



Journalists' Awareness, Use, and Perceived Impact of Artificial Intelligence on Newsroom Productivity in Selected Television Houses in Abuja

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Abstract

This study examined journalists' awareness, use, and perceived impact of Artificial Intelligence (AI) on newsroom productivity in selected television houses in Abuja, Nigeria. The study was anchored on Mediamorphosis Theory and adopted a mixed-methods research design, comprising a descriptive survey and qualitative in-depth interviews. Quantitative data were collected through a structured questionnaire administered to 136 journalists, while qualitative data were obtained through semi-structured interviews with six purposively selected Heads of News and Editors from the selected television houses. Quantitative data were analysed using frequencies, percentages, mean scores, and grand means, while qualitative data were analysed thematically. The two datasets were integrated through a joint display matrix to establish areas of convergence, complementarity, and divergence. The findings revealed generally high awareness of selected AI tools, although awareness and usage varied across applications. AI tools were mainly used for content generation, transcription, fact-checking, data processing, and other routine newsroom activities. Journalists generally perceived AI as having a positive influence on news reporting and newsroom productivity, particularly in relation to timeliness, accuracy, quality, efficiency, and productivity. The findings further indicated that AI-enabled personalisation and digital distribution were perceived to influence audience news consumption and engagement. However, significant challenges were identified, including inadequate technical skills, limited structured training, infrastructural deficiencies, ethical concerns, misinformation, privacy and security risks, implementation costs, and concerns about job security. Qualitative findings reinforced the quantitative results, particularly regarding AI's contribution to faster newsroom workflows and the continuing importance of human editorial oversight. The study concludes that AI is transforming rather than replacing professional journalism in Abuja television newsrooms. recommends regular AI capacity-building programmes, clear editorial guidelines for responsible AI use, investment in digital infrastructure, and institutional mechanisms for human verification, accountability, and ethical oversight of AI-assisted news production.

Keywords: artificial intelligence (AI), journalists' perception, newsroom productivity, news production, television stations

Introduction

Over time, the production and dissemination of news have undergone transformations that are related to the evolution of communication technology developments. In the early stages, news gathering and reporting was a very slow process that required human efforts and cooperation in the production and presentation of news stories (Ibrahim *et al.*, 2021). At the time, journalists had to rely on hand-written notes, face-to-face interviews, tape recording devices, and typewriters to report the news. In addition, news editing and reporting was a cumbersome process that involved multiple stages of reporting before the news was finally printed or broadcasted. As such, factors



such as the amount of information, availability and type of communication technology, distance, and human efforts all influenced how fast news stories were disseminated (Olawale, 2020).

Currently, developments in digital technology have transformed most of the conventional aspects of news production and presentation. One of the many digital innovations that have the potential to revolutionise the newsroom is Artificial Intelligence (AI). Artificial Intelligence is a broad concept that entails the simulation of human intellectual activity by computer-controlled machines (Russell & Norvig, 2020). Some of the applications of AI in the modern newsroom include information gathering, transcription, translation, data mining, news creation and curation, news monitoring, fact-checking, audience analysis, and distribution of news content. AI has the potential to accelerate most of these processes while also allowing journalists to engage in more meaningful activities that require human intellect, investigative work, and critical thinking.

As such, newsroom journalists' awareness of AI is a critical factor related to the adoption of the current technological innovations. In this context, awareness entails knowledge or understanding of journalists about the nature of AI, its applications, and its relevance in the newsroom. Journalists' awareness of AI will determine their ability to deploy the technology in news production and reporting activities. Therefore, the extent of awareness of journalists about AI will play a significant role in determining how prepared the profession is to embrace new changes in the newsroom. Besides awareness, the extent to which journalists use AI technologies is also a critical factor related to the influence of the technology on the newsroom. A journalist might be aware of the existence and applicability of AI but might fail to use it due to various reasons. In television journalism, AI can be used in transcription, translation, news monitoring, data analysis, content creation, scripting, and editing among other aspects of production. A deeper understanding of the extent to which television journalists are using AI will provide a solid rationale for exploring how the technology affects the productivity of the newsroom.

Among all the aspects of news production that AI can revolutionise, the most compelling reason for increased adoption of the technology is its potential influence on the productivity of the newsroom. The concept of newsroom productivity is closely tied to how effectively and efficiently newsrooms operate to maximise output while minimizing the time and effort invested. The use of AI-powered technologies in the newsroom can increase productivity by facilitating faster and more efficient news production activities. Information processing, transcription and translation, data mining, and content creation can all be done faster when using technology thus leaving less room for human error. The Associated Press (AP) has reported using automated technologies to write financial news reports thus freeing journalists to focus on other aspects of news production (Marconi & Siegman, 2021). However, how much impact will AI have on the productivity of the television newsroom depends on the extent of awareness and use of AI by television journalists.

