ARTIFICIAL INTELLIGENCE (AI) AND ITS INFLUENCE ON CONTENT CREATION IN BROADCASTING: A STUDY OF SELECTED STATIONS IN NIGERIA

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ABSTRACT

This study explores the transformative impact of Artificial Intelligence (AI) on content creation within the broadcasting industry, focusing on selected radio and television stations in Nigeria. As AI technologies increasingly permeate media production—ranging from automated news writing and speech synthesis to intelligent editing tools and audience analytics—broadcasters are redefining their workflows and creative strategies. The research adopts a qualitative approach, including interviews with media professionals, direct observation, and document analysis, to assess how AI tools are being utilized, the perceived benefits, and the emerging challenges. Key findings reveal that while AI enhances production speed, consistency, and content personalization, it also raises concerns about job displacement, ethical standards, and the diminishing role of human creativity. The study concluded that on a broad scale, AI tools for automated scripting, video editing, virtual sets, and graphics will streamline content creation, improving efficiency and quality while reducing costs. The study also recommended that broadcast stations should focus on employee training through workshops, online courses, and partnerships with educational institutions.

KEYWORDS: Artificial Intelligence (AI), Content Creation, Broadcasting, Selected Stations, Nigeria

INTRODUCTION

There has been a rapid transition from analogue to digital technologies in both developed and developing countries, resulting in significantly increased outputs (Usua & Asak, 2023). However, Nigeria has yet to fully embrace digitalisation (Obi, Ole, & Usoigwe, 2023). The adoption of digital technologies has led to substantial improvements in operations across various sectors. In the media industry, these technologies have made significant impacts at every stage of production—pre-production, production, and post-production. Additionally, there has been a notable rise in audience engagement, which has positively influenced media content.

Globally, AI has made inroads into various fields such as STEM, security, health, journalism, and broadcasting. In Nigeria, AI has gained significant prominence as both private and public enterprises seek to enhance productivity and efficiency (Obi et al., 2023). For instance, MTN utilises an AI-driven customer care assistant named Sigi; Senith Bank employs Siva, a chatbot; lawyers use an AI tool called Timi; and commuters in Lagos use Lara.ng, an AI-driven chatbot for conversations and fare estimates. Furthermore, both broadcast and print media organisations in Nigeria have largely adopted digital technologies in their production processes, resulting in undeniable positive impacts (Ogah, 2020). The creative industries, including radio, television, and the Internet, have continued to evolve with these technologies, leading to increased audience appreciation and engagement with content. The advancements in igital technologies have also brought about the rise of Artificial Intelligence (AI), systems designed to mimic human intelligence. AI systems, which perform tasks traditionally done by humans, are known for delivering more efficient and prompt results.

Beyond the use of chatbots and AI customer care assistants, there is also an advanced AI system known as Generative AI. The awareness of Generative AI (GenAI) became prominent in Nigeria with the launch of OpenAI's chatbot 'ChatGPT' (Chat Generative Pre-trained Transformer) in 2022 (Obi et al., 2023; Guanah et al., 2020). Generative AI has the capability to create various types of data, such as images, audio, videos, and text, based on prompts or queries from humans.

There has been a significant transition to the use of AI across different fields, including the creative industries of radio, television, and the Internet, particularly in developed countries. For instance, the United Kingdom, Japan, China, South Korea, and the United States have successfully deployed AI-powered robots as presenters on both radio and television (Oyedokun, 2023). Additionally, AI tools are heavily utilised in graphic design and voice cloning, employing deep learning techniques to replicate human voices. A notable example of voice cloning is the recreation of the late football coach Vince Lombardi's voice by the NFL for the Super Bowl using AI tools (Mayne, 2022).

