

Article

Digital Technological Approaches and Adaptations to the Use of Staff and Solfa Notations in Nigerian Choral Music

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Abstract

Following the preponderant use of Android phones and such music notation software as Sibelius, Finale, and MuseScore, many choristers have become technologically savvy and begun to explore social media platforms like YouTube, Facebook, and Twitter to create and promote new modalities and pedagogies for music sharing. This article explores how the global digital economy has transformed the way that choristers in Nigeria approach consumption, teaching, learning and circulation of choral music. We do so using inquiry research, direct interviews and observation of the new stylistic adaptations by and from music stakeholders who daily engage with the challenges of a changing digital economy. This article concludes with evidence of new approaches and adaptations to the use of both staff and solfa notations in the teaching and learning of choral music in Nigeria.

Keywords: Nigerian choristers, choral music, digital technology, solfa notation, staff notation

Introduction

Music-making has evolved rapidly in Nigeria—from oral transmission to systematized notations and, most recently, the internet where digital technology now empowers musicians and audiences. Details of this academic exploration within the Nigerian academia are at a projected level. First, musical literacy necessitates a way to teach it (Carter-Enyi, 2018). Thus, the study of the growth in music notation in Nigeria is pivotal to any meaningful exercise in Nigerian musicology. Music notation has been evolving for centuries and creating symbolic systems—from neum, letter, choir-book, klavaskribo, staff to Sol-fa notations (Jin, 2013; Onwuegbuna, 2006). Since musical works come alive only when they are performed, the process of systematizing and abstracting theories remains the primary preoccupation of the musicologist (Vidal, 2009). Accordingly, a crucial point of frustration for any African composer is to work laboriously on serious compositions that only end up on the shelf and unperformed. A composer does not need to be a performer for his/her works to be widely known. Just a growth in the industry of music notation and circulation systems prevents the tragedy of composers ending up producing "silent scores" (Osayande & Agbidi, 2011: 223).

This work exposes new vistas of learning in African musicology and what Adedeji (2006: 137) calls "transformative musicology". It deals with how digital technology can be beneficial in music education, only insofar as the teacher and students understand how to use it properly and how internet technologies have enabled a new participatory culture full of creativity and innovation (Draper, 2008; Kerslake, 2014). We engage with the use of notation software by Nigerian composers and also the current dynamics of social media



appropriations within a new digital economy. Vidal (2009) speaks of an African approach to the study of musicology in Nigeria, and specifically calls it "musicologising in the context of globalization" (Vidal, 2009: 21). He critically asks:

Do we understand what 250 ethnic groups in Nigeria are doing musically with sound in their various musical cultures? Do we fully understand where we are today historically, how we got there and where we should be journeying to? Is the kind of music education system we have today suitable for us as Nigerians and is it capable of giving us an identity as Africans in a globalized world? (p. 26.)

Through the rise in proficient use of the internet and digital technology, Nigerian musicology has come to another level of creativity marketing. The harsh economic reality has placed many Nigerian choristers and composers in the mode of creativity and economic innovations. The twenty-first century saw a new era of technological breakthroughs culminating in the invention and spread of facilities like the hand phones, especially of the Android category. This came with several pleasant economic outcomes for both composers and choristers in general. This article's theoretical framework relies on disruptive innovation theory and a Do-It-Yourself (DIY) concept to discuss breakthroughs achieved in the digital production and circulation of music data. This theory sees necessity as a mother of disruptive innovations and explains why the invention of new facilities like email, for example, has succeeded in disrupting the older systems of postal delivery services. Accordingly, this paper examines how Staff/Solfa notations have been adopted and localized by Nigerian choristers through the use of software and several social media apparatuses that make music circulation much easier and cheaper. By Nigerian choristers, we mean choral singers and composers living and operating the musical art within Nigeria. The plummeting and excruciating economic conditions under which many Nigerian choristers operate present the fecund background for this research. Through inquiry research methodology and the use of online surveys, and in-person and email interviews, we sourced requisite information about the use of the social media and music notation software by a good number of Nigerian Choristers.