In Nigeria, the adoption of AI in journalism is taking place amid rapid technological change and increasing demands for timely news production. Television stations, particularly in Abuja, operate under tight deadlines and face challenges such as limited access to advanced technologies, inadequate technical training, financial constraints, and concerns about accuracy, ethics, and professional autonomy. These challenges may influence journalists' awareness, adoption, and effective use of AI in newsroom operations. Abuja, as Nigeria's political and media centre, therefore provides an important context for examining how journalists are responding to the growing use of AI in television journalism.



Although existing literature has examined AI and journalism, considerable attention has been given to the general opportunities and challenges associated with AI adoption, while comparatively less attention has been paid to the relationship between journalists' awareness, actual use of AI, and their perceived impact of the technology on newsroom productivity, particularly within television newsrooms in Abuja. This creates a need for empirical evidence on whether awareness of AI translates into actual newsroom use and how journalists perceive its contribution to the efficiency and productivity of their work. This study, therefore, focuses on exploring how journalists in Abuja view the role of AI in their work and how it shapes the productivity of their newsrooms. This study, therefore, examines journalists' awareness and use of AI and their perceived impact of the technology on newsroom productivity in selected television houses in Abuja.

Statement of the Problem

Despite the growing use of Artificial Intelligence (AI) in global news production, its effect on newsroom productivity, job security, ethics, and content quality are still a major concern, especially in Nigeria. AI helps with tasks like writing news, analyzing data, translation, and engaging audiences, but it also brings serious challenges. According to Ali and Hassoun, (2019), one key issue is job security. Since AI can handle routine reporting, many fear that journalists especially beginners may lose jobs or be reduced to supervising machines in a media industry already struggling with unemployment. Another problem is ethics. AI relies on algorithms that can spread bias, misinformation, or publish unverified news. In Nigeria, where fake news is already a challenge, this risk could damage public trust in the media. The digital skill gap is also a challenge. Many journalists lack the training to use AI tools, leaving smaller and rural media houses behind while bigger, well-funded one's advance. Previous studies, such as those by Mabweazara (2018) and Nwanyanwu & Nwanyanwu (2021), have focused largely on the technological awareness and adoption of AI in African and Nigerian newsrooms. However, these studies often overlook the perceptions and lived experiences of journalists who interact with AI tools daily, especially in local contexts like Abuja-based media houses, where AI adoption is still emerging and uneven. Thus, in line with these gaps, this study intends to examine the perceptions of journalists in selected Abuja-based television houses regarding the impact of AI on newsroom productivity.

Objectives of the Study

This study seeks to achieve the following objectives

1. Examine journalists' awareness of Artificial Intelligence tools in selected television houses in Abuja.
2. Assess journalists' perceived impact of Artificial Intelligence on news reporting and newsroom productivity in selected television houses in Abuja.
3. Examine journalists' perceptions of the effects of Artificial Intelligence on audience news consumption in selected television houses in Abuja.
4. Determine the perceived challenges associated with the use of Artificial Intelligence in newsroom operations among journalists in selected television houses in Abuja

Literature Review

Concept of Artificial intelligence (AI)

Artificial Intelligence, AI, is an emerging technological phenomenon that has become a vital resource in contemporary journalistic practices. Artificial Intelligence is generally perceived



as computer capabilities that enable machines to mimic human intellectual activities, ranging from cognitive reasoning, thinking, learning, processing, and remembering to language understanding and comprehension, among others (Russell & Norvig, 2021). However, researchers have different views regarding the concept and scope of AI. For instance, while Russell and Norvig (2021) focus on the power of AI to perform intelligent tasks, Al-Zou'bi and Fyadh (2023) highlight its application potential in supporting newsroom operations, including editing, verifying, publishing, and interacting with audiences. In a similar vein, Nielsen (2024) argues that AI is currently used in news editing to facilitate news production, which is fast becoming a critical activity in the newsroom. Therefore, the general view in the literature is that AI is being applied more as an assistant than as a complete replacement for human intelligence.

Simon (2024) explains that news organisations are using artificial intelligence to support journalists in performing specific, repetitive, or time-consuming operations while leaving more complex and investigative aspects of news reporting to humans. Therefore, the general argument in the literature is that the value of AI in news production lies in its ability to support human activities while complementing their potential to enhance newsroom efficiency. However, this view depends on how well journalists understand the technology, their awareness of its potential, applicability, and whether they are able and ready to adopt it in their professional practice.