Despite the growing use of AI in radio, television, and the Internet for more efficient content creation, Nigeria still has limited resources for deploying AI in its creative industries. The evolution of Artificial Intelligence (AI) is transforming task performance across various sectors, including the creative industry of radio, TV, and the Internet. AI enhances efficiency and productivity, especially in developed countries. While AI seem to be used generally in Nigerian today, its impact on Nigeria's creative industry remains underexplored. The question is: How is Artificial Intelligence (AI) influencing content creation in radio and television broadcasting in Nigeria? The goal of this study was to assess the influence of AI on the gathering, production, and dissemination of content in two television broadcast stations in Nigeria, namely Channels Television and the Nigerian Television Authority (NTA). We achieve this by looking at content creation at the stations through the lens of extant literature in the application of AI technology and in-depth interviews with journalists from Channels Television and (NTA) to gain information on their viewpoints and

experiences about the usage of AI in content creation at the broadcast stations. In this approach, we learn more about the motivations of the broadcast stations that adopt the application of AI in content creation, as well as the strategies used by these stations in their bid to be more efficient and profitable. This work therefore, adds to the growing corpus of knowledge in the field of AI technology in the creative industries. The specific objectives for the study are to determine the extent of AI application in content gathering, production, and dissemination in Nigeria's creative industry; assess the impact of AI on these processes; and identify challenges to AI implementation in these areas.

THEORETICAL FRAMEWORK

The mediamorphosis theory, introduced by Roger Fidler in 1997, serves as the theoretical foundation for this study. This theory provides a comprehensive framework for understanding the transformation of media forms, emphasising the complex interplay of various factors including societal needs, competitive dynamics, political pressures, and technological advancements (Guanah et al., 2020). Fidler's theory is particularly relevant to examining the impact of Artificial Intelligence (AI) on the creative industries in Nigeria, as it offers a nuanced perspective on how new media technologies emerge, evolve, and integrate within existing media ecosystems. Fidler's principles of mediamorphosis are pivotal to understanding the transformation process. One key principle is the concept of coexistence and evolution, which posits that new media forms do not immediately replace older ones but rather coexist and evolve alongside them. This principle is evident in the Nigerian context, where traditional media such as radio and television continue to operate alongside burgeoning internet-based platforms, all of which are increasingly influenced by AI technologies. This coexistence allows for a gradual adaptation and integration of new technologies, facilitating a smoother transition and adoption process.

Another significant principle is the gradual metamorphosis from old to new media. Fidler suggests that media transformation is not abrupt but occurs through a slow and continuous process. This principle is particularly applicable to the Nigerian creative industry, which has experienced a prolonged transition from analog to digital broadcasting. Despite delays and challenges, this gradual shift has opened the way for the introduction and integration of AI technologies, enhancing content creation, management, and dissemination processes.

The propagation of dominant traits is another cornerstone of Fidler's theory. This principle asserts that new media technologies often inherit and propagate the most effective traits of their predecessors. In the context of AI, this means leveraging the established strengths of traditional media while introducing advanced capabilities such as automated content generation, data analytics, and personalised content recommendations. These dominant traits enhance the functionality and appeal of new media forms, making them more effective and widely adopted.

Survival in changing environments is another important principle, highlighting the adaptive nature of media forms. Fidler argues that media must continuously evolve to survive in a dynamic environment characterised by changing consumer preferences, technological

advancements, and regulatory frameworks. In Nigeria, the creative industry's adoption of AI is a strategic response to these environmental changes, aiming to enhance competitiveness, improve efficiency, and meet the evolving demands of audiences.

Fidler also discusses the merits and adoption delays of new media. He suggests that while new media technologies often offer significant advantages, their adoption can be delayed by various factors such as cost, infrastructure, and regulatory barriers. This principle is particularly relevant to Nigeria, where the high cost of AI systems, infrastructural challenges, and lack of regulatory frameworks have slowed the widespread adoption of AI in the creative industry. Despite these delays, the gradual integration of AI technologies continues, driven by the potential benefits they offer in terms of improved productivity, efficiency, and audience engagement.

Applying Fidler's mediamorphosis theory to the study of AI in Nigeria's creative industry provides valuable insights into how AI, as a new media technology, is transforming the gathering, production, and dissemination of content in broadcasting and internet media. This theoretical framework underscores the dynamic and multifaceted nature of media transformation, highlighting the interplay between old and new media, the gradual nature of technological adoption, and the adaptive strategies employed by media organisations to thrive in a changing environment.

