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REVIEW ARTICLE

ANALOG OR ALGORITHM : ASSESSING THE STATE OF BROADCAST CONTENT DEVELOPMENT IN SOUTH-EAST NIGERIA

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ABSTRACT

Despite intense competition from fast-proliferating digital media platforms in our rapidly evolving social media and Artificial Intelligence-driven world, content development practices in radio stations in South-East, Nigeria remain predominantly analog, traditional and conventional. Several studies suggest that artificial intelligence (AI) adoption in broadcasting can enhance the efficiency of production systems and reduce running costs thereby improving the viability and sustainability of broadcast stations. Anchored on the Disruptive Innovations theory and the TOE (Technology–Organisation–Environment) framework, this study evaluates current content development practices and the challenges of AI adoption in content development amongst radio stations in South-East, Nigeria. The objectives of the study are to assess the current broadcast content development practices among South-East Nigerian radio stations and to identify institutional, organizational, and technological challenges hindering Artificial Intelligence (AI) adoption, with the goal of informing strategies for accelerated digital transformation. Mixed research design was adopted comprising quantitative (survey) and qualitative (Key Informant Interview - KII) methods. The population of the study composed of radio content creators from all the 63 state, federal and privately-owned radio stations, across the region. Chi-Square Test and thematic analysis were used to analyze data obtained from the study. Results indicated a significant relationship between current content development practices and persistent challenges including hesitancy, technological deficits, lack of staff training, and the absence of policy direction etc. Findings also suggested that although South-East radio stations utilise digital tools such as phones and computers, the predominant content development practice is still mainly analog, non-digital and conventional. With the rapid transformation of the broadcast industry by AI, its adoption by South-East radio stations is urgent.

KEYWORDS

Artificial Intelligence, Analog, Broadcasting, Digital Transformation

1. INTRODUCTION

Artificial Intelligence (AI) is fast redefining broadcast content development with the proliferation of AI-driven technologies for enhanced content creation, automated news production, personalized audience experiences, optimized advertising strategies, and more (Carlson, 2015). AI technologies now assist in news generation, audience analytics, voice synthesis, and real-time translation (Dörr, 2016). Amidst growing concerns about AI's impact on journalistic integrity and job security in radio broadcasting, more AI-powered voice synthesis and generative AI tools are being launched, as well as interactive AI chatbots for enhanced audience engagement. Generally, AI is revolutionising the global broadcast industry, driving innovation in content creation, audience engagement, operational efficiency, personalised experiences, and more. More than ever, broadcasters are leveraging AI systems to meet the growing demand for diverse content, enhance production capabilities, and optimize content distribution through automated journalism, audience analytics, personalized content, and emerging operational systems. AI adoption in broadcasting can enhance production systems, streamline operations, and reduce running costs, necessitating proactive efforts by broadcast stations to follow developments and embrace innovation for survival and sustainability.

Concerning technological advancements, digitalisation and the proliferation of platforms and channels have increased the demand for personalised and quality multi-platform content. Unexpectedly, an increase in the demand for media content appears to have increased content-induced pressure on broadcast content producers. The quest for more and more content is driving audiences towards social media, with huge consequences for the survival of the conventional broadcast industry. It becomes crucial to examine the capacity and ability of content creators on Nigerian broadcast stations to meet rising content demand. This work contributes to the growing body of literature on AI adoption in the Nigerian broadcast industry. It also investigates a possible technological lag and the implications for competitiveness and innovation in broadcast content development in South-East Nigeria. Hence, this study aims to assess the current broadcast content development practices among South-East Nigeria radio stations and to identify institutional, organizational, and technological challenges hindering Artificial

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Intelligence (AI) adoption, with the goal of informing strategies for accelerated digital transformation.

1.1 Conceptual Framework

The conceptual framework of this study draws from the Disruptive Innovation theory (how novel, efficiency-enhancing tools displace legacy routines) and the TOE Framework (Technology–Organisation–Environment) developed to explain organisational technology adoption by (Tornatzky and Fleischer, 1990). The TOE Framework finds wide application in ICT adoption studies generally. In the context of the present study, the framework explains why South-East Nigeria radio stations, still dominated by analog practices, face uneven uptake of AI despite the visible benefits of cost, speed, and personalization. It integrates the Technology–Organization–Environment (TOE) perspective to organize drivers and barriers, and links these to measurable adoption outcomes.

