ANALYSIS OF THE DIGITALIZATION OF ADMINISTRATIVE PRACTICES IMPACT IN PUBLIC AND PRIVATE PRIMARY SCHOOLS IN RIVERS STATE

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Abstract

The research investigated analysis of the digitalization of administrative practices impact in public and private primary schools in Rivers State. The research work used descriptive survey design with a population of 80 primary school headteachers and a sample size of 80 headteachers derived by purposive random sampling technique. The study was guided by two research questions and two hypotheses. The instrument for data collection was a structured questionnaire by the researcher with 20 items measured on a modified 4-point scale. The instrument was validated by three experts. The reliability coefficient of the instrument 0.81 was calculated using Cronbach-Alpha. Data analysis was done using mean and standard deviation and hypotheses tested with z-test. Findings revealed low extent of digital equipment in public primary and otherwise in private primary schools and that the utility of digital tools was at low extent and high extent for both public and private primary schools in Rivers state. It was recommended that the government should do well to provide digital equipment for public primary schools, the headteachers should do well to asks teachers who are digitally literate to teach them to use available digital equipment to boost their capacity and stop available equipment from going bad, private primary schools' proprietors in the state that are wealthy should provide digital equipment for public primary schools as their contribution to the advancement of the state etc.

Keywords: *Digitalization, public and private primary school*

Introduction

Digitalization is a process where concrete information are developed into digital formats.Akor and Ochijenu (2022) defined digitalization as an act of transforming information needed for teaching and learning purpose to be in digital form, yet, maintaining its original state of accuracy and clarity as much as it is possible. While Gupta (2020) had defined digitalization as the presentation of physical objects in their digital mode so as to raise the level of its utilization, time of usage or any other feature but with the intention to make communication faster, easier and be less ambiguous. Thus, the idea of digitalization is a process of programming information or objects such that they attain digital level and form but raising their capacity for usefulness, value, time of utility and even accuracy. The newly assumed digital form or electronic format allows the learning materials or resources to be easily manipulated (Onyia. 2021). It develops in the learner cognitive resources, improve skills for lifelong learning competence as well as continuous education. Therefore, the idea behind digitalization is a process of converting analogue materials or resources to electronic mode. Hence,it increase its length of usage and accessibility to a wider group of people.

Some of the advantages of digitalization as highlighted by Ding (2000) are : that it leads to improvement in information sharing, enhance digitalized instruction, permit sorting and easy retrieval of materials etc. The information puts the act of digitalization at a very high echelon when it comes to information security and usage. This position of digitalization seem to be something that should be pursued with vigour considering the fact that primary school teaching and learning process and even the administrative documents are sometimes not found or that they have been destroyed by termite, climatic effects or any other

factor. Thus , the conception of the impact of digitalization of primary education system may be the best way for now on how to keep information regarding the process and practices of primary education safe.
In consideration of some of the goals of primary education which has it as that primary education should:

1. Develop in the child the ability to adapt to the child's changing environment
2. Give the child opportunities for developing manipulative skills that will enable the child function effectively in the society within the limits of the child's capacity
3. Provide the child with basic tools for further educational advancement, including preparation for trades and crafts of the locality (FRN, 2016).

The above goals are pointing to the direction of preservation of the educational process and practices that would enable the pupils relate with things freely in his environment and be able to pursue future dreams that would enable such person become a full and functional member of the society. It also conveys that primary school leavers should be able to interact with people from other places, manipulate gadgets without struggle, prepare for the future that is ahead of them. But the educational system in place should be able to accommodate these pupils' desire and meet their needs, yet, because the pupils find themselves in either public schools or private schools, it becomes imperative to determine the impact digitalization has on primary education practice in the state.

According to Obokoh (2023) though education in Nigeria is faced with several challenges and one of the most disturbing part among many things is the issue of quality education and this is said to be driven by the low level of financing it enjoys, thereby, leading to low school infrastructure and qualified teachers to teach and even high poverty level resulting from low skills potentials among school leavers which the goals of primary education was meant to deal with. To compound the issues of low funding is the problem of increased attack on schools and the abduction of learners and their facilities. This has left a lot of digital offices in schools closed but much more worrisome is the problem headteachers most of whom are digital illiterates that lock up and lock out pupils from accessing equipment that would have supported their learning, thus, making pupils miss out on the learning opportunities they would have got

Based on the information provided by Newland Elementary School (NES, 2023) that digital learning tools are being used in many schools in Nigeria and even the application of digital management system in order to resolve problems associated with education. Even NERDC have been said to launch innovative e-curriculum, therefore, teaching and learning being pursued can be made easy but the question still remains, What is the extent of impact the process of digitalization is having on the primary school system?

