



# Impacts of ICT-Based Instructional Materials on the Management of Students' Disruptive Behaviour in Public Schools in Rivers State, Nigeria

**Lios Nkechi Abraham<sup>i</sup>**

Department of Curriculum Studies and Educational Technology  
Faculty of Education  
University of Port Harcourt, Nigeria  
[lois.abraham@uniport.edu.ng](mailto:lois.abraham@uniport.edu.ng)

**Esther Kelechi Azubuike Fombo<sup>ii</sup>**

Department of Educational Management  
Faculty of Education  
University of Port Harcourt, Nigeria

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## Abstract

The study investigated impacts of ICT-based instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers State. One research question guided the study and one null hypothesis tested at 0.05 level of significance. The descriptive survey research design was adopted for the study. The population of the study comprised 7,619 teachers in the 258 senior secondary schools in Rivers State. The population included 3,926 male teachers and 3,693 female teachers. A sample of 724 respondents (teachers) was determined using Taro Yamane's Formula (363 male teachers and 361 female teachers). The face and content validities were assured. The reliability of the study was established using Cronbach alpha reliability coefficient, which yielded a reliability index of 0.96. Mean and standard deviation were used to answer the research question, while z-test was used to test the hypothesis at 0.05 alpha level of significance. The findings of the study revealed that equipping classrooms with ICT-based instructional materials, the use of ICT-based instructional materials promotes desirable real world of learning thereby making the lesson more interesting, ICT-based instructional materials quicken students' learning through confidence rather than cause disruption, and proper use of ICT-based instructional materials hold students' attention in the learning process. The study recommended among others that there is the need for government (proprietor) to equip classrooms with ICT-based instructional materials and teachers should be encouraged to train for ICT proficiency so as to meet global demands in the teaching and learning as influenced by globalization.

**Keywords:** Impact, ICT-Based, Instructional Materials, Management, Students, Disruptive, Behaviour, Public Schools, Rivers State, Nigeria.

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## INTRODUCTION

Instructional materials are very important resources needed in the classroom. If the curriculum must achieve its stated objectives, the preparation and production of appropriate instructional materials must be handled with utmost care. Instructional materials are selected to support the teaching and learning in the classroom. Instructional materials such as board, maps, audio-visuals, charts, posters, pictures, among others, are used regularly by teachers to achieve desired instructional goals and objectives. Inadequate instructional materials such as seats, lockers, shelves, boards often constitutes unnecessary distractions which frustrates the teachers' efforts at teaching, and students learning. If instructional materials are appropriate and in good condition it could help in addressing students' disruptive behaviours in the classroom, because the students will have hands-on materials for learning. Learning is a gradual and repeated process of presenting any learning concept to students in a way that appeal to student's varied interests and abilities, moving from the known to the unknown and encouraging active class participation. The teacher cannot be said to have achieved his instructional objectives until there is the desired change in the students' behaviour. The teacher is therefore expected to use instructional materials to make the students participate actively. Abdu-Raheem (2016) asserted instructional materials are essential and significant tools needed for teaching and learning of school subjects to promote teachers efficiency and improve students' performance. Isola (2010) saw instructional materials as objects or devices that assist teachers to present their lessons logically and sequentially to the learners. This means that they serve as a guide to the teaching and learning processes through the logical and sequential preparation and presentation of lessons.

ICT-based instructional materials are the tools used to enhance teaching and learning that are electronically powered. They are different from the age-long, traditional teaching aids like charts, globes, etc. They are instructional tools that unify wireless signals and computers, with the relevant software, storage devices, etc. ICT has come to stay in all spheres of human endeavour, including teaching and learning. This fact is corroborated by Watson (2001) who opined that ICT has revolutionalized work, including its transformation of teaching and learning. Ehinola and Olaleye (2014, p. 11) assert that "because ICTs provide both students and teachers with more opportunities in adopting learning and teaching to individual needs, society expects schools to aptly respond to this... innovation". ICT-based instructional materials have great edge over textbooks and other traditional instructional aids. For instance, Prasetiyo (2017) submits that "an effective teaching can be done easily using the ICT-interactive multimedia in learning and teaching process. It will provide the professional real world demand than... traditional textbooks" (p. 229).

Effiong and Igiri (2015) opined that instructional materials helps students to carry out their learning activities with a lot of interest to ensure positive behaviour in the classroom. According to Akpan and Okoli (2017), students taught with instructional materials exhibit positive behaviour lessons than those taught without instructional materials. This means that instructional materials promotes student's interest. Usually, quality is an inherent characteristic or attribute of a person or thing; something that forms part of the individual or an object that makes the individual or thing unique in such a way that the person or thing is different from others. In educational context, quality means the ability or the degree to which educational services and products could yield desirable outcomes (Nwafor & Nwogu, 2014). For effective teaching and learning to take place in a classroom, there is the need for the provision of appropriate, adequate and functional basic elements. Lack of basic elements of a classroom may lower motivation and creativity of teachers and students as well as disrupting learning and teaching process. ICT-based instructional materials have the quality of sustaining students' attention in the classroom.