LITERATURE REVIEW

The quest for improved and efficient ways of performing tasks is a major driver of technological innovations, with Artificial Intelligence (AI) being a prominent example. Fayoyin (2021) notes that AI development addresses the question, 'can computers think?' (p. 3). This highlights the ambition to create machines with human-like intelligence. According to the United Nations' Information Economy Report (UNCTAD 2017), AI is defined as the capability of machines and systems to acquire and use knowledge, displaying intelligent behaviors once exclusive to humans. Reidl (2019) emphasises AI's ability to communicate, a facet of human intelligence now replicable by machines. Beyond machine-to-machine communication, AI has facilitated machine-to-human interactions through systems like Natural Language Generation (NLG) and Natural Language Processing (NLP), enabling machines to understand, interpret, and respond in human languages (Jamil, 2020; Campolo, 2017; Raine & Andersen, 2017; Allen, 2003).

John McCarthy, an MIT computer scientist, coined the term Artificial Intelligence in 1956 (Okunola, 2018).

Despite its slow initial uptake, AI gained attention and funding in the 1960s (Oyedokun, 2023). The 1970s saw the first AI winter, followed by the second in the 1980s with significant investments from Japan and the United Kingdom (Oyedokun, 2023). By the 1990s, AI saw acceptance and use in the tech industry, exemplified by IBM's Deep Blue defeating the world chess champion (Okiyi & Nsude, 2019; Oyedokun, 2023). The 2000s marked a period of increased AI development, with notable achievements like IBM's Watson winning the quis show 'Jeopardy' in 2011 (Okiyi & Nsude, 2019). Eugene Goostman's

chatbot winning the Turing Test in 2014 further demonstrated AI's advancing capabilities (Okiyi & Nsude, 2019 citing Lewis, 2014).

AI now performs tasks based on human instructions or automation, using algorithms developed by programmers. These algorithms enable AI systems to automate tasks like data collection, analysis, and production (Jamil, 2019; Dorr, 2016; Jamil, 2020). In journalism, this application of AI is known as automated, algorithmic, or robotic journalism (Peiser, 2019; Caswell & Dorr, 2018; Van-Dalen, 2012).

AI IN BROADCASTING

The influence of AI on broadcasting has significantly transformed operations from ideation to content distribution. Notable implementations include China's Xinhua News Agency, which introduced the first AI newscaster, Qiu Hao, in 2018, followed by a female counterpart, Xin Xiaomeng (Handley, 2018; Guanah, 2020; Nwabuese, 2019). This pioneering effort inspired similar developments worldwide, with virtual presenters such as Ananova in the UK, Yuki in Japan, Vivian in the US, and Lusia in South Korea (Qin, 2021). More recently, Odisha Television in India and Live 95.5 in Portland, Oregon, launched their AI presenters in 2023 (Oyedokun, 2023).

AI's impact extends beyond broadcasting to internet content creation and distribution, where it plays an important role. AI analyses user data to tailor content and advertisements, offering personalised recommendations and automatically generating content through algorithms (Mohamed, Osman & Mohamed, 2024; Brown et al., 2020). This capability has become invaluable for marketers, enhancing lead conversion and market growth (Singh, Verma, Vij & Thakur, 2023; Fast & Horvits, 2017). Additionally, social bots that autonomously generate content and interact with users are becoming more prevalent (Jamil, 2020).

However, the adoption of AI in these sectors is not without challenges. High development and implementation costs, risk of unemployment, and potential loss of human creativity and intuition are significant concerns (Fayoyin, 2021). The efficiency of AI could lead to workforce reductions, causing job displacement (Guanah et al., 2020). Nevertheless, some argue that AI cannot fully replace humans due to its limitations in creativity and judgment (Miroshnichenko, 2018; RTDNA, cited in Oyedokun, 2023). AI systems, while advanced, may not replicate the natural connection between human presenters and audiences (Guanah et al., 2020).

Ethical and societal risks further complicate AI's integration. Trattner et al. (2022) highlight that although AI can enhance data-driven journalism and combat misinformation, it also poses risks through algorithmic content selection and personalisation. The potential for AI systems to act unpredictably is a concern, as demonstrated by Facebook's AI experiment where robots developed an unintelligible language, prompting a shutdown (Giardina, 2017). Prominent figures like Elon Musk have warned of AI's dangers, suggesting that AI-enhanced robots could pose existential threats to humanity (Giardina, 2017). Also, while AI has revolutionised broadcasting and internet content creation, offering significant benefits in

productivity and personalisation, it also brings challenges related to costs, employment, creativity, ethics, and societal impact. Balancing these benefits and risks is important for the continued integration of AI in these sectors.