Use of Staff/Solfa Notation

Staff Notation

The origin of staff notation can be traced to the Middle Ages (11th century) in Europe when a music theorist and Monk, Guido d'Arezzo, developed a four-line coded system used in notating Gregorian chants. It was in his treatise "Micrologus" that d'Arezzo explained how this system could be used in music notation and it grew to replace the ancient neumatic system. He also developed and proposed the use of clefs as the main signs to indicate the pitches of the notes written on a staff. The staff, which is also known as the stave, underwent further expansion and improvements through the works of other music theorists like Guillaume de Machaut in the 14th century and Jean-Jacques Rousseau in the 18th century. Their major impact was in the addition of more lines to the staff, the introduction of accidentals to the staff and the development of other musical symbols (Hoppin, 1978). The use of staff spread widely from Europe to other parts of the world from the Medieval era through to the Renaissance and later in the 19th century where it was developed to the standard five lines in use today by Francoise-Joseph Fetis (Colles, 2007).

By the 20th century, and following the advent of computers and digital notation software, staff notation witnessed another significant development. The first generation of such software included both Finale and Sibelius which were developed in the 1980s. With these, creating, editing and publishing of musical scores were made easier and faster. Another important development in the staff notation history is the advent of open-source software like the Muscore and the Lilypond. These software programmes give free access to the software code modifications thereby creating a notation system that is community-driven. With these, folk and other world music traditions which were previously difficult to notate became easy to do (Frazelle, 2010; Onwuegbuna, 2019).

Solfa Notation

The origin of solfa notation is also traceable to Guido d'Arezzo. In an attempt to develop a system that would make it easier for singers to learn music by ear, he established the solfa notation system that was rooted in the syllables of a Latin hymn. There have been a lot of developments and improvements in the Solfa system. In the 13th century, for example, clefs and accidentals were added to the system. Later in the 14th century, theorists like Giovanni Pierluigi da Palestrina standardized it by creating new syllables that remain in use today. As well, Jean-Jacques Rousseau developed the movable *doh* system, which made it easier for one to write melodies in any key (Cole, 1974; Frazelle, 2010).

Another important development in the system happened in the 19th century when John Curwen and Sarah Glover developed the "tonic solfa" method and also the "solfa finger method" which employed hand signs to indicate the solfa notes especially for children. By the 1850s, the Solfa movement precipitated a musical renaissance in Victoria England "but struggled to gain traction with the academic establishment" (Carter-Enyi, 2018: 165). In the late 19th Century, the Tonic Solfa Society joined forces with the Missionary Movement and the Colonizers took advantage of that. Christian evangelism would not have been so successful during the colonial era in Africa without it (Ekwueme, 1974; McGuire, 2009). With these developments especially in Nigeria being part of the old British colonies, solfa system became more accessible, more popular and easier to use among singers, especially Nigerian choristers. The tonic Sol-fa system is a system of syllable names used for sight-singing and ear training. The principle of the system is that each note of the scale is an easily singable syllable. Thus, C D E F G A B C becomes *do re me fa so la ti do*, sometimes spelt as *doh, ray, meh, fah, soh, lah, te, doh* (Karolyi, 1965).

Major Advantages of Sol-fa Notation

One major advantage of solfa notation is that it aids good ear training and singing skills. With a good knowledge of solfa notation, singers are better equipped to sing accurate pitches. Solfage provides a good framework for melodies by establishing recognizable relationships between pitches and provides music education for both the higher and lower (Greenwood, 1882). Solfa notation enhances ear training and singing skills. It helps singers internalize the pitches and intervals, aiding in accurate pitch reproduction (Gimeno, 2007). Solfa notation generally makes learning easier.

According to Houlahan and Tacka (2008), Solfa notation simplifies the process of learning and sight-singing, making it accessible to beginners. The syllables provide a mnemonic aid for remembering pitches. In reality, Solfa is an empowering system of pitch recognition for music of all ages. It is great to know a pitch by letter names in a certain key, but once a new singer changes to a tune higher it takes time to sit down and write it out in the new key.

Even the use of accidentals and chromatic notes is easy in the solfège system because you can raise or lower the pitch of a note by a semitone (half step) by changing the vowel in the syllable. For example, 'doh' can become 'de' (Boone, 2017). According to Boone,

Solfège works wonders for transcribing music (writing down what you hear) - whether it's your favorite jazz solo or the music you are hearing in your head. Learning solfège can also work wonders for your chops as a composer, whether you're writing a vocal melody or an Instrumental piece. With enough practice, you can progress from sight-signing existing songs to making up beautiful melodies because you'll already have a good idea of what they'll sound like. Then, you will be able to remember them and easily write them down in order to communicate your ideas with other musicians (p.5).

