

DR GABRIEL ADEMOLA OYENIYI

ademolaoyeniyi17@gmail.com

ORCID: 0009-0009-0672-7159

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AI AND MUSIC COMPOSITION AMONG STUDENTS OF NIGERIAN BAPTIST THEOLOGICAL INSTITUTIONS

Abstract

Artificial Intelligence (AI) is having a growing impact on music creation worldwide, but little is known about how it affects church music education, especially in Nigerian Baptist Theological Institutions. This paper investigates how music students in these institutions use AI to create religious music. It aims to assess students' knowledge of Artificial Intelligence (AI), examine the AI tools they employ, investigates the moral dilemmas surrounding AI in church music, and suggest methods for integrating AI-related instruction into theological music courses. The Technology Acceptance Model (TAM) and the Theory of Technological Acceptance serve as the foundation for this study, concentrating on how people embrace new technology and how it can affect social norms. Using a mixed-methods approach, the research combines surveys and interviews with students and faculty from selected Nigerian Baptist theological institutions to acquire qualitative data. The results reveal that many students are still ignorant of the potential of AI tools for music creation, even though some are aware of them. The validity of AI-generated music and its conformity to religious doctrine, particularly with regard to authorship and divine inspiration, are ethical issues. By offering strategies for integrating AI training and resources into the curriculum to assist students in navigating these obstacles, the study offers insightful information on how to solve these problems in theological education.

Keywords: Artificial Intelligence, Church Music Composition, Theological Education

Introduction

The current application of Artificial Intelligence (AI) to music composition is a striking illustration of the continuous innovation at the intersection of technology and the arts. Over the past ten years, artificial intelligence (AI) has evolved from a tool mostly used for process automation to one that can now express itself creatively by producing music, harmonies, and even subtle emotional mimics. This phenomenon is both thrilling and concerning, especially for communities where music holds great cultural, religious, and spiritual value.

At theological institutions, music is more than just an artistic medium; it is a vital manifestation of faith and worship, particularly in the context of Nigerian Baptists. Church life is deeply rooted in sacred music, which conveys teaching, fosters a sense of community, and forges an inexpressible bond between Christians and God. When AI is utilized to create such music, a complex dynamic is introduced. While some view it as a powerful instrument that may stimulate creativity, others have grave doubts: can a machine create music that is spiritually authentic? What does it mean for divine inspiration if music is produced by algorithms? And how can theological institutions prepare their students for such a rapidly changing musical landscape?

Creating intricate, structured compositions with little human involvement is now simpler than ever thanks to AI-driven music composition tools like Google's Magenta, Amper Music, and AIVA (Artificial Intelligence Virtual Artist). Commercial jingles, experimental art music, and movie scores have already made use of these now generally accessible techniques. According to researchers like Yang and Lerch (2020), artificial intelligence is becoming more adept at deciphering musical patterns and generating logical results that frequently match human ingenuity in terms of technical precision (p. 5). Sacred music's emotional and spiritual aspects, however, transcend technicality.

The use of AI presents significant ethical and educational issues for students studying theological music, particularly in settings like Nigerian Baptist seminaries. The conventional education in liturgical appropriateness, music theory, and hymnology might not be sufficient anymore. Presently, students must learn how to use these tools while also comprehending the religious consequences of doing so. According to Burton et al. (2017), ethical consideration is increasingly required in conjunction with technological literacy, particularly in fields where there are significant emotional and spiritual costs (p. 3).

The Theory of Technological Determinism, which contends that technology is not neutral and actively changes social structures and cultural values, emphasizes this tension even more (Smith & Marx, 1994, p. 10). This implies that the application of AI in composition for church music may have an impact on worship customs, creative standards, and even religious notions of divine inspiration. In this context, the Technology Acceptance Model (TAM) also becomes pertinent since it clarifies how users, in this case, students and faculty, adopt new technologies according to their perceived utility and usability (Davis, 1989, p. 320).

Many music students in Nigerian Baptist theology institutes are aware of artificial intelligence (AI), but they are unclear of how it relates to the sacred aspect of their musical calling, according to unofficial discussions and early surveys. While some worry that relying too much on AI could lessen the impact of worship music, others see technology as a tool that could boost creativity and expand composers' options if it is informed by good theology. This conflicting response points to the necessity for systematic research on AI's place in sacred music, particularly in organizations that educate the next generation of worship leaders.

In order to address the theological, ethical, and spiritual implications of using AI in sacred music, this paper first establishes the theoretical underpinnings of the study, then traces the historical emergence of AI in music, looks at the Nigerian Baptist theological education context, reviews important AI composition tools, and discusses these implications. It then presents empirical findings from a few chosen institutions before offering pedagogical recommendations for responsibly integrating AI into church music education.

