Relevance of Art Music Composition in the Digital Multimedia Presentation – The Case of the Burial of Ichie Nathan Obijiaku

By

Obiesie, Ezekiel N.C PhD
Department of Music, Alvan Ikoku University of Education, Owerri
Phone 07046878232
E-mail: ezekiel.obiesie@alvanikoku.edu.ng
&
Ahanotu, Ngozi Eunice PhD
Department of Music, Alvan Ikoku University of Education, Owerri
Phone: 08035401587
E-mail: eunice.ahanotu@alvanikoku.edu.ng

Abstract

This study explores the significance of art music composition in digital multimedia presentations, highlighting its role in enhancing emotional resonance, aesthetic appeal, and narrative depth. With the proliferation of digital media, music composition has become an integral component of multimedia content, including films, video games, and virtual reality experiences. It is on the above stance that this paper therefore discusses the relevance of art music composition in the digital multimedia, using bibliographic, ethnographic and musicological methods to extract information on the required concepts for effective research. The paper x-rayed some key concepts such as emotional resonance, aesthetic appeal, narrative depth, and memory and recall. The paper also put searchlight on the benefits of digital multimedia in art music composition such as enhanced engagement, creative expression, and cultural significance. In conclusion, the researchers allude to the vital roles art music plays in digital multimedia presentation. By integrating music composition with digital media as in the case of the burial of Ichie Nathan Obijiaku, creators can craft immersive experiences, engaging audiences and conveying meaningful stories. Highlighting the importance of art music composition in the digital age, the study encourages further exploration and innovation in this field.

Keywords: Music composition, Digital Multimedia, Computer Technology.

Introduction

Music composition is the art of music writing. It is the art of combination of well organized sounds that can be pleasant to the ear. It therefore encapsulates the four basic elements of music – melody, rhythm, harmony and timbre (tone-colour). Giving vent to the above assertion,. Onwuekwe (2016, p. 4) defines composition as "the art of creating original music for one or more media. Also, Onwuekwe (2019, p. 270) further defines music composition as "the art of writing original music for voice and or musical instruments for solo performance or in combination of both vocal and instrumental sections". To Nwankpa (2022, p. 8),

> Art music can be considered or viewed as a composition, ideation, review, analysis, or performance of well-structured music reflecting training, education, technical and intellectual competency, logic, evocative of emotion or idea, and with a high degree of sonic artistry and creativity.

In the light of the above, people mostly use music and its components to interact with others, to express themselves, to shape and maintain group consciousness from the view of social perspective. Today – may be with some exceptions – there is no society members of which are not being effected socially by mass media and internet. New technologies have directly entered into human life and individuals have rapidly consumed and used them. In fact, as a result of technological improvements, written visual, audio and audio-visual mass media, internet and related social mechanisms have renewed themselves. In most cases, it is believed that communicating through music is a way of publicly disseminating information via multimedia.

Music has been used for aesthetical, sociological, psychological, educational, political, and so on purposes by societies, institutions and; as Kaemmer (1993, p. 75) indicates,

> the socio-cultural matrix influences not only the musicians, but all the members of the society and a group's ongoing musical practices are the result of the experiences of the performers, audience, agents, and critics as they grow from babyhood to adulthood.

Music has also been one of the very important components of advertisements, soap-operas – a kind of radio or television serial drama dealing with domestic

problems, etc in a sentimental or melodramatic way, sitcoms and competition programmes in mass media. Different socio-cultural groups watch/consume same programmes and individuals try to adopt themselves to new conditions according as their economical, cultural and aesthetical conditions. Also music often serves as an acceptable channel of communication in a situation where open criticism or complaint would be unacceptable and traditions of improvising music and lyrics enable performers to make personal comments on events as they are occurring; usually in form of satirized music, typical of late Fela Anikulapo.

Effect of Digital Multimedia in Music Composition/Performance

To start with, let us talk about multimedia in its entirety so as to gain insight as well as the understanding of its effect in music composition and in the affairs of mankind. Multimedia is a medium through which the information can be easily transmitted from one place to another. Multimedia, according to Hilewicz (2022) is defined broadly here "encompassing artworks that involve multiple artistic dimensions including songs and program music as well as dance and film". According to Sullivan (1982),

> Multimedia is a form of communication that uses a combination of different content forms such as text, audio, images, animations or video into a single interactive presentation, in contrast to traditional mass media, such as printed material or audio recordings, which features little or no interaction between users.

