

## PERCEPTION OF ICT USE IN TEACHING AND LEARNING OF MUSIC IN SELECTED SECONDARY SCHOOLS IN IBADAN, NIGERIA

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### Abstract:

**Purpose:** This study was carried out to investigate the application of ICT in teaching and learning of Music in selected Secondary Schools in Ibadan, Nigeria.

**Design/Methodology/Approach:** The study employed a descriptive survey research design. A purposive sampling technique was used to select a sample size of 200 hundred music students and 100 hundred music teachers from selected public and private secondary schools in Ibadan. Instruments for data collection included a well-structured questionnaire on a four point scale with fifteen and thirteen items respectively. All copies of the questionnaire were returned. The data was analysed with descriptive statistical measures.

**Findings:** The findings revealed that that teachers and students are aware of the numerous benefits of using the ICT as technology is part of living and learning in the 21<sup>st</sup> century. The results show that the use of ICT in an instrumental, theory and composition classroom benefits both music students and teachers. Furthermore, the study identified some challenges such as: irregular power supply, inadequate ICT literate teachers, facilities, funds and maintenance in the application of ICT in Schools. There are many ways a music teacher can apply learning resources with ICT that allow for better flow of a music lesson and visual appeal to students.

**Implication:** Schools and stake holders in child education can give more time, resources and skill to investing on availability of ICT and regular training of music teachers for the effective use of the ICT in schools, as technology will continue to be a useful and powerful tool to music education. The use of ICT in Schools should be regular and planned, encouraging all music teachers to contribute every bit of discovery on the use of the technology. Music Educators should organize workshops where practical session on the latest discovery and manipulations on ICT.

**Originality/Value:** The study recommends periodic training and workshop for music teachers on acquisition of ICT skills and the manipulation of new technologies for teaching. The study also shed more light on the application of ICT in the teaching and learning of music.

**Keywords:** Application, ICT, Teaching, Learning, Music

**Paper type:** Empirical research

### Introduction

“Information Communication Technology” can be defined as forms of technology that are used to transmit, store, create, share or exchange information. This broad definition of ICT includes such technologies as: radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, computer and network hardware and software, as well as the equipment and services associated with these technologies, such as video as well as the equipment and services associated with these technologies, such as video conferencing and electronic mail. (UNESCO, 2006).

Technology have become key tools and had a revolution impact on how we see the world we live. The place of information communication technology in education and in the world general cannot be undermined. Bandele (2006), opines that ICT is a revolution that involves the use of computers, internet and other Telecommunication technology in every aspect of human endeavor. Teaching and learning is considered to be part of human endeavor that requires effective and dynamic means of communication between the teacher and the student. The field of education has certainly

been affected by penetrating influence of ICT worldwide.

Aribisala (2006) posited that ICTs are increasingly playing an important role in organization and in society's ability to produce access, adopt and apply information. They are however being heralded as tools for the post industrial age and the foundations for the knowledge economy due to their ability to transfer the acquisition of musical knowledge. Stressing the importance of use of ICT in schools, Olorunsola (2007) posited that through ICT, education needs have been met; it changes the needs of education as well as the potential processes. Messages or information (lesson content, videos and pictures) can be communicated through flash share, Bluetooth, WhatsApp and other means. This shows that the use of ICT in education have paved a better way for teaching and is such a development different from what teaching used to be when a teacher has to depend on the drawings on cardboard or plain sheet, lesson notes and charts for the delivery of a lesson.

ICT is an indispensable part of educational administration as its application makes institutions more efficient and productive, thereby engendering a variety of tools to enhance and facilitate teachers' pedagogical activities. Teaching and learning has gone beyond the teacher standing in front of the students and disseminating information to them without the students' active and adequate participation (Ajayi, 2008). With the aid of ICT, the teacher can take the students beyond the traditional limits, ensure their active participation in the teaching and learning process and create vital environments to experiments and exploration. This new development is strong indication that the era of teachers without ICT are gone.

### **Statement of the Problem**

Existing studies have focused on the importance of technology and instructional materials in music education. However, little attention has been paid to the perceptions of application of Information Communication Technology in the

teaching and learning of music in selected secondary Schools in Ibadan. This study examines the application or the use of Information Communication Technology in the teaching and learning of Music in selected secondary Schools in Ibadan. This study fills the gap.

