

MOBILE TECHNOLOGIES FOR SERVICE DELIVERY AMONG SPECIAL NEEDS STUDENTS IN HIGHER INSTITUTIONS FOR GLOBAL COMPETITIVENESS IN CALABAR METROPOLIS, CROSS RIVER STATE, NIGERIA

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Abstract

The study examined the influence of managing mobile technologies for service delivery among special needs students in higher institutions for global competitiveness in Calabar Metropolis, Cross River State, Nigeria. Ex-post facto research design was adopted for the study. The population of the study consisted of 750 students with learning disabilities drawn from University of Calabar (435), Cross River University of Technology (209) special needs students and College of Health Technology (106) special needs students. The purposive random sampling technique was employed to select the three higher institutions in the study area. To select the respondents needed for the study, the stratified random sampling technique was adopted to select 40% of the population that is, three hundred (300) respondents from 100 to 400 levels in the three institutions. The respondents were made up of males and females who were willing to participate in the study. Questionnaire was the only instrument used for data collection. The questionnaire was tagged: Mobile Technologies For Service Delivery Among Special Needs Students Questionnaire (MTSDASNDQ). Data obtained for the study was analyzed using independent t-test statistical analysis. The result showed that, the use of computer, use of mobile phone and the management of jaws/ voice synthesizing significantly influenced service delivery among special needs students in the study area. Based on the result, it was recommended among others that, adequate attention should be paid to the provision and use of modern technology to promote effective teaching and learning.

Keywords: Management, mobile technologies, service delivery, special needs students, global competitiveness

Introduction

Teaching students with disabilities poses one of the greatest challenges to the classroom teacher, especially in the tertiary institution classrooms in Nigeria. This could be due to the fact that there is difficulty in distinguishing students who truly have learning disabilities from students who are failing for other reasons (Ahmed 2013). It is estimated that students with learning disabilities is fifty percent of the total number of persons with special educational needs. The heterogeneous nature of the condition of the classrooms makes it a greater challenge to the regular teachers in most tertiary institution classrooms in Nigeria (Ivan, 2010). According to Salami (2013), learning disabilities as a condition affect the brains' ability to receive process, analyze or store information. The condition can make it difficult for the learners to learn as quickly as possible like someone without the condition. Certain kinds of learning disabilities such as hyperactivity and attention disorders can cause students' mind to wonder too much.

For effective teaching or instructional delivery, the classroom instructor should be able not only manage the utilization of these mobile technologies by these group of students, but also tolerate the noise that is associated with usage. Being patient with them also be a skill that should be cultivated if proper lesson delivering is expected given their nature in an inclusive classroom environment. Students with disabilities are faced with the challenge of learning at the same pace with other students without learning difficulties. In order to overcome this challenge, the introduction and use of jaws and voice synthesizers by the students to enhance their learning effectiveness. Given the situation of the conventional classroom in Nigeria, the only way out for students with learning disabilities to cope with the teaching and learning experiences is through the use of these devices (Abah, 2010). Traditionally, in JAWS, users have created specific language voice profiles, along with task specific profiles such as profiles for proof reading, pleasure reading, and speed reading. The use of voice adjustment box to create a new or edit an existing voice profile is another means by which students with disabilities can be employed to enhance their learning competence and global competitiveness.

Salami (2013) noted that these situations may pose great challenge to the teacher in an inclusive classroom with a target of ensuring that every student learn at their pace. It has been observed therefore, that special needs students often do not try harder to pay closer attention to their teachers or improve motivation on their own; they need the help of their teachers to cope with their studies. However, assistance is also required when the students are to learn reading in other languages order than their mother tongues. Learning disabilities are in different forms; so many students have learning disabilities in spelling, some have in writing, others have in mathematics and calculation. The use of mobile technologies such as jaws and voice synthesizers may go a long way in assisting them in problem solving alongside their normal classmates in the same learning environment; some learners have behavioural problems such as lack of attention for a longer time (concentration to the teacher during teaching/learning processes), hyperactivity, or hypo-activity. Salami (2013) asserted that teachers in inclusive education should be acquainted with the fact that students with learning disabilities are suffering from perceptual disorders, which limits their ability to receive, sort, process, store and retrieve information of which those without learning disabilities do. The problem is seriously widening the gap between their potentials and their actual achievement. Except students with learning disabilities are well patiently thought, the problem will continue to affect them; with time, it may start affecting their lifestyles.

