such as cash and checks. The finding aligns with

the works of Faulkner (2019) who opined that digital technologies are centralizing in terms of people, businesses, and communities. The most striking examples of our growing reliance on digital technologies are the ways we travel around the city, communicate with friends, and do informational searches.

Conclusion

This study reveals that government policies variables significantly influence the use of digital technologies in Secondary Schools in Enugu State. Specifically, Teaching and learning and e-payment were found to be strong determinants of administrative success. The Enugu State government, under Governor Peter Mbah, has implemented various policies to drive digital transformation and economic growth. Key initiatives include; Digital Infrastructure Development: E-Governance: Enugu State has transitioned to an e-governance platform, enhancing transparency, efficiency, and inter-agency collaboration, digital literacy and smart Schools, partnerships. Government has collaborated with federal agencies, such as the Federal Ministry of Communications, Innovation and Digital Economy, to support digital transformation initiatives.

Recommendations

The following recommendations are made based on the research findings.

1. Government policy on the implementation of digital technologies should be advertised to teachers with continuous training to reduce anxiety and sentiment.
2. Government policy on the implementation of e-payment in secondary schools in should be made available for teachers and students in all the schools in Enugu State.

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