



Impact of Educational Technology on the Management of Communication in Public Secondary Schools in Zaria Education Zone, Kaduna State

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ABSTRACT

The study examined the impact of educational technology on the management of communication in public secondary schools in Zaria Education Zone, Kaduna State. This objective was transcribed into research questions and hypothesis respectively. The study employed the use of survey research design. The target population of the study was made up of 1183 teachers, 46 principals and 12 education officials from Zaria Education Zone, Kaduna State. A sample size of 237 teachers, 9 principals and 2 education officials were sampled, making the total of 248 respondents used in the study. The instrument titled "Educational Technology and School Management Questionnaire (ETSMQ)" was used for data collection in the study. The instrument was pilot tested and reliability coefficient of 0.79 was obtained. The data collected in the study was analysed using descriptive statistics of frequency, mean and standard deviation to answer the research questions, while Kruskal-Wallis statistic was used to test the hypotheses at 0.05 level of significance. Findings revealed that educational technology enrich the effective management of communication in public secondary schools in Zaria Education Zone, Kaduna State. The study recommends among others that the Kaduna State government should ensure that technology is available in all schools in the state by collaborating with other stakeholders to ease the management of instructional work in secondary schools. The school managers should be provided with staff development in-service courses, especially, such as training in technology management programmes, technological communication and others.

INTRODUCTION

The success of a school as an educational and teaching institution is determined by its management. Over the last two decades, technological advancements have permanently transformed the educational landscape. Revolutionary breakthroughs in information and communication technology (ICT), particularly fields related to computers, mobile phones, and the internet have sparked a rebirth in educational technology (ed-tech). Educational technology had the potential to be a powerful force for change in today's educational system. Every

school ought to have the basic technology resources to operate effectively. The ideal is achieved when every school has sufficient classrooms, laboratories, teaching and management equipment, internet facilities, computers, multimedia libraries and others. This is essential as it can be regarded as a "dream" because most of the public secondary schools in Zaria Education Zone, Kaduna state are far from this dream.

Educational institutions world over have revolutionized the way they manage their data in which processing computer based

ARTICLE INFO

Article History
Received: February, 2022
Received in revised form: April, 2022
Accepted: May, 2022
Published online: June, 2022

KEYWORDS

Educational Technology, Communication, Management, Public Secondary Schools



information systems have been adopted as a tool to support managers in their management duties (Webber, in Merireng, 2013). Educational technology has been used in both developing county's major economic sectors such as transport. Webber in Merireng (2013) points out that despite the success registered in the use of educational technology in other sectors of economy, educational institutions have lagged in the integration of computers for schools management purpose

Harnessing the potentials of educational technology to enhance instruction makes it a value to teachers and students. In a research study by Morrow, Barnhart and Rooyackers (2002), the computer provides opportunities for cooperative learning as children work in pairs or small groups. Cooperative learning promotes academic achievement, social interaction, and positive attitudes in the class room (Morrow, Barnhart & Rooyackers, 2002). Educational technology is not only supportive but essential to instructional work in school (Warschauer, 2002). In other words, educational technology should be facilitated by the teacher to bring out the optimum setup of the class and, in effect, the students. This accomplished by the teacher but only if the technology, whether software package or hardware adaptation, is suitable.

Within an educational setting, effective communication serves as an integral contribution to the academic, social, and emotional success of managers. Although there are several mediums for communication between families and educational personnel, they often include the use of technology such as emails, or typical traditional methods such as notes sent home. Ultimately, families feel the need to be connected with their child's educational experience and often seek educators on how to best support students (Currie-Rubin & Smith, 2014). In order to facilitate the best educational experience for students, it is imperative to understand the different perspectives the various stakeholders have regarding communication patterns and methods that families are most comfortable communicating through.

Communication is an essential part of the daily lives of educational personnel, and

students across all grade levels. According to Nwogbaga, Nwankwo, and Onwa (2015), "communication refers to the process of exchanging information between or among individuals, groups, institutions, and/or organizations in oral, written, or signed forms through any available media" (p. 33). Through effective communication, which includes verbal and non-verbal communication methods, school managers have the potential to collaborate in order to meet a goal or complete a project efficiently (Sharma & Sharma, 2014).

Mugenda in Adamu (2017) averred that educational technology fosters the dissemination of information and knowledge by separating content from its physical location. This flow of information is largely impervious to geographic boundaries allowing remote communities to become integrated into global networks and making information, knowledge and culture accessible, in theory, to anyone. It is also mentioned that technology enhances day-to-day management of institutions. Technology is used in maintenance of student and staff communication and document management (OECS, 2001).

However, the transformations associated with ed-tech are occurring in a context of deep and persistent inequality. Despite expanding access to some technologies, the digital divide remains very real and very big. Even when disadvantaged school manager can physically access technology, they may lack the guidance needed for productive utilization; a "digital-use divide (Brotman, 2016)." Depending on design and implementation, education technologies could alleviate or aggravate existing inequalities. There is also growing need to evaluate benefits of educational technology and to create opportunities for capacity building that will ensure their beneficial use and absorption within schools. In light of the above background, this study therefore explored the impact of educational technology on the management of public secondary schools in Zaria Education Zone, Kaduna State.

