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APPRAISING THE EXTENT OF DIGITAL DIVIDE BETWEEN MUSIC TEACHERS AND STUDENTS IN ANAMBRA STATE SECONDARY SCHOOLS, NIGERIA

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ABSTRACT: *The study investigated the extent of existence of digital divide between music teachers and students in selected secondary schools in Anambra State. Two objectives and two research questions guided the study using descriptive survey design. Threeeducation zones consisting of nine public secondary schools, 18 music teachers and 270 music students formed the sample for the study. Structured questionnaires and oral interview were developed for teachers and students, and were used for collecting data from the field. The data gathered were presented quantitatively and qualitatively. The reliability indexes were calculated to be 0.71 and 0.70 for teachers and students respectively. Mean and standard deviation were the statistical tools used in the analyses of the work. The findings revealed high extent of digital divide based on the responses of both music teachers and students on the place of ICT in operative curriculum.There was low extent of digital disparity in ICT knowledge on the teachers part and high extent of digital disparity in ICT knowledge on the students part. The recommendations were that; the present music curriculum should be restructured to integrate ICT in order to meet the needs of 21st century music education and music teachers should be trained to have the wherewithal in ICT applications for bridging the digital disparities. The study has fully established the need for paradigm shift from traditional method of teaching to technologically-based teaching by music teachers in Anambra State secondary schools.*

KEYWORDS: digital divide, music education, information and communication technology (ICT), digital native and digital immigrants.

INTRODUCTION

Approaches to teaching and learning of music education in the 21st century have come under a heavy influence of modern Information and Communication Technology (ICT).Odachi (2009) opines that information and communication technology is a range of technology for gathering, storing, retrieving, processing, analysing and transmitting information. Information and communication technologies driven-world has been reshaping the techniques for teaching and learning globally in institutions of learning. Secondary schools in Nigeria generally and Anambra State in particular are inclusive

in these technological and cultural revolutions. The use of ICT in teaching and learning of music has transformed the ways teachers teach and the ways learners learn.

Down through the ages, music has been a major feature of the cultural heritage of most societies. Agu (2017) posits that it is a global human phenomenon which is peculiar to the culture where it is created and performed. Agu further argues that it reflects the values and lifestyles of the culture, as well as provide a channel for the culture to share emotions, intentions and values. Similarly, Okafor (2005) averres that music is the most widely practiced art in the world, including in Nigeria, where it has been closely associated with other professions and disciplines. It has been used as an informal educational method, especially in pre-independence Nigeria. It was transmitted through various means including traditional festivals, moonlight plays, work songs, lullabies, children rhymes, court music, apprenticeship under a well-known musician and other avenues of learning (Andrew 1998, Euba, 1982).

Aninwene (2003) is of the opinion that like other cultural heritage, music has been evolving to reflect the sociocultural realities of specific societies. As such, music has not only been a cultural promoter but also an educational tool. Modeme (2009) also stated that music, which is generally defined as the arrangement of sounds in one or more voices or instruments and made audible is a universal form of expression which impacts on the socio-cultural norms of the society, as well as is impacted by the norms of the society. One way through which the society impacts on music is through the formalized process of music education.

Education is the specialized training given to individuals with the basic aim of equipping them with the knowledge of reading, writing and calculation, as well as specialized skills for developing their interest and ability. The acquisition of these skills and competencies enables individuals to achieve self-development and contribute effectively towards social development (Okeke, 2016, pp.24-25). In the same view, Okechukwu (2017) affirms that education is the art or process of teaching and learning, especially in schools or colleges to improve knowledge and develop skills (p.141). Education, including music education, is therefore considered to be essential for the holistic development of individuals with the aim of attaining progress. The relevance of music education to cultural institutions demands that music be taught and learnt in line with global trends so as to be saleable, accessible and acceptable at the competitive international markets.

