

# MATHEMATICS TEACHERS' READINESS TOWARDS UTILIZATION OF MULTICHOICE RESOURCE CENTRE FOR TEACHING IN OGUN STATE

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## Abstract

*Multi-choice Resource Centre is targeted at improving the teaching and learning processes by equipping schools with audio-visual educational equipment through which the Multi-Choice Education Bouquet can be accessed. The major problem faced by most students is inability to remember what they have learnt. This problem is often caused by too much theoretical expressions or formulae by the mathematics teachers while learners remain passive listeners. The use of technology will help reduce failure in Mathematics, but the readiness and usefulness of the technological tools made available at the Multi-Choice Resource Centre will go a long way to sustain the success rate of students in Mathematics. The study is a descriptive study of the cross-sectional survey type. Mathematics teachers from 20 schools provided with the multi-choice resource centre in Ogun State. Purposive sampling technique was used to select 35 Mathematics teachers from the schools in Ogun state that have access to the Multi-choice resource centre. The study found out that out of all the technological resources provided in the schools for teaching Mathematics, 12 major ones were available in schools. The study recommended that training should be organized for teachers to encourage and motivate them to use the technological tools since they perceived it useful.*

**Keywords: Readiness, Resource Centre, Multi choice, Mathematics**

## Introduction

Innovations in educational resource centres come along with Information Technology (IT). The use of IT is on the rise in teaching and learning processes in Nigeria. Some of the technologies which serve as instructional media have specific characteristics, such as openness, real-life connection, focus and come with the promise of radically transforming teaching and learning in education to a new dawn (Johnson, 2012). According to Boris, Michael, Leigh and Peter (2011), modern technology offers significant potential for enhancing the learning and teaching of subjects like mathematics which are sometimes abstract in nature at all levels. IT can be an effective tool in supporting teaching and learning in Nigeria.

Information Technology tools such as computer is an innovation which can bring about drastic changes in our educational system which serves as the basic determinant of teaching and learning. Yusuf

et. al (2012) noted that 2004 was not the first attempt the Nigerian government made to introduce computer education in schools, but it started in 1988 when the Nigerian government enacted a policy on computer education. The plan was to establish pilot schools and diffuse computer education innovation first to all secondary schools, and then to primary schools but the project did not really take off beyond the distribution and installation of personal computers, but the Multi-Choice Resource Centre surfaced to build on the programme.

The Multi-Choice Resource Centre is targeted at improving the teaching and learning processes by equipping schools with audio-visual educational equipment through which the Multi-Choice Education Bouquet can be accessed by the schools. Having realised the potentials of IT and its tools in enhancing teaching and learning in this digital era, Multi-Choice Nigeria, in partnership with School Net Nigeria, has developed a dedicated Education Bouquet to equip schools under a special initiative (Premium Times Nigeria, 2015). Under the digital satellite platform, schools have free access to the DSTV education bouquet, comprising six premium channels: National Geographic, Discovery Channel, History Channel, Animal Planet, BBC world and Mindset Learn. It would afford teachers and students the opportunity to have access to world class education, direct from their classrooms thereby bridging the digital divide between Nigeria and other developed countries (Premium Times Nigeria, 2015). One of the channels also teaches Mathematics which is a core subject in Nigerian schools

Mathematics as a subject can be seen in all facets of life and in day-to-day occupations such as internet technology, banking, construction, medicine, scientific discoveries and even in our planning of daily activities and many others. One of the reasons for the review of the (National Policy on Education, 1998) was to expand the National Mathematical Centre (NMC) whose role is to enhance Mathematics teaching and learning through research (FRN, 2013). In the National Policy on Education, Mathematics is one of the compulsory subjects in the basic education curriculum. Mathematics has continued to play significant role in Nigeria's national development. It is believed that among other things that there is no other subject that has greater application than Mathematics (Odogwu, 2002). Fields of knowledge are dependent on Mathematics for solving problem, stating theories and predicting outcome through mathematical theories (Odili, 2006). There is hardly any aspect of human lives that is not affected by Mathematics (Keith, 2000). Mathematics is the science of space and numbers, the study of space is called Geometry; the study of numbers is called Arithmetic, while the hybrid of geometry and Arithmetic is called Algebra. Mathematics therefore, can be said to be the bedrock of technology. For proper understanding of Science, Mathematics play a leading role, hence referred to as the queen of all sciences (Odili, 2006).