There is no doubt that school managers suffer from the lack of management technological support. The researcher has realized that management responsibilities take



up the bulk of the time and insufficient time is left for the primary responsibility of the profession such as educative interaction with learners, due to the lack of technological support in a school. The lack of education technological support in a school means the shortage of modern material resources like computers, telephone, fax machine, internet, photocopier, and other items that support and facilitate school management. Principals in many schools have to fulfil numerous managerial functions which might be detrimental to their general managerial role.

An effective school is a school with the shared vision of educators, learners and parents, which provide a purpose and a sense of direction. In the research area, schools still provide regular statistical returns and reports to zonal offices through letter posts, couriers or by telephone conversation, the researcher is of the view that these methods are potentially slow, expensive and prone to errors. Integration of educational technology in school management is based on the assumption that technology is already an integrated part of school data processing at all levels (Kituyi & Adagun, 2007). This is not the case of schools in Zaria Education Zone as there is no effective and rapid access to information from schools giving rise to the notion that there are incentives and barriers at work hampering integration of technology in school management.

More so, access to technology is one of the key elements necessary for integrating technology into school management. In other words, due to unavailability of the technology for the management of instructional work, communication gadgets especially report exchange between schools, Zonal Education Authority, State Ministry of Education among others are done manually making production of information slow and prone to errors. Therefore, this calls for a study on the impact of educational technology on the management of communication public secondary schools in Zaria Education Zone, Kaduna State.

Objectives of the Study

The study was intended to:

1. Ascertain the impact of educational technology on the management of

communication in public secondary school in Zaria Education Zone, Kaduna State.

Research Questions

This research questions was answered in the study:

1. What impact does educational technology have on the management of communication in public secondary school in Zaria Education Zone, Kaduna State?

Research Hypothesis

This null hypotheses was tested at 0.05 level of significance:

H₀₁: There is no significant difference in the response mean of teachers, principals and ministry of education official (MoE) on the impact of educational technology on management of communication in public secondary school in Zaria Education Zone, Kaduna State.

METHODOLOGY

The study was conducted using survey research design. The target population of the study is made up of all public secondary school teachers, principals and education officials in Zaria Education Zone, Kaduna State. In all, there are one thousand one hundred and eighty three (1183) teachers, forty six (46) principals and twelve (12) education officials from Zaria Education Zone, Kaduna State (Ministry of Education, Science and Technology, Kaduna State, 2020). A sample size of two hundred and thirty seven (237) teachers, nine (9) principals and two (2) education officials were sampled from Zaria Education Zone, Kaduna State, making the total of two hundred and forty eight (248) respondents, used in the study. The study sample size represented 20% of the entire population and was drawn using random sampling technique. The instrument titled "Educational Technology and School Management Questionnaire (ETSMQ)" was used for data collection in the study. The instrument was pilot tested and reliability coefficient of 0.79 was obtained. The data collected in the study



was analysed using descriptive statistics of frequency, mean and standard deviation to answer the research questions, while Kruskal-Wallis statistic was used to test the hypotheses at 0.05 level of significance.

RESULT

Research Question: What is the impact of educational technology on the management of

communication in public secondary school in Zaria Education Zone, Kaduna State?

Opinions of teachers, principals and education officials were gathered in order to provide answer to this research question. The summary of analysis made in respect to the research question is presented in table 1.

Table 1: Impact of Educational Technology on the Management of Communication in Public Secondary School in Zaria Education Zone, Kaduna State

SN	Item	Respondents	SA	A	U	D	SD	Mean	SD	Remark
1.	The management of this school uses online method of communication than circular and bulletin.	Teachers	74	94	12	43	14	3.500	1.000	Positive
		Principals	3	2	-	-	4	3.711	1.244	
		Edu Officials	-	2	-	-	-	4.000	0.001	
2.	Through technology facilities, workshops are communicated in this school.	Teachers	1	106	30	23	77	3.777	0.971	Positive
		Principals	5	-	1	-	3	3.708	1.335	
		Edu Officials	2	-	-	-	-	4.611	0.122	
3.	Through technology facilities, job advertisements are being advertised online for PTA teachers.	Teachers	80	18	21	34	84	2.911	1.166	Negative
		Principals	4	-	-	3	2	2.658	1.272	
		Edu Officials	-	-	1	-	1	2.633	0.707	
4.	Through educational technology, Newsletters are posted on social media in this school.	Teachers	6	111	49	55	16	3.063	0.927	Positive
		Principals	5	-	-	3	1	3.651	1.026	
		Edu Officials	-	1	-	1	-	3.194	2.121	
5.	Through technology facilities, the management uses online advertisement for admission applications.	Teachers	48	61	2	114	12	2.988	0.928	Negative
		Principals	4	-	2	3	-	2.500	0.941	
		Edu Officials	-	1	-	1	-	2.550	2.121	
6.	Through technology facilities, academic calendar are released in this school.	Teachers	86	6	58	65	22	2.900	0.500	Positive
		Principals	4	1	2	-	2	2.953	1.054	
		Edu Officials	-	-	-	2	-	2.900	1.000	
7.	Through technology facilities, the school management communicates the outcome of staff meeting in this school.	Teachers	7	102	42	71	15	2.666	1.118	Positive
		Principals	-	1	1	3	4	2.888	1.049	
		Edu Officials	-	2	-	-	-	2.800	0.005	
8.	Through technology facilities, the management of this school releases admission online.	Teachers	45	19	21	54	98	2.778	0.333	Negative
		Principals	4	-	2	1	2	2.594	1.250	
		Edu Officials	-	-	-	1	1	2.666	0.707	