Music education is an area of study which concerns itself with the teaching and learning of music. It impresses on all domains of the teaching and learning process, which includes the cognitive domain which emphasizes knowledge acquisition; the affective domain which anchors on emotional appreciation and sensitivity; and the psychomotor domain which lays emphasis on the developmental of physical skills. Mbanugo (as cited in Okeke, 2012) stresses that "music education is a process of transmission of musical knowledge, skills and attitudes not only in the classrooms but also essential for life preservation, upgrading and sustainability" (p.54). Eze (2010) asserts that "music education is a holistic education geared towards a functional and artistic career in the

society" (p.34). The integration of music education from primary to university education is a welcomed development in Nigeria generally and Anambra State specifically. This is because students' participation in music is a very relevant element of the people's culture. Contributing to music education, Nzewi (1999) argues that any group of humans that has a unique body of music knowledge and practice which is transmitted from one generation to another as a process, has a system which is operative of music education, irrespective of methodological manifestations (p.73). Similarly, Bowman (2001) states that music education takes place "wherever and whenever music is taught and learnt" (p.13).

The major driver of almost all activities in the modern world, including the teaching and learning of music, is the innovation of information and communication technology (ICT). As defined by Ikemelu (2015), ICT involves the development and utilization of digital tools, equipment and applications which facilitates the collection, storage, retrieval, use, transmission, manipulation and dissemination of information as accurately and efficiently as possible for the purpose of enriching the knowledge and develop communication, decision-making as well as problem solving ability of the user. The ubiquitous presence of ICT and associated technologies have contributed immensely in reshaping teaching practice and learning experiences of educational institutions in Nigeria and Anambra State specifically, especially within the context of music education.

As one of the subjects in the secondary school curriculum, music education has had a long history in the Nigerian school system. Tracing the history of music education in Nigeria, Olusoji (2013), stated that the advent of western education in Nigeria saw the formal introduction of music education into the school system. Music education was seen as an essential component of the process of evangelism by the missionaries who introduced formal education to Nigeria, through their focus on the arts such as drama, poetry and dance. While early music education was based on the cultural and religious practices of those times, current practice of music education in educational institutions has been significantly influenced by the use of technological tools and resources (Ojukwu&Ibekwe, 2015). Contributing further on this, Nwankpa (2014) points out that there is a need for a comprehensive curriculum review if the music classroom is to keep track with the world outside the classroom.

Secondary schools in Nigeria generally and Anambra State in particular are actively involved in the technological and cultural revolution. The use of ICT in teaching and learning has impacted most subjects including music. This has transformed the ways teachers teach and the ways learners learn. Secondary school students of this generation have shown a marked difference from previous generations in the way they learn. These disconnections are manifesting in their understanding and utilization of technological tools and resources. Prensky (2001) notes that the lives of these students are fully surrounded by computers and the usage of diverse technological tools including videogames, digital music players, cell-phones and other digital tools. Further describing these students, Prensky (2001) states that "today's students think and process

information fundamentally different from their predecessors. These differences go far further and deeper than most educators suspect or realize (p.6).

These differences in information processing between today's students, their predecessors and teachers are what has been conceptualized as the digital divide. Providing a formal operationalization of the term digital divide, Noll. Older-Aguilar, Rosston& Ross (1999) see it as "differences in access to and uses of information and communication technology" which can be attributed to various factors including income, race, gender, age and other indicators of socio-economic status. Study of the concept of digital divide however, has been approached from the perspective of age which have classified technological users into digital natives and digital immigrants.
Originating with the studyby Prensky (2001), the concept of digital divide and digital natives refers to the differences in technological utilization based on age variations. Zur andZur (2011) describe the digital natives as group of people who are born in the technological era. These people are seen as the people who are born with "digital DNA" and are called iGeneration (Zur&Zur, 2011). On the other hand, the concept of digital immigrants refer to those who were born before 1964 and who have grown up in a pre-digital era. To put it more succinctly, digital immigrants are people who were born before the advent and widespread adoption of digital technologies. The concept of digital immigrant might also be applied to individuals who were born before the widespread utilization of digital technologies and who were not really exposed to them early in their infancy. The digital immigrants are the exact opposite of digital natives, who have spent a larger part of their lives interfacing with digital technologies. However, it should be noted that this conceptualization of the digital divide is not absolute and without dispute. Other researchers (Barupal, 2017) have identified gaps in the conceptualization of digital divide along this line. This is because some teachers, who are considered digital immigrant are more knowledgeable in computer operations than their students. This notwithstanding, Prensky's (2001) conceptualization continues to be dominant and has enjoyed greater usage in the field of human education and learning.