To ensure that students with learning special needs realize their potentials, reading/spelling should be made compulsory in primary and secondary schools in Nigeria and other developing countries. This is to maximize or increase the rate at which students with disabilities develops their reading and writing skills through the use of mobile handsets and other computer devices. The use of mobile handsets or phone and computer is to add value to the knowledge acquired in order to promote and enhance their global competitiveness (Donald, 2009). Learning disabilities can also be academic or developmental. Academic learning disabilities are those that are directly related to academic activities while developmental learning disabilities are those related to activities needed to perform academic tasks for example attention and memory. Students with learning disabilities encounter difficulties in their academic pursuits compared with other children in the same classroom setting who are not special needs students. They find it very difficult to cope with other colleagues in what takes place in the classroom.

Parents, friends and teachers of these types of children do complain of their poor performances in school subjects like Mathematics, English Language, Chemistry, and

Physics and so on. They are being given all sorts of names by their fellow students due to their inability to cope with the challenges in the conventional classroom setting. Their areas of difficulties could be in their ability to listen, speak, read, write and carry out mathematical calculations among others (Dafwat, 2013). One of the most common deficits among special needs students in higher institutions in Nigeria is their inability to read written or printed materials. Pierangelo and Giulian (2006) postulated that reading difficulties are observed among students with learning disabilities more than any other problem area of academic performance. Lemer and kline (2006) reported that most students with learning disabilities, at least 80% encounter difficulties in their ability to read, write and cope with all the activities that has to do with the classroom teaching and learning in higher institutions in Calabar Metropolis.

Dumbia (2013) conducted a study to examine the relationship between the use of jaws/ voice synthesizers and service delivery among special needs students in University of Togo. The study adopted the survey research design as the most suitable design. This implies that, there is a significant relationship between the use of jaws/ voice synthesizers and service delivery among special needs students in University of Togo. Based on the result obtained from data analysis and testing of hypothesis of the study, the researcher recommended that, students with learning disabilities should be tolerated in the conventional classroom environment while learning alongside their counterpart without such disabilities.

Special needs students have disability which either prevents or hinders the learners from making use of educational facilities of a kind generally provided for children of the same age in schools within the area of the local authority (Jha, 2002). According to Adebisi (2013), the concept of special needs students and identification of students with special educational needs have always been a thing of negligence as there is still a high proportion of ignorance and lack of legislation to pursue the implementation of inclusion, at least at pilot level. Mitller (2000) sees the identification of children with special educational needs as labelling and discriminatory. Meanwhile, students with special educational needs according to Obani (2004) are exceptional students who may be experiencing learning problems and difficulties as a result of difficulties or handicap or other forms of special needs. They however, require individually planned and systematically monitored arrangements of physical settings, special requirements and materials, special teaching procedures and the application of 21st century ICT infrastructures (use of computer, use of internet and use of mobile phone, etc), and other interventions in order to achieve their greatest possible independence, self sufficiency, academic success and self fulfillment. Education for persons with special educational needs Act 2004 of the Federal Republic of Nigeria defines students with special educational needs as a restriction in the capacity of the person to participate in and benefit from education on account of an enduring physical, sensory, mental health or learning disability or any other condition which results in a person or any other condition which results in a person learning differently from a person without that condition. Special educational needs as a term is related to terms like disability, impairment, handicap and special needs (Egunjobi, 2013).

Siyanbola and Osobisi (2013) categorized people with special needs as follows: Those enrolled in schools but are experiencing much difficulty, whether temporarily or permanently (including handicaps, disability, impairment and special needs), those living in severe poverty, those living in remote places far from any schooling facilities, those who are victims of war and armed conflicts, street children, criminals and ex-convicts, prostitutes and young single mothers who have dropped out of school, miscreants and

misguided youths on the streets, touting and hawking wares, and children of school age who lead adult disabled beggars around. All the above mentioned categories of persons with special educational needs require the support of well trained teachers and there is need for innovative strategies to handle and manage such people at schools.