### **Statement of the Problem**

In spite of the importance attached to Mathematics as a core subject in Nigerian schools today and its application in everyday life, there has been consistent poor performance at all levels starting from the primary school level (Akinoso, 2015, Gambari & Adegbenro, 2008; WAEC May/June & Nov/Dec. 2007-2011). The phobia for Mathematics starts from the primary school education which is also known as the Lower Basic Education. The West African Examinations Council (WAEC, 2009, 2010, & 2011) Chief Examiners reports highlighted areas of students' weaknesses to include (i) inability to carry out simplifications of surds and indices, (ii) applications of laws of logarithm, (iii) inability in choosing appropriate scales in plotting graphs (iv) poor knowledge on the rubrics of construction, and (v) confusion on plane and solid shapes. Despite the importance attached to Mathematics and its crucial role in technology, student sees it as a difficult subject, as an abstruse and pointless subject to study (Akinoso, 2015), in this case, students show little or no interest in the subject. The major problem faced by most

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students is inability to remember what they have learnt. This problem is often caused by too much theoretical expressions or formulae by the Mathematics teachers while learners remain passive listeners (Odili, 2006). Though the use of technology will help reduce failure in Mathematics, but the readiness and usefulness of the technological tools made available at the Multi-Choice Resource Centre will go a long way to sustain the success rate of students in Mathematics.

Teacher's readiness has been found to be major predictors of the use of new technologies in instructional settings. The successful use of technology in the classroom depends to a significant extent on the teachers' readiness toward these tools. More so, the readiness towards digital tools affect teachers' attitude towards the usage. Positive readiness often encourages less technological capable teachers to learn the skills necessary for the implementation of technology-based activities in the classroom (Almusalam, 2001).

### **Purpose of the Study**

This study focused on Mathematics teacher's readiness towards the utilization of multi-choice resource centre for teaching in Ogun State. Specifically, the study examined investigated the available resources, determined mathematics teacher's readiness towards the utilization of the resources at the centre and examined the usefulness of the Multi-choice resource centres.

### **Research Questions**

1. What are the resources available at the Multi-choice resource centres?
2. What is the level of readiness of Mathematics teachers to the use of Multi-choice resource centres?
3. How Mathematics teachers do perceive the usefulness of the Multi-choice resource centres?

### **Literature Review**

#### **Multi-Choice Resource Centre in Ogun State, Nigeria**

Multi-Choice Nigeria showed their commitment to the educational sector again by enhancing education in Nigeria with its resource centre intervention through the donation of digital learning aids to 22 schools in Ogun State. The 22 beneficiary schools are Abeokuta Girls' Grammar School, Abeokuta; African Church Grammar School, Abeokuta (Jnr.); Adeola Odutola College, Ijebu-Ode; Ansarudeen Comprehensive College, Ota; Baptist Boys' High School, Abeokuta; Makun High School, Sagamu; Odogbolu Grammar School, Odogbolu; Owode High School, Egba Owode; Our Lady of Apostles, Ijebu Ode; and Yewa College Ilaro. Others include Multilateral Grammar School(Jnr), Okun Owa; Ikenne Community High School(Snr), Ikenne; Ijebu-Ode Grammar School(Jnr), Ijebu-Ode; Community Grammar School, Owu-Ikija(Snr); Oronna High School(Snr), Ilaro; N.U.D Grammar School(Jnr), Solu; Government Science and Technical College, Igbesa; Comprehensive High School, Ayetoro(Snr); Asero High School, Asero(Snr), Asero; Agunbiade Victory High School(Snr), Magbon; St. Peter's College, Abeokuta and St. Peter's Catholic Private College, Abeokuta. Arogudade further stated that the digital resources in the Multi-choice Resource centres are introduced to improve the knowledge levels and understanding of subject areas by students (<http://thenewsnigeria.com.ng/2016/02/multichoice-donates-22-digital-resource-centres-to-ogun-state>).