CORPORATE PROFILE OF CHANNELS TELEVISION

Channels Television, established in 1992 by veteran Nigerian broadcasters John Momoh and Sola Momoh, is a prominent 24-hour news and media organisation. Originally launched in Lagos, Channels TV has expanded its operations to include additional stations in Abuja, Edo, and Kano, alongside numerous bureaus across Nigeria and partnerships with affiliates throughout Africa. As a pioneering national TV brand in Nigeria's vibrant broadcast media landscape, Channels TV is unique in its dedication solely to news dissemination.

The station commenced its broadcasting journey after receiving a license in June 1993, beginning transmission in 1995 under the name 'Channels Television.' With a mission to uphold the core principles of objectivity, fairness, and the public's right to information, Channels TV has built a substantial viewership of over 20 million people. It has established itself as a credible and aggressive news outlet that prioritises balanced news coverage and aims to provide an alternative communication platform for the public, particularly in matters concerning governance and public accountability.

Channels Television was founded in response to a widespread desire among Nigerians for a media outlet that not only accommodates diverse viewpoints but also informs and educates the populace about their governance and civic responsibilities. The station passionately advocates for balanced reporting, presents proven facts, and ensures that citisens have a voice regarding issues that impact their lives. Its commitment to airing divergent perspectives, regardless of political or social circumstances, underscores its role as an impartial observer of Nigerian events. Channels Television's status as a market leader in the broadcast sector is a testament to its continuous innovation and the exceptional talent of its award-winning broadcasters, which remain integral to its success.

METHOD

This study adopted a qualitative research design, employing secondary data to investigate the influence of Artificial Intelligence (AI) on content creation in broadcasting, with a specific focus on Channels Television and the Nigerian Television Authority (NTA). These two stations were chosen based on their prominence in Lagos State, where they are recognised for their ownership structures and programming accessibility, making them readily available for researchers. Channels Television holds the distinction of being the most awarded station in Nigeria, whereas NTA is recognised as the largest television network in the country. The primary data collection method for this research was the library research technique, which facilitated an extensive examination of existing literature and secondary sources relevant to the research topic. In addition, in-depth interviews were conducted to supplement the secondary data and provide a richer context for analysis.

A systematic review of relevant literature was conducted, encompassing academic journals, industry reports, books, and credible online resources. Criteria for selecting materials included the publication date, relevance to the nexus of AI and television broadcasting, as well as the credibility of the sources. Priority was given to studies that explored AI applications in content production, changes in production processes due to AI integration, and case studies that documented the adoption of AI technologies in Nigerian broadcasting stations. The data collection process involved a comprehensive search of academic databases, including JSTOR, Google Scholar, and institutional repositories, targeting scholarly articles and industry publications. To ensure thorough coverage of the available literature, keywords such as 'Artificial Intelligence,' 'content creation,' 'broadcasting,' 'Nigeria,' and 'media technology' were employed in various combinations during the search process. This methodological approach allowed for an in-depth assessment of the existing body of knowledge on the influence of AI in the broadcasting sector, thereby providing a solid foundation for the study's analysis and findings.

Furthermore, this study employed in-depth interviews to explore the perspectives and experiences of journalists regarding the integration of artificial intelligence (AI) in the content creation processes at two prominent television stations: Channels Television and the Nigerian Television Authority (NTA). The target population for this research comprised content production professionals from both stations, with Channels TV (Lagos) employing a total of 96 journalists and NTA (Lagos) employing 252 journalists. Therefore, the total population for this study amounted to 348 professionals involved in content production.

To facilitate the selection of interview participants, purposive sampling was employed. A total of 25 journalists were selected as interviewees, comprising 10 from Channels Television and 15 from NTA. The selection criteria were based on the 'rich data' criterion, which prioritises individuals whose extensive experience and knowledge were deemed relevant to understanding the phenomenon of AI's influence on content creation in broadcasting. In-depth interviews were conducted to gather comprehensive insights from the participants about their experiences and viewpoints regarding AI utilisation in their media practices. An interview guide was developed as the primary tool for data collection, ensuring that key topics related to AI in content creation were systematically addressed. The qualitative data obtained from these interviews was subsequently analysed using the explanation-building method, which facilitated the development of rich, nuanced understandings of the ways in which AI impacts broadcasting content creation from the perspectives of the journalists involved. The focus was on understanding how AI has transformed traditional content creation practices, the challenges faced in its implementation, and the perceived outcomes as reported by broadcasting professionals.