Umoh (2015) carried out a study on the use of computer and service delivery among special needs students in tertiary institutions in the Niger Delta regions of Nigeria. The study adopted the survey research design to investigate the situation as it exists presently in the study area. The results revealed that, 757 (78.3%) of the respondents agreed that the use of computer promote effective service delivery among special needs students in higher institutions, 100 students which is equivalent to 10.3% said that the use of the conventional method of teaching with demonstration, explanation, assignment and use of textbook or handout in pedagogy delivery is the method they prefer while 110 which is equivalent to 11.4% said they were undecided on the method. Based on the result however, the researcher concluded that, the use of computer in teaching and learning promotes effective service delivery among special needs students in tertiary institutions in Niger Delta region, South- south, Nigeria.

Ibanga and Ebeiyamba (2016) asserted that the use of mobile phone in the promoting effective teaching and learning at the secondary and tertiary education levels in Nigeria is one of the significant achievements of the 21st century taking place outside the four walls of the classroom. The mobile phone provides the user the opportunity to access information via other applications like face book, instagram, tweeter, you tube, whatsapp, 2go among others. These applications give phone users the enablement to receive information and send information which are processed and used for personal and societal growth and development. Special needs students finds it difficult to cope with teaching and learning experiences in the conventional classroom situation given the nature and challenges facing the Nigeria educational system. However, the use of handset or mobile phone is very relevant in today's classroom situation because it provides students with learning disabilities the platform to access information on the lessons already taught or finds more information in their different disciplines to upgrade their knowledge.

Asukpa and Usetu (2014) conducted a study on the use of mobile phone and service delivery among students with disabilities in the Universities of Uyo, Akwa Ibom State, Nigeria. The Ex-post facto research design was adopted for the study. This implies that, there is a significant influence of mobile phone use on service delivery among students with disabilities in the Universities in Uyo, Akwa Ibom State, Nigeria. Based on the result obtained from the study, the researchers recommended among others that, the use of mobile phone and other applications such as face book, instagram, whatsapp and tweeter should be encouraged and used by teachers to enhance effective teaching and learning among special needs students in the study area and beyond.

Statement of the Problem

Improving and promoting special educational needs for students with learning disabilities in Nigerian schools is a very brilliant one, but it seems to only be brilliant on papers. However, the reality on ground is that it is almost impossible to attend to the special educational needs for students with learning disabilities in higher institutions in Calabar Metropolis in particular and Nigeria in general. This is because of the various challenges facing the classroom of students with learning disabilities and Nigeria educational system in general. Many efforts to improve learning in schools for students with learning disabilities have focused attention on current rather than long-range problems and needs

and have relied on readily available information that has often been inadequate in addressing this problem.

Government, non- governmental organizations, educationists and teachers have played significant role in the promotion of quality service delivery for students with special needs in tertiary institutions in the study area. Unfortunately, the kind of classroom in the higher education sector in Nigeria does not support effective teaching and learning of special needs students. The use of mobile information and communication technology (ICT) facilities such as computer and the use of mobile phone or handsets in the classroom for special needs students may engender effective pedagogy delivery. However, researchers perceived that, effective management of mobile technologies may not be associated with quality service delivery amongst special needs students in higher institutions in the study area.

It is against this back drop that this study was undertaken to examine the relationship between managing mobile technologies for service delivery among special needs students in higher institutions for global competitiveness in Calabar Metropolis, Cross Rivers State, Nigeria.

Purpose of the study

This study examined managing mobile technologies for service delivery among special needs students in higher institutions for global competitiveness. Specifically, the study sought to;

1. Assess the influence of management of jaws/voice synthesizer on service delivery among special needs students in higher institutions for global competitiveness
2. Examine the influence of the use of computer on service delivery among special needs students in higher institutions for global competitiveness
3. Assess the influence of the use of mobile phone service delivery among special needs students in higher institutions for global competitiveness

Research questions

The following research questions are posed to direct the study

1. To what extent does management of jaws/voice synthesizer influence service delivery among special needs students in higher institutions for global competitiveness?
2. To what extent does the use of computer influence service delivery among special needs students in higher institutions for global competitiveness?
3. How does the use of mobile phone influence on service delivery among special needs students in higher institutions for global competitiveness?

