



## Comparative Analysis of Gender Differences in the Adoption of AI Tools in Broadcast Journalism in Awka

<sup>1</sup>Dennis O. Abutu, PhD; <sup>2</sup>Adikuru, Chinonso Chinaemerem, PhD; <sup>3</sup>Shadrach, I. PhD

<sup>1</sup>National Open University of Nigeria (NOUN), Abuja, Nigeria [dabutu@noun.edu.ng](mailto:dabutu@noun.edu.ng)

<sup>2</sup>Department of Mass Communication, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus, Anambra State. [cc.adikuru@coou.edu.ng](mailto:cc.adikuru@coou.edu.ng)

<sup>3</sup>Department of Mass Communication, Taraba State University, Jalingo. Corresponding Author: [shadrachidi@gmail.com](mailto:shadrachidi@gmail.com)

### Abstract

This study is a comparative analysis of the adoption of Artificial Intelligence (AI) in journalism among male and female journalists working in broadcast media stations within Awka. It focuses on their level of awareness, frequency of AI usage, and the factors influencing AI adoption in newsroom practices. Anchored on Gender and Technology Theory, the study employs a survey research design, with a sample size of 384 respondents selected using snowball-sampling technique across various broadcast stations in the city. Data were collected through an online questionnaire and analyzed using descriptive statistical tools, including frequencies and percentages. The findings revealed a significant gender gap, with male journalists demonstrating higher awareness and more frequent use of AI tools such as ChatGPT, Grammarly, and QuillBot, while female journalists reported lower awareness, limited access, and minimal usage. Key barriers affecting adoption among female journalists included lack of technical skills, high subscription costs, perceived complexity, and fear of job displacement. These disparities highlight the urgent need for gender-inclusive digital literacy interventions. Based on the findings, the study recommends targeted training programs subsidized access to AI tools, mentorship schemes, curriculum revisions to include AI education, and organizational policies that promote equal access to technological resources.

**Keywords:** AI, Gender, Adoption, Broadcast. Journalism

### Introduction

Artificial Intelligence (AI) has emerged as one of the most transformative technological developments of the 21st century, reshaping virtually every sector of human endeavor ranging from healthcare, education, finance, manufacturing, to transportation. With its ability to simulate human intelligence, learn from data, and perform complex tasks with speed and accuracy, AI is revolutionising the way people work, interact, and make decisions (Rashid & Kausik, 2024). From chatbots and virtual assistants to predictive analytics and robotic automation, AI is now embedded in many aspects of everyday life, driving innovation, improving productivity, and redefining traditional workflows. Governments, industries, and institutions around the world are increasingly

investing in AI tools and infrastructure to enhance operational efficiency, decision-making, and service delivery.

The media and communication industry is not exempt from this AI revolution. In journalism specifically, AI is driving rapid changes in news production, distribution, and audience engagement. AI-powered technologies such as natural language generation (NLG), speech-to-text software, automated news writing, and content recommendation systems are being integrated into newsroom operations to improve speed, reduce human error, and personalise audience experience (Umeora, 2025). Broadcast media stations now leverage AI for live captioning, voice recognition, video archiving, and even facial recognition for news footage analysis. These tools not only enhance content creation but also facilitate real-time reporting and data-driven storytelling, transforming how journalists gather, process, and present information. Consequently, AI adoption in broadcast journalism is redefining traditional media roles and presenting both opportunities and challenges for professionals in the field.

The adoption of AI in journalism has not been uniform, particularly when gender is taken into account. Existing literature has highlighted persistent gender disparities in technology adoption, with female professionals often facing greater barriers due to factors such as limited access to training, lower digital confidence, socio-cultural biases, and workplace dynamics that restrict exposure to emerging technologies (Umeora, 2025). In media organisations, including broadcast journalism, these disparities may translate into unequal opportunities to learn about, use, or benefit from AI tools. While male journalists may be more likely to experiment with new technologies and receive mentorship or technical support, female journalists may lag behind due to structural and cultural constraints. These gender-based gaps can affect job performance, career progression, and overall media innovation in organisations where diversity and inclusion are not actively promoted.