9.	Through technology facilities, seminars are communicated in this school.	Teachers	2	110	40	40	45	3.777	0.971	Positive
		Principals	4	1	4	-	-	3.932	1.194	
		Edu Officials	-	1	1	-	-	3.500	0.771	
10.	Typewriters are now being replaced by computer in the typing pool because they are being considered outdated.	Teachers	68	87	19	61	2	3.555	0.527	Positive
		Principals	5	-	2	-	2	3.500	1.169	
		Edu Officials	-	1	1	-	-	3.640	0.754	
Average Mean								3.21	0.94	

Table 1 revealed that educational technology had impact on the management of communication in public secondary school in Zaria Education Zone, Kaduna State. The table presents the average response mean of 3.21 which is higher than the rating mean of 3.0 and the standard deviation of 0.94. The table also revealed that 5 items out of the 10 items stated on the table were positive by attracting a response means higher than the rating mean of 3.0 while 5 items were negative which recorded a response mean less than the rating mean of 3.0. This result implies that, the school manager uses online method of communication than circular and bulletin.

Hypotheses Testing

Table 2: Summary of Kruskal-Wallis Test on the Impact of Educational Technology on Management of Communication in Public Secondary School in Zaria Education Zone, Kaduna State

Group	N	Mean Rank	Chi-square (χ^2)	df	α	P-value	Decision
Teachers	237	16.05					
Principals	9	44.91	29.321	2	0.05	0.002	Rejected
MOE	2	21.94					

Table 2 revealed that educational technology significantly impacted on the management of communication in public secondary school in Zaria Education Zone, Kaduna State. The table showed the group chi-square (χ^2) of 29.321 with p-value of 0.002 at 2 degrees of freedom. Since the p-value (0.002) was less than the alpha level (0.05), the hypothesis which says that there is no significant

This section presents the result of the hypotheses tested in this study using Kruskal-Wallis statistics at 0.05 level of significance.

Research Hypothesis: There is no significant difference in the response mean of teachers, principals and ministry of education official (MoE) on the impact of educational technology on management of communication in public secondary school in Zaria Education Zone, Kaduna State.

The response rate of teachers, principals and education officials were gathered and tested using Kruskal-Wallis statistics. The summary of the hypothesis tested in respect to hypothesis two is presented in table 2:

impact of educational technology on management of communication in public secondary school in Zaria Education Zone, Kaduna State was rejected.

MAJOR FINDING

This study found out that:

1. Educational technology enrich the effective management of



communication in public secondary schools in Zaria Education Zone, Kaduna State.

DISCUSSION OF FINDINGS

The findings of this study revealed that educational technology had impact on the management of communication in public secondary school in Zaria Education Zone, Kaduna State. This result implies that, the school manager uses online method of communication than circular and bulletin. Consequently, the hypothesis which says that there is no significant impact of educational technology on management of communication in public secondary school in Zaria Education Zone, Kaduna State was rejected. The outcome of this research concurred with the findings of Natale and Lubniewski (2018) which showed that educational managers are moving towards a more technology based form of communication, such as email, WhatsApp, among others rather than traditional methods such as a note sent home. The majority of responses acknowledged that email was the primary method of communication between educational managers and educators. The finding also identified the message most commonly discussed in communications between educators and students surrounded the topics of classroom updates and/or behaviour concerns. This finding also shared similarity with the findings of Adamu (2017) that technology has great impact on the smooth running of the schools and communication.

CONCLUSIONS

In conclusion, the concluded that based on the findings of the study educational technology had impact on the management of communication in public secondary school in Zaria Education Zone, Kaduna State.

RECOMMENDATIONS

In light of the findings of the study, it was recommended that;

1. The Kaduna State government should ensure that technology is available in all schools in the state by collaborating with other stakeholders to ease the

management of instructional work in secondary schools.

2. The school managers should be provided with staff development in-service courses, especially, such as training in technology management programmes, technological communication and others.

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