### **Methodology**

This is a descriptive research of the cross-sectional survey type. The population for this study are Mathematics teachers from the twenty purposively selected schools from the twenty-two schools that were

provided with the multi-choice resource centre in Ogun State. Purposive sampling technique was used to select 35 Mathematics teachers from the schools in Ogun state that have access to the Multi-choice resource centre. A research designed check-list and questionnaire were used to determine the available resources, mathematics teachers' readiness to use the available resources and the usefulness of technological resources at the centre. The internal consistency of the instruments was 0.81 and 0.82 respectively for readiness and usefulness using Cronbach Alpha. Data was analysed using Percentage and Mean using a bench mark of 50% for percentage and 2.50 for mean.

## Result

The results are presented in order of the research questions raised for the study.

### Research Question 1:

What are the resources available at the Multi-choice resource centres?

Table 1:  
Resources Available at the Multi-Choice Resource Centre

| S/N |                                  | Availability (%) | Decision      |
|-----|----------------------------------|------------------|---------------|
| 1   | Computer                         | 92.3             | Available     |
| 2   | Video Recorder                   | 34.6             | Not Available |
| 3   | Speaker                          | 73.1             | Available     |
| 4   | Projector                        | 84.6             | Available     |
| 5   | Interactive White Board          | 96.2             | Available     |
| 6   | Television Set                   | 88.5             | Available     |
| 7   | DSTV Explora Decoder             | 88.5             | Available     |
| 8   | Power Generating Set             | 92.3             | Available     |
| 9   | Satellite Dish                   | 88.5             | Available     |
| 10  | Uninterrupted Power System (UPS) | 65.4             | Available     |
| 11  | Audio Cassette                   | 76.9             | Available     |
| 12  | Video Cassette                   | 69.2             | Available     |
| 13  | Radio                            | 73.1             | Available     |

Table 1 shows that availability of computers had 92.3%, video Recorder had 34.6% availability, Speaker had 73.1%, projector had 84.6, Interactive White Board had 96.2%, Television Set, Satellite Dish and DSTV Explora Set had 88.5% availability respectively, Power Generating Set had 92.3%, UPS had 65.4%, Audio and Video Cassette had 76.9% and 69.2% availability respectively and Radio had 73.1%. This implies that all the technological tools proposed by Multi-Choice are in place except for the Video recorder which is below 50%.

### Research Question 2:

What is the level of readiness of Mathematics teachers to the use of Multi-choice resource centres?

Table 2:

Mathematics Teachers Readiness towards the Utilisation of Multi Choice Resource Centre

| S/N               | Statements   | Mean        | Decision        |
|-------------------|--|-------------|-----------------|
| 1                 | Based on my profession, I am ready to use Multi-Choice Resource Centre for teaching                        | 2.56        | Agree           |
| 2                 | I plan on using the Multi-Choice Resource Centre for discovery on a regular basis to develop my teaching.  | 3.46        | Agree           |
| 3                 | It will take me time before I can think of using Multi-Choice Resource Centre for teaching my class        | 2.62        | Agree           |
| 4                 | I will rather not teach than to use Multi-Choice Resource Centre for teaching                              | 1.88        | Disagree        |
| 5                 | The use of Multi-Choice Resource Centre for teaching bring noise to the class, therefore I will not use it | 1.65        | Disagree        |
| <b>Grand Mean</b> |  | <b>2.43</b> | <b>Disagree</b> |