Prior studies have explored AI's application in journalism, most have focused on institutional adoption, ethical implications, and efficiency gains, with limited attention given to how individual characteristics especially gender influence AI usage in journalistic practice. Very few studies have conducted comparative analyses that examine how male and female journalists experience, access, and adopt AI in their work, particularly within the Nigerian context. In broadcast media stations located in Awka, Anambra State, the extent to which gender shapes AI adoption remains underexplored. This gap is significant given the increasing reliance on AI tools in modern journalism and the need for equitable participation in media innovation. Therefore, this study seeks to fill this critical gap by conducting a comparative analysis of the adoption of AI in journalism among male and female journalists working in broadcast media stations within Awka.

## **Statement of the Problem**

Artificial Intelligence (AI) is reshaping journalistic practice by automating tasks, enhancing content creation, and optimising newsroom workflow. As broadcast media organisations in Nigeria begin integrating AI technologies, concerns about unequal access, low awareness, and limited technical training among journalists remain. A particularly underexplored issue is the gender disparity in AI adoption within newsrooms. While male journalists may have greater exposure to technological tools, female journalists often face systemic barriers, including lack of training,

limited mentorship, and workplace stereotypes, which may hinder their adoption of AI tools. Existing research on AI in journalism has largely focused on institutional integration and ethical concerns, with limited emphasis on gender-based differences in usage and access. Within the broadcast stations operating in Awka, it is unclear whether both male and female journalists have equal opportunities to engage with AI technologies, or whether disparities exist in awareness, frequency of use, and influencing factors. This study, therefore, aims to fill this gap by comparing the adoption of AI tools in journalism among male and female journalists in broadcast media stations within Awka.

## **Objectives of the Study**

The main objective of this study is to conduct a comparative analysis of the adoption of Artificial Intelligence (AI) in journalism among male and female journalists in broadcast media stations within Awka. Specifically, the study seeks to:

1. Examine the level of awareness of AI tools for journalism among male and female journalists in broadcast media stations within Awka.
2. Assess the extent of AI usage in journalistic practices among male and female journalists in these stations.
3. Identify the factors influencing the adoption of AI tools among male and female journalists in broadcast media stations within Awka.

## **Research Questions**

To guide the investigation, the following research questions are posed:

1. What is the level of awareness of AI tools for journalism among male and female journalists in broadcast media stations within Awka?
2. To what extent do male and female journalists use AI tools in their journalistic practices?
3. What factors influence the adoption of AI tools among male and female journalists in broadcast media stations within Awka?

## **Literature Review**

### **Concept of AI**

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, particularly computer systems. It enables machines to mimic cognitive functions such as learning, problem-solving, reasoning, and decision-making. AI has evolved significantly over the years, becoming an essential part of various fields, including education, healthcare, finance, and transportation. According to Russell and Norvig (2016), AI is “the study of agents that receive percepts from the environment and perform actions.” This definition highlights AI’s ability to process data from its surroundings and make decisions based on that information. Similarly, John McCarthy (1956), one of the pioneers of AI, defines it as “the science and engineering of making intelligent machines.” This definition emphasises AI as both a scientific discipline and a technological innovation aimed at developing machines capable of human-like intelligence (Andresen, 2002).

AI encompasses a wide range of technologies, including machine learning, natural language processing (NLP), robotics, and neural networks. Machine learning allows computers to improve their performance based on experience, while NLP enables machines to understand and generate human language. Robotics involves AI-driven machines that can perform physical tasks, while neural networks simulate the workings of the human brain to process complex data. These technologies collectively enable AI systems to function in various domains, performing tasks that traditionally required human intelligence.