Digitalization of education is a very good thing considering the fact that it has some advantages like easy access or accessibilty of information by learners, easy sorting of information, liberal sharing of information, increase in the value of learnable materials, innovativeness and creativity associated to teaching of digital materials, reduction in space that accomomdate digital materials, yet, when the equipment and tools are provided someone needs to man them, manage them, guide the learners through it but much more challenging for the researcher is the issue of the extent of impact being received from the availability of such facilities in the school system. Though, there is a claim above that NERDC has developed e-curriculum but to what extent is it being used and what is its impact on the primary school education system faring? (NES, 2023). Particularly because one of the interventions of the previous governments in Rivers State who built modern and standard primary schools furnished with the needed digital equipment and most private primary schools in recent years are at the forefront of digitallization of the system too, hence, the need to determine the state of affairs through this study analysis of the impact of digitalization of administrative practices impact in public and private primary schools in Rivers State. Specifically, the study sought to achieve the following objectives:

1. Determine the extent of availability of digital equipment for administrative practices in public and private primary schools in Rivers State.
2. Determine the extent headteachers utilize digital equipment for administrative practices in public and private primary schools in Rivers State.

The following are the research questions that guided the study:

1. What is the extent of availability of digital equipment for administrative practices in public and private primary schools in Rivers State?
2. What is the extent headteachers utilize digital equipment for administrative practices in public and private primary schools in Rivers State?

The hypotheses below were postulated for the study (P=0.05)

1. There is no significant difference between the extent of digital equipment for administrative practices in public and private primary school in Rivers State.
2. There is no significant difference between the extent headteachers utilize digital equipment for administrative practices in public and private primary schools in Rivers State.

Research Methods

The study was carried out in public and private primary schools in Rivers State, particularly, in eighty (80) primary schools in Obio/Akpor. The study adopted descriptive survey design. The population for the study was made up of 80 headteachers from public and private primary schools in Obio/Akpor Local Government Area, Rivers State. The sample size for the study is made up of 80 headteachers of public and private primary schools in Obio/Akpor which was drawn using the purposive random sampling technique. The instrument used by the researcher for data collection was a questionnaire titled: Analysis of Digitalization of Administrative Practices Impact Public and Private Primary Schools in Rivers State Questionnaire (ADAPIPPPSRSQ) which was constructed by the researcher. It consists of 20 items which were arranged in two sections A and B. Section A contains the bio data, while section B consists of two subgroups on extent of availability of digital equipment and extent utility of digital tools. The questionnaire was built on a modified four-point Likert Scale, namely: Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) and the levels of responses are weighted as 4, 3, 2, 1 respectively. The instrument was face validated by three experts, two from Measurement and Evaluation Unit of the Department of Educational Foundations of Rivers State University, Nkpolu Port Harcourt, Rivers State and one from Educational Administration and Planning Department, Faculty of Education, University of Port Harcourt. The suggestions given were used in producing the final copy of the instrument. Cronbach Alpha was used in calculating the reliability to determine the coefficient value of 0.81 which was considered high. The instrument was administered and collected by the researcher. The data obtained were analyzed using mean and standard deviation for answering the research questions and z-test used for testing the hypotheses. Hence, 4+3+2+1= 10/4=2.5.Therefore, items whose mean were less than 2.5 were seen as low extent (LE) responses while those whose mean were 2.5 and above were seen as high level (HE) responses. The decision rule on the null hypotheses was to reject the hypothesis with calculated z-value greater than the critical z-value but otherwise accept.

Results

Research Question 1: What is the extent of availability of digital equipment for administrative practices in public and private primary schools in Rivers State?