Statement of hypotheses

The following hypotheses are posed to guide the study;

1. Management of jaws/voice synthesizer does not significantly influence service delivery among special needs students in higher institutions for global competitiveness
2. Use of computer does not significantly influence service delivery among special needs students in higher institutions for global competitiveness
3. There is no significant influence of the use of mobile phone on service delivery among special needs students in higher institutions for global competitiveness

Design and Methodology

The study area is Calabar Metropolis, Cross River State, Nigeria. The Ex-post facto research design was adopted for the study. The researcher adopted the purposive sampling technique to select the three higher institutions; University of Calabar, Cross River University of Technology and College of Health Technology in the study area. The population of the study comprised of all the students with disabilities in the three institutions. In selecting the respondents used for the study, stratified random sampling technique was adopted to select students from 100 to 400 levels in the selected institutions. Each level represents strata upon which respondents were selected and used for the study. The researcher then selected 40% of the 750 students in the three institutions used for the study. A sample of 300 respondents (students with disabilities) who were willing to take part in the study was used. The respondents of the study comprised both males and females systematically stratified from the population.

The instrument used for data collection in the study was questionnaire. It was designed by the researcher and vetted by experts in test, measurement and evaluation. It was tagged: Mobile technologies for services delivery among special needs students' Questionnaire (MTSDASNDQ). It was divided into two parts. Part A contained items on respondents' data; while part B was designed to elicit information from the sub-variables of the study such as the use of computer and use of mobile phone for service delivery among special needs students in higher institutions for global competitiveness in Calabar Metropolis, Cross River State, Nigeria. The statistical analysis adopted for the study is independent t- test analysis. The analysis was done using Statistical Package for Social Science (SPSS) soft ware.

Presentation of Results

Hypothesis one state that Management of jaws/voice synthesizer does not significantly influence service delivery among special needs students in higher institutions for global competitiveness. The result of the analysis is presented in Table 1.

Table 1: Independent t-test analysis of the influence of management of jaws/voice synthesizer of the influence of service delivery among special needs students in higher institutions for global competitiveness (N= 300)

Variables	N	Mean	SD	t-value	df	Sig.
Adequate management of jaws/voice synthesizers	198	16.84	4.52	7.062*	298	.000
Inadequate management of jaws/voice synthesizers	102	12.62	3.13			

*significant at .05; df = 298; critical t-value 1.96

Result obtained from analysis and testing of hypothesis one revealed that, the null hypothesis was rejected while the alternate was accepted and retained. The result showed that, the calculated t-value 7.062 greater than $p < .05$. This implies that there is a significant influence of management of jaws /voice synthesizers on service delivery among special needs students in higher institutions in the study area.

Hypothesis two states that the use of computer does not significantly influence service delivery among special needs students in higher institutions. The result of the analysis is presented in Table 2.

Table 2: Independent t- test analysis of the influence the use of computer on service delivery among special needs students in higher institutions (N= 300)

Variables	N	Mean	SD	t-value	df	Sig.
Adequate use of computer	207	18.24	3.52	5.314	298	.021
Inadequate use of computer	93	12.36	2.13			

*significant at .05; df = 298; critical t-value 1.96

Result obtained from analysis of hypothesis two revealed that, the null hypothesis was rejected while the alternate was upheld. The result showed that the calculated t- value of 5.314 is greater than $p < .05$. This implies that the use of computer significantly influence service delivery among special needs students in higher institutions in the study area.

Hypothesis three states that there is no significant influence of the use of mobile phone on service delivery among special needs students in higher institutions. The result of the analysis is presented in Table 3.

Table 3: Independent t- test analysis of the influence the use of mobile phone on service delivery among special needs students in higher institutions (N= 300)

Variables	N	Mean	SD	t-value	df	Sig.
Adequate use of mobile phone	213	19.84	4.62	4.326*	298	.011
Inadequate use of mobile phone	87	14.08	1.54			

*significant at .05; df = 298; critical t-value 1.96

Result obtained from analysis and testing of hypothesis three revealed that, the null hypothesis was also rejected while the alternate hypothesis was accepted and upheld. The result further revealed that, the calculated t- value of 4.326 is higher $p < .05$. This implies that, there is a significant influence of the use of mobile phone on service delivery among special needs students in higher institutions in for global competitiveness in Calabar Metropolis, Cross River State, Nigeria.