AI can be categorised based on its capabilities and functionalities, each representing different levels of intelligence and adaptability. Thus, there is a Narrow AI also known as the Weak AI (Sowri, & Krishna, 2024). This is the most common type of AI today. It is designed to perform specific tasks with high efficiency but lacks general intelligence. Examples include virtual assistants like Google Assistant. The second class of AI is known as the General AI also known as the Strong AI. This AI systems can perform any intellectual task that a human can do (Sowri, & Krishna, 2024). Unlike Narrow AI, which is limited to specific applications, General AI would have the ability to reason, learn, and make decisions independently across different domains (Damar et al., 2024). The third type of AI is known as the Super AI, This is a theoretical concept of AI that surpasses human intelligence in all aspects, including creativity, problem-solving, and emotional intelligence (Damar et al., 2024). A Super AI system would be capable of independent thought, self-improvement, and possibly even consciousness. While this concept is often explored in science fiction, some experts believe that AI could eventually reach this level of advancement, raising important ethical and philosophical questions about human-AI coexistence.

## **AI and Journalism**

Technological advancements have significantly reshaped the landscape of journalism, with Artificial Intelligence (AI) emerging as a central force in transforming news production and dissemination. AI tools are now indispensable in modern journalism, influencing how news is reported, edited, and delivered. As noted by Vaglis and Bratsas (2017) and Galily (2018), AI has introduced a new era in journalism marked by speed, efficiency, and automation. Omebring (2016) describes technology as an objective ally that enhances the skills of journalists while redefining professional practices within the newsroom. In contemporary media organisations, AI supports various functions across the journalistic workflow. According to Mark et al. (2017), AI contributes significantly to news reporting, content generation, information distribution, and audience interaction. Tools for fact-checking, data gathering, and automated writing enable journalists to organise and verify information rapidly.

Automation has become a strategic necessity for newsrooms seeking to remain competitive in an increasingly digital media environment, where speed and precision are highly valued. Globally, the integration of AI into journalism is well-advanced. A notable example is *Heliograph*, an AI system developed by *The Washington Post*, which generated over 850 articles during the 2016 Rio Olympics, mainly covering politics and sports (Waleed & Mohamed, 2019). Similarly, a Reuters report cited by Newman (2018) revealed that nearly three-quarters of surveyed media outlets had incorporated AI into their operations. These organisations use AI not only for content generation but also to enhance marketing efficiency, validate information, and automate data classification, demonstrating the wide-ranging utility of AI technologies in journalistic practice.

Interestingly, studies have shown that audiences are increasingly open to AI-generated content. Jung et al. (2017) found that readers often trust news produced by AI software more than that written by human journalists, largely due to perceptions of objectivity and consistency. This growing acceptance has prompted deeper collaboration between journalists and programmers in many newsrooms. Zangana (2017) notes that the traditional boundaries between content creators and technical developers are fading, giving rise to hybrid roles and interdisciplinary teamwork in media production. The integration of AI into journalism offers both opportunities and challenges. While it improves efficiency, accuracy, and scalability, it also requires journalists to adapt to new technological environments and workflows. The transformation of newsrooms through AI signals a broader shift in media culture, where innovation and adaptability are essential. As technology continues to evolve, journalists must be equipped with the skills and mindset to collaborate with AI systems effectively, ensuring ethical and balanced reporting in an increasingly automated media space.

### Review of Related Empirical Studies

Several empirical studies have explored the integration and awareness of Artificial Intelligence (AI) in journalism, each offering unique insights while also revealing notable gaps that justify further investigation. Okiyi and Nsude (2020) conducted a study focused on understanding and evaluating the awareness and adoption of AI technologies within the Nigerian journalism sector. The study adopted an Integrative Literature Review approach as its methodology. While the findings underscored the transformative potential of AI in journalism, they also revealed that the major barrier to adoption, particularly in Nigeria and sub-Saharan Africa, is the lack of fundamental knowledge about AI among journalists. The study concluded by recommending reorientation and professional training to equip Nigerian journalists for effective AI adoption. In another related study, Udoh, Nsude, and Oyeleke (2022) examined the awareness of AI tools for news production among 250 practising journalists in Ebonyi State, Nigeria. Using a census survey method and drawing from the diffusion of innovation and mediamorphosis theories, the study assessed the journalists' level of awareness, willingness to be trained, preferred areas of AI integration, and concerns regarding its usage. Findings suggested that all respondents were aware of AI's relevance to news production.