Popular examples of multimedia include, but not limited to video podcasts, audio slideshows, live streaming of musical events, and animated videos. Multimedia also contains the principles and application of effective interactive communication such as the building blocks of software, hardware, and other technologies. Today multimedia is used in various fields of life like in education, training, business, religious/socio-religious services, etcetera and music plays important part/role in some of such media, and yet, as Shevy (2015) emphasizes/argues, "the research in this area ignores music as an independent component", hence some parts of this paper sets to highlight musical roles in a digital multimedia presentation.

What is Multimedia Presentation?

The word '**Multimedia**' is a combination of two words, '**Multi**' and '**Media**'**.** Multi means many and media means material through which something can be transmitted or sent. Multimedia is a loaded term. It can be anything from a composer to a singer singing while a painter or sketch artist creates a project platform. It combines all the media elements like text, graphics, audio, video and animation to make the information more effective and attractive. Two other elements that can help bring a presentation to life are music and vocal narration. Music can not only make audience pay more attention to the overall presentation but give it a bit more pop up. Expert analyses have it that music enhances digital multimedia narratives through emotional resonance, structural cohesion, and multimodal storytelling. The veracity of the above lies on the following ideations:

Emotional Guidance

Music has a way of triggering psychological responses, such as tension as a result of dissonant chords or joy through upbeat melodies, to amplify a scene's emotional weight. For example, horror scenes heighten fear, while romantic themes deepen emotional connection; typical of the Romantic Period kind of musical style called 'programme music'. Also, a suspenseful orchestral piece paired with a tense scene induces anxiety, whereas a pop song adds levity/buoyancy,

Narrative Reinforcement

The veracity that music underscores plot points, and character dynamics, functioning as an invisible narrator cannot be over emphasized in digital multimedia presentation. More so, synchronized crescendos during action sequences heighten impact.

Structural Cohesion

To enhance structural cohesion in films, audio slideshows, etc music has the capability to bridge uncoordinated scenes or time jumps. Recurring themes in films or adaptive scores in games maintain narrative flow while reflecting user choices.
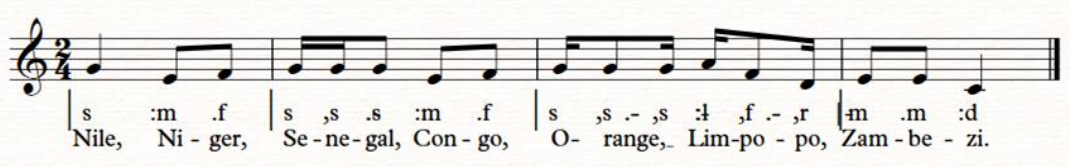
Multimodal Synergy

The relevance of multimodal synergy in recording studios is paramount; thus, soundtracks align precisely with visuals and sound effects to create layered meaning. For instance, the combination of eerie scores with jarring visuals intensifies horror scenes. In other words, the same visual of a night-time walk feels joyful with upbeat music but ominous with dark tones.

Memory and Recall

The use of familiar lyrics for musical texts/melodies or motifs create auditory branding, ensuring long-term audience engagement. More so, associative links between music and visuals enhance memorability. For instance, Ekezie, Obiesie & Ajamgbe (2024 p.3) recollected their primary school experiences in Geography lessons, that the major rivers in Africa, namely: Nile, Niger, Senegal, Congo, Orange, Limpopo, and Zambezi as well as the names of some political leaders of Africa, were taught to them using music to enable them memorize and remember them easily.

Thus:



Also, in Religious Knowledge, the names of Moses, his siblings and parents were taught to them also with musical melodies.

Interactive Adaptation

In video games, interactive music composition responds to player actions as dynamic scores shift based on player actions, mirroring character emotions and plot developments. Definitely, this form of interactivity deepens immersion and personalizes narratives.

By integrating the above stated elements, music transforms multimedia storytelling into a cohesive, emotionally charged experience that resonates deeply with audiences.

Technical Know-How and Components in a Standard Digital Multimedia

The multimedia combined all the media elements like text and graphics to make the information more attractive and effective.

Components of Multimedia

The various materials, technical know-how and components of a standard multimedia include **Text, Audio, Graphics, Video, Animation, Music and Voice**. All these components work together to represent information in an effective and easy manner. Let us now examine the functions and technical know-how of each of these components according to Pavnesh (2012).