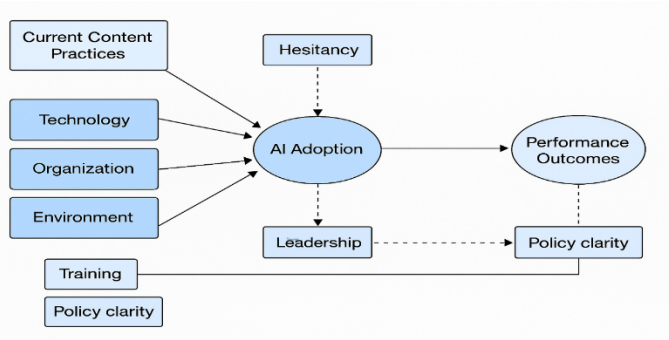

Figure 1: Conceptual Framework on TOE Framework Extension for AI Adoption in a Global South context, Linking Organizational, Technological, and Environmental Drivers to AI Adoption and Performance Outcomes

The framework, presented in Figure 1, illustrates how technology, organization, environment determine current content practices, an indicator of AI adoption, which in turn drives performance outcomes. Hesitancy negatively affects AI adoption, while leadership plays a mediating role, supported by policy clarity. Training strengthens organizational capacity, reducing hesitancy and improving adoption rates. Policy clarity also moderates the leadership–adoption pathway, ensuring that AI adoption aligns with institutional rules and regulations. In summary, the model highlights the interplay of structural, organizational, and behavioral factors shaping effective AI integration and its impact on media performance.

2. Literature Review

2.1 AI and the Transformation of Media

Artificial Intelligence (AI) has become a central force in reshaping global media production, distribution, and audience engagement. In developed economies, newsrooms and broadcast stations increasingly use AI to automate repetitive tasks, accelerate content workflows, and enhance targeting (Carlson, 2015; Dörr, 2016). Global leaders such as Reuters, The Washington Post, and the Associated Press (AP) deploy algorithmic journalism to automatically generate earnings reports, sports recaps, and data-driven stories with minimal human input, enabling greater scale and timeliness (Carlson, 2015). In Europe, MittMedia uses AI to create hyper-local news, while broadcasters like Deutsche Welle leverage AI subtitling for rapid translation and localization (Graefe, 2016; Volanschi, 2021). In Asia, China's Xinhua News Agency developed AI-powered news anchors to deliver 24/7 broadcasts, while South Korea's SBS network has piloted AI assisted video editing and music generation for drama series. In North America, Adobe's AI tool Sensei supports automated video categorization and editing, reducing production time (Manovich, 2019). These examples underscore AI's ability to streamline production, lower costs, and enable personalized content delivery through tools like Natural Language Generation (NLG), recommendation engines, and predictive analytics (Broussard, 2018).

Emerging literature highlights AI's potential for fact-checking, audience analytics, and content optimization, but also flags structural challenges, such as algorithmic bias, data scarcity, and ethical governance gaps (Ogola, 2023). The literature maps AI's role in content creation, moderation, and recommendation, highlighting Natural Language Processing (NLP) and computer vision as key enablers of newsroom efficiency. However, empirical evaluations of their actual impact on newsroom performance remain limited (El Erafy, 2023). Studies also discuss the potential of automated journalism to combat misinformation, but much of the evidence remains conceptual or descriptive, providing few actionable benchmarks to guide real-world adoption (Ali & Hassoun, 2019). Systematic reviews

show that while personalized news narratives and AI-based moderation are rising globally, region-specific validation in developing countries remains limited (Sonni et al., 2024). These gaps highlight the need for context-specific studies measuring adoption, performance outcomes, and workforce readiness.

In Africa, AI adoption in newsrooms is still nascent but growing. The first continent-wide mapping, calling for local tool development, capacity building, and policy reforms to overcome gender gaps and data inequities (Ogola, 2023). This extends the conversation to development communication, advocating culturally sensitive and inclusive AI deployment to empower communities (Ezeaka and Umennebuaku, 2024). This also links AI adoption to technology-determinism theory, emphasizing infrastructure and policy alignment as prerequisites for digital migration, while examining how NLP and layout automation are reshaping Nigerian newspaper editorial workflows (Ogbodo et al., 2025) (Ogbuoshi, 2021). Empirical evidence from Nigeria remains limited, surveyed 399 practitioners in South-East Nigeria, documenting early adoption of content automation and personalized audience engagement but noting significant infrastructure gaps and skill shortages (Anyanwu and Iheonye, 2024). These findings echo those who observed persistent training and equipment deficits in public broadcasting stations, constraining innovation (Ukwuru et al., 2023).