Noain-Sánchez (2022) explored the influence of AI in newsrooms across countries such as the USA, UK, Germany, and Spain. The study, grounded in an exploratory qualitative approach, employed in-depth interviews with journalists, academics, media professionals, and AI experts. It found that AI enhances journalistic capabilities by saving time and improving efficiency, yet ethical concerns and limitations persist. Gonçalves and Melo (2022) investigated AI adoption in Portuguese journalism, particularly the use of algorithms in newsrooms. The study combined theoretical review with a pre-test questionnaire involving 17 journalists across four national newspapers. It identified limited awareness, a generally positive attitude towards AI, and the need for journalist training.

In a sub-Saharan African context, Gondwe (2023) focused on journalists' adoption of generative AI tools like ChatGPT. The study explored key challenges including misinformation, bias, and technological limitations, based on interviews with journalists from Congo DRC, Kenya,

Tanzania, Uganda, and Zambia. Although the study provides timely insights into generative AI in journalism, it did not provide detailed demographic breakdowns or clear analytical frameworks, which weakens the empirical grounding of its findings. Sharadga, Tahat, and Sofori (2022) assessed Jordanian journalists' perceptions of AI adoption in Jordan TV's newsroom. Using a survey design, data were gathered from 106 journalists. The study revealed generally positive perceptions of AI and highlighted varying digital competencies, particularly in content generation and social media use. Lastly, Yu, Huang, and Jones (2020) studied how journalists in China perceive AI's impact on employment. The study employed a qualitative approach using in-depth interviews with 18 journalists. The findings offered limited insight, as the authors acknowledged the absence of conclusive data on the impact of AI, intending to include such analysis in future studies. Additionally, the small sample size and the absence of quantitative validation weakened the findings.

None of the reviewed studies focused on gender differences in the awareness, perception, or adoption of AI in journalism. While general attitudes and awareness were explored, the comparative dimension between male and female journalists remains under-researched. This is a major gap, especially in a professional field where gender-based disparities in access to technology, training, and role expectations may affect AI adoption.

### **Theoretical Framework**

This study is anchored on the Gender and Technology Theory, which originates from feminist technology studies and gender scholarship, offering critical insight into how gender roles and societal norms shape individuals' access to, interaction with, and perception of technology (Feeny & Fusi, 2021). The theory emerged prominently in the late 20th century as scholars began interrogating the social constructions of technology and how they intersect with gender dynamics. Key contributors such as Judy Wajcman (1991, 2004) examined how gendered power relations affect technological development and usage in the workplace. Cynthia Cockburn (1985, 1992) explored the gendered division of labour in relation to the design and use of technological systems, especially in professional settings. Donna Haraway (1985), in her *Cyborg Manifesto*, challenged binary thinking in science and technology, proposing that digital technologies can redefine and transform traditional gender roles (Smith & Selfe, 2007).

The Gender and Technology Theory rests on several foundational assumptions. It posits that technology is not inherently neutral; rather, its design, dissemination, and use are influenced by social and cultural contexts. It further argues that men and women experience different levels of exposure, support, and confidence in engaging with technology due to entrenched gender norms and inequalities in training and access. Technological spaces such as newsrooms often reflect these disparities, with men more likely to be early adopters of emerging tools like Artificial Intelligence (AI), while women may face challenges linked to institutional bias, limited mentoring, or reduced confidence.