Disruptive behaviour is resulting from a deficiency in the teachers' skills of classroom management. This could occur when the classroom is not adequately equipped with the necessary resources that facilitate teaching and learning. This behaviour interferes with school activities, especially, teaching and learning process in the classroom (Maddeh, Bennour & Souissi, 2015; Miami University, 2016). These behaviours waste instructional time, because teachers spent most of their instructional time correcting some of the irregularities that arise from such behaviours. It is against this background that the study seeks to investigate instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers State.

### **Statement of the Problem**

Instructional materials are designed to enrich the classroom activities and contribute directly or indirectly to effective teaching and learning. They are in the form of ICT, print materials and non-print materials. ICT-based instructional materials provide enriched positive learning environment which help teachers to communicate more effectively and the learner to assimilate more. Despite the importance of ICT-based instructional materials in facilitating learning process in the classroom, it seems that these materials are lacking in quantity and as such teaching becomes challenging, and unnecessary distractions are bound to occur which frustrate teachers' efforts at teaching and students' learning. This study therefore, seeks to investigate impacts of ICT-based instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers State.

### **METHODOLOGY**

The study adopted the descriptive survey research design. This design is therefore appropriate for this study because it seeks to describe the instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers State. The researcher examined the effect of the independent variable 'classroom quality' on the dependent variable 'students' disruptive behaviour' in public senior secondary schools in Rivers State. The population of the study comprised 7,619 teachers in the 258 senior secondary schools in Rivers State. The population includes 3,926 male teachers and 3,693 female teachers. A sample of 724 respondents (teachers) was determined using Taro Yamane's Formula (363 male teachers and 361 female teachers). A proportionate stratified random sampling technique was used to draw sample from three senatorial districts in Rivers State. The research instrument was a self-designed questionnaire titled "Appropriate Instructional Materials the Management of Students' Disruptive Behaviour Questionnaire (AIMSDBQ)". The questionnaire contains 5 items structured in a four (4) points rating scale of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1) and was used for data collection. The face and content validity of the instrument was ascertain by three experts, one from Measurement and Evaluation Department and two from Educational Management Department. The reliability of the instrument was tested with thirty (30) teachers in Rivers State which was outside the sampled schools. The reliability coefficient for the instrument yielded 0.89. This indicated that the instrument was reliable and therefore considered appropriate for the study. 530 copies of the questionnaire were administered by the researcher with the aid of two (2) research assistants who was trained by the researcher. The entire instrument distributed was retrieved for data analysis. Data collected from the field was analyzed using statistics of mean and standard deviation to answer the research questions. Four point measuring scale (modified Likert scale) was used to rate the responses of respondents. The z-test statistics was used to test the hypotheses at 0.05 level of significance.

The hypotheses of no significant difference was rejected for calculated value less than the table value, and accepted when calculated value is greater than the table value.

## RESULTS

**Research Question 1:** What are the impacts of ICT-based instructional materials on the management of students' classroom disruptive behaviour in public secondary schools in Rivers State?

Table 1: Mean ratings and standard deviation of male and female teachers on the impacts of ICT-based instructional materials on the management of students disruptive behaviour in public secondary schools in Rivers State

S/N	Impacts of appropriate instructional materials in the management of students disruptive behaviour	Male Teachers = 363				Female Teachers =361		
		$\bar{x}$	S.D	$\bar{x}$	S.D	Weighted mean	Rank Order	Remarks
1.	Equipping the classroom with ICT-based instructional materials contributes to students positive behaviour	3.11	0.86	3.11	0.86	3.10	1 <sup>st</sup>	Agreed
2.	The use of ICT-based instructional materials promotes desirable behaviour in students	3.10	0.69	3.10	0.69	3.06	2 <sup>nd</sup>	Agreed
3.	ICT-based instructional materials exposed students to the real world of learning thereby making the lesson more interesting	3.01	0.82	3.01	0.82	3.05	3 <sup>rd</sup>	Agreed
4.	ICT-based instructional materials quicken students' learning through confidence rather than cause disruption	3.07	0.75	3.07	0.75	3.05	3 <sup>rd</sup>	Agreed
5.	Proper use of ICT-based instructional materials holds students' attention in the learning process.	3.06	0.72	3.06	0.72	3.02	5 <sup>th</sup>	Agreed
	<b>Grand Mean</b>	<b>3.07</b>	<b>0.77</b>	<b>3.07</b>	<b>0.77</b>	<b>3.06</b>		<b>Agreed</b>

Source: Survey Data 2018

Legend:

$\bar{x}$  : Mean

SD : Standard Deviation

Scale

1.00-2.49: Disagreed

2.50-4.00: Agreed

Data in Table 1 show that mean ratings and standard deviation of male and female teachers on the impact of appropriate instructional materials on the management of students disruptive behaviour in public secondary school in Rivers State. Items 1-5 had mean scores above the criterion mean of 2.50 and were agreed as the impacts of ICT-based instructional materials on the management of students' disruptive behaviour. Also, the overall mean shows that equipping the classroom with ICT-based instructional materials contributes to students' positive behaviour was rated highest with weighted mean score of 3.06, while proper use of ICT-based instructional materials holds students' attention in the learning process was rated lowest on the impacts of appropriate instructional materials on the management of students' disruptive behaviour in public secondary school in Rivers State.