That said, some scholars have noted the following limitations of Solfa Notation.

1. *Limited Precision:* According to Hoppin (1978), Solfa notation lacks the precision of staff notation in representing exact pitch and rhythm. It may not be suitable for complex compositions or professional notation requirements.
2. *Context Dependency:* According to Benward & Saker (2003), Solfa notation requires familiarity with the diatonic context of the key and can be challenging when dealing with non-diatonic or atonal music.

Major Advantages of Staff Notation

Staff Notation presents a kind of graphic/pictorial outlook of each sound's duration and pitch. These are indicated by symbols called notes which are written on a staff - a series of five parallel lines separated by four spaces. Each note has its value proceeding in time (Ho, 2015). Some beginners arguably find the Staff easier from this perspective of seeing the sounds pictorially as they ascend or descend and as they widen or shorten.

Furthermore, some Nigerian musicologists we interviewed like Innocent Okechukwu¹ contend that tonic Sol-fa is limited within modulations and continuous change of keys. However, this depends on one's understanding of music theory and sense of tonality. "It is limited also," he says, "for its inability to offer much shorter durational values such as the demi-hemi-semi-quaver. It is limited in the event of orchestration, as some instruments in the philharmonic orchestra are transposed instruments. It would be almost an impossible journey to figure out what each should play".

The following advantages of Staff Notation have been outlined by scholars.

1. *Precise Representation:* Staff notation provides an accurate representation of pitch, rhythm, and various musical elements, making it suitable for complex compositions and professional use (Read, 1954).
2. *Universal System:* Staff notation is a universal system used by musicians worldwide, facilitating communication across cultures and time periods.

As well, the following challenges in the use of Staff Notation were noted.

1. *Initial Complexity:* Gimeno (2007) observes that Staff notation can be initially complex and intimidating for beginners, requiring a steeper learning curve compared to solfa notation.

¹ Innocent Okechukwu, Interview with authors, August 5 2023.

2. *Less Intuitive for Singing*: Ahan and Tacha (2008) point out that Staff notation may not be as intuitive for singers when it comes to interpreting pitches and intervals directly in relation to the human voice.

As an outcome, most instrumentalists prefer to use staff notation for better clarity and fluidity in representing notes and their precise pitches. To be clear, when music leaves the realm of tonality, tonic sol-fa loses its relevance, but as long as one is dealing with tonal music, especially vocal music, according to Emmanuel Asogwa,² "tonic Sol-fa would be easier and more fashionable". This is why tonic solfa is fast becoming the preferred heuristic for contemporary choral music notation in Nigeria since the majority of choristers especially church choristers perform only works that are tonal in character. The composition cited below, ANYI NILE SHI by Maximus Onyishi, is a twenty-two paged choral music presented in partial fulfillment for the award of a bachelor's degree in Music. The piece was studied and presented by a rural church choir situated close to the University of Nigeria, Nsukka—the awarding institution. The choir had a majority of indigent students who could neither read staff notation nor afford the high cost of music scores written in staff notation. The composer had to extract the solfa transcription from Sibelius and use a Microsoft editing application to reduce the piece to about 5 pages. This made it easier for each chorister to access a scanned copy using their Android phones ahead of rehearsals since all the choristers had access to Android phones. For some comparison, we present an excerpt of the music in staff notation (Fig. 1) as well as the corresponding page in solfa (Fig. 2).

² Emmanuel Asogwa, Interview with authors, August 6 2023.

ANYI ILE SHI

MAXIMUS CHIDERA ONYISHI

Presto

SOPRANO
o bo do gba ko ta o bo do gba ko ta

ALTO
o bo do gba ko ta o bo do gba ko ta

TENOR
o bo do gba ko ta ha le le

BASS
o bo do gba ko ta nu ha le le

2

S.
o bo do gba ko ta o bo do gba ko ta o bo do gba ko ta

A.
o bo do gba ko ta o bo do gba ko ta o bo do gba ko ta

T.
o bo do gba ko ta ha le le o bo do gba ko ta ha le le

B.
o bo do gba ko ta o bo do gba ko ta ha le le

Fig. 1: A three-bar excerpt of the twenty-two paged choral music, ANYI ILE SHI, in Staff Notation