The impact of digital divide in the teaching and learning of music have continued to be a source of concern to music educators. This question was raised by Pitts and Kwami (2002) who observed the developmental trends of emerging technologies for both music teachers and students. Also, Burnard (2007) had originally raised several questions relating to the extent to which the roles of music teachers might change in diverse methodological contents to music. What are the innovative practices which could improve the use of technology in music teaching? What are the things which teachers and students should learn from the new experiences of technologically based teaching? And also to what degree are teachers willing to learn from their students who may be technologically richer than them? Again how do the teachers' experiences (as co-learners) impact on their music students?

In responding to these concerns, Maflow (2014) asserts that the above situation can bring about the issue of digital divide in music classrooms between teachers and students. While the concept of digital divide is used mainly in the questions of access,

the present study investigates it from the perspective of utilization. Hence, in the context of this study, digital divide is the discrepancy between the extent of utilization, knowledge, skills, and competencies between students and teachers on information and communication technologies. Observation by this researcher has shown that the current crop of teachers and those of learners vary distinctly in their abilities and utilization of digital tools and resources in music education. In line with this observation, the researcher deemed it necessary to verify the level of music teachers' application of digital technologies in the teaching and learning of music education. This was further informed by the assertion of Hargreaves, Marshall and North (2003) that one of the biggest challenges facing music teachers, who are mostly digital immigrant, is how to create scaffolding elements that would provide students the opportunity to express their innovativeness and creativities in contexts that are functional and supportive of their skills, values, knowledge and resources relevant to their learning both in and out of the classroom. It is, therefore, essential that music teachers be qualified and prepared to broaden their knowledge of what constitutes composition and performance in the light of digital tools that has the potential of creating better appeal of the various genres in music education (Savage, 2007).

Statement of the Problem

As the world progresses technologically, every sector of the economy including education tries to fit into the digital world. The potentialities of ICT in teaching and learning of music have transformed the teaching strategies of how music teachers teach and the ways learners learn. Observations, therefore, have shown that music students are deeply rooted in technological use, with the internet as their home, but most music teachers are still operating the traditional way. This have brought digital gap and clash of interest between the two generations. However, this digital gap has not been the subject of any previous scholarly investigation, to the best of this researcher's awareness. The concern of this study, therefore, is: what is the extent of existence of digital divide between the music teachers and their students in Anambra State Secondary Schools? Providing answers to these questions is the thrust of this study.

Based on the above observations of the researcher, which has been corroborated by other scholarly contributions, the following research questions were developed to give structure to the present study:

1. What is the place of ICT in the operative curriculum for secondary school music in Anambra State?
2. What is the extent of digital disparity in ICT knowledge between music teachers and learners?

LITERATURE REVIEW

Digital Divide: Digital divide could be said to be unequal access to information and communication technologies which shows differences in opportunities that are available to people who have access to new information and communication technologies and those who do not have. Contributing to the definition of digital divide, Osim (2017) affirms that digital divide refers to the difference that exists between the haves and haves not in terms of access to and acquisition of the needed skills and

technologies for interaction and communication. Beal (2016) submits that digital divide describes the disparities between individuals who have access to the resources and to the usage of new information and communication technological tools such as the internet and the people who do not have access to the usage of ICT. Viewed from another angle, Osim asserts that digital divide explains the differences between those living in the urban and those in the rural areas, between the educated and those not educated, between rich and poor nations, and between developed and less developed nations. Globalization demands that these gaps be closed for more economic diversification and global growth.

As used in the present study, digital divide refers to the gaps between music teachers and students in terms of interest, access and utilization of computers, internet and other technological gadgets based on age or generational differences. Beyond generational gaps, digital divide has been conceptualized across other lines including location, nationality, demographics and ethnicity. It was on this premise that the OECD (2000) defined digital divide as the ICT Digital divide could also be said to be unequal access to information and technologies which shows differences in opportunities that are available to people who have access to new information and communication technologies and those who do not have (dictionary.com).

Considering the broad spectrum of digital divide, there have been various indicators for classifying what is implied by the concept which include, social divisions in internet access and usage, exclusion and marginalization, interest and access to internet, and socio-economic difficulties.While the above indicators have been used for the conceptualization of digital divide, the cause of digital divide has been extensively investigated. According to Osim(2017),Ekaette (2016), and Lareur and Weininge, (2003), the major causes of digital divide in music classrooms include fear, laziness and resistance to change, poor internet penetration in urban areas, high purchasing and maintenance cost of computer, lack of internet connectivity in music classrooms, poor training of music teachers on technology usage, negative belief of teachers.