Globally, conceptualize AI-driven media transformation in three layers: policy, environment, and content, arguing for a balanced approach that integrates human capacity development and ethical frameworks (Ciruskabiri and Mousavi, 2023). However, they stress that implementation challenges, such as regulation and labor displacement, must be addressed to avoid widening inequalities. Taken together, these studies reveal that while AI adoption is revolutionizing media production internationally, Nigerian broadcasting remains at an early stage of digital transformation, with isolated innovations like NIMI, Nigeria's first AI powered virtual radio host, pointing to a gradual shift toward intelligent broadcasting. This study builds on these insights by critically evaluating the state of broadcast content development in South-East Nigeria, measuring adoption levels, and identifying barriers and opportunities for AI integration in a context marked by infrastructural limitations and growing competitive pressure from digital platforms.

2.2 Challenges to Innovation for Broadcast Development

Delay in adopting relevant emerging media systems in broadcasting has far-reaching implications for domestic content development. That broadcast stations in Nigeria are involved in local content programming, but the extent is not significant as foreign programmes still take the lead, citing the lack of finance and digitalised equipment, which constitute poor quality programming and lack of adequate monitoring by the Nigeria Broadcasting Commission (NBC) (Egere and Ushie, 2024). Pointing out that the low rate of purely indigenous broadcast content development has contributed to cultural imperialism as our indigenous programmes are in most cases relegated to the background, even by the indigenous viewers, they conscientised broadcast media managers in Nigeria to review content development orientation and practices, thereby prioritising local programming for values preservation. This research highlights multiple barriers to AI adoption in African media, including poor funding, inadequate training, unreliable infrastructure, and the absence of a clear AI policy (Bosompem et al., 2020; Chibuwe and Ureke, 2020).

3. Methodology

The researcher employed a mix of survey methods and key informant interviews, thereby leveraging the strengths of both designs. The combination also secured an in-depth understanding of the phenomenon under study while capturing the vast range of relevant quantitative and qualitative elements. The quantitative aspect of the study was the survey, while the qualitative aspect was the key informant interview. South-East Nigeria was chosen for this study because it boosts a burgeoning broadcast environment serving technological savvy and exposed audiences. The population of the study comprised of radio content creators from all the 63 state, federal and privately-owned radio stations, licensed by the Nigeria Broadcasting Corporation (NBC) to operate in the five states of South-East, Nigeria. Given the necessity to enrich the present study by assessing the broader perspectives of practitioners on the subject, Cochran's 1977 formula for sample size determination was used since the survey population was unknown. The study therefore adopts 384 as an ideal sample size based on (Cochran, 1977). Eventually 360 questionnaire was duly filled and collected. On the other hand, a total of nine radio stations were selected for the qualitative study, comprising nine (9) interviewees who are in the managerial cadre.

Table 1: List of Selected Radio Stations					
	STATE	**NAME**	**FREQUENCY**	**LOCATION**	**OWNERSHIP**
	ANAMBRA				
1		ABS	88.5FM	Awka/Onitsha	State
2		Purity FM	101.7FM	Awka	Federal
3		Sapientia	95.3FM	Onitsha	Private
	EBONYI				
4		EBBC		Abakaliki	State
5		Salt FM		Abakaliki	Federal
6		Legacy	101.5FM	Abakaliki	Private
	ENUGU				
7		ESBS	96.1FM	Enugu	State
8		Coal City	92.9FM	Enugu	Federal
9		Dream FM	92.5FM	Enugu	Private

Source: Authors Compilation, 2025

Table 1 presents nine radio stations across Anambra, Ebonyi, and Enugu. Each state features a mix of state-owned, federal, and private stations, reflecting diverse ownership and coverage. Frequencies range from 88.5FM to 101.7FM, with major urban locations represented.