Theoretical Framework

The Technology Acceptance Model (TAM) and the Theory of Technological Determinism are two complementary theoretical stances that serve as the foundation for this study's understanding of how artificial intelligence (AI) is incorporated into music creation in Nigerian Baptist Theological Institutions. These frameworks aid in analyzing the wider societal and theological ramifications of developing technologies in sacred music composition, in addition to provide a prism through which to view users' interactions with AI.

According to Davis' (1989) Technology Acceptance Model (TAM), perceived utility and perceived ease of use are the two main elements influencing the acceptance of new technology. TAM aids in investigating the reasons behind and methods by which students of theological music decide to use, or not use, AI tools in their creative activities. Students are more likely to embrace AI if they think it can improve their creativity or streamline their workflow. On the other hand, they could object to using the tools if they believe they are too complicated or inconsistent with their spiritual beliefs. TAM has been widely applied across various disciplines, including education and creative industries, because it emphasizes user experience and intentionality. In theological music education, this model helps assess the cognitive and emotional attitudes of students toward AI, whether they see it as a practical aid or as a disruptive force. It also provides insight into the role of institutional support, curriculum design, and peer influence in shaping students' openness to technological adoption.

The Theory of Technological Determinism, which provides a broader, societal-level viewpoint, is a useful addition to TAM. This thesis, which was made popular by academics like

Marshall McLuhan and then improved upon by Smith and Marx (1994), contends that technology is a force that influences institutional practices, cultural values, and behavior rather than just being a neutral tool. When applied to church music, technological determinism forces a critical analysis of how artificial intelligence (AI) might change the religious, moral, and spiritual aspects of sacred music once it is incorporated into the composition process.

According to this perspective, AI does more than merely help the composer; it may even change what constitutes "authentic" praise music. For instance, congregational expectations regarding musical quality, originality, or divine inspiration may change if AI-generated compositions are widely used in churches. Therefore, the theory calls on theological institutions to take into account not just how students use AI, but also how this usage may progressively impact instructional priorities, liturgical norms, and creative theology. The study can examine both the macro-level implications for church music and theological education as well as the micro-level choices made by theological music students by fusing these two theories, that is, Technological Determinism's emphasis on societal influence and TAM's emphasis on individual acceptance. By acknowledging that the incorporation of AI into sacred music is a cultural transformation that requires careful navigation by educators, students, and the church as a whole, rather than just a technical issue or a theological argument, this dual lens enhances the research.

The survey instrument was designed using the Technology Acceptance Model (TAM) as a guide. The four main TAM constructs; perceived usefulness, perceived ease of use, attitude toward use, and behavioral intention to use were used to organize survey items. Perceived utility questions asked respondents if they thought AI may improve the efficiency and inventiveness of composing religious music. Items on perceived ease of use investigated respondents' perceptions of how easy or challenging AI tools were to learn and utilize. The theological, ethical, and emotional reactions of respondents to AI in church music were evaluated with attitude questions. The willingness of responders to use AI in future training and ministry was gauged using behavioral intention measures. This structure enabled the study to systematically analyse how beliefs, experiences, and values shape the acceptance or rejection of AI in theological music education.

The theoretical framework of the study, which emphasizes formative learning techniques, theological education, and technological adoption, served as the basis for the google form questions. Key framework constructs, such as consciousness, usage patterns, perceived value, and ethical issues of AI in theological contexts, are all reflected in each item. In order to convert these theoretical ideas into quantifiable markers of participants' experiences and views, the questions were purposefully designed.

Because it was not practical to reach everyone in the four theological institutions, the study used a convenience sampling approach. The online forms were shared through institutional platforms so that relevant participants could respond voluntarily. This approach allows for broad participation, supports exploratory research, and is suitable for studying new and emerging issues where general perceptions and experiences are the main focus.

However, it should be noted that the data in this work are influenced by respondents' increased exposure to Western-oriented digital platforms and musical resources. This could skew perceptions of AI in favor of Western compositional norms, potentially underrepresenting indigenous African sacred musical values, practices, and creative priorities. In all, there were twenty nine responses from the institutions used.

Limitations of the Sample and Self –Reported Data

There are a number of limitations to this study that should be noted. First, participation was optional and the sample was selected from a small number of Nigerian Baptist theological institutes that presently provide church music programs. Because of this, the responses might not accurately reflect the range of viewpoints found in all Nigerian theology institutions or among all church musicians. The distribution of responses may have been impacted by respondents' specific interests in technology, music, or artificial intelligence.