Therefore, grand mean scores of 3.07 and 3.07 for male and female teachers, show that teachers agreed that equipping classroom with ICT-based instructional materials contributes to students positive behaviour, the use of instructional materials promotes desirable real world of learning thereby making the lesson more interesting, ICT-based instructional materials quicken students learning through confidence rather than cause disruption, and proper use of ICT-based instructional materials holds students attention in the learning process.

### Test of Hypotheses

**Hypothesis One:** There is no significant difference between the mean ratings of male and female teachers on the impacts of ICT-based instructional materials on the management of students’ disruptive behaviour in public secondary school in Rivers State.

Table 2: Summary of z-test analysis of male and female teachers on the impacts of ICT-based instructional materials on the management of students’ disruptive behavior in public secondary school in Rivers State

Respondents	n	$\bar{x}$	SD	df	z-cal	z-crit.	Decision
Male Teachers	363	3.28	0.79	722	0.71	$\pm 1.96$	Not Significant
Female Teachers	361	3.33	0.82				

### Legends

N: Number of respondents

$\bar{x}$ : Mean

SD: Standard Deviation

z-cal: z- calculated value

df: Degree of freedom

z-crit: z-critical value

Data on Table 2 show summary of subjects mean, standard deviation and z-test of difference between the mean ratings of male and female teachers on the impacts of ICT-based instructional materials on the management of students’ disruptive behaviour in public secondary schools in Rivers state. The calculated z-value, used in testing the hypothesis stood at 0.36, while the z-critical value stood at  $\pm 1.96$  using 528 degree of freedom. At 0.05 level of significance and 528 freedom, the calculated z-test value of 0.36 is less than z-critical value of  $\pm 1.96$ , hence there is no significant difference between the responses of the male and female teachers on the impacts of ICT-based instructional materials on the management of students’ disruptive behaviour in public secondary schools in Rivers State. Based on the foregoing, the researchers accepted the null hypothesis and conformed that there is no significant difference between the mean ratings of male and female teachers on the impacts of ICT-based instructional materials on the management of students’ disruptive behaviour in public secondary schools in Rivers State.

## DISCUSSION

### Impacts of ICT-based Instructional Materials on the Management of Students’ Disruptive Behaviour

The finding of this study indicated that decorating classroom with appropriate instructional materials contributes to students positive behaviour, the use of instructional materials promotes desirable real world of learning thereby making the lesson more interesting, good

instructional materials quicken students learning through confident rather than disruption and proper uses of instructional materials holds students attention in the learning process. This is in line with Effiong and Igiri (2015) who opined that instructional materials help students to carry out their learning activities with a lot of interest to ensure positive behaviour in the classroom. Again, Akpan and Okoli (2017), asserted that students taught with appropriate instructional materials exhibit positive behaviour during lessons than those taught without instructional materials. More pointedly, the studies of Watson (2001), Ehinola and Olaleye (2014), and Prasetyo (2017) confirm that ICT-based instructional materials make teaching and learning more interesting, practical, motivate the students and actually have their attention glued to the lesson. These make disruptive behaviour to almost be totally absent in a class where ICT-based instructional materials are properly used in teaching. Therefore, ICT-based instructional materials when used in teaching and learning aid students understanding, retention and recall of what has been taught. However, they help in increasing students' learning experiences and subsequently model positive behaviour in the classroom. The only hypothesis tested shows that there is no significance difference between the mean ratings of male and female teachers on the impacts of ICT-based instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers state. This implies that both male and female teachers have similar opinion on the items raised on the impacts of ICT-based instructional materials on the management of students' disruptive behaviour in public secondary schools in Rivers State.

## **CONCLUSION**

The impacts of ICT-based instructional materials on the management of students' disruptive behaviour are that equipping classroom with ICT-based instructional materials contributes to students' positive behaviour, the use of ICT-based instructional materials promotes desirable real world of learning thereby making the lesson more interesting, ICT-based instructional materials quicken students' learning through confidence rather than cause disruption, and proper use of ICT-based instructional materials holds students attention in the learning process.

## **Recommendations**

Based on the findings and conclusion of the study, the following recommendations are made:

- There is the need for government (proprietor) to equip the classrooms with adequate ICT-based instructional materials.
- Teachers should be encouraged to train for ICT-proficiency so as to meet global demand influenced by globalization.
- School principals should motivate teachers to use ICT-based instructional materials in delivery lessons to students in the classroom (when available).

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<sup>i</sup> **Dr Lios Nkechi Abraham** is a Senior lecturer in the Department of Curriculum Studies and Educational Technology, Faculty of Education, University of Port Harcourt, Nigeria. She can be reached via email at [lois.abraham@uniport.edu.ng](mailto:lois.abraham@uniport.edu.ng)

<sup>ii</sup> **Esther Kelechi Azubuike Fombo** is of the Department of Educational Management, Faculty of Education, University of Port Harcourt, Nigeria.