Relevance of Information and Communication Technologies in Music Education Curriculum

One of the ways to achieve the good use of technologies is to first lay emphasis on the curricular goals and desired educational outcomes and then select the resources or technological devices that will best accomplish the stated goals. Rudolph (2012:7) asserted that there are two categories of goals for music curricular at all levels. These are: skills and knowledge. Skills may be referred to as the ability to play different musical instruments, create, and perform music while knowledge may be referred to as understanding and comprehending information about music such as biographical information, music theory and concepts and so forth. Effective technological use by teachers can assist music students in appropriate integration of technologies in their learning which has the capacity to improve on students' digital literacy.

Digital literacy refers to the ability of individuals to make effective use of digital information in making informed decisions for themselves and their families. Providing

a more encompassing definition, Martins (2005) citing the European Information Society defines digital literacy as the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social actions; and to reflect upon this process (p.135).

From the above definitions, two components of digital literacies are identified. These are the technical and social. The technical component involves teachers and students' abilities to carryout basic computer-based operations. This component helps individuals to connect a computer system and solve other digital problems in the classroom. The technical component help students identify productivity software to use in resolving computer-related challenges. The social component will assist students to collaborate and work with other individuals in music education projects such as designing and joining blogs where music topics are presented. It was on this basis that Asodike (2017) stated that digital literacy of teachers extends beyond the capacity of individual to use computer for research or entertainment, but for them to efficiently connect pedagogical tools in a manner that reflects their understanding of the great possibilities of these tools.

The relevance of teachers and learners' background in digital literacy notwithstanding, Savage, (2007) and Wise, Greenwood and Davis (2011) made an observation that music teachers may need to be prepared to widen their understanding of what is involved in composition and performance when we bring into the lime light the changing practices that digital literacy can bring to the music classroom. For music teachers to have sound background in the use of technology, they may come to the level where they have to rethink about the teaching methodologies and reform the ways they have been doing things in the past (Bauer, Reese &Mcallister, 2003). Teachers' lack of digital music literacies have serious implications for their teaching in this 21st century. Scholars like Byrne and MacDonald (2002) and Pitts &Kwami (2002) reveal that many secondary school music teachers are products of traditional western education, which is based largely on the conservative and the associated skills and traditions that come with it. No doubt, these music teachers may have difficulty in understanding the intricacies of the digital literacy. The need for music teaching and learning to be based on digital technologies has serious implications for music teachers as will be discussed in the next session. Some of these are listed below:

1. Music teachers should base the pedagogies on the technology and also use technology for the pedagogies and the objectives of learning. This means that knowing about technological tools and how they function can support teaching.
2. Music teachers' sound background in digital literacy implies the need to be similarly literate as the music students, in order to integrate ICT effectively into their teaching. This would mean developing good technical skills and knowledge of the capabilities and hindrances of the technology of interest that will aid the design of pedagogies in order to achieve the desired learning outcomes for their students.

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THEORETICAL FRAMEWORK: ENGAGEMENT THEORY

The engagement theory was propounded by Kearsley and Shneiderman (1999) as a new format for learning in 21st century. The central tenet of this theory is geared toward laying emphasis on the positive role of technology in learning process during interaction. During this interaction process, the learner is engulfed in activities that require active cognitive process such as reasoning, decision making, critical thinking activities, problem solving and innovative creation. The engagement of learners in technology-based environment creates in them the desire to learn and to make meaning out of their learning experience.

Engagement theory is seen as a model for learning in a technological learning environment that advances learning process. In other words, it synthesizes that students should be meaningfully engaged in their learning through interactive functions and worthwhile tasks. This could enable them promote their learning potentials which could have been very difficult to achieve otherwise. This theory stimulates self-determined learning, direct participation in activities, collaboration and direct problem solving among the students. It all means that the theory breaks down social complexities for students and encourages social interactions. This in effect, means that learners would develop the spirit of self-determination as they participate and collaborate in solving problems they engage in.