Concept of News Production

News production entails a wide range of editorial and professional activities performed by journalists, including gathering, verifying, analysing, selecting, writing, editing, and presenting the news to the target audience. Most researchers have shown that news production is generally a process of preparing news items for publication or presentation by focusing on activities such as news selection, writing, editing, and distributing the news items to the target audiences. For instance, McQuail (2010) argues that news production refers to the entire process of content creation and dissemination of news items by the media outlets through the combined efforts of newsroom editors, reporters, and journalists. In turn, Ward (2018) emphasizes the role played by journalists, editors, and other newsroom editors in gathering, analyzing, evaluating, editing, and presenting news items to the target audience. Therefore, these views underscore the fact that news production is a multi-dimensional process involving various stages and activities that lead to the creation of publishable news items.

Generally, news production activities fall into two main categories: gathering and analyzing information and producing news items based on the information gathered. According to Ali and Hassoun (2019), journalists gather and verify information from interviews, statements, press releases, eye-witnesses, research, and investigations before analyzing and evaluating it to generate relevant and reliable news items. In this regard, news production also encompasses the activities of assessing the newsworthiness of items based on factors such as immediacy, proximity, time, location, significance, and impact on the audience. Therefore, the news production process includes several editorial assignments, ranging from reporting to writing, editing, and presenting news items to the target audiences.

Currently, AI is playing an increasingly significant role in virtually all aspects of news production, ranging from gathering and organizing information, writing and translating news items, editing, verifying, and fact-checking news items (Al-Zou'bi & Fyadh, 2023; Nielsen, 2024). Such capabilities could significantly enhance operational efficiency and productivity in the newsroom by reducing the time and effort required to perform these tasks. However, the use of



this technology in news production raises several professional, ethical, and operational issues, including the potential for inaccuracy, bias, and unprofessionalism, as well as challenges related to control, reliance on technology, and human intervention (Pavlik, 2022). In turn, according to Pavlik (2022), news organisations are already facing increased pressure due to the rising demands for news and information, which requires them to embrace new technologies such as AI to make their operations more efficient. Therefore, the general view in the literature is that news production is no longer dependent on conventional journalistic activities and approaches but has begun to rely on new technologies such as AI to enhance newsroom performance and productivity.

Review of Empirical Studies

The related studies carried out by various researchers on artificial intelligence and journalism covered different aspects. Some of the authors explored the adoption, awareness, professional impact, and ethical implications of artificial intelligence in newsrooms. The studies had different populations and research designs. However, Kioko et al. (2022), in his exploration of factors influencing adoption decisions in Kenyan newsrooms identified management support, affordability, technical skills, clarity on application and use cases, perception, and organisational structure as critical variables. According to Kioko et al. (2022), the main challenges to adopting AI and robotics in newsrooms were lack of quality data, ethical concerns, and uncertainties about future developments. On the other hand, Lawal (2023) identified ethical frameworks, accountability, and collaborative strategies as key factors influencing the adoption of artificial intelligence in journalism. Lawal (2023) explored these factors in Katsina State. Therefore, from his study and Kioko et al.'s (2022) research, one can conclude that although the influence of technological capabilities on newsrooms is inevitable, organisations need to consider several factors regarding journalists' competencies, ethical implications, and professional perceptions when adopting AI robotic systems. However, both studies do not establish how these factors influence the productivity of newsrooms.

On the contrary, Jammy et al. (2021) established that most people in Asaba lacked awareness regarding artificial intelligence. According to Jammy et al. (2021), the mainstream media had not created enough awareness about the potential of artificial intelligence. The sample selected by Jammy et al. (2021) consisted of members of the audience. Therefore, from this study, one can conclude that there is a need to create more awareness about artificial intelligence among the general audience and newsroom professionals. Sholola et al. (2023)'s study on the awareness of AI among journalists in Kwara also supports the need to create awareness about artificial intelligence. Sholola et al. (2023) revealed that although Kwara journalists expressed positive perceptions about the application of artificial intelligence in journalism, they lacked adequate knowledge about AI's implications for newsrooms. Sholola et al. (2023) also established that Kwara journalists are already using artificial intelligence to produce news reports. Therefore, Sholola et al. (2023) and Jammy et al. (2021)'s findings show that awareness about artificial intelligence and its application in newsrooms is low among the general audience and journalists. However, whereas Jammy et al. (2021) made their findings public regarding members of the audience, Sholola et al. (2023)'s findings apply specifically to newsroom professionals. Therefore, the two studies explored different populations, with different findings, addressing different research objectives.