Discussion of findings

Hypothesis one which was stated in a null form was rejected while the alternate hypothesis was accepted and upheld. This implies that the use of jaws/ voice synthesizers significantly influence on service delivery among special needs students in higher institutions for global competitiveness in Calabar Metropolis, Cross River State, Nigeria. This is in support of the findings of Dumbia (2013) who conducted a study to examine the relationship between the use of jaws/ voice synthesizers and service delivery among special needs students in University of Togo. The study adopted the survey research design as the most suitable design. This implies that, there is a significant relationship

between the use of jaws/ voice synthesizers and service delivery among special needs students in University of Togo. Based on the result obtained from data analysis and testing of hypothesis of the study, the researcher recommended that, students with learning disabilities should be tolerated in the conventional classroom environment while learning alongside their counterpart without such disabilities.

Hypothesis two which was stated in a null form was rejected while the alternate was accepted and upheld. This implies that the use of computer significantly influence service delivery among special needs students in higher institutions in the study area. This finding is in agreement with the findings of Umoh (2015) who carried out a study on the use of computer and service delivery among special needs students in tertiary institutions in the Niger Delta regions of Nigeria. The study adopted the survey research design to investigate the situation as it exists presently in the study area. The results revealed that, 757 (78.3%) of the respondents agreed that the use of computer promote effective service delivery among special needs students in higher institutions, 100 students which is equivalent to 10.3% said that the use of the conventional method of teaching with demonstration, explanation, assignment and use of textbook or handout in pedagogy delivery is the method they prefer while 110 which is equivalent to 11.4% said they were undecided on the method. Based on the result however, the researcher concluded that, the use of computer in teaching and learning promotes effective service delivery among special needs students in tertiary institutions in Niger Delta region, South- south, Nigeria.

Hypothesis three which also was stated in a null form was rejected while the alternate was upheld and retained. This result obtained from data analysis and testing of hypothesis revealed that, there is a significant influence of the use of mobile phone on service delivery among special needs students in higher institutions in the study area. This finding is in line with the findings of Asukpa and Usetu (2014) who conducted a study on the use of mobile phone and service delivery among students with disabilities in the Universities of Uyo, Akwa Ibom State, Nigeria. The Ex-post facto research design was adopted for the study. The University of Uyo, Akwa Ibom State University, Akwa Ibom State polytechnic and College of Education, Afaha Nsit was purposively selected for the study. Stratified random sampling technique was employed to enable the researchers select the respondents used for the study. To collect data for the study, a modified four point Likert scale rating questionnaire was designed, validated and tested for reliability before it was administer to respondents in the study area. The instrument was divided into two sections. Section 1 was designed to obtain information on respondents' personal data, while section 2 was designed using four point Likert scale rating of strongly agree, agree, disagree and strongly disagree. Data analysis was carried out using independent t-test statistical tool. Result of data analysis and testing of hypothesis showed that, the calculated t- value of 9.082 is greater than the critical t- value of 1.960 when tested at 0.05 level of significance with 664 degree of freedom. This implies that, there is a significant influence of mobile phone use on service delivery among students with disabilities in the Universities in Uyo, Akwa Ibom State, Nigeria. Based on the result obtained from the study, the researchers recommended among others that, the use of mobile phone and other applications such as face book, instagram, watsapp and tweeter should be encouraged and used by teachers to enhance effective teaching and learning among special needs students in the study area and beyond.

Conclusion

Based on the result of the finding of the study, the researcher concluded that, there is a significant influence of the use of computer and use of mobile phone on service delivery among special needs students in higher institutions for global competitiveness in Calabar Metropolis, Cross River State, Nigeria.

Recommendations

Based on the finding of the study and their implications for the future of educational process and the country as a whole, the following recommendations are made;

1. Adequate attention should be paid to the provision and use of modern day technology to promote effective teaching and learning among students with learning disabilities to make them relevant in the society.
2. The use of computer in service delivery among special needs students should be encouraged in order to make them global competitive.
3. The use of mobile phone and other applications that can enhance teaching and learning among students with disabilities should be encouraged to provide them with better learning option that would support effective learning at their pace.

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