Second, the majority of the data is based on self-reported opinions, experiences, and views. Self-reporting may be impacted by things like insufficient knowledge, personal presumptions, or social desirability bias. To look technologically adept or theologically conservative, for instance, some respondents might have inflated their knowledge with AI tools or underreported their worries. The poll does not assess actual skill or long-term behavioral patterns, although offering insightful information about current awareness and attitudes. For these reasons, the results should be viewed as a snapshot of an ongoing discussion rather than a definite conclusion and as indicative rather than definitive.

Emergence of AI in Music

Artificial Intelligence in music did not arrive overnight. Like many technological revolutions, it evolved gradually, emerging from decades of experimentation at the crossroads of computer science, music theory, mathematics, and cognitive psychology. What we see today in AI-powered music generators and composition tools is the fruit of long-standing curiosity about whether machines could not only process sound but also emulate something as uniquely human as musical creativity. In the 1950s and 1960s, computer scientists and musicians started employing algorithms to create rudimentary tunes, which was the first indication of artificial intelligence's promise in music. Lejaren Hiller and Leonard Isaacson's 1957 Illiac Suite, which is generally considered to be the first computer-generated score, is among the earliest instances. The suite used computational algorithms to create string quartet music on the University of Illinois' ILLIAC computer. Despite its lack of emotional depth, the work posed a significant query: could a computer reproduce or aid in the creative process of composition? (Hiller & Isaacson, 1959, pp. 1–3).

Following this groundbreaking work, a surge of studies on algorithmic and rule-based systems emerged in the 1970s and 1980s. By encoding the musical "grammar" of classical composers into logic assertions, these systems imitate their composing techniques. In the 1980s, David Cope, a key player in this period, created a program called Experiments in Musical Intelligence (EMI). EMI created new compositions in the style of composers like Bach and

Mozart by examining patterns in existing works. Cope's work was both praised and critiqued since it showed how AI may replicate styles while also posing difficult philosophical queries regarding creative worth and authenticity (Cope, 2001, pp. 6–9).

The development of machine learning in the twenty-first century marked the true breakthrough in AI-driven music. Machine learning models "learn" from large datasets without being specifically trained to adhere to musical rules, as contrast to rule-based systems. Deep patterns, such as melodic trends, rhythmic themes, and harmonic progressions, can be found by analyzing millions of musical instances. They can then utilize these patterns to create completely original compositions. This new paradigm, where AI works with human composers rather than mimicking them, is best illustrated by tools like Sony's Flow Machines and Google's Magenta (Briot, Hadjeres, & Pachet, 2020, pp. 33–36). By offering ideas, harmonizations, or even whole arrangements, these more recent technologies seek to foster human originality rather than merely "copy" the greats. According to Martin (2019), artificial intelligence (AI) is now seen as an intelligent assistant that may inspire ideas or get past creative obstacles rather than as a substitute for human composers (p. 14). Music educators, composers, and technologists' perspectives on the interaction between people and machines in the creative process have been profoundly impacted by this change in emphasis from imitation to collaboration.

AI has been effectively incorporated into a variety of genres in recent years, from electronic dance music to classical music. Its current capabilities include mood-based composition, real-time improvisation, and adaptive scoring for movies and video games. The dilemma facing church music in light of this diversity is not whether AI can compose music, but rather whether it can produce music that speaks to the emotional, doctrinal, and spiritual aspects of Christian worship. Understanding this history is essential for students in theological institutions, not only to appreciate technological advancement but also to assess its consequences for sacred music traditions, which are frequently firmly anchored in scripture and individual devotion. Thus, the development of AI in music mirrors the questioning, testing, and adapting that characterizes the human journey. Theological musicians are urged to consider critically and spiritually how AI could help or impede the holy goals of worship and ministry, rather than dismissing or embracing it mindlessly as technology continues to forge new frontiers.

AI-generated worship music should therefore be assessed according to whether it is faithful to Scripture and Christian doctrine, pastorally sensitive to the congregation's context, appropriate for the liturgical function and season, musically accessible for congregational singing, and ethically transparent about the respective roles of artificial intelligence and human creativity in its production. Church leaders, trained church musicians and others who are spiritually sensitive should therefore review AI-generated music before using it.

Nigerian Baptist Convention Theological Schools

The Nigerian Baptist Convention operates ten theological institutions dedicated to the training of pastors and church leaders across Nigeria (Ayokunle:2014, p 40) The largest and most prominent is the Nigerian Baptist Theological Seminary (NBTS) in Ogbomoso, established in 1898. Alongside NBTS, the Convention oversees nine other theological training centers, which include:

Baptist Theological Seminary, Kaduna

Baptist Theological Seminary, Eku

Baptist College of Theology, Lagos

Baptist College of Theology, Oyo

Baptist College of Theology, Owerri

Baptist College of Theology, Benin City

Baptist College of Theology, Igede-Ekiti

Baptist College of Theology, Jos

Baptist Pastors' School, Gombe

Together, these establishments serve as the foundation for Baptist ministerial education in Nigeria, guaranteeing a consistent flow of qualified leaders for the thousands of congregations that make up the denomination across the country. Nigerian Baptist Theological Seminary Ogbomoso offers its church music program up to the PhD level, whereas Nigerian Baptist Theological Seminary Eku, Baptist College of Theology, Benin, and Baptist College of Theology Lagos offer music up to the degree level. Examining a few AI tools for creating musical compositions is relevant at this time.