However, Schneiderman (1999), outlined some components of engagement theory thus:

- **Relate:** This is the learning process that deals with collaborative learning among the learners. It creates the spirit of team work among the students which helps them to tackle difficult tasks with ease in their process of learning. As a result, they record and improve performance.
- **Create:** It is the process where the learners embark on a given project as an assignment. They, in the work assignment, exhibit personal ingenuity while solving the problem. In the process, they become active participants in the learning and personal growth. The learners learn through defining, organizing and completing their own projects. They derive pleasure in personal achievements.
- **Donate:** This donate, signifies creating learning that is authentic and relevant to various areas of human endeavours. Their projects should be something that would give relevance to outside customers such as schools, campus groups, local businesses, churches, government agencies and many others. Through the addition of realistic projects in their learning potentials, they would be better prepared to handle similar projects in their professional environment when they are employed.

Classroom Implications of Engagement Theory of Learning

To the Students:

- The students learn faster when they participate in workshop classes. In music classes, students learn faster when they learn as a group than as isolated individuals.
- It widens the mental horizon of the students in their interaction with the technological based systems. In the music lessons, the students fully engage themselves in modern technological tools as they practice various skills in music and dances.

- Engagement in practical classes as well as group work activities improves the social skills of the students as they relate to one another. The social interaction in engagement theory in music classes helps the students to develop love and oneness with one another which, increases their learning potentials in music.
- It increases innovation among students. In music, engagement theory gives the students the opportunity to try new ways of doing things. This leads to new inventions in music talents and exhibitions.
- Students are empowered during engagement to browse and search the internet for information other than school related work. By so doing, they increase their knowledge.
- Students are attracted to learn due to the meaningful nature of the learning environment and activities therein.
- Engagement theory is based upon the ideal of creating a successful collaborating teams that work on ambitious projects that would be meaningful.

Implications to the Teachers

- Getting the right technical instruments to be used in class discussion might pose some challenges.
- The teacher should learn to be patient in teaching because some students are fast learner, while others are slow learners. Therefore, the teacher should device methods of carrying both categories along.
- By the use of internet, the teacher would be exposed to various sources of information, which would bring in the needed ideas for achieving instructional objectives.
- Engagement theory points to students as the architects of their own fortune as they work tirelessly to maximize self-actualization in the assignment while the teacher would have time for other activities.
- The teacher equally exhibits creative ideas in his teaching to ensure that the class is interesting and lively.

METHODOLOGY

Research Design: The descriptive survey design was used for the study. This design was deemed appropriate because it enabled the researcher to investigate the extent of the digital divide between the music teachers and students in selected secondary schools in Anambra State of Nigeria. Furthermore, a qualitative research design involving interview of key respondents was done. So the general design for this study involved both qualitative and quantitative research designs.

Population and Sampling Procedure: The population for this study consisted of all JSS3 music students in all public junior secondary schools in Anambra State. Anambra State is made up of six Education Zones: Aguata, Awka, Nnewi, Ogidi, Onitsha and Otuocha. A sample of 30 Junior Secondary School Three (JSS 3) students were randomly selected from nine schools in three education zones amounting to 270 music students in the three zones. In all, three Education Zones (Awka, Nnewi and Onitsha

Zones), nine public secondary schools, 18 music teachers and 270 music students formed the sample for this study.
Furthermore, eighteen respondents were selected for the purpose of in-depth interview used for the qualitative analysis. These individuals were purposively chosen which includes four students and two teachers in each of the education zones in this state. The purpose of the interview was firstly to expand upon information provided by the questionnaire, by investigating respondents' motives and feelings more fully, and secondly to maximise reliability and validity of the study.

Nature and Sources of Data: Based on the research design of the study, the important source of the data was the use of questionnaire and interview. The researcher obtained the data through the direct administration of the research instruments to the participants – the music teachers and students. However secondary data was sourced from the related literature. Two sets of structured questionnaires were developed for teachers and students respectively. The set of questionnaires were validated by experts in music and education. Test-retest reliability of the instrument yielded 0.695 for students, while that for teachers yielded 0.714. The researcher with trained research assistants administered the instrument and conducted the interviews in the selected schools. Mean and standard deviation were used for providing answers to the research questions guiding the study. For the qualitative analysis of data, the interviews were recorded and transcribed to enable the researcher understand the thematic process involved in the interview. The interview was done for 15 minutes for each of the respondents, for both teachers and students.

