

TEACHERS' PERCEPTION ON THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR INSTRUCTIONAL DELIVERY

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Abstract

Teachers' perception of the use of information and communication technology for instructional delivery may be negative or positive which can affect its actual use. The survey research design was adopted for this study to assess teachers' perception in Igarra, Akoko-Edo Local Government Area of Edo State. The target population for the study was all teachers made up of 57 males and 78 females. Since this number was manageable by the researchers, census sampling was used to arrive at the sample for the study. The instrument for data collection was researchers' designed, titled "Teachers' Perception of the Use of ICT Questionnaire TPUICTQ" and had two sections: 'A' was on demographic information and "B" contained the questionnaire items structured following 4-point Likert rating scale. Three each of ICT experts and teachers validated the instrument. Pilot test which involved 20 teachers was done outside Igarra. Cronbach Alpha was used to determine the reliability co-efficient which yielded 0.89 and 0.91. 135 copies of questionnaire were administered by the researchers and one assistant, 131 was retrieved out of which 129 representing 95.6% was used for the study. Frequency counts, percentages, mean score value set at 2.50 was used to analyse the data to answer the two research questions and t-test was employed to test the only hypothesis that guided the study. Findings revealed that teachers' perception was negative which affected the actual use of ICT for instructional delivery. It was recommended that the teachers should rescind on their perception and explore the use of ICT for instructional delivery.

Keywords: Information and Communication Technology, Teachers' Perception, Instructional Delivery

Introduction

Use of Information and Communication Technology (ICT) in the classroom which indicates ICT in instructional delivery has come of age with its inherent potentials in the classroom activities which has been widely discussed. The term ICT has been variously defined by several scholars in the field of education such as Mavellas, Wellington & Samuel (2016), ICT as information handling apparatuses, applications and facilities that are used to produce, store, process, distribute and exchange same. Similarly, ICT is said to be tools used for collecting, storing, processing and for the dissemination of information in various forms which includes classroom setting (Issa, Daramola, Aladelsusi & Udoh, 2017). The use of ICT in education is both for academic and non-academic activities. In line with the explanation given by Okojie, 2016, the use of ICT encompasses both academic and non-academic activities which involve the use of whiteboards, computers, internet, laptops, modem, flash memory, overhead projector and CD-ROM packaged software to mention but few.

The use of ICT in the process of instructional delivery is of great benefits to both the teachers and the learners. The benefits include improving instructional delivery and learning environment

(Onwuagboke, Singh & Fook, 2015). Both the teachers and learners will exact less stress in the process of instructional delivery and learning while the learners are likely to comprehend better. It is based on this that Matthew, Joro & Manasseh (2015) submitted that there was a need for ICT consideration as the main priority in Nigerian Secondary schools. Yunus, Nordin, Salehi, Sun & Embi (2013), stated that the use of ICT boosts cooperative learning, improves the process of instructional delivery and learning among others.

Several studies have been conducted on teachers' perception on the use of ICT for instructional delivery; Adomi and Kpangban (2010) reported from a study that teachers' perception about ICT use for teaching and learning was negative which led to the conclusion that teachers' perception was one of the factors confronting the adoption of ICT in Nigerian secondary schools. In similar studies, Al-Munawwarah (2014) found that teachers have positive perceptions towards the use of ICT in teaching and learning of subject like such as English. Sinbada, Mapenduka & Furusa (2016) in another study found that laptop was used for lesson preparation, interactive boards were used for delivering lessons and that teachers and students communicate through E-mails among others.

Teachers' perception of the use of ICT for teaching and learning; Cubukcuoglu (2013) reported that teachers had a negative perception towards ICT use and do not use it in teaching. Similarly, Agbo (2015) discovered from a study that teachers' perception affects negatively the use of ICT in teaching and learning in Nigeria. However, Kervin (2013) found that Australian teachers use ICT for lessons preparation and mobile technologies to communicate with their students. Likewise, the report of the study by Ejinkeonye and Usoroh (2016) revealed that Nigerian secondary school teachers seldom use ICT in their lesson delivery in Abia State, Nigeria.

