



## **New technology tool (Resources) for instructional delivery in classrooms**

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### **Abstract**

This Study was carried out to investigate new technological resources for instructional delivery in the classroom. It was conducted at University of Port Harcourt, Rivers state. Three Research objectives, three research questions Guided the study. The Population of the study comprised all 400 level students in Department of Educational Foundation, Faculty of Education, University of Port Harcourt. The sample comprised 120 students for the study. Mean scores and standard deviation were the statistical tools used in the study. Simple random sampling technique was used for this study and the instrument used to collect data was a structured questionnaire titled New Technological Resources for Instructional Delivery in Classroom (NTRIDC) which consists of 30 questionnaire Items. The instrument was given to experts in the field of Measurement and evaluation. The study found that Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office are the technological tools teachers use for teaching them in their classrooms. Based on these findings, the study recommends that Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office should be integrated into all disciplines in tertiary institutions since technological tools improves students' knowledge, collaboration and also encourages individualized learning.

**Keywords:** technological resources, instructional delivery, classroom

### **Introduction**

Electronic learning is popularly known as e-learning is increasingly becoming accepted in schools all over the world, simply as a result of the opportunity provided by institutions and more students that are taking part in it Evarest and Laura, 2011 [3] and Organization of Economic Co-Operation and Development (OECD, 2011) [8]. E-Learning is the use of Information and Communication Technology (ICT), the various resources for ICT delivery includes computers, scanner, printer, Intranet, Internet, e-mail, videophone systems, teleconferencing devices, Wireless Application Protocols (WAP), radio and microwaves television and satellites, multimedia computer and multimedia projector, among others in Instructional delivery methods (Nwana, 2012) [12]. With e-learning, there is a shift from the traditional approach of teacher-directed didactic to modern methods where computer technology plays a significant role, thereby improving the quality, efficiency and effectiveness of teaching, learning and research purposes.

Technology resources are information, tools or devices that motivate students and give information or assistance with questions. In today's world, every teacher needs to use technology in the classroom. Technology in an educational aspect can be defined as any electronic equipment used to support or foster learning. Students are exposed to all sorts of technology in their everyday lives, so using technology in the classroom can be a way to reach out to students (Study.com, 2018) [10].

Any available technological equipment can be a useful support to the learning process. Some schools are able to have computers in each classroom or even laptops for each student.

Using computers can provide the opportunity to teach students how to identify reliable websites and relevant information. Tablets are a useful piece of technology in a classroom. They can provide internet access and can be used like laptops. Students can also download different educational mobile apps. These apps can be used as learning support for students with individualized education programs or even just with students who struggle with a certain topic. Tablets can promote active learning, which centres on students taking responsibility for their own learning, along with reaching students with different learning styles and skills (Study.com, 2018) [10].

The effective use of technology in education has changed the face of education and it has created more educational opportunities. Both teachers and students have benefited from various educational technologies, teachers have learned how to integrate technology into their classroom and students are getting more interested in learning with technology. The use of technology in education has removed educational boundaries, both students and teachers can collaborate in real time using advanced educational technologies (Ramey, 2013) [13].

Technology has helped in the growth of mobile learning and long distance learning. The use of internet technology has enabled teachers to reach students across borders and also students from developing countries have used technology to subscribe to advanced educational courses. Many Universities and colleges have embraced online education by creating virtual classrooms. Online education is flexible and affordable, students can attend classroom during their free time, and they can also have a chance to interact with others (Ramey, 2013) [13].

Recent development in educational technologies has yielded positive results in the educational sector. This new educational technology is supporting both teaching and learning processes, technology has digitized classrooms through digital learning tools like computers, iPads, smartphones, smart digital whiteboards. It has expanded course offerings, it has increased student's engagement and motivation towards learning.

For many people, the words educational materials invoke images of large print, classroom textbooks and with small type, outdated information, and content that covers the breath but not the depth of a subject. But learning resources are more than that. They are any tool that helps teachers teach and students learn. Learning resources include textbooks (print and digital), workbooks, teachers guide, worksheets, manipulatives, flashcards, posters, software DVDs, CDs, magazines and periodicals, educational games, maps, atlases, podcasts, webcasts etc. (Association of American Publishers, 2018) <sup>[2]</sup>.

Resources for formal learning must consider reading, language, developmental, and ability levels; include qualitative and quantitative assessment, and contain comprehensive teacher's guides. In addition, they must be accurate, evidence-based, objective-driven, and designed to engage today's students and teachers as well as aligned to state, district, and curriculum standards. Informal learning resources must still adhere to quality content and design standards as well as providing a meaningful education experience (Association of American Publishers, 2018) <sup>[2]</sup>.