### **Objectives of the Study**

The purpose of this study was to examine the use of ICT in the teaching and learning of music. Specifically, the study sought to:

1. find out the perceived benefits of ICT use in teaching and learning of Music
2. Determine the perceived ease of use and challenges facing use of ICTs for teaching and learning of Music

### **Significance of the Study**

This study will provide information on the extent to which the use of Information Communication technology in music instruction is being achieved, highlight the potential of ICT in the teaching and learning of music which will enrich knowledge of music educators and students also shed more light on how computer applications are used in the teaching and learning of music in Nigeria. The study will also serve as useful document for does charged with education responsibilities in the development of secondary School curriculum and will further stimulate research.

### **Methodology**

The descriptive survey design was used for this study. Both primary and secondary sources of data were used for this study. The primary data employed a well-structured questionnaire on a four point scale with fifteen items. Two hundred music students and one hundred music teachers from selected public and private secondary Schools, in Ibadan, Nigeria were given questionnaire which were all returned. The secondary data was sourced from books, journals, magazines and the internet. Data collected were analyzed with descriptive statistical measures.

## Theoretical Framework

This study employed the Piaget's theory for the discourse. According to Farrant (2002), the Piaget's theory of intellectual development holds that cognitive development takes place from active interaction of the child with his environment. This means that the basis of learning is the child's own ability as he interacts with his physical and social environment. Piaget is of the view that a child must act on the objects in his environment for him to plan.

This means that a child should be actively involved in learning and learning should not be passive. The active involvement of the child may be in form of direct manipulations and visual observations. The Piaget's theory places the child as the principal agent in the teaching and learning situation. This being the case, the teacher's responsibility is to provide the student with situations that encourage experimentation and manipulation of objects and symbols.

According to Efebo (2001), the learner must be allowed to "do" and to progress at his or her own rate. The student has the real comprehension of a concept if he or she invents it himself or herself. At any point when we teach without interactive medium, we prevent student from reinventing it himself or herself. Piaget's theory has direct implication for the use of ICT in the teaching, especially in Music. In the first place, the theory of intellectual development holds that cognitive development takes place from the active interaction and participation of the student with the learning environment which is possibility through the use of ICT.

## Literature Review

### Teaching and Learning Music with ICT

According to Mangaland (2009) some modern ICTS that provides reliable source of interest to learning music include the digital video, multimedia Computer (e.g laptop and notebook) application software (e. g Word processing, spreadsheets and power point), internet and intranet, digital libraries, computer-mediated conferencing (e.g. audio conferencing, video text and Interactive video disk). This means that ICT can enable music teachers and students store musical works,

retrieve previous lessons, disseminate information such as assignment through the internet facilities. Also, considering the ICT facilities listed by Mangaland (2009), The digital video camera helps music students to document their musical performances and re-play for the purpose of music analysis which improves their subsequent performances. In the course of preparing for a music performance, the digital video would be useful to ascertain perfection of rehearsals. (Falodun, 2018).

The inventions of ICT thus assist the teaching and learning of music by first creating interest and excitement for learning. Students find lessons taught with technology interesting, relevant, appealing and involving (Beeland, 2002). Music teachers use music examples from windows media player or iTunes and use Internet resources to enhance instruction (Nolan, 2009). This emphasizes on the resourcefulness of the ICT in the teaching of music as enables music teachers to give several examples students can feel in the course of teaching so that a lesson will not be a mere discussion. Also to note is the invention of music software such as Finale, Smart music, noteworthy, Sibelius and other programs (Baker, 2007). These software are tools that can be used in teaching music composition and harmony. This affords the students to be able to play back their compositions and works to have a feel of their works.

Richmond (2002) indicated that there are three general approaches to the instructional use of computers and the Internet, namely:

- a. Learning about computers and the Internet, in which technological literacy is the end goal;
- b. Learning with computers and the Internet, in which the technology facilitates learning across the curriculum; and
- c. Learning through computers and the Internet, integrating technological skills development with curriculum applications.

### **Prospects in the Application of ICT in Teaching and Learning of Music**

Information communication technology have been very useful in teaching and learning of music in Schools by providing other approach to teaching, different from the old tradition of teaching. According to (Voogt, 2008; Voogt & Pelgrum, 2005; Voogt 2010; Voogt et al., 2013) ICT in education was to transform the teaching and the learning process from the traditional instructional teacher-centered endeavour to a learner-centered approach with active participation of the learner coach. Anderson (2008) also opines that ICT provides an alternative approach to learning compared to the traditional education that takes place in the physical school building. This means that music students have the opportunity of having access to whatever they have been taught in the school for revision and it enables each student to learn at their respective pace. Miller and Glover (2010) asserts that the saved materials which is made possible through the advent of ICT equipment such as Interactive Whiteboard saves teachers from the stress of re-writing on the board and cause them to end the lesson at the expected time.