Instructional delivery in the classroom which entails teachers passing information to the learners in a school setting. In time past, instructional delivery which connotes teaching by teachers to learners or students was mostly done with talk and chalk method only which is teacher-centred. Otemuyiwa and Attah, (2019) asserted that, globally, ICT has developed into a crucial component in educational methodology and curriculum delivery which span from lesson preparation to the actual instructional delivery and has been recognized as a very important tool for the development of quality teaching and learning.

On gender difference on teachers' perception of the use of ICT for instructional delivery, several studies have been carried out and reports show that Kehinde & Salami (2018) found no significant difference in the male and female students' perception. Similarly, Utoware & Agbonaye (2018), Ebele, Onokpaunu & Ikonmwan (2018) and Olyinka & Joshua (2018) in separate studies reported no significant differences. However, other researchers found that there were significant differences in the male and female students' perception on the use of ICT for teaching and learning, they include; Mahdi & Al-Dera, (2013), Teo (2014), Buabeng-Andoh (2015) and Usman, Orji & Sule (2018).

Statement of the Problem

The era when the delivery of instruction is carried by 'face to face' traditional mode also known as the use of 'talk and chalk' method of delivering instruction which encourages teacher-centred activities are becoming obsolete, the world over. It has also been noticed here in Nigeria that this type of teaching is becoming ineffective in meeting the educational demands of the learners in technology-driven generation (Onwuagboke, Singh, & Fook 2015). An era that Information and Communication Technology has permeated almost every facet of human endeavours with no exception to the field of education (instructional delivery inclusive). It has also been noticed that instructional delivery in some parts of the country (Igarra inclusive) still rely very much on the obsolete method of delivering instruction to learners. This study was therefore designed to seek senior secondary school teachers' perception of the use of ICT for instructional in Igarra.

Objective of the Study

The study was conducted to determine the senior secondary school teachers' perception of the use of ICT for instructional delivery in senior secondary schools in Igarra.

Research Questions

1. What perception do senior secondary school teachers have on the use of ICT for instructional delivery in senior secondary schools in Igarra?
2. Do senior secondary school teachers' perceptions on the use of ICT affect its actual use for instructional delivery in senior secondary schools in Igarra?

Hypothesis

There is no significant difference in the perceptions of male and female teachers on the use of ICT for instructional delivery.

Methodology

The study adopted a descriptive survey research design to assess the perception of senior secondary school teachers on the use of ICT for instructional delivery in senior secondary schools in Igarra, headquarters of Akoko-Edo Local Government Area of Edo State. The target population for the study was all the senior secondary school teachers in the three public senior secondary schools. The teachers comprised 57 males and 78 females. Census sampling was employed to determine the sample for the study which involved all the teachers in the three schools since the number was manageable by the researchers. The instrument for the study was designed by the researchers and titled "Teachers' Perception of the Use of ICT Questionnaire (TPUICQ)". The instrument had three sections: 'A' on demographic information of the respondents, 'B' contained the questionnaire items structured following 4-points Likert rating scale. The instrument was face validated by three ICT experts and three senior secondary school teachers. The instrument was pilot tested in two senior secondary schools which involved 20 teachers outside. Igarra Cronbach Alpha was used to determine the reliability co-efficient which yielded 0.89 and 0.91 respectively. The researchers and one assistant administered a total of 135 questionnaire instrument on the respondents which lasted for three days, 131 were retrieved while 129 representing 95.6% were found usable and was used for data collection. Frequency counts, percentage, mean set at 2.50 and the standard deviation was used to analyse the data collected to answer the two research questions and t-test was used for the analysis of the only hypothesis that guided the study.