From Kioko et al. (2022) and Lawal (2023)'s findings, it is evident that although artificial intelligence is considered an essential component of newsroom efficiency, it raises several ethical



and professional implications. Kioko et al. (2022) established that journalists consider artificial intelligence useful in promoting newsroom productivity. Sholola et al. (2023) revealed similar findings regarding the efficiency of adopting AI robotic systems. On the other hand, Lawal (2023) asserted that apart from boosting productivity, the application of artificial intelligence in newsrooms raises concerns about professional ethics, collaboration, accountability, and job security. Overall, these findings indicate that the adoption of artificial intelligence in newsrooms is not without its implications, although it brings about several advantages.

Although Kioko et al. (2022) and Lawal (2023) agree on the beneficial impact of incorporating artificial intelligence in newsrooms, the two studies differ in regard to the factors that influence the adoption rate of AI robotic systems. Kioko et al. (2022) identified ethical concerns, uncertainty about future developments, and lack of quality data as the main barriers to adopting artificial intelligence in Kenyan newsrooms. On the other hand, Lawal (2023) revealed that newsroom managers consider ethical frameworks, collaborative strategies, and professional accountability as the primary factors that influence their decisions to adopt AI robotic systems. Thus, while Kioko et al. (2022) asserts that the main barriers to adopting AI robotic systems are technical, Lawal (2023) argues that organisational factors deter organisations from embracing artificial intelligence in their operations.

Another divergence between the related studies is evident from the differences in the research designs. Kioko et al. (2022) conducted a qualitative multi-case study to determine factors influencing organisations' decisions to adopt AI robotic systems. The study involved newsroom personnel in two different organisations, with findings addressing variations between the two newsrooms. On the contrary, Lawal (2023) and Sholola et al. (2023) carried out quantitative surveys to establish the extent to which journalists are aware of artificial intelligence. The two researchers selected their samples from the target populations in Katsina and Kwara States, respectively. Jammy et al. (2021) took a mixed-approach to researching the awareness level of AI among the general audience in Asaba. Thus, most related studies on artificial intelligence and journalism applied different research designs to address different research objectives.

Theoretical Framework

This study was premised on the Mediamorphosis Theory. The Mediamorphosis Theory was posited by Roger Fidler in 1997 as a theory designed to explain the change or transformation that communication media underwent through the interaction with technologies and evolving society. Fidler (1997, p.1) defined mediamorphosis as: the transformation of communication media brought about by the complex interaction of technological advances, social and political changes, competitive pressures, and perceived demands of users. This theory asserts that new media technologies are not new products appearing in a vacuum, rather, they have been slowly evolving out of prior media systems in adaptation and convergence. This theory is built on the principles of co-evolution, convergence, and complexity. According to Fidler (1997), communication media, considered as complex adaptive systems that responds to outside influences by continuous re-organisation and adjustment, were able to evolve. It means that, a new technology cannot and does not wipe out existing technology but new technology is adapted from old one and that old technology itself transforms or it gets integrated with new one to be better able to perform some function (Fidler, 1997). Similarly, Anaeto, Onabajo and Osifeso (2018) posited that organisations would change their strategies and operational structures in order to accommodate technological changes and their clientele's preference for information. Notwithstanding these



limitations, the Mediamorphosis Theory remains a valuable theoretical framework for this study as it captures the changing nature of journalism and the newsroom, thereby offering an explanation of how the adoption of Artificial Intelligence technology could be reshaping journalists' activities and impacting the newsroom productivity of television organisations.

The theory is adopted as the theoretical underpinning of the study because it provides a framework for explaining how journalists understand, adopt, and use Artificial Intelligence within newsroom operations. The theory guides the study by linking journalists' awareness and use of AI to their perceptions of its effects on news reporting and newsroom productivity. Specifically, it provides a basis for examining the factors that may influence journalists' acceptance and application of AI tools, as well as the perceived benefits and challenges associated with their use. The theory is therefore relevant to the study's objectives because it informs the examination of journalists' awareness and use of AI, their perceived impact of AI on news reporting and newsroom productivity, and the challenges associated with AI-driven newsroom operations. It also provides a framework for interpreting the findings by helping to explain patterns in journalists' responses and the extent to which the theoretical assumptions are reflected in the adoption and use of AI within selected television houses in Abuja.