Data collection tools were designed for both the survey and the key informant interviews. For the survey, a structured questionnaire was used for data collection, while an interview guide was used for the collection of qualitative data. Convenience sampling was adopted in randomly administering the instrument to broadcasters who were available at the selected radio houses at the time of the researcher's visit. Descriptive statistics was used for analysing the quantitative data, while the recorded interviews were fully transcribed and thematically analysed to extract meaning.

Qualitative data from interviews and focus group discussions were transcribed verbatim and analyzed using thematic analysis, following six-phase approach (Braun and Clarke's, 2006):

- Familiarization with data,
- Generating initial codes,
- Searching for themes,
- Reviewing themes,
- Defining and naming themes, and
- Producing the report.

NVivo 14 software was used to code transcripts and organize emerging themes related to self-efficacy, household decision-making, and financial stress. Triangulation will ensure convergence between qualitative insights and quantitative findings, enhancing validity (Fetters et al., 2013).

4. Results And Discussion Of Results

4.1 Demographic Data Analysis

This subsection provides a descriptive overview of respondents' demographic attributes, including gender, age distribution, and length of service. These characteristics help establish the representativeness, diversity, and experiential depth of participants involved in examining AI adoption in broadcasting.

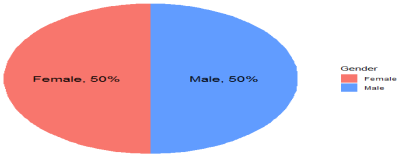

Figure 2: Gender Distribution of Participant

The result presented in Figure 2 revealed an even distribution of male (50%) and female respondents (50%), indicating no disparity between the genders used for the study.

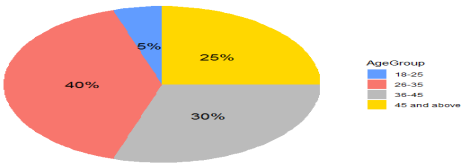

Figure 3: Age Distribution of Participant

The result presented in Figure 3 showed that only 5% of the respondents were aged 18-25; 40% were aged 26-35; 30% of the respondents were aged 36-45 years, and 25% were over 46 years old. The data revealed that more than one-half of the respondents were well over the youth upper age limit of 29 years, according to Nigeria's Revised National Youth Policy. The tech-savvy nature of young people, coupled with a future-oriented mindset, positions them as key drivers of AI adoption and innovation . Therefore youths are more likely to adopt artificial intelligence (Brennen et al., 2020). The age distribution of respondents therefore reflected a fair composition of youthful perspectives and insights on AI adoption realities in broadcasting in South-East, Nigeria.

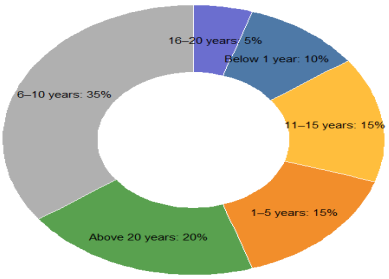

Figure 4 : Length of Service Distribution Among Respondents

The chart presented in Figure 4 shows most respondents have six to ten years of service (35%), followed by those above 20 years (20%). Smaller proportions fall within one to five years and 11–15 years (15% each). Only 10% and 5% have less than one year and 16–20 years.

In summary, the demographic patterns indicate a balanced gender composition, a predominantly mature workforce, and substantial professional experience among respondents. These attributes enhance the credibility of responses, suggesting that participants possess both practical exposure and informed perspectives necessary for evaluating the realities, challenges, and opportunities surrounding artificial intelligence

adoption in the broadcast sector.

4.2 Perspectives on Current Content Development Practices

This section examined current content development practices in radio stations in South-East, Nigeria, as perceived by the practitioners using three key institutional and organisational variables:

- Ownership status
- Location of station
- Years of operation

The objective was to determine the predominant content development practices amongst radio stations in South-East, Nigeria, in order to evaluate the extent of AI adoption. Results showed that one-half of the respondents were from state owned radio stations which were all over 20 years in operation. In terms of location, over one-half of the radio stations were located in Anambra state, followed by 25% in Enugu state and 20% in Ebonyi State. Over two-thirds (70%) of respondents perceived content development practices in their respective stations as equally traditional and digital; 15% considered it more traditional than digital, one-tenth said it was entirely traditional and only 5% indicated that it was entirely digital. Therefore, the majority perceived content development practices in their respective stations as equally traditional and digital; indicating significant uncertainty about the true nature of content development practice in the region.