This theory provides a suitable lens for examining gender-based disparities in the adoption of AI tools among journalists in broadcast media stations within Awka. As AI technologies are increasingly integrated into newsroom operations ranging from automated scripting to AI-assisted research understanding whether male and female journalists have equal opportunities to access,

learn, and utilise these tools is critical. The framework allows for an exploration of how social, cultural, and institutional dynamics influence journalists' interaction with AI and helps to explain variations in adoption based on gendered experiences within professional broadcast environments.

## Research Methodology

This study adopted a survey research design to investigate and compare the adoption of Artificial Intelligence (AI) in journalism among male and female journalists working in broadcast media stations within Awka. The study population comprised all practicing broadcast journalists employed in both private and public media organisations within the study area. A sample size of 384 was determined using Cochran's formula, allowing for statistical generalisability. Given the professional nature of the population and the difficulty in accessing a comprehensive list of broadcast journalists, a snowball sampling technique was employed to reach respondents through professional networks and referrals. Data were collected using a structured online questionnaire, adapted from previously validated instruments and modified to align with the objectives and variables of this study. The questionnaire was divided into sections covering demographic information, awareness of AI technologies, frequency of AI tool usage, perceived usefulness, and factors influencing AI adoption. To ensure validity, the instrument was subjected to expert review by scholars in communication and technology studies. For reliability, a pilot test was conducted with a small subset of respondents outside the sample frame, and the resulting Cronbach's Alpha coefficient exceeded 0.78, indicating acceptable internal consistency. Data were analysed using descriptive statistical tools, specifically frequencies and percentages, to provide a clear presentation of findings. The results were presented in tables to facilitate comparison across gender lines and draw meaningful conclusions from the observed patterns.

Table 1: Demographic Distribution of Respondents

Variable	Categories	Frequency (n=384)	Percentage (%)
Gender	Male	192	50.0%
	Female	192	50.0%
Age Group	18 – 20 years	120	31.3%
	21 – 25 years	180	46.9%
	26 – 30 years	64	16.7%
	31 years and above	20	5.2%
Years of Experience	Less than 5	72	18.8%
	5 – 10	96	25.0%
	11 – 15	108	28.1%
	16 – 20	72	18.8%
	20+	36	9.4%
Type of Broadcast Media	Radio	232	60.4%
	Television	152	39.6%

The demographic distribution of respondents reveals a balanced representation of gender, with male and female journalists equally constituting 50% each of the total sample. The majority of respondents fall within the 21–25 age range (46.9%), followed by those aged 18–20 (31.3%), indicating a relatively young workforce. In terms of professional experience, the largest group has 11–15 years of experience (28.1%), while those with less than 5 years or between 16–20 years each make up 18.8%, suggesting a mix of early-career and mid-career journalists. Notably, the majority of respondents (60.4%) work in radio broadcast media, while 39.6% are engaged in television journalism, highlighting radio as the dominant platform among broadcast journalists in Awka.

Table 2: Awareness of AI Tools for Journalism between Male and Female Broadcast Journalists in Awka

S/N	AI Tool	Gender	Very Aware	Aware)	Somewhat Aware	Not Aware	Total (n=150 per gender)
1	ChatGPT	Male	90 (60.0%)	40 (26.7%)	15 (10.0%)	5 (3.3%)	150
		Female	10 (6.7%)	25 (16.7%)	40 (26.7%)	75 (50.0%)	150
2	Grammarly	Male	30 (20.0%)	50 (33.3%)	40 (26.7%)	30 (20.0%)	150
		Female	5 (3.3%)	20 (13.3%)	35 (23.3%)	90 (60.0%)	150
3	QuillBot	Male	25 (16.7%)	55 (36.7%)	45 (30.0%)	25 (16.7%)	150
		Female	3 (2.0%)	15 (10.0%)	30 (20.0%)	102 (68.0%)	150
4	Automated news anchors	Male	20 (13.3%)	45 (30.0%)	50 (33.3%)	35 (23.3%)	150
		Female	2 (1.3%)	10 (6.7%)	28 (18.7%)	110 (73.3%)	150
5	Trint	Male	18 (12.0%)	40 (26.7%)	52 (34.7%)	40 (26.7%)	150
		Female	1 (0.7%)	8 (5.3%)	25 (16.7%)	116 (77.3%)	150
6	Visualping	Male	22 (14.7%)	42 (28.0%)	48 (32.0%)	38 (25.3%)	150