General tools for AI Music Composition

The emergence of a wide range of digital tools that streamline, speed up, and, in many ways, rethink the creative process has sparked the rise of artificial intelligence in music creation. These AI tools are active collaborators in a composer's workflow rather than just accessories. Simple online melody generators and complex neural networks trained on thousands of musical examples from various genres are among them. For theological music students who might be investigating how technology can support holy creativity, it is essential to comprehend these tools, how they function, and what they provide.

Machine learning, especially deep learning algorithms, which examine enormous amounts of current music to understand structure, style, harmony, rhythm, and melodic progression, form the basis of the majority of contemporary AI music tools (Briot, Hadjeres, & Pachet, 2020, pp. 11–15). Unlike previous algorithmic composers, these models create music based on probabilistic patterns that are learned from data rather than rigid rules. The Recurrent Neural Network (RNN) is a popular design that works especially well for modeling time-dependent data, such as musical sequences. These techniques are able to catch lengthier musical

phrases with contextual sensitivity thanks to variations like Long Short-Term Memory (LSTM) networks (Huang et al., 2020, p. 3).

One of the most widely used tools nowadays is Google's Magenta, an open-source research project that investigates the relationship between music and machine learning. MusicVAE, one of its most well-known usage, interpolates and modifies melodies and harmonies using Variational Autoencoders. MusicVAE is a helpful tool for composers looking for new ways to express a musical notion because it allows users to seamlessly transition between two melodies (Roberts et al., 2018, pp. 2–5). With just eight buttons, non-musicians may improvise piano-like performances using Piano Genie, another Magenta project, with the AI filling in intricate phrasing and harmonies.

In a similar vein, professional composers and filmmakers can use the commercial program AIVA (Artificial Intelligence Virtual Artist). AIVA creates gaming music, movie soundtracks, and orchestral pieces using deep learning, frequently in classical or cinematic forms. Users can input emotional themes, like "uplifting" or "melancholic," to control the AI's musical direction. It provides templates in a variety of genres (AIVA Technologies, 2023). Although its primary concentration was on Western classical music, it increasingly embraces hybrid forms, which may lead to integrations with sacred music. Another popular tool, Amper Music, has an easy-to-use interface that lets users alter genre selections, pace, and instrument layers. Amper is an accessible tool for religious music students who wish to explore with AI without having a thorough understanding of coding because it is especially well-suited for users with less technical competence (Kiss, 2020, p. 73). Students wishing to create creative compositions without having to deal with complicated copyright issues can greatly benefit from Amper's royalty-free output.

Another potent system is OpenAI's MuseNet. It can produce music in the styles of a wide range of composers, from Mozart to the Beatles, and with up to ten different instruments. MuseNet predicts the next note or chord based on musical context using a transformer-based architecture, which is comparable to GPT models (Payne, 2019). It has shown how a generalized language model can execute complex musical tasks, despite its limits in terms of user control.

Additionally, AI-generated music is available for both personal and commercial use through Soundraw, Ecret Music, and Loudly. While these platforms are primarily designed for content producers and advertisers, their potential for use in places of worship or worship is expanding. They might someday find a place in theological music programs investigating innovations in digital worship, thanks to their customizable capabilities and expanding genre support. While most of these tools were developed in technologically advanced regions, access is increasingly global, including parts of Africa where internet connectivity and digital literacy are improving. Students in Nigerian theological institutions can experiment with these tools using cloud-based platforms without expensive software licenses.

But it's crucial to remember that even if AI tools are strong, they have drawbacks. The majority of existing algorithms, according to Ariza (2020), are excellent at replicating patterns

but fall short when it comes to genuine thematic development or purposeful narrative arcs in music (p. 87). This is a serious issue for holy music, which frequently depends on emotional tempo, biblical theming, and spiritual sensitivity. Nevertheless, human composers can modify and improve upon the useful beginning points, themes, and arrangements that these tools can offer. Therefore, the overall concept of AI music tools is about creative enhancement rather than convenience. Learning about these technologies offers theological music educators and students a chance to reconsider composing as a collaborative dialogue between human intuition and machine intelligence rather than as a solo work.

