ASSESSMENT OF THE OBSTACLES TO THE USE OF ICT IN SECONDARYSCHOOLS IN THE IKA SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE

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Abstract

This research study assessed the obstacles to using ICT in secondary schools in the Ika South Local Government Area of Delta State. Three research questions and three hypotheses were formulated to guide the study. The study adopted a correlational survey design. A sample of 50 teachers was selected randomly from a population of 453 teachers in the local government area using random sampling of balloting. The instrument used was a questionnaire designed for teachers. Α reliability coefficient of 0.79 was obtained using the Cronbach alpha reliability test. The data

collected from the questionnaire were analyzed using Chi-square statistics at a 0.05 level of significance. The findings that lack of infrastructure, showed teachers' incompetence, and lack of technical support are significant factors in using ICT in secondary schools in the local government area. Based on the findings, it was recommended that the government *provide adequate infrastructure.* The government and philanthropic individuals should help subsidize the cost of ICT tools. *Teachers should be provided with adequate* training on using ICT tools and adequate technical support in the classroom.

Keywords: Obstacles in ICT use, Secondary Schools, ICT facilities

Introduction

Communication can be referred to as the process of receiving and transmitting ideas, information, and messages. Information and Communication Technology (ICT) denotes a collection of technical tools and resources used to communicate, generate, distribute, store, and manage data. Computers, the internet, broadcasting technologies (radio and television), and the telephone are all part of it. Traditionally, education consisted of a one-way flow of information from the instructor to the students. The most common educational strategy was whole-class instruction. Information has always played an important role in human affairs. However, due to societal progress and rapid advancements in science and technology, the importance of information and communication technology grew dramatically in the mid-twentieth century. The "information explosion" refers to the quick proliferation of a large amount of diverse information. Consequently, there is a need for a scientific approach to information and clarifying the concept's most important aspects.

Moving education ahead in the twenty-first century requires communication and information technologies (Pelgrum, 2001). The information and communication revolution is one scientific and technical advancement aspect that significantly impacts education. The rapid speed of technological progress has had a huge impact on people's lives, work, and play. The conventional teaching and learning process and how education is handled are challenged by new and developing technology. As a distinct field of study, information technology significantly influences curriculum implementation in teaching and learning. Access to a broad

diversity of data is made possible by easy global communication, which challenges absorption and assessment abilities (Pelgrum, 2001).

Rapid communication and expanded access to ICT at home, at business, and in schools may make learning a lifelong activity. It is an activity in which the learning process is constantly evaluated in light of the rapid rate of technological progress. It has been noticed that using ICT in education increases curriculum delivery and access to knowledge (Eberendu, 2014). It results in more diverse learning outcomes. It promotes critical thinking and provides many options for reaching educational objectives. E-learning, blended learning, mobile learning, remote learning, and online learning are examples of ICT in education.

Numerous governmental and non-governmental organizations have funded the implementation of ICT in Nigerian educational institutions at all levels, according to Ogunsola and Aboyade (2005). Strategic plans and projects are always in progress to revisit targets in the area of ICT. Nigeria will be ranked among the top computer users in the world. Unfortunately, this strategy has not been implemented since many secondary school graduates lack the basic computer skills necessary to overcome minor difficulties they may encounter (Eberendu, 2014). The lack of fundamental skills required to utilize computers fully and other ICT tools has been a major impediment to educational growth in Delta State. It was discovered that the ICT and computer education policy had not been fully implemented in all Nigerian public secondary schools due to impediments such as a lack of infrastructure, incompetent instructors, and technical assistance, among others. All efforts advocating and promoting ICT and computer literacy for all Nigerian secondary schools have been rendered ineffective due to the absence of full use and integration of ICT in Nigerian secondary schools (Eberendu, 2014). According to Ocharo, Irene, and Momanyi (2015), non-computer use in public secondary schools is due to a lack of teacher training in the use of computer technology, as well as inadequate computer facilities, software, electricity supply, and policy regarding the use of computers in teaching and learning. It has confined the practical use of computers and ICT to basic skill teaching and learning. These factors have a negative impact on efforts to integrate ICT into public secondary schools, particularly in Delta State (Osakwe, 2012).

Several issues obstruct the successful use of ICT in education. The national information and communications technology infrastructure is built on top of a country's educational technology infrastructure. Before launching any ICT-based initiative, legislators and planners must assess whether adequate rooms or buildings are available to house the equipment. In a school with several historic buildings, considerable retrofitting would be necessary to maintain correct electrical wiring, ventilation, safety, and security.