Methodology

This study adopted an explanatory sequential mixed-methods research design, comprising a quantitative cross-sectional descriptive survey and a qualitative multiple-case study. The mixed-methods approach was considered appropriate because it enabled the study to obtain measurable evidence on journalists' awareness, use, and perceived impact of Artificial Intelligence (AI) on newsroom productivity, while the qualitative component provided in-depth explanations of the quantitative findings. The study was conducted in three selected television houses in Abuja: Africa Independent Television (AIT), Nigerian Television Authority (NTA Channel 10), and Channels Television. The quantitative target population comprised 210 journalists across the three organisations. The population figure was obtained from the official staff and editorial records of the selected television houses during the period of the study (2025). A sample of 138 journalists was determined using the Taro Yamane formula at a 5% margin of error and proportionately distributed across the three organisations using stratified sampling. Journalists constituted the quantitative respondents because they are directly involved in news gathering, reporting, editing, and other newsroom activities.

The qualitative component involved six purposively selected key informants, comprising Heads of News and Editors of relevant editorial desks, with two participants selected from each television organisation. They were selected because of their supervisory responsibilities, involvement in editorial decision-making, and knowledge of AI adoption and newsroom operations. Data were collected through semi-structured in-depth interviews, each lasting approximately 30–45 minutes. The six interviews were considered adequate for the qualitative component, with data collection guided by the principle of thematic saturation, whereby interviews continued until no substantially new themes emerged. Quantitative data were collected through structured questionnaire administered face-to-face and analysed using frequencies, percentages, means, and standard deviations, while qualitative interview data were analysed thematically. The two datasets were integrated at the interpretation stage: survey findings established broad patterns in journalists' awareness, use, and perceptions of AI, while interview findings were used to explain and contextualise those patterns. The findings from both datasets were then compared to identify



areas of convergence, where the results supported or reinforced each other, and divergence, where the findings differed or revealed contrasting perspectives. This integration enabled a more comprehensive interpretation of journalists' perceptions of AI and its implications for news reporting and newsroom productivity.

Data Presentation

A total of 136 copies of questionnaire were distributed to respondents for this study, all of which were duly completed and returned, representing a response rate of 100%.

Table 1. *Showing Demographic Characteristics of Respondents*

Category	Frequency	Percentage (%)
Gender		
Male	82	60.3
Female	54	39.7
Age		
18–25 years	28	20.6
26–35 years	57	41.9
36–45 years	36	26.5
46 years and above	15	11.0
Job Role		
Reporter/Journalist	78	57.4
Editor	34	25.0
Newsroom Manager	24	17.6
Years of Professional Experience		
Less than 5 years	35	25.7
5–10 years	52	38.2
11–15 years	28	20.6
Above 15 years	21	15.5

Note: Sample size = 136

The demographic profile indicates that the respondents were predominantly male (60.3%), while females constituted 39.7%, showing a moderate gender imbalance. Most respondents were aged 26–35 years (41.9%), followed by those aged 36–45 years (26.5%), suggesting that the study largely captured journalists within active professional age groups. Reporters/journalists constituted the largest job category (57.4%), providing substantial representation of personnel directly involved in news production. In terms of professional experience, respondents with 5–10 years of experience formed the largest group (38.2%), indicating a sample with considerable exposure to newsroom practices and emerging technologies.

Table 2. *Journalists' Awareness of Selected AI Tools*

AI Tool	Very High (4)	High (3)	Low (2)	None (1)	Mean	Decision
ChatGPT	70	45	15	6	3.32	High awareness
Google Gemini	45	55	25	11	2.99	High awareness
Microsoft Copilot	30	50	35	21	2.65	High awareness
Grammarly AI	40	50	30	16	2.84	High awareness
Perplexity AI	25	45	40	26	2.51	High awareness
Claude	18	40	45	33	2.32	Low awareness
Grand Mean					2.77	High awareness

Note: Decision rule: Mean scores of 2.50–4.00 indicate high awareness, while mean scores of 1.00–2.49 indicate low awareness.

The findings indicate a generally high level of awareness of the selected AI tools, with a grand mean of 2.77. ChatGPT recorded the highest awareness ($M = 3.32$), suggesting that it was the most familiar AI tool among the respondents. This was followed by Grammarly AI ($M = 2.84$), Google Gemini ($M = 2.99$), and Microsoft Copilot ($M = 2.65$). Perplexity recorded a relatively lower level of awareness ($M = 2.51$), while Claude recorded the lowest awareness ($M = 2.32$), indicating that familiarity with AI tools varies considerably among journalists.

Table 3. *AI Tools Used in Newsroom Work in Television Houses Abuja*

AI Tool	Used	Not Used	Total
ChatGPT	92 (67.6%)	44 (32.4%)	136
Google Gemini	68 (50.0%)	68 (50.0%)	136
Microsoft Copilot	55 (40.4%)	81 (59.6%)	136
Grammarly AI	61 (44.9%)	75 (55.1%)	136
Perplexity AI	43 (31.6%)	93 (68.4%)	136
Claude	29 (21.3%)	107 (78.7%)	136

Note: Sample size = 136

The findings indicate that ChatGPT was the most widely used AI tool, with 67.6% of respondents reporting its use, followed by Google Gemini at 50.0%. Use of Claude and Perplexity was comparatively limited. This pattern suggests that AI adoption is occurring within the selected newsrooms, but the intensity of use varies considerably across tools, with journalists appearing more familiar with and more likely to use widely accessible generative AI applications.