According to Anderson (2004) the advent of ICT has given learning opportunities that have changed the delivery of instruction to a virtual environment. It means that ICT gives any student the opportunity to learn at their assimilating or convenient time.

To also note is the opportunity ICTs creates for both music teachers and students as they can access digital resources like digital libraries for assignments, research material and course material from any place at any time (Bhattacharya and Sharma, 2007; Cholin, 2005). Considering this claim ,it means that music students can prepare ahead of the lesson by reading wide since they are privy to learning resources. Stressing the prospects is the indelible impact of ICT on interaction that is possible among music students and teachers (Reed, 2001). This means that music students have the opportunity to interact with their teachers on issues relating to their musical works such as composition and harmony.

Other scholars like(Finger & Trinidad, 2002; Jorge et al., 2003; Young, 2003; Jamieson-Procter et al., 2013) also asserts that the application of ICT in teaching enhances the learning process and maximizes the students' abilities in active learning. From this view, the active learning provides

Music students the opportunity to listen and watch musical clips, unlike the traditional approach that only involves the use of charts and cards as instructional tools in learning. For example, learning the live and works of a composer can be boring if sound of works are not felt or perceived in the ear. Also to note on the Paying attention to the right fingering if its instrumental work or the shape of the mouth of the singer or vocalist is made possible through ICT.

### **Challenges**

There are quite a number of challenges affecting the application of ICT in secondary schools in Nigeria. According to Ojo (2005), the corps of teachers who are expected to bring reform into Nigerian education system went through the traditional 'old' system without any exposure to ICT. This poses a great challenge for the application of ICT in the teaching and learning of Music as it is impossible for teachers to give what they don't have. The old system of education did not avail the teachers the opportunity of acquiring ICT skills which then has an implication on the delivery of lesson with the use of ICT. (Haruna, 2005) opines that ICT facilities are expensive and not affordable to many individuals, private and some government establishments, infrastructures such as electricity for the operation of ICT components and epileptic power supply. In the recent, when individual effort is made by some teachers to acquire ICT skills, the challenge of not having ICT facilities to work with in Schools can be discouraging for many teachers. The nagging issue of epileptic power supply could disrupt lessons in schools where ICT facilities are available. Other challenges include the lack of adequate trained manpower for the development, maintenance and operation of ICT facilities to service the increase demand of Information Technology service in Nigeria, Poor

remuneration for the inadequate personnel in ICT which consequently keep them away from labour markets in Nigeria, lack of total commitment on the part of government towards the development of ICT, insufficient internet facilities and connectivity. To also note is the poor attitude of many teachers to be computer literacy. According to Becta (2004), the inaccessibility of ICT resources is not always merely due to the non-availability of the hardware and software or other ICT materials within the school. It may be the result of one of a number of factors such as poor resource

organization, poor quality hardware, inappropriate software, or lack of personal access for teachers (Becta, 2004). In Sicilia's study (2005), technical problems were found to be a major barrier for teachers. These technical barriers included waiting for websites to open, failing to connect to the Internet, printers not printing, malfunctioning computers, and teachers having to work on old computers. "Technical barriers impeded the smooth delivery of the lesson or the natural flow of the classroom activity" (Sicilia, 2005, p. 43).

**Table 1: Perceived Benefits of ICT use in Teaching and learning of Music**

S/N	Items	SA	A	SD	D
1	The use of ICT makes music lesson interesting	80%	19%	0%	1%
2	The use of ICT makes musical concept clear	72.5%	22.5%	2.5%	2.5%
3	The ICT helps music students to learn from more given examples	71%	29%	0%	0%
4	All aspects of Music can be taught with ICT	60%	30%	5%	5%
5	All aspects of Music can be taught with ICT	31%	64%	5%	0%
6	The use of ICT gives a lasting memory of musical ideas and terms	85%	25%	0%	0%
7	The ICT help teachers to manage instruction time effectively	35%	64%	1%	0%
8	The ICT help students to learn on their own or replay a lecture	65%	25%	10%	0%
9	The ICT help students to relate previous lessons with the new one	80%	19%	1%	0%
10	The ICT can be used in musical composition	30%	68.5%	0%	1.5%
11	The use of ICT aid students' participation in the Classroom	78%	12%	5%	5%
12	Technical error slow down music lessons when ICT is used	15%	72.2%	0%	12.5%
13	The ICT appliances are difficult and expensive to maintain	43%	32.5%	7%	17.5%
14	The problem of epileptic power supply affects the use of the ICT in Classroom	70%	28%	0%	2%
15	ICT facilitates effective teaching of Music	85%	15%	0%	0%