4.3 Challenges of AI adoption in broadcast content development

Respondents were required to tick all that apply in order to give a broad sense of the relevant challenges of AI adoption and also identify the most critical ones. Hesitancy topped the list with 60%, lack of training followed with one-half, and poor internet connectivity to power AI use at two-fifths. This finding gives an overview of the factors stalling AI adoption by broadcast stations in the region. It can be deduced that all other factors contribute to hesitancy which appeared to be the dominant challenge. The lack of training was strongly indicated as a major challenge of AI adoption over the lack of information possibly because training solves the problem of lack of information. The high cost of AI tools, high cost of data and lack of access to workplace digital devices also negate AI adoption in the region. However, internet access was not a challenge. Deductively, the internet is available and accessible but the lack of workplace devices prevents radio content creators from exploring AI for work purposes. Ethical concerns were indicated above privacy concerns on challenges of AI adoption, thereby corroborating the earlier finding on the limiting effect of lack of training on AI adoption. With proper sensitization and training on AI use, radio content creators in South-East Nigeria are likely to navigate ethical concerns relating to the use of AI. Avoiding AI reliance or laziness was strongly indicated over the fear of job replacement. Realistically, AI is fast transforming every area of life and broadcasting is no exception but the respondents appear oblivious of the ongoing rapid AI revolution. The latent mental disposition of the respondents to AI adoption reveals the need for prior and thorough sensitization as a basic component of AI trainings. On the other hand, the most implicated institutional challenge was the limited knowledge of AI among managers of South-East radio stations. Next was the absence of an official policy direction from the government, AI localization concerns and lastly, the perception of AI as mechanical or easily detectable. This outcome aligns with an earlier finding which suggested that hesitancy to the use of AI among the respondents' stems from the lack of training which we have now discovered to be a general issue, from managers to staff.

4.4 Determinants of AI Adoption: Linking Content Practices and Institutional Challenges

Table 1 presents the results of a chi-squared test examining whether current broadcast content development practices are significantly associated with institutional challenges influencing artificial intelligence (AI) adoption among South-East radio stations.

H_0: There is no significant relationship between current content development practices and challenges faced by broadcast organizations.

Table 2: Chi-Squared Test of Independence between Content Development Practices and Institutional Challenges in South-East Radio Stations

Test Statistic	Value
Chi-squared (χ^2)	141.47
Degrees of Freedom	4
p-value	0.000

The result presented in Table 2 found a Chi-squared value of 141.47 with 4 degrees of freedom and a p-value of 0.000 ($p < 0.05$), indicating that the result is statistically significant. This means we reject the null hypothesis (H_0). Hence, the result implies that there is a significant relationship between current content development practices and challenges faced by South-East radio stations (like a lack of information or training on AI tools). This suggests that organizations struggling with certain technological or structural limitations are likely to experience particular patterns in how they disseminate broadcast content.

4.5 Thematic Analysis of Interview data

The main objective of this study was to assess current content development practices in the Nigerian broadcast industry. The qualitative inquiry unraveled the underlying institutional and organisational factors affecting AI adoption by South-East radio stations. The managing directors of the selected radio stations described the end to end broadcast content development processes at their respective organisations. Major factors which determine AI adoption in broadcast content development were identified in the data. These themes include institutional/ organisational realities, management structures and regulatory policies.

Research Question 1: What are the current content development practices among radio stations in South-East, Nigeria?

Based on the thematic analysis of respondents' insights, the following key themes emerged regarding content dissemination practices in Nigerian broadcasting stations:

- Traditional and Ethical Journalism Practices
- Technological Integration and Media Convergence
- Challenges in Content Production
- Interdepartmental Collaboration and Staff Roles
- Audience Engagement and Content Strategy

The interviewees noted that most Nigerian broadcast stations uphold traditional journalistic practices, ensuring that content is sourced through on-the-ground reporting and cross-verification of news from multiple sources. They emphasized that social media is not relied upon as a primary news source; instead, verification is done using credible national and international media outlets such as BBC, Punch, and Vanguard, indicating consensual trust on those platforms.