Table 3. *Journalists' Perceived Impact of AI on News Reporting among Television Houses in Abuja*

Statements	SA	A	U	D	SD	Mean	Decision
AI has improved the accuracy of news reporting.	45	55	22	10	4	3.93	Agree
AI has enhanced the speed of news gathering and reporting.	60	50	18	6	2	4.18	Agree
AI has reduced errors in news production.	40	52	27	13	4	3.82	Agree
AI has improved objectivity in news reporting.	28	48	35	20	5	3.54	Agree
AI has enhanced the credibility of news reports.	30	50	34	18	4	3.62	Agree
AI has improved the overall quality of news reporting.	42	55	25	11	3	3.90	Agree
AI has improved efficiency in newsroom operations.	58	52	18	7	1	4.17	Agree
AI has increased journalists' productivity.	55	54	19	7	1	4.14	Agree
AI has increased diversity in news content.	35	50	32	15	4	3.71	Agree

Note: Sample size = 136. Decision rule: Mean scores of 2.50–5.00 indicate agreement, while mean scores of 1.00–2.49 indicate disagreement.

The findings indicate a generally positive perception of AI's impact on news reporting, with a grand mean of 3.89, which exceeds the acceptance benchmark of 3.00. AI was perceived to have the strongest influence on the speed of news gathering and reporting ($M = 4.18$), newsroom efficiency ($M = 4.17$), and journalists' productivity ($M = 4.14$). This suggests that respondents particularly associate AI with faster workflows and improved operational efficiency. AI was also perceived to improve accuracy ($M = 3.93$), quality ($M = 3.90$), content diversity ($M = 3.71$), and credibility ($M = 3.62$). Objectivity recorded the lowest mean ($M = 3.54$), although it still fell within the agreement range. Overall, the findings suggest that journalists perceive AI as having a positive influence across several dimensions of news reporting, particularly timeliness, efficiency, and productivity, rather than merely viewing it as a tool for automated content production.

Table 5. Perceived Challenges to AI Adoption and Use in Newsroom Operations among Television Houses in Abuja

Perceived Challenge	Mean	Decision
Concerns about accuracy and reliability of AI-generated information	3.86	Accepted
Ethical concerns associated with AI use in news reporting	3.79	Accepted
Risk of misinformation generated or amplified by AI	3.91	Accepted
Potential bias in AI-generated content	3.72	Accepted
Fear of journalists' job displacement	3.68	Accepted
Lack of adequate technical skills among journalists	3.84	Accepted
Inadequate technological infrastructure	3.88	Accepted
Privacy and data security concerns	3.76	Accepted
High cost of acquiring and maintaining AI technologies	3.69	Accepted
Resistance to AI adoption within the organization	3.51	Accepted

Note: Sample size = 136; Decision rule: Mean scores of 2.50–5.00 indicate acceptance, while mean scores of 1.00–2.49 indicate rejection

The findings indicate that AI-related challenges are perceived as serious overall, with a grand mean of 3.76. The most prominent concerns were the risk of misinformation (M = 3.91), inadequate technological infrastructure (M = 3.88), and the accuracy and reliability of AI-generated information (M = 3.86). Lack of technical skills (M = 3.84) and ethical concerns (M = 3.79) were also identified as significant barriers. Although fear of job displacement (M = 3.68) and organisational resistance (M = 3.51) recorded comparatively lower scores, they remained perceived challenges. Overall, the findings suggest that journalists' concerns about AI extend beyond employment to include technical, ethical, informational, organisational, and infrastructural factors, which may influence the effective adoption and use of AI in newsroom operations.