Sacred Music and Theological Integrity

Sacred music has a special position in Christian worship, serving as a medium for doxology, catechesis, and spiritual development in addition to being an artistic expression. Sacred music is viewed as a spiritual vocation that is both theologically sound and liturgically useful in the setting of theology study, especially in Nigerian Baptist theological colleges. The preservation of theological integrity in holy music has become a legitimately urgent concern as artificial intelligence (AI) becomes more and more integrated into music production. Theologically, expected that sacred music will edify the body of Christ, reflect the qualities of God, and affirm biblical truths. Biblical instructions like Colossians 3:16, in which the apostle Paul encourages believers to allow "the word of Christ dwell in you richly... singing psalms and hymns and spiritual songs with gratitude in your hearts to God" (NIV), serve as the foundation for this expectation. The main purposes of music in the sacred environment are collective worship and divine communication, not only artistic or inventive expressions. As a result, right belief right actions, and relevance to the body of Christ must all be considered when evaluating any tool like AI

The popularity of artificial intelligence-generated religious music presents important theological issues. Can a machine actually write a song that praises God? Is the music it creates less sacred because there is no human spiritual experience? These issues are not hypothetical; rather, they are actual conflicts that both students and teachers encounter. Hattwick (2021) points out that while AI can mimic worship music patterns, it is unable to recreate the emotions of a worshipper giving thanks to God (p. 114). Because it originates from the trials, victories, and life experiences of believers molded by the Spirit, sacred music is by its very nature incarnational. AI is not doxologically conscious.

Furthermore, the validity of religious compositions produced by AI is called into question by the theological concept of inspiration. The idea of divine inspiration, according to which God breathes His truth through human vessels, is central to Christian philosophy, especially in Baptist circles. It explains how scripture is created and, consequently, how worship is expressed via it. By examining biblical passages or pre-existing hymns, AI may generate theologically correct lyrics, but it lacks the pneumatological element that distinguishes compositions guided by the Spirit. True sacred art, according to Dyrness (2016), arises from a relationship of participation

with the divine rather than from a dispassionate process of computation (p. 138). The ongoing talk on AI and sacred music is further complicated by the question of authorship. Authorship in sacred composition carries moral and spiritual duty in addition to being a legal or creative designation. Scripture's psalmists wrote from a strong covenantal connection with God rather than for praise. The integrity of the composer's goal and the source of inspiration are called into doubt when AI is introduced into this field. Can music that is produced by a machine that has been educated on datasets still have the pastoral heart and prophetic edge that sacred music requires?

However, some academics support a nuanced acceptance of AI tools as tools, not substitutes, for the creation of sacred music. AI can be a "co-creative partner," according to Pachet and Roy (2021), who present musical ideas that the human composer can evaluate theologically and spiritually (p. 56). This allows the composer to take advantage of technological diversity and efficiency while maintaining doctrinal supervision. This is consistent with the Christian theological idea of sub-creatorship, according to which people take part in God's creative process without taking the place of the supernatural source of beauty and meaning (Tolkien, 1983, p. 73).

The possible diluting effect of congregational interaction is another theological worry. The social and participatory aspect of worship is emphasized by Baptist ecclesiology, which is based on the idea that all Christians are priests. The purpose of sacred music is to bring Christians together in communal praise, prayer, and confession. AI compositions run the risk of offending the congregation if they get too complicated, impersonal, or culturally disconnected. Therefore, theological integrity must take into account not only the doctrinal truth of music but also its pastoral and missional role. In general, the use of AI in the creation of sacred music requires pastoral care, theological rigor, and spiritual discernment. The task of theological music educators is to give students the capacity to assess technology from the perspectives of ecclesiology, biblical theology, and spiritual development in addition to imparting technical knowledge. AI should never be considered a replacement for the Holy Spirit's function in igniting, directing, and anointing the music that emerges from hearts that have been given over to God; rather, it should be viewed as a tool, possibly even a blessing.

The use of artificial intelligence (AI) in the creation of sacred music presents difficult moral and spiritual issues as it becomes more prevalent in creative fields. These issues are not secondary to theological institutions, particularly those operating within the Nigerian Baptist environment; rather, they are essential. In Christian worship, music is a sacred act rather than a neutral art form. It serves as a medium of communication between the divine and humanity, reflects theological beliefs, and molds spiritual experiences. Therefore, deciding how AI should be used in this sacred endeavor requires both ethical clarity and spiritual insight.

Authorship and originality are two of the most important ethical issues. Who owns the finished composition when artificial intelligence (AI) algorithms create music using enormous datasets of previously composed pieces? More significantly, who has spiritual responsibility for

the message? In church music, where the composer is frequently regarded as both a creative force and a spiritual communicator, this subject is particularly important. Coeckelbergh (2020) claims that because AI makes it harder to distinguish between imitation and originality, it undermines conventional notions of creativity (p. 101). This uncertainty can cause a crisis of trust in both the music and the organization that promotes it, which is problematic in sacred music, where authenticity is valued and viewed as an extension of one's relationship with God.