"*Our policy prohibits sourcing news from social media, therefore we stick to verified sources like BBC, Punch, Vanguard, etc.*" (Interviewee 4)

While traditional content development processes remain dominant, media convergence has been embraced to expand content reach. Many stations now integrate social media platforms (Facebook, Instagram, X/Twitter, YouTube, and TikTok) and live-streaming to engage a wider audience.

"*COVID made us embrace media convergence, and most of our programs are streamed live on individual presenter's social media pages.*" (Interviewee 7)

Also, several challenges hinder efficient content production, including high operational costs, resource constraints, and verification delays. Particularly, fuel costs for running broadcast stations have forced some to reduce their daily broadcast hours.

"*The high cost of diesel forced us to reduce broadcast time to 15 hours daily; sadly, we are considering further reductions.*" (Interviewee 3)

While some stations promote interdepartmental collaboration, there is resistance from some staff who prefer to specialize. In contrast, others encourage multitasking, encouraging employees to develop multiple skills across departments.

"*We encourage staff to multitask across departments, but we don't quite see robust interdepartmental collaboration in ensuring that story ideas from the news department are shared with the programs department." (Interviewee* 5)

Stations tailor their content to suit audience preferences, incorporating humour, interactivity, and indigenous language programming. Listener feedback through phone-in programs and social media monitoring influences content decisions.

"*Through our phone-in programs, we discover content ideas that resonate with the audience."* (Interviewee 4)

Hence, while traditional content dissemination practices remain prevalent, Nigerian broadcast stations are gradually adapting to digital trends through media convergence and social media integration while facing operational challenges.

Research Question 2: What are the challenges of AI adoption in content development among radio stations in South-East, Nigeria?

Through thematic analysis of respondents' views, the following key challenges associated with AI adoption in content development emerged. These challenges have been categorized into the following themes:

- Lack of Natural Writing and Language Limitations
- Threat to Job Security and Workforce Resistance
- Ethical and Copyright Concerns
- Limitations in Content Generation and Fact-Checking
- Aversion to Change and Institutional Readiness
- AI's Lack of Flexibility and Initiative

Many practitioners feel that AI-generated content lacks a human touch and does not align with natural writing styles. Additionally, concerns were raised about AI's inability to accurately pronounce or generate content in indigenous languages like Igbo.

"AI style of writing is unnatural and needs an infusion of human creativity. AI also mispronounces our local Igbo names." (Interviewee 1)

"*Given our environment of operation, we offer lots of local content in the local language, Igbo, to increase our listener base and engagement. Can AI write and speak Igbo?"* (Interviewee 2)

A recurring concern is that AI could replace human jobs, particularly in government-owned broadcast stations, leading to agitation and reduced productivity. Some managers also noted a general unwillingness among content creators to embrace AI due to fears of displacement.

"*Quick adoption of AI can lead to fears of job insecurity in government owned broadcast stations, causing agitation and poor productivity*." (Interviewee 4)

"*The idea that AI will take people's jobs is further scaring most people away from AI."* (Respondent 5)

Managers also worry about the ethical implications of AI, especially regarding copyright, misinformation, and privacy. The use of AI-generated content without clear ownership guidelines is, therefore, a significant challenge.

"*I am concerned that copyright issues may arise with the use of AI tools for content generation. There are also privacy concerns with all the information we feed AI with—what if those details are used against us in the future*?" (Interviewee 1)

Some respondents highlighted the limitations of AI noting that AI relies heavily on available online data, making it inadequate for generating content on less-documented local subjects. Additionally, AI struggles with distinguishing between misinformation and factual news.

"*AI relies on available information, so if there's no data online about a particular subject, AI cannot generate content on that*." (Interviewee 7)

"*After content generation, AI is unable to distinguish between disinformation and facts. And so, after using AI for research, the editor has to sift through and reconfirm*." (Interviewee 5)

AI adoption is hindered by a general reluctance to embrace technological changes and the operational struggles of broadcast stations. Many organizations are still grappling with financial constraints and digital transformation challenges, making AI adoption a lower priority.

"*Aversion to change by some broadcasters is a major issue, and the lazy ones may end up regurgitating AI-generated content without any creative input on their part."* (Interviewee 7)

"*Most stations are still grappling with operational challenges, trying to cover operational costs and embrace technology, so AI isn't yet on the table."* (Interviewee 7)

Some respondents pointed out that AI lacks the intuitive ability to make real-time corrections during news delivery. Additionally, they questioned whether the rapid pace of AI development is sustainable for Nigerian broadcast stations.