Willie (2015) <sup>[14]</sup> opined that the following are the importance of technology;

1. Instructors can personalize the education experience: tools like websites, apps, learning games, e-books, and virtual tutoring help students learn at their own pace. Digital materials can support classroom learning topics, and introduce different teaching methods for each student's unique learning needs.
2. Instant access to knowledge: the internet gives students instant access to answers beyond what is in their textbooks. The gift of the internet to classrooms give teachers the chance to give students a holistic view of any given subject while still giving students the guidance to find the right sources. In the classroom, internet research gives teachers the opportunity to teach their students how to assess the quality of the information they find online while removing the one-sided restrictions of a textbook.
3. Student preference: computers, tablets, smartphones, and the internet are the same tools that students use at home. Students are already comfortable using these tools to connect with other students, their instructors, and their institution.
4. Trends towards blended learning environment: this offers several benefits, including a cost reduction for some schools. Blended learning programs often use e-textbooks to allow their students to have unlimited access to their learning material. The blended environment also supports online submission of electronic documents, cutting school costs on paper and other materials (Willie, 2015) <sup>[14]</sup>.

### **Statement of the Problem**

As the proliferation of technology in the classroom continue to

accelerate, schools that have not yet implemented some of the latest and greatest devices such as iPads, tablets, etc. in the

classroom are starting to really feel the pressure to. Mobile devices can make perfect learning tools and open up unlimited possibilities for educators and students alike, but it is not all daisies and roses. Sometimes the initial fluctuation with the shiny new technology turns into a love-hate relationship as problems and issues arise. Other challenges that may affect technological resources delivery in the classroom include; network overload, security breach, cheating, gaming, damaged devices overuse of social media. Therefore, this study investigates new technological resources for instructional delivery in the classroom.

### Aim of the Study

The aim of the study is to investigate new technological resources for instructional delivery in the classroom.

### Objectives of the study

1. To find out the new technological resources for Instructional delivery in the classroom
2. To examine the preferred Technological Resources used for delivering Instruction
3. To find out the benefits of using these technological resources in delivering Instruction.

### Research Question

1. What are the new technological resources for Instructional delivery in the classroom?
2. What are the preferred technological resources used in delivering Instruction?
3. What are the benefits of using these technological resources in delivering Instruction?

### Methodology

The study is a descriptive survey research designed to investigate new technological resources for instructional delivery in the classroom. The population of the study comprised all 400 level students from the department of educational foundations, University of Port Harcourt. A sample of 120 students was used for the study. Simple random sampling techniques were used for the study. The instrument used to collect data from respondents was a structured questionnaire entitled New Technological Resources for Instructional Delivery in Classroom (NTRIDC) with 30 items. To ensure validity, the instrument designed by the researcher was given to experts in the field of measurement and evaluation. This was done to help the researcher assess the quality of each item in the context of clarity, ambiguity and generality of the items. Their various comments and assessment gave the researcher the conviction that the instrument is appropriate and valid for the research. To determine the reliability of the instrument, test-re-test was applied; 20 copies of the instrument were administered on some students on two different occasions within three weeks. Their responses to the questionnaire item in the two separate

responses were correlated to attain the reliability coefficient of 0.84. The responses from the questionnaire in section B were weighted on the four-point Likert type scale: Strongly agreed, agreed, disagreed, and strongly disagreed. Data obtained were analyzed using Mean and Standard Deviation.

### Data Presentation

**Table 1:** What are the new technological resources for Instructional delivery in your classroom?

S/N	Items	Mean	Standard Deviation
1.	Interactive Whiteboards	3.43	0.49
2.	Digital Cameras	3.16	0.54
3.	Scanners	1.16	0.36
4.	Blackboards	1.21	0.40
5.	Wikis	1.30	0.46
6.	Facebook	3.29	0.59
7.	Twitters	1.61	0.66
8.	YouTube	3.17	0.65
9.	Skype	3.36	0.52
10.	Microsoft Office	3.24	0.42
	Average Mean	2.49	0.50

The table revealed that students accepted Interactive Whiteboards (Mean= 3.43; SD= 0.49), Digital Cameras (Mean= 3.16; SD= 0.54), Facebook (Mean= 3.29; SD= 0.59), YouTube (Mean= 3.17; SD= 0.65), Skype (Mean= 3.36; SD= 0.52), Microsoft Office (Mean= 3.24; SD= 0.42). Therefore, the table revealed that Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office are the technological tools used for teaching them in their classrooms. This may be because the outlined technological tools or resources was taught by their teacher and they were all used in Computer in Education classroom.