The synthesised findings from the literature review and interviews were categorised thematically, allowing for a clear illustration of the interrelationships among AI technologies, content creation methodologies, and the implications for broadcasting in Nigeria. The qualitative nature of the research facilitated a nuanced understanding of the impact of AI on

the broadcasting sector, highlighting both opportunities and challenges faced by media practitioners in the context of rapid technological advancement.

DISCUSSION OF FINDINGS

Based on the analysis of reviewed literature and the analysis of data from interviews, themes like the extent of AI application in the two broadcast stations; impact of AI on the gathering, production; and dissemination of content at the stations and the challenges to successful application of AI in the stations and Nigeria's creative industry were deduced.

EXTENT OF AI APPLICATION IN CHANNELS AND NIGERIAN TELEVISION AUTHORITY

In technologically advanced societies, AI has been seamlessly integrated into many facets of content gathering, production, and dissemination within the creative industries of radio, television, and the internet. These integrations have transformed media operations, enabling more efficient and innovative practices. However, in Nigeria, the deployment of AI within these sectors remains relatively limited. This limitation is largely attributable to the current state of technological innovation and infrastructure within the country. According to Fidler's mediamorphosis theory, the transformation of media operations is heavily influenced by technological advancements, underscoring the importance of innovation in evolving media landscapes (Guanah et al., 2020).

Despite these constraints, the Nigerian creative industry has made notable strides in deploying AI in specific areas, particularly in television content creation. AI has been effectively utilised in automated scripting, where algorithms analyse data from various sources to identify trending issues and social media conversations, subsequently suggesting content ideas and generating scripts. This usage of AI in content creation further re-echoes Fidler's theory, which suggests that new media forms gradually influence and replace older methods. AI-driven video editing tools are also in use, where raw footage is analysed to automatically generate, highlight reels and suggest appropriate effects, music, and subtitles (Xperity, 2023). These capabilities are especially beneficial for the two television stations with their limited resources, as AI-driven virtual sets allow for the creation of appealing content without extensive physical infrastructure. Furthermore, AI tools have been increasingly utilised in graphics design at the stations, particularly for advertisers and internet content. Social media content and advertisements at the stations frequently employ cloned voices, highlighting the growing influence of AI in content creation (Mayne, 2022).

In terms of content management, AI has facilitated significant improvements through the use of metadata at both stations. Broadcast journalists as content creators employ AI technologies such voice along with automated tagging, to streamline workflows. These technologies enable voice-controlled Electronic Program Guides (EPGs) and real-time, high-volume content analysis, simplifying data management and retrieval processes (Mayne, 2022). This application of AI enhances the efficiency of media operations, allowing for better organisation and accessibility of vast amounts of data.

Advertisement scheduling is another area where AI has made a significant impact at the stations. The TV stations now utilise automated AI systems like RAM-COM to schedule and air advertisements at designated times. These systems also maintain a comprehensive database of aired advertisements, providing valuable data for advertisers (Oyedokun, 2023). The deployment of AI in advertisement scheduling is dependent on the availability and affordability of these technologies. As noted by Guanah et al. (2020) and Idachaba (2018), the ability of AI to optimise ad scheduling and manage data efficiently offers a competitive edge to media organisations, enabling them to attract and retain advertisers.

The dissemination of content, particularly over the internet, has also been significantly enhanced by AI technologies at both stations. AI algorithms analyse user psychographics to identify individual interests, thereby facilitating personalised content suggestions. This personalisation improves user engagement and satisfaction, making content more appealing to the audience. Additionally, AI tools enhance content metadata and search engine optimisation (SEO), increasing the discoverability of content and websites (Xperity, 2023). These tools are very important for ensuring that content reaches a wider audience. In addition, AI is used to improve audience engagement and immersive experiences through AI chatbots and virtual assistants. Broadcast programs and other content shared on social media benefit from enhanced audience interaction, as AI-driven tools provide immediate and personalised responses to user queries and comments. This not only enhances user experience at the stations but also nurtures a sense of community and loyalty among the audience (Oyeleye & Ademosu, 2021).