PAGE 1

ANYI ILE SHI

Doh is F

Presto

MAXIMUS CHIDERA ONYISHI

<p>1</p> <p>f</p> <p>o bo do gba ko ta o bo dogbako ta o bo dogba ko ta</p> <p>o bo do gba ko ta o bo dogbako ta o bo dogba ko ta</p> <p>o bo do gba ko ta ba le le o bo dogba ko ta ba le le</p> <p>o bo do gba ko ta nu ba le le o bo dogba ko ta ba le le</p>	<p>2</p> <p>o bo dogba ko ta</p> <p>o nyerikpo ru ya fu ta o</p> <p>o bo dogba ko tanuo</p> <p>o bo dogba ko tanuo</p>	<p>3</p> <p>o bo do gba ko ta o bo dogbako ta</p> <p>o bo do gba ko ta o bo dogbako ta</p> <p>o bo do gba ko ta ba le le</p> <p>o bo do gba ko ta ba le le</p>
<p>4</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p>	<p>5</p> <p>o nyerikpo ru ya fu ta o</p> <p>o nyerikpo ru ya fu ta o</p>	<p>6</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p>
<p>7</p> <p>fu ta ka nyigwu rin'egwu</p> <p>fu ta ka nyigwu ri mgwu</p> <p>fu ta ka nyigwu ri mgwu</p>	<p>8</p> <p>o bo dogba ko tanuo</p> <p>o bo dogba ko tanuo</p> <p>o bo dogba ko tanuo</p>	<p>9</p> <p>te o gbe nye te o gbanu</p> <p>te o gbe nye te o gbanu</p>
<p>10</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p>	<p>11</p> <p>te o nye ke te o nyaye</p> <p>te o nye ke te o nyaye</p>	<p>12</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p> <p>o bo do gba ko ta nu</p>
<p>13</p> <p>o nyo ma ra mony'o mara kpo ro ya</p> <p>o nyo ma ra mony'o mara kpo ro ya</p> <p>o nyo ma ra mony'o mara kpo ro ya</p> <p>o nyo ma ra mony'o mara kpo ro ya</p>	<p>14</p> <p>o nyo mara may'o ma ra kpo ro ya</p> <p>o nyo mara may'o ma ra kpo ro ya</p>	<p>15</p> <p>o nyo ma ra ony'o</p> <p>o nyo ma ra ony'o</p> <p>o nyo ma ra ony'o</p> <p>o nyo ma ra ony'o</p>
<p>16</p> <p>ma ra tu ru zam</p> <p>ma ra tu ru zam</p> <p>ma ra tu ru zam</p> <p>ma ra tu ru zam</p>	<p>17</p> <p>o nyo mara may'o ma ra kpo ro ya</p> <p>o nyo mara may'o ma ra kpo ro ya</p>	<p>18</p> <p>o nyo ma ra kpo ro ya</p> <p>o nyo ma ra kpo ro ya</p> <p>o nyo ma ra kpo ro ya</p> <p>o nyo ma ra kpo ro ya</p>

Fig. 2: An excerpt of a Tonic Solfa reduction of ANYI ILE SHI

A brief comparison of Figures 1 and 2 shows that just one page of three bars in staff notation is equivalent to eighteen bars of the same music written in solfa notation. This makes the case for a more economical use of space and sheets and is perhaps a major reason why most Nigerian choristers prefer solfa notation.

Digital Innovations for Music Learning and Circulation

Digital innovations were found to have several socio-economic impacts on the learning and circulation of both art and popular music in Nigeria (see Modeme & Onwuegbuna, 2023; Onwuegbuna, 2022). Here, we wish to explore various technologically assisted options in composition and performance, as well as explore the various social media platforms available for sharing works, musical ideas and activities on the internet. The internet revolution which started in the 1980s is fast developing in Nigeria. Digital transformation is now impacting businesses in both the developed and developing worlds, and Nigeria is not left out. Following the rapid increase in the use of mobile phones from the late 1990s, social media and internet technologies have cascaded to new levels in Nigeria (Olayinka & Wynn, 2021).

Uquah (2015) narrates Joshua Uzoigwe's experience with a studio engineer in Lagos who, out of musical illiteracy, recorded all his entries on a single midi channel. As a result, the different instrumental parts were playing back as a flute consort, and the great composer was frustrated. He was finally able to help the composer interpret his scores and record each instrumental part independently on individual midi channels, as well as assign them to the relevant instruments. Uquah says: "The end result produced such a great relief and satisfaction to the composer who was by now overwhelmed with gratitude" (p. 121).