Table 2 reveals a significant gender disparity in the awareness of AI tools for journalism among broadcast journalists in Awka, with male journalists consistently demonstrating higher levels of awareness across all listed tools. For instance, 60% of male respondents reported being very aware of ChatGPT compared to only 6.7% of females, and similar gaps are observed for Grammarly (20% males vs. 3.3% females), QuillBot (16.7% vs. 2.0%), and Automated News Anchors (13.3% vs. 1.3%). In contrast, a majority of female journalists were not aware of most tools, with 50% not aware of ChatGPT, 60% of Grammarly, 68% of QuillBot, 73.3% of Automated News Anchors, and 77.3% of Trint.

Table: Extent of AI Usage between Male and Female Broadcast Journalists in Awka

S/N	AI Tool	Gender	Very Frequently Used	Frequently Used	Occasionally Used	Rarely Used	Never Used
1	ChatGPT	Male	80 (53.3%)	40 (26.7%)	20 (13.3%)	8 (5.3%)	2 (1.3%)
		Female	10 (6.7%)	20 (13.3%)	30 (20.0%)	35 (23.3%)	55 (36.7%)
2	Grammarly	Male	40 (26.7%)	45 (30.0%)	35 (23.3%)	20 (13.3%)	10 (6.7%)
		Female	5 (3.3%)	15 (10.0%)	30 (20.0%)	40 (26.7%)	60 (40.0%)
3	QuillBot	Male	30 (20.0%)	40 (26.7%)	45 (30.0%)	20 (13.3%)	15 (10.0%)
		Female	3 (2.0%)	10 (6.7%)	25 (16.7%)	50 (33.3%)	62 (41.3%)
4	Automated news anchor	Male	-	-	-	-	150 (50%)
		Female	-	-	-	-	150 (50.0%)
5	Trint	Male	10 (6.7%)	25 (16.7%)	40 (26.7%)	45 (30.0%)	30 (20.0%)
		Female	1 (0.7%)	5 (3.3%)	15 (10.0%)	40 (26.7%)	89 (59.3%)
6	Visualping	Male	15 (10.0%)	30 (20.0%)	40 (26.7%)	45 (30.0%)	20 (13.3%)
		Female	2 (1.3%)	6 (4.0%)	20 (13.3%)	48 (32.0%)	74 (49.3%)

The table shows a notable gender disparity in the extent of AI tool usage among broadcast journalists in Awka, with male journalists using AI tools more frequently than their female counterparts. For example, over half of the male respondents (53.3%) reported using ChatGPT very frequently, compared to just 6.7% of females, and similar gaps are evident for tools like Grammarly (26.7% vs. 3.3%) and QuillBot (20.0% vs. 2.0%). Female journalists were more likely to report rarely or never using these tools, with 36.7% never using ChatGPT, 40% never using Grammarly, and 41.3% never using QuillBot. Notably, none of the respondents male or female reported using automated news anchor tools, suggesting either lack of access or relevance. Across

all tools, a consistent pattern emerges where female journalists exhibit significantly lower usage, highlighting a gendered digital divide in AI adoption for journalism practices in Awka.