Table 2 revealed that Mathematics Teachers profession makes them ready to use Multi-Choice Resource Centre for teaching with a mean of 2.56, the use of the Multi-Choice Resource Centre for discovery on a regular basis help them to develop teaching with a mean of 3.46. More so, it takes time before most Mathematics Teachers think of using Multi-Choice Resource Centre for teaching had a mean score of 2.62, Mathematics Teachers will rather not teach than to use Multi-Choice Resource Centre for teaching had a mean score of 1.88 and the use of Multi-Choice Resource Centre for teaching bring noise to the class, therefore I will not use it with a mean score of 1.65. With the average mean of 2.43 which is lesser than 2.50, it implies that most Mathematics teachers are not ready to use the Multi Choice Resource Centres despite the availability of the technological resources in their schools.

**Research Question 3:**

How do Mathematics teachers perceive the usefulness of the Multi-choice resource centres?

Table 3:

Mathematics Teachers Perceived Usefulness of Multi Choice Resource Centre

| S/N               | Statements  | Mean        | Decision     |
|-------------------|---|-------------|--------------|
| 1                 | Using Multi-Choice Resource Centre for my class enables me to accomplish objectives more quickly. | 3.23        | Agree        |
| 2                 | Multi-Choice Resource Centre improves my students' academic performance.                          | 3.12        | Agree        |
| 3                 | I find Multi-Choice Resource Centre useful for my class.  | 3.23        | Agree        |
| 4                 | Multi-Choice Resource Centre has given me greater awareness of its use.                           | 3.13        | Agree        |
| 5                 | Multi-Choice Resource Centre gives me more confidence using ICT tools for teaching.               | 3.17        | Agree        |
| <b>Grand Mean</b> |   | <b>3.18</b> | <b>Agree</b> |

Table 3 revealed that Mathematics teachers perceived using Multi-Choice resource Centre for classes enables them to accomplish objectives more quickly with a mean score of 3.23, Multi-Choice Resource Centre improves my students' academic performance with a mean score of 3.12, Mathematics teachers find Multi-Choice Resource Centre useful for my class with a mean score of 3.23, Multi-Choice Resource Centre has given me greater awareness of its use had a mean score of 3.13 and Multi-Choice Resource Centre gives Mathematics teachers more confidence using ICT tools for teaching had a mean score of 3.17. With an average mean of 3.18, it implies that mathematics teachers perceived the Multi-Choice Resource Centre to be useful.

## Discussion

The findings of the study are in line with findings of Nwosu (2010) who reported that teachers can, to a very low extent, utilize resources for their professional development to enhance service delivery in schools. It also revealed that slow access to equipment, low internet connectivity, lack of sufficient computers and high cost of purchase, lack of qualified personnel, interrupted power supply among others constitute a hindrance to usage of the available resources. More so, the findings of this study agreed with the report of Enwereuzor (2011) in a study on utilization of antenatal care facilities. This study is in consonance with the findings of Daudu (2012) in a study on assessment of availability and use of resources and services. Daudu reported that resources of the library were quite adequate. Materials resources are not very current except for newspapers.

## Conclusion

Based on the Finding, it was concluded that the technological resources are available at the Multi Choice Resource Centres in the selected schools in Ogun State. This suggests that the readiness of Mathematics teachers in using the available technological resources may be equivocal. It then becomes necessary to the availability and use of the technological resources for effective teaching of Mathematics to students in schools. The study found out that out of all the technological resources listed in the study by the researchers for teaching Mathematics to students, 12 of them were available in schools. Though Mathematics teachers are not ready to make use of the technological resources at the Multi-Choice resource centres, but they perceived it to be useful for effective teaching of Mathematics.

## Recommendations

The study recommended that training should be organized for teachers to encourage and motivate them to use the technological tools since they perceived it useful.

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