Furthermore, a spiritual void is created by AI's disassociation from human experience. Worship music frequently originates from very personal experiences, such as gratitude, sadness, joy, and repentance. These are theological reflections of a person's relationship with God, not only emotional reactions. AI, on the other hand, relies on algorithmic learning, pattern recognition, and data. The core of many liturgies and worship expressions is anamnesis, the holy recollection of God's deeds in history and in individual lives, which it lacks (Wainwright, 1980, p. 36). As a result, the music is spiritually hollow at its foundation, even though it may sound acceptable on the surface.

The commercialisation of sacred music raises additional ethical issues. The temptation to mass-produce worship songs for commercial appeal rather than spiritual depth arises from the ease and speed with which AI tools like AIVA, Amper, and Google's Magenta make music production possible. The distinction between industry and government becomes extremely hazy in such an environment. According to Ward (2021), the church runs the risk of transforming doxology into a transaction rather than a transformation when worship turns into a product (p. 219). Because worship music is ultimately a gift given to God rather than a product sold to consumers, theological education must help students develop both their musical abilities and their ethical convictions.

The possibility of theological dilution also exists. Even though AI-generated songs might be technically and metrically correct, they might not be precise in their doctrine or even spread theological fallacies. A song inspired by popular expressions in modern praise music, for example, can unintentionally prioritize individualism over ecclesiology or offer an unbalanced perspective of God's qualities, emphasizing love at the expense of justice or purity. Such works could gently influence a congregation's beliefs in ways that depart from historic Christian orthodoxy if there isn't strong theological monitoring (Begbie, 2007, p. 89).

The composer's development is also a part of the spiritual component. Writing religious music has historically required fasting, meditation, prayer, and even contemplation of the Bible. It is both a creative undertaking and a spiritual discipline. The spiritual process of waiting on God, hearing His voice, and lining up one's heart with His purpose may be neglected when artificial intelligence is presented as a shortcut or substitute. This is a matter of loyalty to the spiritual practices that have traditionally supported Christian worship, not just personal taste. "The transformation of the artist by grace is as important as the creation itself," as Tournier (2005) tells us (p. 112). But can artificial intelligence be sanctified?

The issue of reliance is another. Theological students risk not finding their own spiritual and artistic voice if they depend too much on AI to create lyrics, harmonies, or melodies. This over-reliance can hinder pastoral sensitivity, discourage creativity, and diminish theological thinking. A student might choose a generic AI-generated template rather than asking God for inspiration to write a song that would be distinctive and fulfill the needs of a congregation. In addition to undermining the pastoral integrity of worship leadership, this runs the risk of producing a generation of musical leaders who are technically proficient but lack depth in their spirituality.

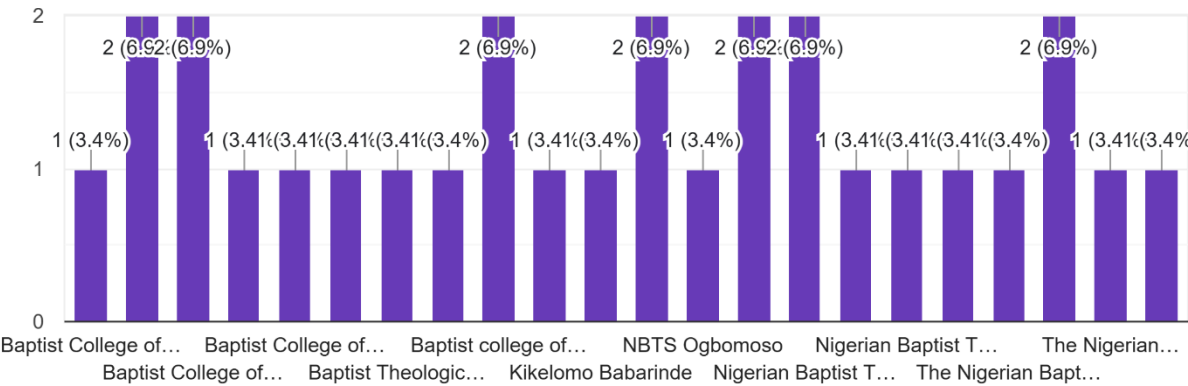
Insights from Nigerian Baptist Theological Institutions: Use of AI in Music Composition

A structured questionnaire was sent via Google Forms to music faculty and students at Nigerian Baptist theological schools that offer music, including Baptist Theological Seminary Eku, Nigerian Baptist Theological Seminary (NBTS), Ogbomoso, and Baptist College of Theology (BCT), Benin, and BCT Lagos, as part of this ongoing study. Their responses provide preliminary insights into the awareness, perceptions, and ethical positions surrounding the use of artificial intelligence (AI) in sacred music composition. These institutions represent a range of music education levels, from undergraduate and diploma programs to postgraduate and doctoral programs.