Demographic information of the respondents

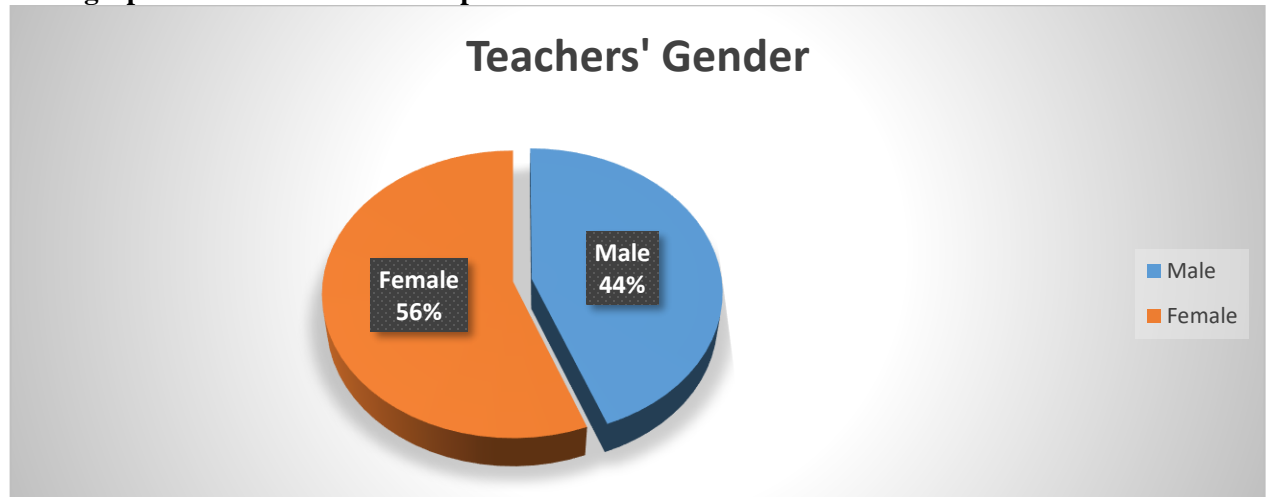


Figure 1 showed the frequency and percentages of male and female teachers. Teachers' gender as shown in figure 1 showed that 57 teachers were male which represents 44% and 72 teachers were female and represented 56%. that 44% (n=47) teachers were male and 56% (n=72) were female.

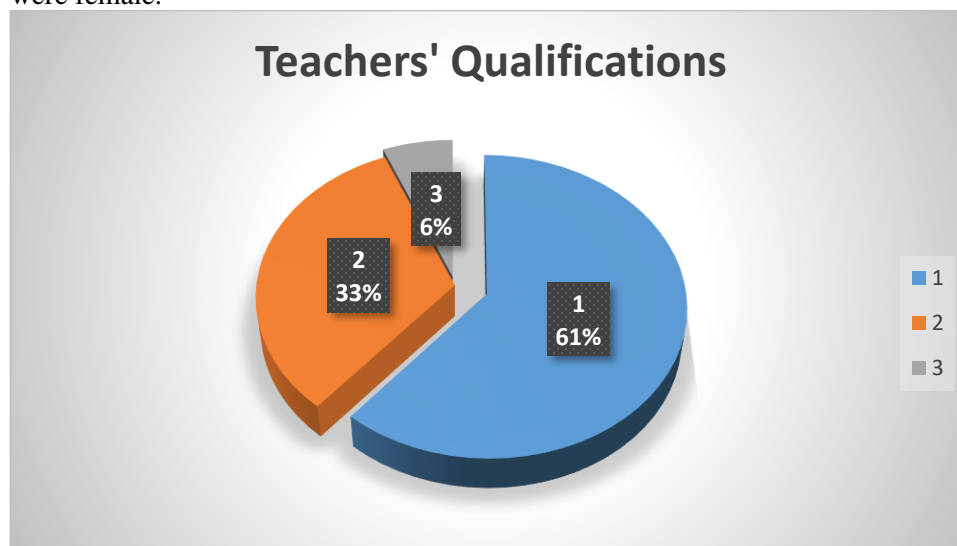


Figure 2 showed the frequency and percentages of respondents' qualifications: Teachers' qualifications as depicted in figure 2 showed that degree holders in Education were 79 representing 61%, Master degree holders in education were 42 which represented 33% and teachers with categories of qualifications were 8 and represented 6%.