RESULT PRESENTATION

Research Question One: What is the place of ICT in operative curriculum for secondary school music in Anambra State?
To answer this research question, items 1-6 on the teachers' and the students' questionnaire were used. Respondents' responses are presented on table 1 below, while the interview transcripts are further presented after the quantitative analysis.

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Table 1: ***Mean and Standard Deviation on the place of Information and Communication Technology (ICT) in operative curriculum(N=18 – teachers, N =270 – students)***

S/N	Place of ICT in operative curriculum	VHE	HE	LE	VLE	$\bar{X}$	S.D	DEC.
1.	The music curriculum in use now is very useful to the challenges of workplace in 21st century	1	3	10	4	2.07	0.95	LE
2.	The present music curriculum prepares me to be competent in digital tools operations necessary for survival in modern society.	1	1	11	5	2.14	1.11	LE
3.	The present music curriculum, is based on digital tools, which are needed for technology-based education.	3	1	9	5	2.00	1.06	LE
4.	The music curriculum enables both teachers and students to be self-reliant in the society.	1	1	14	2	2.12	1.18	LE
5.	The music curriculum enables the teachers to engage in composing songs using digital tools.	2	1	12	3	2.17	1.06	LE
6.	The music curriculum, which is traditionally or conventionally-oriented is effective for developing critical thinking and innovative skills.	2	1	14	1	2.48	1.08	LE
	Average Response Rate					2.16	1.07	LE

	Place of ICT in operative curriculum	VHE	HE	LE	VLE	$\bar{X}$	S.D	DEC.
1.	The present music syllabus prepares me to be competent in the use of digital tools.	20	30	160	60	2.45	1.11	LE
2.	The present music syllabus is based on digital tools which helps for functional education.	37	21	149	63	2.01	1.03	LE
3.	I am very comfortable with the present music syllabus	30	40	128	72	1.99	1.00	LE
4.	The present music syllabus equips me with the knowledge and skills needed for composing of songs using the computer	57	82	108	23	2.21	0.96	LE
5.	The music syllabus is traditionally based and needs to be reformed for critical thinking/innovative.	12	174	66	18	2.89	0.96	HE
6.	I like the music syllabus in use for teaching music in my school	11	75	155	29	2.08	1.19	LE
	Average Response Rate					2.27	1.04	LE

Key: VHE- Very High Extent, **HE**– High Extent, **LE**– Low Extent, **VLE**– Very Low Extent, **DEC –** Decision**, S.D –** standard deviation

The result of the investigation revealed that some of the respondents said that the music syllabus is traditionally based and needs to be reformed for critical thinking/innovative. The table indicated mean and SD of music teachers on the place of ICT in the operative curriculum. The result showed teachers responded to a low extent on items 1, 2, 3, 4, 5and 6. Furthermore, students' mean responses for item 1 (the present music curriculum prepares me to be competent in the use of digital tools) was 2.45 (SD = 1.11), for item 2 (the present music syllabus is based on digital tools which helps for functional education) was 2.01 (SD = 1.03), item 3 (I am very comfortable with the present music syllabus) was 1.99 (SD = 1.00), item 4 (the present music syllabus equips me with the knowledge and skills needed for composing of songs using the computer),

was 2.21 (SD = 0.96), while for item 6 (I like the music syllabus in use for teaching music in my school was 2.08 (SD = 1.19). Since majority of the respondents have a low mean ratings, this indicates disagreement on the way music learning is being imparted which was further confirmed by the average response regarding the place of Information and Communication Technology (ICT) in music curriculum (mean = 2.27, SD = 1.04). Based on the grand average of the responses of both the teachers (2.22) and the students (2.27), it shows that there is a high need for ICT integration in the music education curriculum for secondary school students.Result from the qualitative analysis further showed that the respondents had positive attitude towards the integration of ICT in the teaching and learning of music as shown from their comments below:

The traditional media is very important in my learning of music. But I feel that having access to the internet and its associated technologies can improve my competencies in learning better. ICT provides tools that facilitate critical thinking and innovations which are not available through traditional media – Miss J.
Another respondent, a teacher reported that:
Apart from the recommended textbooks by the government, most of the resources I use in teaching music are drawn from the internet. I believe if this is supported, our jobs as music teachers can be made much easier. ICT is fundamentally essential for the development of the music education in Nigeria. – Mrs. U