1. **Text:** The most common medium of representing the information is Text. In multimedia, text is mostly use for titles, headlines, menu, etc. the most commonly used software for viewing text files are Microsoft Word, Notepad, Word pad etc. mostly the text files are formatted with professional jargons such as DOC, TXT etc extensions.
2. **Audio:** In multimedia, audio means related with recording, playing etc. Audio is one of the important components of multimedia because this component increases the understandability and improves the clarity of the concept. Audio includes speech (voice), music, etc. The commonly used software for playing audio files is: Quick Time; Real Player; and Window Media Player.
3. **Graphics:** Every multimedia presentation based on graphics. The use of graphics in multimedia makes the concept more effective and presentable. The commonly used software for viewing graphics is Windows Picture, Internet Explorer, etc. The commonly used graphics editing software is Adobe Photoshop through which graphics can be edited easily and can make effective and attractive.
4. **Video:** Video means moving picture with sound. It is the best way to communicate with each other. In multimedia, Video is also used to make the information more presentable and it saves a large amount of time. The commonly used software for viewing videos is also: Quick Time; Window Media Player; and Real Player.
5. **Animation:** In computer, animation is used to make changes to the images so that the sequences of the images appear to be moving pictures. An animated sequence shows a number of frames per second to produce an

effect of motion in the user's eye. Some of the commonly used software for viewing animation are: Internet Explorer; Windows Pictures; and Fax Viewer.

All the above variables constitute the basic components of a standard Digital Multimedia. Music and voice are part of the audio as stated above. To talk about the application of multimedia as Pavnesh (2012) further specifies.

Application of Multimedia

Nowadays, the applications of Multimedia are observed in various fields such as Education, Entertainment, Business, and so on. To communicate the message in the form of picture, sound, video, animation is the primary role of multimedia. Other applications are as follows:

1. **Multimedia in Education:** Multimedia is becoming popular in the field of education. It is commonly used to prepare study material for the students and also provide them proper understanding of different subjects. Currently, Edutainment, a combination of Education and Entertainment has become very popular in our society; as users are provided with both entertainment and learning through the system.

2. **Multimedia in Entertainment**: Computer graphics techniques are now commonly use in making soap-operas, movies, films and games. By this, the growth and significance of multimedia presentation is greatly increased to the needs of the society.

i) **Movies:** Multimedia used in movies gives a special audio and video effect. Today multimedia has totally changed the art of making movies in the world; as the hitherto difficult effects and actions are made possible through the application of multimedia.

ii) **Games:** Multimedia also used in games through computer graphics, animation and videos have changed the gaming experience. Presently, games provide fast action, 3-D effects and high quality sound effects which can only be possible through multimedia.

3. **Multimedia in Business:** Today, multimedia is applicable in various ways of life; such as in videoconferencing, where the system enables communication using audio and video between two different locations, through their computers. When the information is sent across the world, this technology provides cost benefits to the business, and as well saves their time, energy and money. In the light of the above, multimedia, as its name implies lives up to its billing.

The Computer Technology as a Multimedia

The word technology originated from Greek word 'tecnologia'. 'Techne' means 'craft,' and 'logia' means 'ordering or arranging' (Okpara 2018, p.56). More so, technology refers to "all tools and procedures and man's ability to control nature. The term can be applied to specific areas such as 'construction technology', 'educational technology', computer technology', etc. (Wikipedia 2014). This implies that in technology, we re-order our environment using our God-given wisdom. Salawu et al (2006, p.7) defines multimedia as "the existing combination of computer hard ware and software that allows you to interpret video, animation, audio, graphics, and texts resources to develop effective presentations on a computer" .

Also, the word **Digital,** on the other hand has to do with a mechanism that enables one to go or perform beyond analogue or manual devices of creativity, towards electronic pattern of creative realization, In the light of the above, the fact that computer technology is part and parcel of multimedia cannot be over-emphasized. This is so because the present day computer has the capacity to carry texts, graphics, audio, video and animation; hence multimedia can be used interchangeably with computer technology. Examples of computer software that aid in the tasks of music composition are finale, noteworthy, Sibelius, forte, etc. The researchers use the Sibelius, computer software extensively in music composition, editing and feedback. Supporting this view, Nwamara (2006), a renowned composer and researcher states that "the usefulness and importance of computer technology is very conspicuous and quite overwhelming…quite essential to a composer from the time he conceives his musical ideas till he finalizes/rounds off his creative job" (p. 130). He further states inter alia, that the computer technology enables the composer to have immediate feedback of his

work as he notes and listens to the sounds he notates; achieving easier, faster and cleaner scoring and arranging, and as well document/preserve musical works.