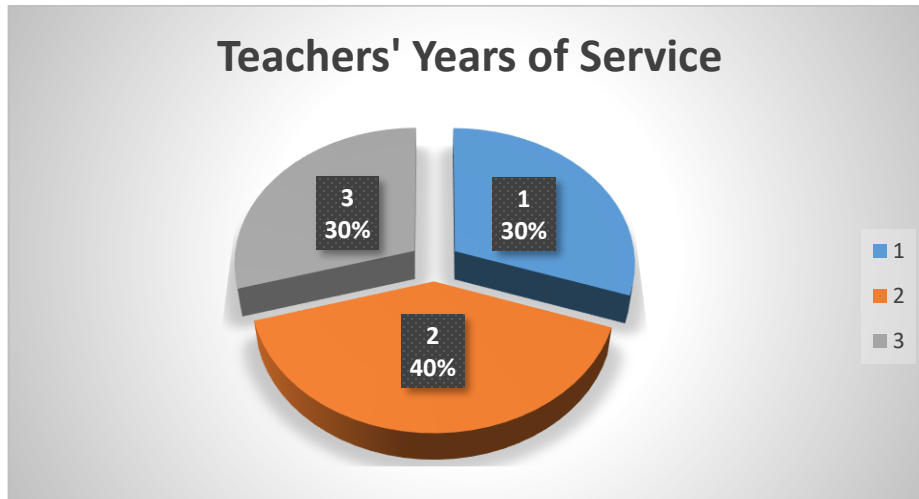


Figure 3 showed teachers’ years of teaching experience in frequency and percentages

Teachers’ years of teaching experience as depicted in figure 3 showed that 30% (n=39) had between 1 – 10 years working experience, 40% (n=51) had between 11 – 20 years working experience and 30% (n=39) had 21 years and above experience.

Results

Research Question 1: What perception do senior secondary school teachers hold on the use of ICT for instructional delivery in senior secondary schools in Igarra?

Table 1:

Senior secondary school teachers on the use of ICT for teaching and learning in senior secondary schools in Igarra

S/N	Items	Mean	StD.	Decision
The use of ICT in teaching:				
1	makes my teaching easy	2.51	0.82	Positive
2	enhances my lesson delivery	2.49	0.68	Negative
3	Promotes problem-solving	2.47	0.84	Negative
4	Foresters learning in collaboration	2.42	0.78	Negative
5	Increases innovation in learners	2.31	0.73	Negative
6	Promotes teaching and learning based on research	2.14	0.81	Negative
7	Raises quality in education	2.34	0.71	Negative
8	Enhances teachers’ delivery of curricula content	2.15	0.77	Negative
9	Facilitates teachers’ use of ICT in teaching and learning	2.10	0.73	Negative
10	Does not consumes time	2.90	0.91	Positive
11	Facilitates problem-based learning	2.44	0.69	Negative
12	Keeps teachers on current happenings	2.34	0.77	Negative
Cluster Mean		2.39	0.77	Negative

Table 1 showed that only two items regarding teachers’ perception on the use of ICTs for teaching and learning in senior secondary schools in Igarra were positive while ten items had their mean below mean score value of 2.50 signifying that the items were negative. Grand mean of 2.39 while the standard deviation of the items ranges between 0.68 and 0.91 which implies that respondents are not far from one another from the mean in their responses.

Research Question 2: Do senior secondary school teachers’ perceptions of the use of ICT affect its actual use for instructional delivery in senior secondary schools in Igarra?

Table 2:

Effect of senior secondary school teachers’ perception of the actual use of ICT for teaching and learning in senior secondary schools in Igarra

S/N	Items	Mean	StD	Decision
1.	Desktop computer and internet to search for materials for teaching	1.59	0.88	Disagreed
2.	Laptop and internet to search for materials	1.70	0.78	Disagreed
3.	Interactive board to direct learners’ attention	1.09	0.77	Disagreed
4.	Projector to direct learners’ attention	1.10	0.76	Disagreed
5.	ICT tools to motivate learners for collective learning	1.89	0.70	Disagreed
6.	ICT tools to motivate learners to solve problems	2.01	0.83	Disagreed
7.	E-reader in my lesson delivery	1.76	0.74	Disagreed
8.	Internet in the classroom for teaching and learning	1.07	0.76	Disagreed
9.	ICT alone to avoid being seen making errors	2.90	0.82	Agreed
10.	ICT confidently in teaching	1.89	0.80	Disagreed
11.	ICT in the classroom for demonstration	1.19	0.88	Disagreed
12.	ICT with learners in the classroom	1.03	0.79	Disagreed
Cluster Mean		1.60	0.79	Disagreed

Table 2 revealed that only item 21 had a mean value of 2.90, all other items had their mean scores between 1.03 and 2.01 with standard deviation ranging from 0.70 to 0.88 which showed that respondents were not far from one another their responses. The grand mean is 1.60 which implies that senior secondary school teachers’ perception affects the actual use of ICTs in teaching and learning in Igarra.