For teachers to effectively use ICT, numerous competencies must be built across the educational system. However, because ICTs are rapidly growing technologies, even the most ICT-savvy instructors must continually enhance their abilities and stay current with the newest advances and best practices. Over the years, research on the use of ICTs in various educational contexts has consistently identified the incapacity of instructors to comprehend why they should use ICTs and how they may use ICTs to assist them in teaching better as a barrier to success. Unfortunately, teacher apprehension about being replaced by technology or compromising their authority in the classroom as the learning process is becoming more learner-centred is a well-known roadblock to ICT adoption.

The absence of timely technical assistance has been one of the most significant barriers to improving computer use in high schools. Whether offered by in-school employees or external service providers, technical support experts are critical to the long-term success of ICT use in a school. While an institution's technical support needs will ultimately rely on the type and extent of technology implemented and employed, a few common abilities are necessary, such as network administration and security. Technical breakdowns may cost a lot of time and money without onsite technical help. In some severe circumstances involving schools in distant places, malfunctioning computers take months to fix since no technician is accessible in the nearby area. The computers must be transferred hundreds of kilometres away to the nearest metropolis (Tinio, 2002). Similarly, technicians in Delta State are not in the nation, posing a hazard in the event of a system failure. As a result, this research aims to determine how much infrastructure, teacher ineptitude, and a lack of technical assistance impede ICT adoption in secondary schools.

Hypotheses

The following hypotheses were framed and tested at a 0.05 level of significance.

- Ho₁: Lack of ICT infrastructure is not a significant factor in using ICT in Secondary Schools in the Ika South Local Government Area of Delta State.
- Ho₂: Teachers' incompetence is not a significant factor in ICT use in Secondary Schools in the Ika South Local Government Area of Delta State.
- Ho₃: There is no significant difference between ICT technical support and the use of ICT in secondary schools in the Ika South Local Government Area of Delta State.

Purpose of the Study

The study's goal is to analyze the barriers to ICT usage in secondary schools in Delta State's Ika South Local Government Area. The research examined how infrastructure, teacher competency, and technical assistance impact ICT usage in secondary schools.

Methodology

This study is a correlational survey design used to assess the obstacles to using ICT in secondary schools in the Ika South Local Government Area of Delta State. The population of this study consists of all twelve (12) secondary schools comprised of 453 teachers in the Ika South Local Government Area of Delta State. A sample of 50 teachers was selected randomly from a population of 453 teachers in the local government area using random sampling of balloting. The instrument used for data collection was a questionnaire titled: Assessment of the Obstacles to the use of ICT in Secondary Schools. The questionnaire was patterned after a Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The reliability of the instrument was tested using the Cronbach alpha reliability test. Its reliability coefficient was established to be 0.79. Scoring was based on the responses to the questionnaire. Those that responded to strongly Agree (SA) and Agree (A) were taken as a positive response to the variables being tested, while those that responded to Disagree (D) and Strongly Disagree (SD) were taken as negative responses to the variables been tested. Then all the SA and A were summed up as Agree (A). Likewise, all the responses from D and SD were summed up as Disagree (D). The researchers used Chi-Square statistics to test the hypotheses at a 0.05 level of significance.

Hypothesis 1

The lack of ICT infrastructure is not a significant factor in using ICT in Secondary Schools in the Ika South Local Government Area of Delta State.

Table 1

Chi-Square (χ^2) test of significance for responses to lack of ICT Infrastructure								
Lack of infrastructure	of	Agreed	disagreed	Ν	Df	χ^2 cal	χ^2 crit	Remark
Poor electricity		45	5	50				
Lack of compute laboratory	er	43	7	50 50	3	2.0422	0.3520	Significant
Lack of computer	S	42	8	50				
Lack of internet facilities	et	40	10					

From table 1 above, 45 respondents agreed that poor electricity is a significant factor in ICT use in the area of insufficient electricity. In contrast, 5 (10%) respondents disagreed in secondary schools in the Ika South Local Government Area of Delta State. On the lack of a computer laboratory, 43 (83%) respondents agreed that lack of computer laboratory 43 (86%) respondents agreed that lack of computers laboratory is a significant factor in the Use of ICT in Secondary Schools in Ika South Government Area Delta State. In comparison, 7 (14%) respondents disagreed. On the side of lack of computers, 42 (84%) respondents disagreed finally on the area of lack of internet facilities 40 (80% respondents agreed that lack of internet facilities is a significant factor while 10 (20%) respondents disagreed.

From the table above, the Chi-Square calculated value is 2.0422, greater than the critical value of 0.3520. Since the x^2 -calculated is greater than x^2 -critical, we reject the null hypothesis. Therefore, lack of infrastructure is a significant factor in using ICT in Secondary schools in the Ika South Local Government Area of Delta State.