**Table 2: Perceived ease of use of ICTs for teaching and learning Music**

S/N	Items	SA	A	SD	D
1	All students don't have access to a Computer	70%	23%	7%	1%
2	Not all teachers are Computer literate	65%	25%	5%	5%
3	Only few teachers have access to Computer	71%	29%	0%	0%
4	All aspects of Music can be taught with ICT	80%	10%	5%	5%
5	Teachers use the ICT regularly to teach	30%	5%	65%	0%
6	Teachers are trained regularly on the use of ICT	25%	15%	60%	0%
7	ICT helps teachers to manage instruction time effectively	35%	64%	1%	0%
8	Teachers have access to internet	10%	15%	75%	0%
9	There are sufficient ICT facilities in all Classrooms	15%	10%	25%	50%
10	Teachers have access to Personal Computer	10%	10%	15%	65%
11	The ICT appliances such as Computer, projector are expensive to buy and maintain	74%	26%	0%	0%
12	The problem of epileptic power supply affects the use of the ICT in Classroom	86%	12%	%	2%
13	Most Music teachers have no knowledge on the use of ICT	15%	5%	30%	50%

### Discussion of Findings

In this study, efforts had been made to examine the application of ICT in the teaching and

learning of music in selected secondary schools in Oyo State. One of the most important factors that affect teaching and learning as well as student motivation to learn is student

engagement. For instance, they develop students' autonomy (Harlow, Cowie, & Heazlewood, 2010; Minor, 2013) and it has been discussed that they increase student enthusiasm and motivation (Schmid, 2006; Torff & Tirota 2010; Wood, R., & Ashfield, J. (2008).

The study revealed that music teachers and students benefit from music lessons through the application of ICT in table 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. This finding corroborates Kwache (2007) who submitted that the application of information communication technology makes institutions and teaching more efficient, productive, enhance and facilitate pedagogical activities. It was discovered in the study in Table 1, 2, 3, 6, 9, 12, 13, 14, and 15, of teachers' items that factors like availability of components of computers, access to internet and high cost of maintenance affect the use of ICT in Nigerian secondary schools. Hawkridge (2009) discovered that countries that have made technology part of their school plans were reported to have committed a huge amount of money and material into the project. Investment in interactive whiteboard is capital intensive. Effort should be made by schools to solicit for funds.

The study revealed that regular power supply is one of the major challenges in the use of interactive whiteboard in Nigerian schools. The epileptic power supply is a national phenomenon and a nagging problem detrimental to all sectors. This finding supports Yusuf (2005) and Ofodu (2007) who submitted that irregular power supply is a major obstacle to the use of ICT in all sectors. According to (Weinstein, 1989), in a classroom in which students' voices are honored, the teacher gains access to information about students' perspectives and subjective experiences that promotes responsiveness to students' educational, social, affective, and physical needs. The most important factors that affect teaching and learning as well as student motivation to learn is student engagement. Both students are aware of the extent of the use of the interactive whiteboard and the challenges.

## **Conclusion**

The study revealed that teachers and students are aware of the numerous benefits of using ICT as technology is part of living and learning in the 21<sup>st</sup> century. The use of ICT in an instrumental classroom benefits both students and teachers. There are many ways a music teacher can apply learning resources with ICT that allow for better flow of a music lesson and visual appeal to students.

Music lessons come in clear terms especially when used in conjunction with other programs or software that many music teachers use already as Sibelius, Finale, Noteworthy. Despite the perceived benefits in the use of ICT, there are a lot of nagging factors which have been mentioned and cited in this research, inhibiting the successful use of the interactive whiteboard in Nigerian secondary schools which need to be well addressed. It is crystal clear and obvious that a transition from slate to chalkboard and marker-board to the interactive whiteboard, notebooks and pen to computer or iPads, technology in education keeps evolving. The present state-of-the-art technology will eventually become outdated to teachers and students.

Nevertheless, if music teachers, schools can give more time, resources and skill to the effective use of ICT, technology will continue to be a useful and powerful tool to music education. The study recommends that the sharing of the use of ICT in schools should be regular and planned, encouraging all teachers to contribute every bit of discovery on the use of the technology. Music educators should organize workshops where practical sessions on the latest discovery and manipulations on ICT. Possibly, schools should have a committee to supervise or coordinate the use of ICT in teaching and learning. Schools should acknowledge that teachers have the right to constant appropriate training. Music teachers should take up the challenge and explore using other resources to enrich classroom learning. School management should provide alternative means for power supply like; solar, inverter, generator and UPS. A well-charged UPS can work for like 20 minutes.

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