Table 1: Mean and Standard Deviation of Extent of Availability of Digital Equipment for Administrative Practices in Public and Private Primary School in Rivers State

S/N	Items	Public Primary School			Private Primary School			
		Mean	SD	Remark	Mean	SD	Remark	N
1.	Availability of Canvas LMS	1.7	0.22	**LE**	3.5	0.17	HE	80
2	Availability of Google classroom	2.1	0.3	**LE**	3.5	0.17	**HE**	80
3	Availability of Slack	1.9	0.24	**LE**	3.4	0.18	**HE**	80
4	Availability of Springring	1.7	0.17	**LE**	3.7	0.17	**HE**	80
5	Availability of Tableau	1.4	0.17	**LE**	3.4	0.18	**HE**	80
6	Availability of Google analytics	2.5	0.17	**HE**	3.5	0.17	**HE**	80
7	Availability of Norton antivirus	3.2	0.22	**HE**	3.6	0.17	**HE**	80
8	Availability of Interative curriculum design	2.3	0.17	**LE**	3.5	0.17	**HE**	80
9	Availability of Last pass	1.4	0.17	**LE**	3.0	0.28	**HE**	80
	Grand Mean and Standard Deviation	**2.02**	**0.20**		**3.45**	**0.18**		

Source: Field Survey, 2024

The result on table 1 indicates that the availability of digital equipment in public primary schools in Rivers state is at low extent while those of private primary schools is at high extent. This is coming on the basis of the output of the study where the only things the public primary schools could boost of are the google analytics and norton antivirus with mean (2.5 and 3.2). The implication is that administrative practices may not be doing well as they should there while if the equipment are fully deployed in private primary schools, maximum output would be guaranteed.

Research Question 1: What is the extent headteachers utilize digital equipment for administrative practices in public and private primary schools in Rivers State?

Table 2: Mean and Standard Deviation of Extent of Utility of Digital Equipment by Head teachers for Administrative Practices in Public and Private Primary School in Rivers State

S/N	Items	Public Primary School			Private Primary School			
		Mean	SD	Remark	Mean	SD	Remark	N
1.	Headteacher utilize digital equipment as planning tool	1.6	0.17	**LE**	3.6	0.17	**HE**	80
2	Headteachers utilize digital equipment as departmental management tool	1.8	0.14	**LE**	3.8	0.14	**HE**	80
3	Headteachers utilize digital equipment as school structure management	3.3	0.17	**HE**	3.8	0.14	**HE**	80
4	Headteachers utilize digital equipment as user data management tool	3.4	0.18	**HE**	3.6	0.17	**HE**	80
5	Headteachers utilize digital equipment as students records management tool	1.6	0.17	**LE**	3.6	0.17	**HE**	80
6	Headteachers utilize digital equipment as timetable management tool	1.5	0.17	**LE**	3.7	0.17	**HE**	80
7	Headteachers utilize digital equipment as fees management tool	3.5	0.17	**HE**	3.8	0.14	**HE**	80
8	Headteachers utilize digital equipment as content sharing tool	1.7	0.17	**LE**	3.7	0.17	**HE**	80
9	Headteachers utilize digital equipment as complaint management tool	3.3	0.17	**HE**	3.8	0.14	**HE**	80
10.	Headteachers utilize digital equipment as students reports management tool	3.5	0.17	**HE**	3.6	0.17	**HE**	80
11	Headteachers utilize digital equipment as performance tracking tool	3.4	0.18	**HE**	3.8	0.14	**HE**	80
	Grand Mean and Standard Deviation	**2.6**	**0.16**		**3.70**	**0.15**		

Source: Field Survey, 2024

Table 2 results above showed some areas where the public primary school administrators utilize digital tools at high extent while in others, it was at low extent. Tools for planning, departmental management, students records, timetable planning and content sharing are among those at low extent but school structure management, user data management, school fees, students report and performance tracking are at high extent. This may not be unconnected with the perspective of areas of relevance of the tools to their work. However, the private primary school administrator perceive all the tools are of positive consequence to them, so they are all applied at full capacity, thus, allowing them to be at high extent with a grand mean and standard deviation (3.70 and 0.15).

Hypotheses

1. There is no significant difference between the extent of availability of digital equipment in public and private primary school in Rivers State.