Research Question Two: What is the extent of disparity in ICT knowledge between teachers and learners?
To answer this research question, items 12 - 16 and items 15 – 20 on the teachers and students' questionnaires respectively were used. Respondents' responses were presented on table 2 below:

Table 2: ***Mean and Standard Deviation on the extent of disparity in ICT knowledge between teachers and learners (N =18 - teachers; N=270 - students)***

S/N	Teachers' ICT knowledge	VHD	HD	LD	VLD	$\bar{X}$	S.D	DEC.
12.	The music teachers are technologically inclined while the students are not.	7	12	230	21	1.83	0.98	LD
13.	Music teachers prefer having instant access to their students, friends and parents on Facebook but students are accustomed to paper works and reading textbooks.	4	8	214	44	2.05	0.93	LD
14.	Music students are accustomed to instructional manuals while the teachers prefer logical discovery through the internet.	10	11	189	60	1.94	1.05	LD
15.	Music students are inclined to reading books from cover to cover for information while teachers like web-based information.	8	16	187	59	2.11	0.90	LD
16.	Music teachers think students waste their lives online while students think of internet and virtual world as part of their lives.	14	6	169	81	2.83	1.04	HD
						2.15	.98	LD

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	Average Response Rate							
S/N	**Students' ICT knowledge**	**VHD**	**HD**	**LD**	**VLD**	$\bar{X}$	**S.D**	**DEC.**
15	I feel that music students are more knowledgeable in ICT than their teachers	40	218	10	2	2.63	1.06	HD
16	I like having instant access to my teachers on Facebook, Whatsapp or Instagram but my teachers are inclined to paper works and reading textbooks.	61	159	36	14	2.99	0.87	HD
17	I feel I have more knowledge in different ICT operations that I can even teach my teachers	10	241	14	5	2.78	0.99	HD
18	I collaborate with my friends in other schools through different social media.	39	220	6	5	2.65	1.06	HD
19	I am very knowledgeable in web-based information and my teachers seem to be more inclined to reading books.	68	190	4	6	3.17	0.84	HD
20	I spend many hours online working on virtual world but my teachers are seen to regard it as wasting time.	47	209	11	13	3.15	0.05	HD
	Average Response Rate					2.90	.81	HD

Key: VHD- Very High Degree, **HD**– High Degree, **LD**– Low Degree, **VLD**– Very Low Degree, **DEC –** Decision**, S.D –** standard deviation

Based on the result shown in Table 2, items 12–16 relating to teachers' ICT knowledge had a low level mean weight except for item 16. The standard deviation also buttresses the mean strength. The respondents on the students' ICT knowledge showed a high mean score considering all items (15–20) as well as the standard deviation of their response. Since majority of the respondents on the teachers' ICT knowledge had a low mean weight and considering the respondents' average response, it indicated low degree of ICT knowledge. On the other hand, majority of the respondents on the students' ICT knowledge had a high mean weight and considering the respondents' average response; it indicated high degree of ICT knowledge. Since the mean score of the respondents on the students' knowledge was higher than that of the teachers' knowledge on ICT, it therefore implied that the students had more knowledge in terms of ICT than teachers.
From the qualitative analysis done in the study, there appears to be a significant disparity between the digital skill of teachers and students. For example, a teacher stated *You cannot compare teachers and students in their abilities to use digital technology for learning. Some ideas I only got during my university days are accessible to music students through the internet. Students' abilities in utilizing the internet is way above that of teachers in my opinion.*-Mrs F.

For another respondent, the disparity between teachers and students in utilizing digital tool is non-negotiable. This respondent asserted that
If teachers were as good as students in the use of digital technologies, students would learn better. For me, there is a wide gap between what teachers know and what students know about information and communication technologies. During our time as students, there was nothing like the internet. Today students have access to the internet and all its resources. I feel that the idea of digital divide between teachers and students is a reality. – Mr. R.
Finally, another respondent a student asserted that

Based on the knowledge I have gotten from social media interactions, our teachers need to update. I tried asking my teacher to share a music with me but she could not do that– Ms C.

Summary of Findings

1. There was high extent of digital divide based on the responses of both music teachers and students on the place of ICT in operative curriculum. It was revealed that there was a high need of ICT in the operative curriculum.
2. There was low extent of disparity in ICT knowledge at 42.6% on the teachers' part and high extent of digital disparity in ICT knowledge at 57.4% on the side of students. The disparity in ICT knowledge between the teachers and the students was 14.8%. Therefore, there was a high extent of digital divide.