The Burial of Ichie Nathan Obijiaku and Digital Multimedia

The effect of digital multimedia in the burial of Ichie Nathan Obijiaku is enormous. From the composer of the special dirge/ode to the late Ichie as a medium, to the choir that performed the dirge and other hymns and anthems, as well as the array of priests that presided at the burial service starting from the processional hymn ushering the undertakers that brought the casket/body of the late Ichie into the church, to the priests' homily and prayers; it was so delightful**,** turning a supposedly mourning situation into joyful one at a certain point of the burial service due to effectiveness of the various media at the service.

From the onset, the researchers were adequately informed that the entirety of the burial service would be relayed live in the family house of the late Ichie in USA through streaming – a digital multimedia; which necessitated the high observance of decorum all through the burial service. In the light of the above, the effect of digital multimedia cannot be over-emphasized. It is actually the main source of entertainment and dissemination of information in day-to-day life activities.

The Intersection of Music and Digital Multimedia in Nigerian Movies

The veracity of the statement by a Canadian writer/critic that 'the medium is the message' becomes rife in Nigerian movies these days; meaning that the form of a message (print, visual, musical, etc) determines the ways in which that message will be perceived. In other words, the way a message is delivered (the medium) is more important than the message itself; this is because, the content and medium are intertwined, so that the central message or effect of something is not in the content it carries, but in the way it is presented. For instance, 'the invention of electric light as a technological medium, McLuhan claims has no direct content with itself, but has a message and dramatic cultural impact in the effect it had on the society'. Thus, with the invention of the electric light, hours of darkness become instantly more usable, therefore changing to societal landscape. On the other hand, one can infer from the above narrative that the changing of a mournful situation to a joyful one was as a result of a good musical composition and rendition as a medium of activity in the aforesaid burial ceremony/service of Ichie

Obijiaku.. McLuhan, in Euchner (2016) argues that modern electronic communications (including Radio, Television, Films and Computers) would have far reaching sociological, aesthetic, and philosophical consequences, to the point of actually altering the ways in which we experience the world. He further points out that:

> Media have enormous impact on the course of nature, and that it is essential to understand the nature – technical, sensory, social – of media in order to appreciate what they can do. Television, for example has been described as a low-resolution medium with a visual picture that is smaller than life, not sharply defined, and accompanied by poor sound; it is watched not in a communal setting, but in the isolation of the home and is typically received with a low degree of concentration or focus. Viewing is often intermittent, and the rough, grainy sound may actually get more continuous attention than the visual imagery.

This is to say that the intersection of music and digital multimedia in movies is a welcome development that cannot be over-emphasized. The production of a rational film entails a proper utilization of both the visual and audio elements to realize effective message delivery via ideal communication. The film industry is an important tool to humans for mirroring, creating change and for the projection of his perfect world. Thus the rock video, with its simple, strong musical beat, its surrealistic non-linear form (easily sampled in bits and pieces), and its need for relatively short periods of visual attention grows directly out of the nature of the medium.

The Nigerian movie industry has enjoyed so much attention both within and outside the shores of the country i.e. Africa, Europe, Asia and beyond. The growing popularity that has trailed the industry has been bedeviled with heavy criticism. There has been several calls from different works of life on the contents of the works that are being produced in great quantity with particular reference to relevance of thematic and intersection of music in films which is seen by many as significantly ignored by movie producers or not properly placed in sequential arrangement of events or scenes in the play.

This write-up therefore alludes to the relevance of music intersection with digital multimedia in Nigerian movies with proper sequential arrangement. Actually, music pre-empts film plots as well as the actions of events easily. It plays among other relevant roles, conveys the message that can draw the attention of the audience quicker, whether in mournful or joyful situations, just as it also helps in Nollywood film message delivery. It is therefore recommended that Nigerian movie makers and the stakeholders in Nollywood should improve in the intersection of music and digital multimedia in their movies in a more objective and innovative manner**.**

Analysis of the Special Piece for the Burial of Ichie Nathan Obijiaku

The analysis of musical composition for a digital multimedia, via audio with musical content is a difficult, but important task for various applications in computer music, audio compression, and music information retrieval. The special piece is aimed at expressing mankind relationship with the Almighty God. The analysis is based on the criteria for analyzing vocal African music composition according to Ezegbe (1983), which include the following: **The Scale Mode; The Tonal Range/Centre; The Melody; The Rhythm; The Texture; The Frequency of Tone/Note Occurrence; The Melodic Contour; and Percentage Density**.

The Title of the Music: *A bu M Osisi Vine Ahu* (I am the vine Tree).