**Table: Comparative Analysis of Factors Influencing AI Adoption between Male and Female Broadcast Journalists**

S/N	Factor	Males			Females		
		Yes	No	Can't Say	Yes	No	Can't Say
1	Lack of awareness about AI tools	120 (80%)	20 (13%)	10 (7%)	135 (90%)	10 (7%)	5 (3%)
2	Limited access to AI-enabled devices	75 (50%)	60 (40%)	15 (10%)	95 (63%)	40 (27%)	15 (10%)
3	High cost of AI tools or subscriptions	80 (53%)	50 (33%)	20 (13%)	85 (57%)	45 (30%)	20 (13%)
4	Lack of technical skills in using AI	130 (87%)	10 (7%)	10 (7%)	140 (93%)	5 (3%)	5 (3%)
5	Perceived complexity of AI tools	65 (43%)	70 (47%)	15 (10%)	85 (57%)	50 (33%)	15 (10%)
6	Fear of AI replacing human intelligence	50 (33%)	80 (53%)	20 (13%)	60 (40%)	70 (47%)	20 (13%)
9	Internet connectivity challenges	70 (47%)	60 (40%)	20 (13%)	75 (50%)	55 (37%)	20 (13%)
10	Ethical concerns	50 (33%)	80 (53%)	20 (13%)	55 (37%)	75 (50%)	20 (13%)

The table presents a comparative analysis of factors influencing AI adoption among male and female broadcast journalists, revealing that while both genders face similar challenges, the impact appears more pronounced among females. Lack of awareness was a key barrier for 90% of females compared to 80% of males, and a higher percentage of females (63%) also reported limited access to AI-enabled devices compared to males (50%). Similarly, more females (93%) acknowledged lacking technical skills versus 87% of males. Perceived complexity of AI tools and high subscription costs were also greater concerns among females (57% and 57%, respectively) than males (43% and 53%). Additionally, while fear of AI replacing human roles and ethical concerns were moderately shared, females consistently showed slightly higher concern levels.

## Discussion of Findings

The findings indicate a clear gender gap in awareness of AI tools for journalism, with male broadcast journalists consistently demonstrating higher awareness across all tools examined. Female journalists, on the other hand, showed lower levels of awareness and a higher degree of unfamiliarity with the tools, particularly those beyond commonly used applications. This suggests that while male journalists are generally more exposed to or informed about digital innovations in the field, their female counterparts are significantly lagging behind. This finding aligns with Okiyi and Nsude (2020), who identified a general lack of AI knowledge among Nigerian journalists as a barrier to adoption. However, whereas their study treated journalists as a homogeneous group, the current study advances the discourse by highlighting a gender dimension to this lack of awareness. This gap is critical, as it implies that professional training and reorientation efforts, as recommended by Okiyi and Nsude, must be designed with gender inclusivity in mind to ensure that female journalists are not left behind in the digital transformation of the media industry.

The study further revealed that the extent of AI usage reflects a similar gender divide, with male journalists utilising AI tools more frequently than their female counterparts. Most male journalists reported regular or frequent use of tools such as ChatGPT, Grammarly, and QuillBot, while female journalists were more likely to report rare or no usage of these tools. Notably, none of the journalists, male or female, reported using automated news anchor tools possibly due to lack of access or relevance in their local context. This finding supports the general observation in Udoh, Nsude, and Oyeleke's (2022) study that AI is gaining relevance in news production. However, while Udoh et al. found widespread awareness and willingness to adopt AI, the current study nuances this conclusion by showing that female journalists may not be equally positioned to integrate AI into their practice. The lower usage levels among women suggest underlying structural or skill-related barriers, making the need for training more urgent and targeted, especially for female practitioners who may be under-equipped to benefit from AI tools despite operating in the same professional space. This finding also complements Gondwe's (2023) observation that while generative AI tools like ChatGPT are being explored, broader or more advanced applications such as automation in newsroom functions remain underutilised in sub-Saharan Africa. However, Gondwe's study lacked detailed demographic insights. The present finding suggests that low adoption of certain AI innovations may not only stem from gender or skill gaps but also from the lack of contextual relevance of such tools in the local broadcast media landscape. This underscores the importance of aligning AI adoption strategies with local operational realities.