**Table 2:** What are the preferred technological resources used in delivering Instruction?

S/N	Items	Mean	Standard Deviation
1.	Interactive Whiteboards	3.42	0.53
2.	Digital Cameras	3.31	0.61
3.	Scanners	1.20	0.40
4.	Blackboards	1.18	0.38
5.	Wikis	1.13	0.33
6.	Facebook	3.44	0.49
7.	Twitters	1.52	0.54
8.	YouTube	2.97	0.61
9.	Skype	3.06	0.56
10.	Microsoft Office	2.96	0.61
	Average Mean	2.41	0.50

The table revealed that students preferred Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office because the tools improved their engagement and learning in the classroom.

**Table 3:** What are the benefits of using these technological resources in delivering Instruction?

S/N	Items Benefits of using technological resources	Mean	Standard Deviation
1.	Technology can help develop many practical skills	3.14	0.58
2.	It helps students maintain proper online etiquette and writing emails	3.10	0.54

3.	It improves engagement	3.21	0.57
4.	Technology tools and resources can improve knowledge retention	3.17	0.58
5.	It encourages individual learning	3.28	0.63
6.	It also encourages collaboration	3.25	0.57
7.	Students can learn useful skills through technology	3.21	0.59
8.	Technological tools and resources promote student preference	3.12	0.68
9.	It improves student workplace readiness	3.00	0.65
10	Website creation and access are cost effective	3.52	0.50
	Average Mean	3.20	0.58

The table revealed that students accepted all the item as their usage of technological resources for learning in the classroom. This is because all the item mean was above the criterion mean of 2.50. Therefore, the table revealed that technology tools and resources improves knowledge and collaboration and also encourages individualized learning.

### Discussion of Findings

#### Research Question 1: What are the new technological resources for Instructional delivery in the classroom?

The study found that Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office are the technological tools teachers use for teaching them in their classrooms. The result of the study is in agreement with those of Katie, Lacey, Quinton, Jessica & Marcus (2012) <sup>[5]</sup>, who found that incorporating technology on a higher level in their classrooms would make them more engaged and excited to learn.

Sam (2014) <sup>[9]</sup> whose study is not in agreement with that of the present study, the study found that students are highly distracted by the use of ICT devices for non-academic use during lectures by themselves and by their peers.

#### Research Question 2: What are the preferred technological resources used in delivering Instruction?

The study found that students preferred Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office because the tools improved their engagement and learning in the classroom.

The result of the present study is in agreement with those of Antony & Nina (2016) <sup>[1]</sup> who found that a majority of students use their iPads often or very often and 60 percent had never used voice reader during the semester. Therefore, they agreed that digital technology made their class more interesting and enhanced their learning.

Lan, Eric, YuChun & Rhonda (2015) <sup>[6s]</sup>, whose study is not in agreement with the present study, they found that digital native student teachers' perceived level of risk-taking was not related to their use of technology in the classroom. Therefore, student teachers have not necessarily become more comfortable keeping pace with the fast rate of change in technology.

#### Research Question 3: What are the benefits of using these technological resources in delivering Instruction?

The study found that technology tools and resources improves knowledge and collaboration and also encourages individualized learning. The result of the present study is in agreement with those of Lazar (2015) <sup>[7]</sup> who found that the new generation of kids come ready to work with new technologies, which plays an important role in children's

learning and acquiring various cognitive knowledge so that educational technology must be incorporated into future curricula.

Fouzieh, Abbas and Sedigheh (2013) <sup>[4]</sup> whose study is not in agreement with the present study opined that Just adding a technology tool to a traditional teaching approach does not produce more effective instruction and make the process harder and more complex without providing many benefits.

### Conclusion

The following conclusions were made by the researchers:

1. The study found that Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office are the technological tools teachers use for teaching them in their classrooms.
2. The study found that students preferred Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office because the tools improved their engagement and learning in the classroom.
3. The study found that technology tools and resources improves knowledge and collaboration and also encourages individualized learning.

### Recommendation

Based on the conclusion, the researchers recommend that:

1. Interactive Whiteboards, Digital Cameras, Facebook, YouTube, Skype and Microsoft Office should be well integrated into all disciplines in tertiary institutions since technological tools improve students' knowledge, collaboration and also encourages individualized learning.

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