The findings indicate that AI continues to evolve, performing tasks that were previously the domain of humans at the two television stations. Its adoption and the resulting transformations in studio operations are driven by perceived needs, competitive pressures, and the desire of the media organisations to capture a significant share of the broadcast audience. However, according to Guanah et al. (2020), the deployment of AI in the creative industry of radio, television, and the internet in Nigeria for gathering, production, and dissemination of content is directly proportional to the level of technological advancement in the country. This explains why more technologically advanced countries have long ventured into using AI for hosting programs and have seen continuous improvements in such innovations over the years.

The possibility of Nigeria reaching the level of AI integration seen in more technologically advanced countries will largely depend on its technological advancement. This includes improvements in infrastructure, access to cutting-edge technologies, and the development of relevant skills among professionals in the media industry. Other factors must also be considered, such as regulatory frameworks, investment in research and development, and collaboration between academia, industry, and government. Aligning with Fidler's mediamorphosis theory, the evolution of media practices in Nigeria will likely follow a trajectory influenced by these technological, social, and economic factors.

IMPACT OF AI ON THE GATHERING, PRODUCTION, AND DISSEMINATION OF CONTENT

The deployment of Artificial Intelligence (AI) in the gathering, production, and dissemination of content at the two stations may be a reflection of what obtains within Nigeria's creative industry—encompassing radio, television, and the Internet—and has led to notable improvements in productivity and efficiency, despite the presence of numerous challenges. This study reveals that utilising AI across various stages of content production and dissemination has yielded significant and transformative results, contributing to the evolving landscape of Nigeria's media sector.

In content creation, AI has substantially enhanced the process, making the generated content more appealing and relevant to audiences. Automated scripting stands out as a key application, where AI algorithms analyse data from diverse sources, identifying trending issues and social media conversations. This capability allows AI to suggest content ideas that are pertinent and engaging, ensuring the produced scripts resonate with audience interests (Xperity, 2023). Also, AI-driven video editing tools streamline production by efficiently analysing raw footage, generating highlight reels, and suggesting appropriate effects, music, and subtitles (Xperity, 2023). These tools not only save significant time but also enhance the total viewing experience by ensuring high-quality production values.

Furthermore, the application of AI-driven virtual sets at the two stations is profound. This effect have democratised content creation, enabling startups and smaller media organisations with limited resources to produce visually appealing content. This technological innovation reduces production costs while maintaining high standards of visual storytelling (Xperity, 2023).

AI also plays a critical role in analysing user data and content preferences at the stations, enabling the creation of tailored content and advertisements that are personalised to individual users' tastes and interests (Mohamed, Osman & Mohamed, 2024). This personalised approach is further exemplified by AI's ability to offer content recommendations, enhancing user engagement and satisfaction.

OpenAI's GPT-4 serves as a prime example of AI's potential in content creation. This model has significantly advanced social media content creation by generating high-quality text that is used for posts, articles, and interactive engagements (Brown et al., 2020). The integration of AI in social media content creation and distribution primarily benefits the commercial departments of the stations by efficiently converting generated leads into sales, demonstrating the commercial viability of AI-driven content (Singh et al., 2023). AI tools such as augmented reality and virtual reality also assist in boosting sales and market share, underscoring the broad utility of AI in the creative industry (Cockburn et al., 2018). Social bots, which are computer algorithms that automatically generate content and interact with humans on social media, have also become commonplace, influencing online interactions and content dissemination (Ferrara et al., 2016; Jamil, 2020).

In advertisement scheduling, AI has introduced a new level of efficiency and precision. Automated systems like RAM-COM manage the scheduling and airing of advertisements with remarkable accuracy, even to the extent of interrupting live broadcasts if necessary (Oyedokun, 2023). Such automation alleviates the workload of traffic departments and presenters at the two stations, ensuring that advertisements are aired at the optimal times. The comprehensive database maintained by these systems provides valuable insights for advertisers, enhancing the effectiveness of their campaigns (Oyedokun, 2023).

Content management at the stations has also been revolutionised by AI, particularly through the use of metadata. AI enhances accessibility to older archives seamlessly via Electronic Program Guides (EPGs) and real-time, high-volume content analysis. These advancements enable media organisations and content creators to reach wider audiences by optimising content for easier discovery and increasing its reach through enhanced search engine optimisation (SEO) (Xperity, 2023).