The Song Text/Theme: John chapter 15, verse 5.

Tonal Centre: Key G Major.

Tempo Mark: (Poly-Time Signature) Common &Triple Times (4 beats &3 beats in a bar).

Speed: Mederato.

Duration: 223 Bars.

Form: Through Composed; comprised of five sections (ABCDE) and Coda).

Composer: Obiesie, Ezekiel N.C.

Purpose/Medium: A special piece for the burial of Ichie Nathan Obijiaku; hence an art music composition for a digital multimedia.

ANALYSIS

1. The Scale Mode: The music, **A bu M *osisi vine ahu*** is built upon a diatonic scale which according to Scholes (1978: 291) is a scale with seven different pitches, made up of major and minor tones and semi-tones. The music also has a non-equidistant

scale mode structure, because the intervals between tones are not equal. Some of the intervals are of whole tones and semitones as can be seen even in the opening bars of the piano introduction of the music, as well as in many other bars of the music.

2. The Tonal Range/Centre: The range of the melody is from one-line G to two-line A, with intervallic range of a compound 2nds. The music as stated above is pitched in key G Major as the key centre.

3. The Melody: The melodic progression of the music consisted of both major and minor intervals, leaps and stepwise movements, rhythmic imitations and static notes(see bars 26, 28, 30, 31, etc, as well as the use of unisons for greater emphasis. See bars 58, 59, and 127. Some elements of call and refrain movements were employed in various sections of the music.

4. The Rhythm: Two different types of rhythms were used in the composition of the music at different sections. From the piano introduction up to bar 61, a 4 beat per measure time was used, while a 3 beat per measure time began as the music modulated to key C major at bar 62. At the bar 163, the music returned to 4 beats per measure time and continued with it till the end of the piece at bar 223.

5. The Texture: The music, ***A bu M osisi vine ahu*** is composed for Soprano, Alto, Tenor and Bass(SATB), hence it is homophonic in texture, with a kind of contrapuntal/call and refrain pattern in between bars 48 and 54, while all the parts joined together at bar 55 to 57, and brought the section to a conclusive end with the application of unison between bars 58 and 59, also marked the end of the first motif, as the music for the first time modulated to its sub-dominant(key C major) at bar 62, and subsequently changed to 3 beats per measure time, as well as the entrance to section C of the piece.

The section C brought with it the second motif of the song text, ***nihi na unu apugh ime ihe obula ma Mu anogh ya*** (for without Me you can do nothing). There is also call and refrain pattern in this section between the soprano and the other parts from bar 68 to 75, while all the parts joined together from bar 76 to 82, bringing the second motif of the song text to a meaningful end. From bar 83 to 101, the Soprano

and Alto, in a *cadenza* style narrated the song text while all the parts joined in concurring the narration with the composer's added motif, ***eiya, okwu Jisos gwara ndi neso uzo Ya,*** between bar 102 and 108. In a similar fashion, the Tenor and Bass parts expounded on the remaining part of the song text from bar 109 to 119 while all the parts again joined by repeating the composer's added motif from bar 120 to 126. There is a unison at bar 127, progressed to full harmony from bar 128 to 135 and a *poco rit* at bars 133 to 135 which marked the end of the section, while the music returned to the home key. The section D begins with *a tempo* at bar 136, as the Tenor and Bass parts sing a quasi unison that brought in the application of augmentation style of the lyrics, ***onye na nogide nime M*** (he who abides in Me) amongst Soprano and Alto parts while Tenor and Bass parts maintained the basic movement of the lyrics from bar 142 to 149. Contrapuntal movements and rhythmic imitations ensued from bar 150 to 158, while the music returned to homophonic from bar 159 to 160 and marked the end of section D.

From bar 160, section E, the music returned to 4 beats per measure time and ushered in the antiphonal solo ostinato, with *a cantus firmus*, **eye, iyomee** added motif on Bass & Tenor parts from bar 172 to 196. There is a Coda from bar 197; as the composer, with the application of *cadenza* weaved the entire lyrics of the song text or theme with various music compositional patterns and styles, such as mellisma, contrapuntal and call & refrain patterns, leading to observance of *adagio* at bar 219 as the music conclusively ended at bar 223.