Hypothesis 2

Teachers' incompetence is not a significant factor in ICT use in Secondary Schools in the Ika South Local Government Area of Delta State.

Table 2

Chi-Square (χ^2) test of significance for responses to teachers' competence

Teachers'	Agreed	Disagreed	Ν	df	χ^2 cal	χ ² crit	Remark
incompetence							
Skilled	29	21	50				
Semi-skilled	27	23	50	2	6.568	0.1030	Significant
Unskilled	31	19	50				

From table 2 above, 29 (58%) of the respondents agreed that teachers' lack of ICT skills is a significant factor militating against ICT use in secondary schools in the Ika South Local Government Area of Delta State. In comparison, 21 (42%) disagreed. 27 (54%) respondents

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agreed that some teachers are semi-skilled in ICT usage, while 23 (46%) disagreed. Also, 31 (62%) respondents agreed that some are unskilled, while 19(38%) disagreed.

From the above table 2, the Chi-Square calculated value of 6.568 is greater than the critical value of 0.1030. Since the x^2 -calculated is greater than x^2 -critical, we reject the null hypothesis. Therefore, teachers' incompetence is a significant factor in ICT use in Secondary schools in the Ika South Local Government Area of Delta State.

Hypothesis 3

Lack of technical support is not a significant factor in the Use of ICT in secondary schools in Ika South Local Government Area of Delta State

Table 3

Chi-Square (χ^2) test of Significance for responses to lack of technical support								
Technical support	Agreed	disagreed	Ν	Df	χ^2 cal	χ^2 crit	Remark	
Lack of technical	38	12	50	1	13.52	0.0039	Significant	

From table 3 above, 38 (76%) respondents agreed that lack of technical support is a significant factor in using ICT in Secondary schools in Ika South Local Government Area of Delta State. In comparison, 12(24%) of the respondents agreed.

From table 3, the Chi-Square calculated value of 13.52 is greater than the critical value of 0.0039. Since the x^2 -calculated is greater than x^2 -critical, we reject the null hypothesis. Therefore, lack of technical support is a significant factor in ICT use in Secondary Schools in the Ika South Local Government Area of Delta State.

Discussion of results

The findings on infrastructure as a barrier to ICT usage in secondary schools revealed a lack of infrastructure in using ICT in secondary schools in Delta State's Ika South Local Government Area. As a result, it is a significant barrier to ICT adoption. This result is in line with Tinto's (2002) study, which found that a country's educational technology infrastructure rests on top of the country's ICT in education. According to lloanusi and Osuagwu (2010), the Nigerian economy has been hobbled by the irregular power supply, one of the main infrastructures in terms of ICT. Without this, the great objective of transforming education through ICT will be a pipe dream.

Teachers' incompetence was discovered to be a key issue in using ICT in secondary schools in the Ika South Local Government Area of Delta State. According to the results, teachers' incompetence is a barrier to using ICT in secondary schools. As a result, teacher ineptitude is one of the primary roadblocks to adopting ICT in secondary schools in the Ika South Local Government Area of Delta State. According to Balanskat, Blamire, and Kefala (2006), many instructors still opt not to utilize ICT and media in classroom circumstances due to a lack of ICT skills rather than for pedagogical or didactic reasons. According to another study by Pelgrum (2001), teachers' lack of knowledge and ability in ICT use is a significant barrier in elementary and secondary schools. It may be one of the causes contributing to their reluctance to change.

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Furthermore, the lack of technical assistance as a barrier to ICT usage in secondary schools revealed that lack of technical support is a key issue in using ICT in secondary schools in Delta State's Ika South Local Government Area. It indicates that a lack of technical assistance impedes ICT adoption in secondary schools in the Ika South Local Government Area of Delta State. It supports research by Becta (2004), who found that if a school lacks technical support, it is more likely that technical maintenance will not be performed regularly, increasing the likelihood of technical failures. In the second research, Gomes (2005) stated that ICT integration in education requires a technician and that it might be a barrier if one is not accessible.

Conclusion

The major conclusion reached from the results is that lack of infrastructure, teachers' incompetence, and lack of technical support are significant factors in using ICT in secondary schools in the Ika South Local Government Area of Delta State.

Recommendations

The following suggestions were made based on the results of this investigation.

- The government should provide adequate infrastructures like electricity, telephone directories, and large rooms with burglary proofs to protect these technologies, which will enhance ICT use in secondary schools.
- In teachers' incompetence, they should be provided with adequate training on using ICT tools. There should be regular in-service training like seminars, workshops, and symposia.
- Technical support should be provided for teachers in the classrooms because their assistance may provide them with up-to-date equipment in the new world of technology in the teaching process.

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