Furthermore, AI has significantly improved audience engagement and the immersive experience of broadcast programs and social media content at the stations. AI chatbots and virtual assistants engage audiences in real-time, simulating human interactions and providing immediate responses to queries and comments. This level of interaction fosters a deeper connection between the content and its audience, enhancing user satisfaction and loyalty (Xperity, 2024; Oyeleye & Ademosu, 2021). These AI-driven tools not only enhance the user experience but also help in building a more interactive and engaging media environment (Nyam, 2021).

The significant impact of AI in at these two stations and Nigeria's creative industry underscores its growing popularity and adoption. The findings indicate that AI continues to evolve, performing tasks that were traditionally handled by humans, thereby transforming media operations. The adoption of AI by these station as deduced from the findings is driven by perceived needs, competitive pressures, and the desire of the broadcast stations to capture and retain a significant share of the broadcast audience. This trend is consistent with Fidler's mediamorphosis theory, which suggests that technological advancements drive the transformation of media practices (Guanah et al., 2020).

CHALLENGES TO THE APPLICATION OF AI IN CONTENT CREATION AND NIGERIA'S CREATIVE INDUSTRY

Despite the promise of Artificial Intelligence (AI) for enhancing productivity and efficiency at the television stations under study and by extention, within Nigeria's creative industry—encompassing radio, television, and the Internet—several significant challenges impede its successful application. The struggle with digitalisation highlights these issues, as Nigeria has faced prolonged delays in fully transitioning to digital broadcasting. Initially, the June 17, 2015, deadline set by the International Telecommunication Union (ITU) for Region 1, which includes Europe, Africa, and Arab nations, was extended to June 17, 2017, by the Economic Community of West African States (ECOWAS). However, years after this extended deadline, the Nigerian broadcast media industry remains largely un-digitalised

(Ukwela, 2021). This lag in digitisation has had major implications, forcing the broadcast stations not tp perform at optimal levels and some media organisations out of business due to the high costs associated with digital equipment and the necessary technical expertise (Idachaba, 2018; Endong, 2015; Ihechu & Uwaoma, 2012). Amidst these ongoing digitalisation issues, the advent of AI presents new opportunities for automation and enhanced productivity, but also introduces additional challenges.

One of the most significant barriers to the successful application of AI at the stations is the high cost associated with these technologies. AI systems are expensive to purchase, develop, and maintain, necessitating substantial financial investment and reliable internet connectivity (Guanah et al., 2020). Nigeria's slow pace in adopting technological innovations, as exemplified by the protracted digital switch-over process, underscores the difficulty of integrating advanced technologies like AI (Olanrewaju, 2018; Idachaba, 2018). The financial burden of acquiring and implementing AI systems restricts their use within Nigeria's creative industry, in stark contrast to more developed countries where AI is extensively deployed (Fayoyin, 2021). This financial constraint limits the ability of Nigerian media organisations to leverage AI for enhanced content creation, management, and dissemination.

Also, the infrastructure necessary to support AI deployment is still underdeveloped in Nigeria. Reliable electricity and high-speed internet, both critical for the effective functioning of AI systems, are not consistently available across the country. This infrastructural inadequacy poses a significant hurdle, as AI technologies require stable and robust connectivity to function optimally. The intermittent power supply and limited internet bandwidth can disrupt AI operations, reducing their efficacy and reliability.

Additionally, there is a skills gap that hinders the effective implementation of AI at the two stations. The development, deployment, and maintenance of AI systems require specialised knowledge and technical expertise that are currently in short supply within the stations and the country. This skills shortage necessitates substantial investment in education and training to build a workforce capable of leveraging AI technologies. Without a concerted effort to develop these skills, the adoption of AI will remain limited, and its potential benefits will be unrealised.

Lastly, AI introduces risks and social threats, particularly concerning data privacy. AI algorithms often track user data without explicit consent, raising significant privacy concerns (Nyam, 2021). The absence of a robust regulatory framework for the use of AI in Nigeria exacerbates this issue, leaving users vulnerable to unauthorised data collection and use (Obi et al., 2023). Without stringent regulations and enforcement mechanisms, there is a heightened risk of data misuse, which undermines public trust in AI technologies. This lack of regulation also extends to the protection of intellectual property rights. AI's ability to generate content scripts and ideas tend to inadvertently infringe on existing intellectual property by using protected information without proper authorisation (Obi et al., 2023). This potential for intellectual property violations presents a legal and ethical challenge that must be addressed to ensure the fair and responsible use of AI in content creation.