Table 3: Z-test for Extent of Availability of Digital Equipment in Public and Private Primary Schools in Rivers State

Group	Mean	SD	N	df	$Z_{calculated}$	$Z_{critical}$	Decision
Public	**2.02**	**0.20**	**40**	**78**	**36.25**	**1.96**	**Accepted**
Private	**3.45**	**0.18**	**40**				

Source: Field data, 2024.

The result of table 3 shows that Z-calculated of 36.25 is lesser than the Z-critical 1.96 at 0.05 level of significance at 78 degree of freedom indicating that there is no significant difference in the extent there are digital equipment in public and private primary school in Rivers State. Therefore, the null hypothesis of no significant difference is rejected.

2. There is no significant difference between the extent headteachers utilize digital equipment in public and private primary schools in Rivers State.

Table 3: Z-test for Extent Headteachers Utilize Digital Equipment in Public and Private Primary Schools in Rivers State

Group	Mean	SD	N	df	$Z_{calculated}$	$Z_{critical}$	Decision
Public	**2.6**	**0.16**	**40**	**78**	**27.5**	**1.96**	**Accepted**
Private	**3.70**	**0.15**	**40**				

Source: Field data, 2024.

The result of table 4 shows that Z-calculated of 27.5 is greater than the Z-critical 1.96 at 0.05 level of significance at 78 degree of freedom indicating that there is significant difference in the extent headteachers utilize digital equipment in public and private primary school in Rivers State. Therefore, the null hypothesis of no significant difference is rejected.

Discussion of the Findings

The result of table 1 revealed that the digital equipment at public primary schools in Rivers State either needs upgrade or revitalization in terms of those that manage them in places where they are available. While that which is available at private primary school is commendable, and the reason it may have been this available is because of the competitive nature of private school business in the state. To affirm this, the hypothesis 1 result on table 3 showed that the private school have more equipment than the public schools. This was confirmed by the studies conducted by Kani and Ezeodo (2021) who found that most primary schools did not have available digital technologies and where they are available that they were rarely usable when they research on availability and usability of digital technologies. To further assert this, Asodike and Jaja (2012) had earlier confirmed based on their studies that public and private primary schools in Rivers State had poor digital facilities after they studied information and communication facilities availability but the current study has countered that on the part of private schools that seem to be pursuing higher achievement in acquisition of digital equipment that narrative has changed. Thus, the Rivers State government should pursue acquiring digital equipment for primary schools in the state.

Next, the result on table 2 indicated that the headteachers in public primary schools in Rivers State in their administrative practice feel less of impact of digital utility while the private primary schools utilize digital tools a lot and get the benefit perhaps therefrom. This is based on the result above which showed that issues like planning management, timetable management and students records receive less mean as in public primary schools as against what was obtained with the private primary schools where all the tools were taken advantage of. Perhaps, it helps the private primary schools to stay competitive while the public primary schools who have nothing to lose whether their pupils do stay or not are just relaxed in their poor administrative practices use of digital tools. Though, the hypothesis result on table 4 also showed that private primary schools utilize digital tools effectively. This is alluded to by the study done by Imhanyehor (2021)

who found that most primary school headteachers had no access to digital tools and where they have access, they are not proficient in the usage. But this is contrary based on the findings of this study when it comes to private primary schools in Rivers State even if it is true for the public primary schools in some quarters. Again, the government should do well to train the headteachers on how to maximize digital tools they may make available or are already available for administrative practices in public primary schools in Rivers State.

Conclusion

The conclusion to be drawn from the research based on the findings are that there is low extent of availability of digital equipment for use by headteachers in public primary schools while the reverse is the case with private primary schools. Also, the extent of utility of digital tools in public primary schools in Rivers State is low but it is at high extent in private primary schools. So, effort is required for the provision of more facilities and for training on how to use them by public primary school headteachers.

Recommendations

The following are the recommendations supporting the study based on the findings:

1. The government should do well to provide digital equipment for public primary schools in the state.
2. The headteachers should do well to ask teachers who are digitally literate to teach them to use available digital equipment to boost their capacity and stop the equipment from going bad.
3. Private primary schools proprietors in the state that are wealthy should provide public primary schools digital equipment as their contribution to the advancement of the state.
4. Regular training should be organized for headteachers of primary schools to keep them up to date with the changing digital world in order to avoid being left behind
5. Other education stakeholders should boost digital activities in public primary schools through the provision of facilities and training on the utility of such facilities.

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