Research Hypothesis: There is no significant difference in the mean responses of male and female There is no significant difference in the perceptions of male and female teachers on the use of ICT for instructional delivery.

Table 3:

t-test Analysis of Male and Female Teachers’ Responses on their Perception of the use of ICT for teaching and learning in senior secondary schools in Igarra

Gender	N	Mean	StD	Df	t-cal	P-value (2-tailed)	Decision
Male	57	12.45	4.14	127	-1.45	0.15	Ho retained
Female	72	16.16	5.10				

Table 3 shows that $t(-1.45)$ at $df=127$ and $P\text{-value } .015$. Since $P\text{-value}$ is greater than 0.05, the implication is that the null hypothesis which stated that there is no significant difference in the mean responses of the male and female teacher on the perception of teachers on the use of ICTs for teaching and learning is retained. The implication is that there is no significant difference.

Discussion

The result of the data analysed in Table 1 showed that the senior secondary school teachers in Igarra have negative perceptions of the use of ICT for instructional delivery. This finding is in line with the report by Adomi and Kpangban (2010) that teachers' perception about ICT for teaching and learning was negative and concluded that it was one of the factors confronting its adoption in Nigerian secondary schools. However, the finding of this study disagrees with several other research reports; Al-Munawwarah (2014) that teachers have positive perceptions towards the use of ICT in teaching and learning of subjects such as English. Sinbada, Mapenduka & Furusa (2016) that teachers perceived the use of laptops for lesson preparation and the use of interactive boards for delivering lessons and that teachers and students communicate through E-mails among others to be positive.

The result in Table 2 revealed that ICT is not in use for instructional delivery in the senior secondary schools in Igarra. This finding is in agreement with the report of Cubukcuoglu (2013) that teachers had negative perceptions towards ICT use for teaching and learning, Similarly, Agbo (2015) discovered from a study carried out in Nigeria that teachers' attitudes and perceptions affect the use of ICT in teaching and learning. However, the finding of this study is not in alignment with the finding by Kervin (2013) from a study conducted in Australia, that Australian teachers use technology for lessons preparation and mobile technologies to communicate with their students during instructional delivery. Likewise, the report by Ejinkeonye, & Usoroh, (2016) that, Nigerian secondary school teachers seldom use ICT in their lesson delivery in Abia State, Nigeria.

Result of the analysis of the hypothesis in Table 3 showed that there was no statistically significant difference in the mean responses of male and female senior secondary school teachers on their perceptions on the use of ICT for instructional delivery in Igarra. This finding is in line with the reports by several researchers, such as Kehinde & Salami (2018), Utoware & Agbonaye (2018), Ebele, Onokpaunu & Ikononwan (2018) and Olyinka & Joshua (2018) from their various studies found no significant differences between the male and female students' perceptions. Conversely, the finding disagrees with several other reports such as Mahdi & Al-Dera, (2013), Teo (2014), Buabeng-Andoh (2015) and Usman, Orji & Sule (2018) that significant difference exists in the perceptions of male and female students on the use of ICT for teaching and learning.

Conclusion

Generally, the results showed that senior secondary school teachers in Igarra, Edo State, Nigeria, hold negative perceptions about the use of ICT for instructional delivery in the senior secondary schools. Their negative perceptions also hurt the actual use of ICT in schools. Furthermore, the study revealed that statistically, there was no significant difference in the male and female teachers' perceptions on the use of ICT for instructional delivery in the senior secondary schools in Igarra.

Recommendation

Based on the findings of this study, the following recommendation was put forward:

1. Senior secondary school teachers in Igarra should retract their negative perceptions on the use of ICT for instructional delivery.
2. Teachers should take steps in exploring the use of ICT for instructional delivery in senior secondary schools in Igarra so that they can tap into its inherent benefits and potentials.

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