CONCLUSION

AI has gained substantial traction across Channels Television and NTA, driving notable improvements in productivity and efficiency. In particular, the nexus between these two television stations and the internet have experienced significant advancements through AI deployment in areas such as content creation, management, advertisement scheduling, dissemination, and audience engagement. These technologies have revolutionised how content is produced and consumed, offering enhanced personalisation, streamlined production processes, and better resource management. Despite these advancements, the extent of AI use at the stations is constrained by several factors. Technological advancement remains a key challenge, as the availability and affordability of AI technologies are limited. Many media organisations, especially smaller ones, struggle to access the necessary AI tools and infrastructure, which hinders widespread adoption. The disparity in technological resources between stations like Channels in the urban area and stations in the rural areas further exacerbates this issue, creating a digital divide that impacts the effectiveness of AI implementation.

RECOMMENDATIONS

To enhance further AI deployment in the two stations and Nigeria's creative industries, we recommend that broadcast stations should focus on employee training through workshops, online courses, and partnerships with educational institutions. Establishing AI research and development teams will further support the exploration and implementation of AI solutions. On a broad scale, AI tools for automated scripting, video editing, virtual sets, and graphics will streamline content creation, improving efficiency and quality while reducing costs. Furthermore, broadcast stations should use AI-based systems like RAM-COM for optimal advertisement scheduling and performance analysis to increase revenue opportunities. Deploying AI chatbots and virtual assistants enhances audience engagement by providing real-time interactions and personalised content recommendations just as AI analysis of audience psychographics improves viewer satisfaction and loyalty by suggesting personalised content. In this regard, the employment of AI should be encouraged since, in addition to other benefits, it also improve content discoverability through optimised metadata, SEO, and automated tagging and categorisation, which facilitates better content retrieval and management.

For the government, investing in technological infrastructure, such as improved internet connectivity and reliable power supply, is essential for AI deployment. Developing high-performance computing centers and integrating AI education into curricula will support AI applications in media. Providing scholarships and funding AI research projects will nurture academia-industry collaborations. Supportive policies, including tax breaks, grants, subsidies for AI investments, and ethical guidelines, will incentivise AI adoption while protecting user privacy. Public-private partnerships is one way to develop AI solutions tailored to the Nigerian media landscape, and innovation hubs and incubators to support startups. In addition, raising awareness about AI through conferences, seminars, and public campaigns

will highlight its benefits in the media industry as well as showcasing successful case studies to educate stakeholders on AI's potential to transform media operations and improve content quality.

To maximise AI's benefits, broadcast stations should invest in employee AI training, establish R&D teams, and adopt AI tools for scripting, editing, virtual sets, and graphics. Using AI for ad scheduling and data analytics will optimise placements and provide valuable insights, enhancing revenue. Deploying AI chatbots and virtual assistants will further engage audiences with personalised content.

The government should invest in technological infrastructure, such as better internet connectivity and reliable power supply, and support high-performance computing centres. Promoting AI education and research through curriculum integration, scholarships, and funding will encourage innovation. Creating supportive policies like tax breaks and grants for AI adoption, along with ethical guidelines, will encourage a conducive environment for AI. Public-private partnerships and innovation hubs will support tailored AI solutions and startups. And raising awareness through conferences and campaigns will educate stakeholders on AI's benefits, driving its adoption and transforming media operations.

To address the challenges, broadcast stations should first invest in incremental AI integration, focusing on affordable AI tools that provide immediate benefits without significant financial outlay. Prioritising AI-driven solutions for automated scripting, video editing, and virtual sets is expected to enhance content quality and production efficiency. Training and upskilling employees in AI technologies through workshops and online courses also help in building internal capabilities and reducing dependency on expensive external expertise.

The government, on its part, should prioritise improving technological infrastructure, particularly internet connectivity and power supply, which are essential for AI deployment. Investing in high-performance computing resources and supporting the development of local AI technology will reduce dependency on expensive imported systems. Promoting AI education by integrating AI and data science into academic curricula and providing funding for AI research will stimulate innovation and build a skilled workforce.

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