According to the survey twenty nine people responded, 60% of students and 40% of faculty members answered the questions; 96% of them had heard of AI in music composition previously, and they had used ChatGPT and Perplexity as tools. 40% of them make use of the tools to generate melodies. Since artificial intelligence lacks spiritual inspiration, this is its biggest worry regarding its application in theological institutions' creation of sacred music. The results indicate that 76% of respondents are amenable to more training in the application of AI to the creation of sacred music.

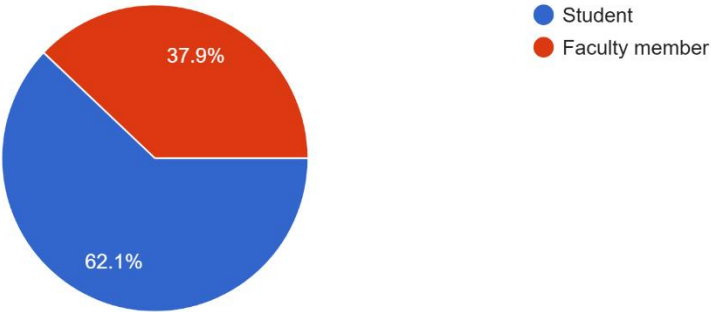
Section 1: 1. What is the name of your institution?

29 responses



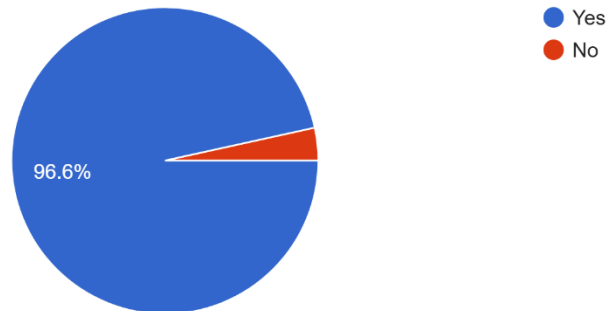
2. What is your role in the institution?

29 responses



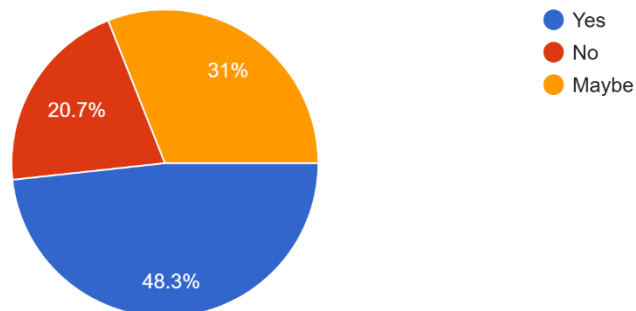
Section 2: Awareness and Use of AI 6. Have you heard of Artificial Intelligence (AI) in music composition?

29 responses



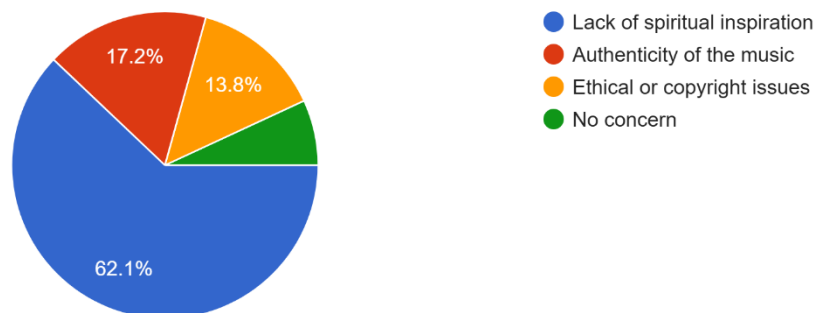
Section 3: Perceptions and Ethical Concerns 9. Do you believe AI-generated music can be used for church or sacred purposes?

29 responses



10. Out of these, what is your greatest concern in the use of AI for composition ?

29 responses



The necessity for organized theologically based training on the application of artificial intelligence (AI) in sacred music creation has been highlighted by the interactions with teachers and students at Baptist theological institution in Nigeria. Even though 96% of respondents said they had previously heard of AI in music, the tools they cited, mostly ChatGPT and Perplexity, indicate a narrow exposure. Most people were unaware of more specialized AI music platforms like AIVA, MuseNet, or Amper Music, which have been covered in academic literature (Yang, 2020; Sturm et al., 2019). Additionally, roughly 40% of responders only employ AI technologies to generate melodies; few investigate lyrics, harmonic structures, or full arranging capabilities.