"*AI may not be flexible, and when certain intuitive corrections need to be made during news delivery, AI may not take initiative*." (Interviewee 8)

Interviewee 8 added that "*AI is dynamic and developing too rapidly—are we able to keep up given our level of development*?"

Hence, while AI has the potential to enhance broadcast content development, practitioners express significant concerns regarding job security, ethical considerations, AI's language limitations, fact-checking challenges, and resistance to change. These challenges highlight the need for proper training, policy frameworks, and the gradual integration of AI into broadcast processes.

4.6. Discussion of results

The results reveal that AI adoption in broadcast content development in South-East Nigeria is still at an early stage, with most stations practicing a hybrid of traditional and digital content development, confirming a gradual but incomplete shift toward digitization. The significant chi-squared result ($\chi^2 = 141.47$, $p < 0.05$) shows that institutional challenges such as hesitancy, lack of training, and policy gaps are strongly associated with content development practices, findings on structural and capacity barriers to AI adoption in African newsrooms (Ogola's 2023). The prominence of hesitancy and inadequate training as top challenges aligns with highlighted skill shortages and limited infrastructure as barriers to innovation in Nigerian broadcasting (Anyanwu and Iheonye 2024).

The thematic analysis also underscored ethical concerns, copyright issues, and fear of job displacement as significant deterrents to AI adoption, mirroring about global newsroom anxieties over algorithmic transparency and data ethics (Sonni et al., 2024). These concerns indicate that adoption is not only a technological issue but also a socio-cultural and organizational challenge requiring policy clarity and sensitization programs (Ezeaka and Umennebuaku, 2024). The finding that internet access was not a major barrier but device availability and training were critical suggests that infrastructural readiness alone is insufficient; human capacity and organizational willingness play central roles in driving adoption. This supports layered framework, which emphasized that human resource adaptation and institutional readiness are key enablers for meaningful AI transformation (Ciruskabiri and Mousavi, 2023).

The clustering of respondents' perspectives around media convergence and selective adoption of digital tools reveals a transitional ecosystem where hybrid practices dominate. This pattern is consistent that Nigerian newsrooms are experimenting with Natural Language Processing (NLP) and automation but lack robust metrics to track adoption outcomes (Ogbodo et al., 2025). The current results advance this discourse by empirically establishing that content development practices and institutional constraints are statistically linked, suggesting that interventions must address organizational culture alongside technology deployment. In practical terms, this means that state-owned and long established stations may require targeted training and change management strategies to overcome resistance and accelerate digital transformation.

From a policy standpoint, the results highlight an urgent need for capacity building initiatives, policy frameworks, and ethical guidelines to foster responsible AI use in broadcasting. As recommended, collaboration between the government, media associations, and AI developers is crucial for developing localized tools that reflect linguistic and cultural diversity, thereby addressing the limitations of AI in handling indigenous languages (Ogola, 2023). Moreover, aligning with global trends, Nigerian broadcasters could leverage AI for routine tasks, such as subtitling, editing, and audience analytics, freeing up human resources for investigative and creative work. The implication for managers is that gradual, guided adoption of AI, supported by training and clear governance, can mitigate fears of job loss, improve efficiency, and position South-East radio stations competitively in a rapidly digitising media landscape.

5. Conclusion

This study concludes that broadcast content development in South-East Nigeria remains dominated by analog, traditional and conventional practices, with AI adoption still at an early stage. Results demonstrate a statistically significant link between content practices and institutional challenges, particularly hesitancy, lack of training, and policy gaps, which impede adoption. The findings underscore the need for targeted capacity building, leadership-driven digital transformation, and development of clear regulatory frameworks to foster responsible AI integration. Addressing workforce concerns and strengthening organizational readiness are crucial steps toward leveraging AI for improved efficiency,

audience engagement, and competitiveness in Nigeria's rapidly evolving media ecosystem.

The study recommends structured AI training for broadcasters, leadership-driven innovation, and targeted infrastructure upgrades to support digital tools. Also, it calls for clear national AI policies from the NBC, incentives for responsible adoption, and programs that address practitioners' psychological concerns while promoting collaboration between human creativity and AI systems.

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