Insight from Qualitative Data

Table 6. Joint Display of Quantitative and Qualitative Findings

Objective	Quantitative Findings	Qualitative Themes	Integrated Interpretation (Meta-Inference)
1. Examine journalists' awareness of AI tools in selected television houses in Abuja.	The survey findings indicate varying levels of awareness and use across the identified AI tools. The highest awareness and usage were associated with more commonly accessible generative AI applications, while awareness and use of some specialised tools were comparatively lower.	Awareness and of AI; AI Tools. Heads of News and Editors demonstrated awareness of AI applications in content generation, transcription, fact-checking, editing and information processing. They also indicated that AI is increasingly used for routine newsroom tasks.	Convergence. Both datasets indicate that AI awareness and use exist within the selected television newsrooms, although the level of familiarity and application differs across tools. The qualitative findings complement the survey by explaining the specific newsroom activities in which AI is being applied.
2. Assess journalists' perceived impact of AI on news reporting and newsroom productivity.	The survey findings indicate a generally positive perception of AI's influence on the major dimensions of news reporting, including accuracy, timeliness, quality, efficiency and productivity, based on the item and grand mean scores.	Perceived Benefits of AI on Newsroom Productivity. Key informants reported that AI facilitates faster information processing, transcription, content preparation, editing and handling of repetitive tasks.	Strong convergence. Both datasets suggest that AI is perceived to improve newsroom efficiency and productivity. The qualitative findings expand the quantitative results by explaining how AI contributes to faster workflows and reduces the time required for routine newsroom activities.



3. Examine the perceived effects of AI on audience news consumption behaviour.	The quantitative findings indicate journalists' perceptions regarding the extent to which AI-enabled news production may influence audience engagement, accessibility, speed of receiving news and consumption of digitally produced content.	Audience Engagement and AI-Enabled News Production. Key informants indicated that AI-supported production and faster dissemination may enhance the ability of television organisations to respond to audience demands and provide content more rapidly.	Complementarity. The quantitative findings provide measurable evidence of journalists' perceptions of AI's implications for audience news consumption, while the qualitative evidence provides contextual explanations of how faster and more responsive content production may shape audience engagement.
4. Determine the perceived challenges associated with AI-driven newsroom operations.	The survey findings identify several perceived challenges associated with AI use, including concerns relating to accuracy and reliability, ethics, misinformation, bias, technical skills, infrastructure, privacy and security, cost, job displacement and organisational resistance.	Challenges Associated with AI Adoption. Key informants identified inadequate digital skills, high implementation costs, poor internet connectivity, limited training and institutional support, as well as concerns about employment and the need for human oversight.	Convergence and expansion. Both datasets identify technical, financial, infrastructural, professional and organisational challenges. The qualitative findings expand the survey results by explaining how inadequate training, infrastructure and institutional support may constrain effective AI adoption in newsroom operations.

The joint display demonstrates substantial convergence between the quantitative and qualitative findings. The survey provides measurable evidence of journalists' awareness, use, perceptions of AI's impact on news reporting and productivity, and perceived challenges, while the interviews provide contextual explanations of these patterns. The qualitative findings particularly reinforce the perceived contribution of AI to faster and more efficient newsroom operations, while also highlighting the importance of human editorial oversight, technical competence, infrastructure and institutional support. The convergence of the two datasets therefore provides stronger evidence that the effective integration of AI into newsroom operations depends not only on access to AI tools but also on journalists' competence, organisational preparedness, appropriate editorial oversight and supporting technological infrastructure.

Discussion of Findings

The findings indicate that Artificial Intelligence (AI) is gradually becoming integrated into newsroom operations in selected television houses in Abuja, although awareness and use remain uneven. Journalists demonstrated moderate-to-high awareness of AI, with greater familiarity with accessible tools used for content generation, fact-checking, transcription, data processing, and routine reporting. Interview findings further showed that much of this knowledge is acquired through self-learning rather than structured organisational training. This finding agrees with Newman (2022) and Beckett (2019), who reported that AI adoption in newsrooms is increasing but remains uneven because of financial, technical, and organisational constraints. The finding suggests that awareness does not necessarily translate into institutionalised adoption or adequate professional competence. It therefore highlights the importance of structured training and organisational support. Consistent with Mediamorphosis Theory, AI appears to be introduced gradually into existing journalistic routines rather than replacing conventional journalism.

The study also found that journalists generally perceive AI as positively influencing news reporting and newsroom productivity, particularly through faster news gathering, transcription,



summarisation, data processing, and content preparation. This finding supports Diakopoulos (2019), who emphasised the capacity of computational technologies to improve journalistic efficiency while retaining human editorial control. However, the findings also demonstrate that increased speed does not automatically guarantee accuracy, credibility, or quality. Journalists stressed the continued need for human verification, contextual interpretation, and ethical judgement. Thus, AI appears to enhance the performance of existing newsroom practices rather than independently determine their outcomes. This finding supports Mediamorphosis Theory by demonstrating technological transformation alongside the continued relevance of established professional journalism practices.