These findings have significant implications: academics and students studying theological music are eager to learn more about AI's potential, particularly as it relates to holy music. Remarkably, 76% of respondents said they would be open to training in this field. Theological institutions have a strong chance to create a curriculum that bases students in spiritual discernment and theological reflection in addition to teaching technical skills because of this openness.

Starting with theological framework is essential for a curriculum that is spiritually informed. It should assist students in considering fundamental questions, such as: What does sacred music's spiritual inspiration mean? Can artificial intelligence serve as a tool without taking the place of divine direction? The concerns of academics like Ma (2022), who highlights that music ministry must always reflect doxological goal and Christ-centered motivation (p. 87), are in line with these questions. If AI education is not grounded in spiritual sensitivity, students run the possibility of embracing technologies that are designed according to secular or commercial principles, which could unintentionally influence their musical theology.

Secondly, a philosophy of technology module should be incorporated into the curriculum to assist students in examining how instruments, such as pipe organs, notation software, and artificial intelligence, have influenced church music throughout history. This is consistent with the stance taken by Deacy and Arweck (2009), who contend that theology must use technology as a lens through which we understand the nature of human agency and divine creativity rather than just as a tool (pp. 112–115).

Practically speaking, tiers of training modules should be incorporated into curriculum construction. Basic AI techniques, such prompt engineering for hymn texts using ChatGPT or coming up with thematic ideas using Perplexity, could be included in introductory classes. AI composition tools may be introduced in intermediate modules, allowing students to assess and comment on AI-generated lyrics, melodies, and harmonies in light of liturgical and biblical criteria. Under the supervision of faculty members to maintain theological and pastoral integrity, advanced programs can involve group projects in which students create, evaluate, and improve AI-assisted compositions for worship settings.

It's also important to stress authorship and ethics. Particularly when AI algorithms are trained on databases that can contain copyrighted or unacknowledged holy music, students should be taught how to differentiate between inspiration and imitation as well as how to give

credit to sources. Students in theological schools need to be prepared to handle issues of spiritual authorship, ownership, and integrity with discernment and humility (Zangwill, 2021, p. 72). Crucially, the curriculum needs to state that AI, no matter how advanced, is a tool and not a theologian, composer, or worshipper. Humans have always been called to make music that exalts God. Music ministers, as participants in divine creativity (Exodus 35:30–35), must learn to use new instruments without contracting out their sacred duties.

Lastly, faculty development is critical to the success of such a curriculum. A lot of instructors are still investigating AI. In order to ensure that faculty members are both technologically savvy and theologically based enough to teach AI responsibly, institutions must invest in training the trainers. While keeping the seminary's spiritual focus, interdisciplinary collaboration with IT departments, theology faculties, and music technologists can enhance the educational experience.

It is pertinent at this juncture to note a few anonymous quotes from the study

“If the melody is generated by a system trained on other people’s songs, then who is really the composer? And if no one is spiritually accountable for the song, how do we treat it as sacred?”
(Anonymous postgraduate student)

“I am not against technology, but I struggle with the idea that a machine can compose a song that is meant to come from a heart surrendered to God. Worship is more than sound — it is an offering.”
(Anonymous faculty respondent)

Conclusion

This study looked at how Artificial intelligence (AI) is becoming more and more prevalent in music composition and how it affects church music education for students at Baptist theological institutions in Nigeria. It starts by outlining how AI technologies like as Magenta, AIVA, Amper Music, and MuseNet have revolutionized the world of music, especially in the areas of automation and creative collaboration. The study investigates how AI questions conventional notions of divine inspiration, spiritual authenticity, and authorship in Christian worship music, acknowledging that sacred music is not just artistic but also theological.

Based on the Theory of Technological Determinism and the Technology Acceptance Model (TAM), the study uses a mixed-methods approach, including interviews and surveys, at a few Nigerian Baptist theological schools to gauge students' knowledge, involvement, and ethical opinions regarding Artificial Intelligence (AI) in music composition. With only a small percentage of students actively using AI tools and many voicing worries over the theological suitability of AI-generated sacred music, the results show a knowledge gap. The study places the current technological capabilities within a larger cultural and pedagogical framework by charting the historical development of AI in music, from early algorithmic initiatives to sophisticated neural network-driven systems. After that, a thorough overview of theological schools affiliated

with the Nigerian Baptist Convention that provide church music programs is given, highlighting differences in curriculum and technical preparedness.

In its conclusion, the study makes the case for the deliberate inclusion of AI literacy in music theology courses. In order to prepare future church music leaders to interact meaningfully and responsibly with AI in ways that preserve both creative greatness and spiritual integrity, this includes ethical training, hands-on experience with AI technologies, and theological fidelity.

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