DISCUSSION OF FINDINGS

The result from research question one showed that there was no ICT in the operative curriculum., Hence, the music teachers were not ICT compliant, and were not competent in digital tools operation needed for technology-based music education. The finding in this study was in line with the previous works (Dorfman, 2008; Reese, 2002; Reese and Rimmington, 2000) who discovered that instructional use of technology in music classrooms was below expectation and below teachers' productivity uses. The study also showed that a relatively small number of music teachers were moving beyond technology integration to teaching music in an environment where technology was a defining factor. The findings were also in agreement with the submission made in Nwankpa (2014) and Onwuegbuna (2018) who revealed that the present curriculum in music classrooms was not relevant and as such it was not capable of preparing learners for today's world of work.

The above finding was not surprising, given that the present crop of students were seen to be more knowledgeable in the use of ICT than their music teachers. Research studies reported that students were digital natives as against their music teachers who were seen as digital immigrants as revealed in Prensky (2001). The transformative changes in teacher practice and students learning due to the use of digital technology were then under way (Riley, 2013). The main challenge of music educators was to motivate students to move beyond using mobile devices for primarily social interactions to using them for educational purposes (Oliver &Guerke, 2007). Additionally, they added that one possibility was for music teachers to collaborate with students based on how and what students believed they might incorporate using iPads and other mobile devices.

The above finding was similar to the study carried by Mclanahan, Williams, Kennedy and Tate (2012) on how iPad technology facilitated reading improvement in music classroom. The goal was to create an educational environment that would go beyond the restrictions of traditional classrooms by incorporating critical and creative thinking through interactive approaches, providing immediate access to information, increasing students' engagements and decreasing students' cost through the use of e-book. Their findings revealed that majority of students used iPads effectively to achieve course

objectives at least once a week. Also, the students had the beliefs that the use of iPads had a positive effect on communication skills and that mobile devices was quickly becoming a substantial part of digital literacy that can powerfully support students' achievement. It was reported also that pre-service music teachers needed to acquire some more experiences with the use of iPads so as to be technologically current. In conclusion, the disparity in ICT knowledge between music teachers and students created digital divide to a high extent.

Contributions to Knowledge

The study has fully established the fact that there are existence of digital divides in operative curriculum in use in Anambra State secondary schools. Therefore, this research has contributed a lot of existing empirical literature on the various ways to bridging the disparity in ICT knowledge between the music teachers and learners. Furthermore, this study has brought to limelight the serious technological demand of this 21st century on music teachers to be technological sabby which takes music education truly into the multiple literacies for the 21st century world.

CONCLUSION

The conclusion from this study reveals that there is a considerable digital divide between music teachers and students in the approach adopted in the teaching and learning of music in Anambra State. The concept of digital divide has brought the idea of digital natives (DN) and digital immigrants (DI) which were brought to limelight by Prensky (2001). However, the existence of high digital divides in the place of ICT in operative curriculum and low disparity in ICT knowledge on teachers side but high disparity on learners side are indicators that the music teachers should avail themselves to the affordance of ICT so as to bridge the identified gaps. The generational clashes in this study were based mostly on the fact that the music teachers have greater preference for teaching music through traditional methods while students prefer technologically-based teaching.

Nevertheless, there are prospects that music curriculum content will be restructured to be technologically-driven in the near future. This will be capable of equipping the beneficiaries for future would of work. Again, there is great possibilities that future music classrooms will be adequately equipped with digital tools and free internet connectivity for greater opportunities to bridging the digital disparity in ICT skill acquisition.

RECOMMENDATIONS

From the results obtained from this study, the following recommendations were made:

1. The music curriculum in use needed to be restructured to integrate ICT. This would offer opportunities for functional music teaching and learning which in turn help the music teachers to be competent in technology-based education.
2. ICT based seminars and workshops should be organized on regular basis for music teachers and students to upgrade their digital literacy. Free access to internet

connectivity should be granted to them as a way of motivating them to acquire more digital education.

3. Music teachers should be motivated to enrol in some ICT based courses where they could be exposed to activities that would help them to apply digital technology in teaching music. There should also be an adequate provision of digital tools to enhance their operation in music classrooms.

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