Regarding audience news consumption, journalists perceived AI-enabled personalisation, rapid dissemination, and algorithmic recommendations as contributing to changing audience expectations and engagement. This finding is consistent with Napoli (2014), who highlighted the influence of algorithmic personalisation on media consumption. However, because the study examined journalists' perceptions rather than audiences directly, the finding should not be interpreted as evidence that AI alone causes changes in audience behaviour. Such changes may also reflect the wider influence of social media, mobile technologies, and digital news platforms. The finding nevertheless extends the application of Mediamorphosis Theory by showing that technological transformation affects not only newsroom production but also the relationship between news organisations and their audiences.

The findings further reveal that AI adoption is accompanied by significant challenges, including inadequate digital skills, ethical concerns, financial limitations, infrastructural deficiencies, misinformation, algorithmic bias, privacy and security concerns, and job insecurity. These findings are consistent with Carlson (2019), Westlund and Lewis (2020), and Beckett (2019), who identified professional, ethical, technical, and organisational challenges associated with automation and digital transformation in journalism. The Abuja context, however, highlights the particular importance of inadequate training, unstable infrastructure, and limited organisational support. The coexistence of perceived benefits and challenges is not contradictory; rather, it demonstrates that the value of AI depends on how it is implemented and governed. Overall, the findings support and extend Mediamorphosis Theory, showing that AI is reshaping newsroom practices through gradual human-technology adaptation rather than complete technological replacement. Its effective integration therefore requires appropriate training, infrastructure, ethical safeguards, and continued human editorial oversight.

Conclusion

This study concludes that Artificial Intelligence (AI) is gradually reshaping newsroom practice in selected television houses in Abuja, but its impact is better understood as transformation rather than replacement of professional journalism. The findings demonstrate that journalists are increasingly aware of and using AI for content generation, fact-checking, transcription, data processing, audience engagement, and other routine newsroom activities. These applications are perceived to enhance reporting speed, efficiency, content quality, and productivity. However, the findings also show that technological availability alone does not guarantee effective AI integration. Skills gaps, limited training, inadequate infrastructure, financial constraints, ethical concerns, and job-security issues continue to shape the extent and manner of adoption. The study therefore establishes that the productivity benefits of AI are conditional on human competence, organisational readiness, and professional oversight. While AI can process information and



perform repetitive tasks rapidly, journalists remain essential for verification, contextual interpretation, ethical judgement, and editorial decision-making.

The perceived influence of AI on audience news consumption further suggests that its effects extend beyond newsroom production to the broader relationship between television organisations and increasingly digital audiences. Theoretically, the findings support and extend Mediamorphosis Theory by demonstrating that technological innovation does not simply displace existing media practices but is incorporated into and transforms them. In the Abuja television context, AI is altering how journalists perform their work while preserving the central professional functions of journalism. The study consequently contributes to the application of the theory within the emerging Nigerian AI-driven newsroom environment. Practically, television organisations should move beyond informal experimentation with AI by investing in continuous journalist training, reliable digital infrastructure, clear organisational guidelines, and systems for human verification of AI-generated content. At the policy level, media regulators and professional journalism bodies should develop appropriate frameworks addressing AI ethics, transparency, accountability, misinformation, data protection, and responsible human-AI collaboration.

Recommendations

In line with the findings the following four recommendations are proffered;

1. Since the findings revealed that journalists' awareness of AI is moderate to high but much of their knowledge is acquired through self-learning, the selected television houses should establish regular, practical AI training programmes and workshops. These should focus on the effective use of relevant AI tools, verification of AI-generated information, prompt formulation, data processing, ethical use, and human oversight.
2. Given the finding that AI improves the speed and efficiency of news reporting but does not eliminate concerns about accuracy, credibility, and ethical judgement, television stations should develop clear newsroom guidelines specifying when and how AI may be used. Human journalists and editors should retain responsibility for verifying AI-generated content and making final editorial decisions.
3. Since the findings indicate that AI-enabled personalisation and digital distribution are perceived to influence audience news consumption, television organisations should make appropriate use of audience analytics and personalisation tools to understand changing audience preferences and improve content delivery. Such use should be accompanied by transparency, editorial diversity, and safeguards against excessive algorithmic filtering.
4. The findings identified inadequate infrastructure, unstable internet connectivity, limited technical skills, and the cost of AI technologies as significant barriers to effective adoption. Television houses should therefore prioritise reliable internet connectivity, appropriate digital infrastructure, and accessible technical support, while selecting AI tools that are practical and financially sustainable within their operational capacity.

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AI Use Declaration:

ChatGPT and Grammarly were used in preparing this work to improve grammar, spelling, clarity, and the overall presentation of ideas. AI tools were not used to create or fabricate research data, findings, or references. All AI-assisted content was reviewed and checked by the author. The author takes full responsibility for the accuracy, analysis, interpretation, and conclusions presented in this work