6. The Frequency of Tone/note Occurrence: the frequency of tone/note occurrence for **A bu M *osisi vine ahu*** is as follows: C has 308 notes/tones; D has 428; E has 257; F has 250; G has 486; A has 327 and B has 333 notes/tones. This shows that key G, the tonal centre predominated in the musical notes/tones used in the composition with 486 notes followed by D with 428 in number of notes. The next is B with 333, followed by A with 327. Others are: C 308; E 257 and F 250. The difference between the highest and the lowest number of notes used in the composition is 486 – 250 = 236. Altogether there are 2,389 musical notes/tones used in the composition of the piece.

7. Melodic Contour: I wish to state that musical notes of varied note values were used in the composition of **A bu M *osisi vine ahu.*** Musical notes such as

semibreves, dotted-minims, minims, dotted-crotchets, crotchets and quavers. The music moved in both static notes, as earlier stated, as well as in conjunct (stepwise) and disjunct (leap) motions. Intervals of seconds, thirds, fourths, fifths and perfect octaves were variously applied in the composition of the piece of music.

8. The Density/Percentage Density of Notes: The density of the notes; that is the number of times each musical note appears in the music is as follows:

C	=	308
D	=	428
E	=	257
F	=	250
G	=	486
A	=	327
B	=	333
Total Density	=	2,389.

8b. Percentage Density: The percentage density of each of the notes used in the composition vis-à-vis the total number of notes in the composition is as follows:

C	=	308/2389	x	100/1	=	12.89%
D	=	428/2389	x	100/1	=	17.92%
E	=	257/2389	x	100/1	=	10.76%
F	=	250/2389	x	100/1	=	10.47%
G	=	486/2389	x	100/1	=	20.34%
A	=	327/2389	x	100/1	=	13.68%
B	=	333/2389	x	100/1	=	13.94%
Total Percentage Density			=			100%

Conclusion

Having expounded on the eight criteria for African vocal music compositional analysis as propounded by Ezegbe (1983), the composer of the piece, ***A bu M osisi vine ahu*** opines that composers, nay musicologists in general should be abreast of its usefulness in African vocal music analysis for multimedia presentation. The music score can be provided if needed.

References

Ekezie, L.N. Obiesie, E.N.C. & Ajamgbe, C.O. (2024). The music composer in the Covid-19

Pandemic: An analysis of the song, *ekwela ka ihe obula nye gi nsogbu* (do not be troubled by anything). *Awka Journal of Research in Music and the Arts (AJRMA) vol. 17. 165 – 180*.

Euchner, J. (2016). *The Medium is the Message.* Research Technology Management 59 (5): Information UK. 9 – 11.

Ezegbe, C.C. (1983). *Lecture Mimeogragh on Organology*. Anambra State College of Education Awka.

Heliwicz, O. (2022). *Music in Multimedia.* https://music.columbia: Department of Music, Columbia University

Nwamara, A.O. (2006). Fulfilling social commitment through the employment of computer technology in Nigeria: The musicologist's perspective. *Nigerian Musicologist Journal 2, 23 – 33*.

Nwankpa, O. N. (2014). Compositional and structural paradigm: An introductory discourse on creative experience. *The Crab: Journal of Theatre and Media Arts*, 9, 9.

Okpara, M.U. (2018). Multimedia technology: A vital instrument for music composition. *International Journal of Arts and Humanities (IJAH). Ethiopia*. www.http://dx.dpi.org/ 10.4314/ijah.v7i3.6. 55 – 64.

Onwuekwe, A.I. (2016). Structural analysis of Idolor's Hallelujah to His name. *in K.E. Eni, B. Benebai & S.O. Ikibe (Eds), Music Scholarship, and Performance Challenges in 21st Century Africa: A Critical Resource Book in Honour of Emurebone Idolor,* Lagos: Bahiti & Delila Publishers. 3 – 31.

Onwuekwe, A.I. (2019). "Nkwankwa", an Igbo dance music as a resource material for indigenous music composition: "Nkwankwa", for flute and traditional ensemble. *Journal of the Association of Nigerian Musicologists (JANIM) 13, 268 – 281.*

Pavnesh, P.S. (2012). Multimedia: Components and Applications. www.indiastudychannel.

Salawu, I.O., Ajelabu, A., Inegbedion, J. (2006). Multimedia Technology in Teaching and Learning: *National Open University of Nigeria (NOUN).*

Shevy M. (2015). Psychology of Music in Multimedia: Oxford Prtess.

Sullivan, I. (2018). Multimedia – Wikipedia. https://en,m,wikipedia. Retrieved 30th Sep, 2022.

Wikipedia (2014). What is Digital Recording? Online Encyclopedia. Retrieved from www.wikipedia.com on 30th Sep, 2022.