Digital innovations have challenged and disrupted the traditional model of music-making (Ofochebe, 2020). In the 1980s and 1990s, this traditional model relied on the physical distribution of music recordings in CDs and tapes. The technical changes we have seen include the use of the internet for music circulation, advanced computers for music recording and scoring, social media streaming platforms such as Facebook, Twitter, YouTube and Instagram, file-sharing devices and many others. These have greatly revolutionized the ways that music is created, produced, marketed, distributed and consumed today (Olayinka & Wynn, 2021; Onwuegbuna, 2022). From this development have emerged social media networks like Amazon, Internet search engines like Google, and so on. Digital innovations in the Nigerian music industry have challenged and disrupted the traditional model and also opened new avenues for economic development beyond the traditional music distribution frameworks. According to Ofochebe (2020), "Digital innovations have democratized the Nigerian music industry by reducing record labels control and the need for the overpowering record deals that mainly enrich the labels more than the artists" (p. 10). Nigerian composers like Jude Nnam³ have since been enjoying royalties from the download of their compositions on Facebook and YouTube. The proliferation of private television stations in Nigeria created a need for local contents such as talk shows, home videos, soap operas, films, documentaries, and the concomitant digital marketing devices that composers and musicians continue to leverage for economic growth (Uquah, 2015).

The following summaries succinctly articulate the view of scholars on digital innovations in the music industry.

³ Jude Nnam, 50 Most Popular Jude Nnam Compositions, assessable from <http://youtube.com/playlist=RDS22S490V5Tw&playnext=1>

1. Facebook and YouTube for Promotion: Tsiakis and Veijalainen (2017) explain how platforms like Facebook and YouTube allow musicians to share their compositions, performances, and music videos with a global audience. This has helped in building a fan base and requisite attention from potential listeners and collaborators. YouTube can share both audio and visual files. It is meant for entertainment only since you cannot download the uploaded works. You make money from YouTube by getting more and more subscriptions and views. When you have, say, ten thousand subscribers, YouTube may begin to pay you per week in dollars. The more people share the work, the more people click and subscribe to it.
2. Twitter for Artist-Listener Interaction: Hrastinski and Keller (2017) explain how Twitter provides a direct channel for musicians to engage with their audience. Musicians can now share updates about their compositions, upcoming releases, and behind-the-scenes content and, thus, foster a stronger connection with fans.
3. Online Distribution and Sales: Wikström (2013) explains how social media platforms can serve as gateways to digital distribution platforms. Musicians can now share links to their compositions on platforms like Spotify, Apple Music, and Bandcamp, leading to potential sales and streaming revenue. Spotify is an app that shares recorded audio works only. It has this special feature that enables composers finished work to be recorded and dropped online for others to listen to.
4. Crowdfunding Campaigns: Cunningham and Silver (2019) contend that musicians can use social media to promote crowdfunding campaigns for new compositions, albums, or music videos. This allows fans to financially support artists directly and, thus, contribute to the growth of the music business.
5. Instagram Visual Promotion: Muniz Jr. and O'Guinn (2001) say that Instagram's visual nature is perfect for promoting album covers, behind-the-scenes glimpses, and short video clips. Musicians can therefore use Instagram stories and reels to share teasers, snippets, and creative content that engage the audience.
6. Monetization through Ads and Views: Decherney (2012) explains how YouTube's monetization model allows musicians to earn revenue from advert placements and views on their videos. This creates a revenue stream for both established and emerging artists, contributing to their financial sustainability.
7. Merchandise Sales and Direct-to-Consumer: Peitz and Waelbroeck (2006) explain how social media platforms enable musicians to sell merchandise directly to fans. Platforms like Facebook and Instagram shops provide convenient ways to showcase and sell physical and digital products.

Use of Notation Software

Musical notations, as earlier stated, have evolved over the centuries creating symbolic systems to convey musical information in many and varied ways. Some music software such as Sibelius, Finale and MuseScore has been developed to meet the needs of composers and musicians.

1. Finale is a comprehensive music notation software (MakeMusic, n.d.) that offers features for staff and solfa notation. It has good sound enhancement since the synthetic plug-ins sound almost like real instruments compared to Sibelius.
2. Sibelius is a popular music notation software that also supports the scoring of both staff and solfa notation (Avid Technology, n.d.). If a composer finishes working in staff notation, he/she can simply have the liberty of converting the whole file to solfa notation before exporting the same to graphics.
3. MuseScore is a free and open-source music notation software (MuseScore, n.d.) that allows for only staff notation but is more user-friendly in the sense that it guides the user with comment sections while you work. You can save your score in Musescore online and easily access it again using another computer, even if your system crashes or is corrupted by a virus. It also assists with copyright and enables authors to market themselves quickly, since people can only see the work but cannot gain access without a subscription.

Evaluation and Conclusion

We have presented a history of music notations alongside the basic algorithmic developments and those emerging digital technological devices that affect music education and merchandise in Nigeria. By comparison, we have detailed the pedagogical dynamics of using both Solfa and Staff notations, considered the sociological threshold from which they emerged, and thus recommend that both notations should be used in Nigeria. The very ancient submission of Greenwood, et al (1882) comes to mind here:

If our primers combined the rudest elements of notation with the same admirable directions for the use of voice and the cultivation of expression which may be found in the standard course of the Tonic Solfa, Staff Notationists would have much less difficulty in teaching and in learning singing...A great end is gained when young children, whether rich or poor, can be taught upon a system which leaves them nothing or little to unlearn when they grow older or more experienced. (p. 3).

The Tonic Solfa has therefore been recommended here to serve as an introduction to the staff and for both economic and pedagogical reasons. We suggest the teaching of both notation styles in all music schools in Nigeria. Through the use of notation software programmes like the Sibelius, many choristers can have a pictorial view of choral works in staff notation as well as see the solfa notation equivalent for easier learning.

We have outlined the vistas of digital marketing and technological innovations – many of which echo the views of scholars that social media has democratized the music industry. As an outcome, Maximus Onyishi⁴ has been able to upload both his musical scores and video recordings of his Bachellor's degree composition project to his YouTube and Musescore channels as part of his curriculum vitae (CV). This is a fecund example of how Nigerian composers and choristers in general can market themselves through social media.

⁴ Maximus Onyishi, Anyi Nile Shi – a Final Year Degree Project Defence presented to the Department of Music, University of Nigeria, Nsukka accessible online from <https://youtu.be/BLBew9KXi0c>

Digital innovations have challenged and disrupted the traditional model of music-making, leading to the use of advanced computers for music recording and scoring, as well as the proliferation of private television stations, creating a need for local content. This has opened up opportunities for composers and musicians to leverage digital marketing devices for economic growth. In light of the foregoing, the main music notation software used by Nigerian choristers is Sibelius, Finale, and MuseScore. These software programmes have been adopted by Nigerian choristers to create, edit, and publish musical scores, as well as to facilitate the teaching and learning of choral music. The digital economy has significantly transformed the way Nigerian choristers approach the creation and promotion of new modalities and pedagogies for music sharing. With the preponderant use of Android phones and music notation software programmes, choristers have become technologically savvy. They have begun to explore social media platforms like YouTube, Facebook, and Twitter to create and promote new modalities to their creative and economic advantages.

The impact of the digital economy has led to the democratization of the Nigerian music industry, reducing the control of record labels and empowering artists. Choristers and composers have leveraged social media platforms to share their compositions, performances, and music videos with a global audience. This has helped in building a fan base, fostering a stronger connection with fans, and creating new avenues for economic development beyond traditional music distribution frameworks. The digital economy, therefore, has revolutionized the ways that music is created, produced, marketed, distributed, and consumed in Nigeria, providing choristers with new platforms and tools to create, share, and promote their musical works. The new approaches and adaptations to the use of staff and solfa notations in the teaching and learning of choral music in Nigeria have been influenced by the digital economy and technological advancements.

Future Frontiers

We offer the following suggestions for further research.

1. Introduction of the job of music director in state government houses and the Ministry of Arts and Culture for standard chapel music, state concert halls and effective management of standard choral groups. Formal applications for such jobs can be published online and musicologists would be expected to apply from all over the country.
2. Music graduates, especially composers should go ahead to record and market themselves and their musical products through social media networks like YouTube, Twitter, WhatsApp and Facebook, and thus provide links to their productions/performances audio-visual as part of their curriculum vitae.
3. More composers and performers should leverage available notation software and social media to promote their works (in both Staff and Solfa notation). This will give them the visibility that can support their efforts to secure international scholarships,

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