The study also established that both male and female broadcast journalists face common challenges in adopting AI tools, though these challenges are more severe among female journalists. Issues such as lack of awareness, limited access to devices, high subscription costs, and low technical skills were more frequently reported by women. Additional concerns such as the perceived complexity of AI tools, ethical dilemmas, and fear of job displacement were also more prevalent among females. These findings underscore the urgent need for capacity-building initiatives, particularly targeting female journalists, to bridge the gender gap in AI adoption within the broadcast sector. This finding resonates with Sharadga, Tahat, and Sofori (2022), who noted varying levels of digital competence and perception toward AI among Jordanian journalists. The current study adds depth by showing that such concerns are not merely general professional

apprehensions but are more acute among women, possibly due to job insecurity or limited digital exposure. Unlike Yu, Huang, and Jones (2020), whose study lacked conclusive data on AI's impact on employment, the present study provides empirical evidence that gendered fears of displacement are already influencing journalists' perceptions of AI. It reinforces the need to integrate ethical awareness and job security considerations into AI adoption policies and training programmes.

## Conclusion

The study revealed a significant gender disparity in the awareness, usage, and adoption of Artificial Intelligence (AI) tools among broadcast journalists in Awka. Male journalists exhibited higher levels of awareness and more frequent usage of AI tools compared to their female counterparts. Female journalists were disproportionately affected by challenges such as lack of awareness, limited access to AI-enabled devices, low technical skills, high subscription costs, and fear of AI's complexity and impact on job security. These findings suggest that while the integration of AI in journalism is progressing, it is not occurring equitably, as female journalists remain disadvantaged in terms of access and readiness. The study fills a crucial gap in existing literature by providing empirical evidence on the gender dimension of AI adoption in journalism, especially within the Nigerian and broader sub-Saharan African context.

## Recommendations

1. Broadcast Media organisations in Awka should organise regular, gender-sensitive digital literacy workshops and AI training sessions, with a specific focus on equipping female journalists with the knowledge and skills to confidently use AI tools.
2. Governmental and non-governmental organisations should support initiatives that provide subsidised or free access to AI-enabled devices and software subscriptions, particularly for female journalists in underserved areas.
3. Establishing mentorship platforms and peer-to-peer learning groups within newsrooms can help bridge the gender gap in AI usage by creating spaces for collaborative learning and continuous professional development.
4. Journalism and mass communication departments should revise their curricula to include hands-on training in AI tools and their ethical implications, ensuring that both male and female students graduate with industry-relevant skills.

## References

- Ali, W., & Hassoun, M. (2019). Artificial intelligence and automated journalism: Contemporary challenges and new opportunities. *International Journal of Media, Journalism and Mass Communications*, 5(1), 40–49. <https://doi.org/10.20431/2454-9479.0501004>
- Andresen, S. (2002). John McCarthy: Father of AI. *IEEE Intelligent Systems*, 17(5), 84–85. <https://doi.org/10.1109/mis.2002.1039837>

- Damar, M., Özen, A., Çakmak, Ü. E., & Erenay, F. S. (2024). Super AI, generative AI, narrow AI and chatbots: An assessment of artificial intelligence technologies for the public sector and public administration. *Journal of AI*, 8(1), 83–106. <https://doi.org/10.61969/jai.1512906>
- Feeney, M. K., & Fusi, F. (2021). A critical analysis of the study of gender and technology in government. *Information Polity*, 26(2), 115–129. <https://doi.org/10.3233/ip-200303>
- Galily, Y. (2018). Artificial intelligence and sports journalism: Is it a sweeping change? *Technology in Society*, 54, 47–51. <https://doi.org/10.1016/j.techsoc.2018.03.001>
- Gonçalves, A., & Melo, P. V. (2022). Artificial intelligence and journalism: An approach to the Portuguese context. *Fonseca*, 25, 23.
- ondwe, G. (2023). ChatGPT and the Global South: How are journalists in sub-Saharan Africa engaging with generative AI? *Online Media and Global Communication*.
- Jung, J., Song, H., Kim, Y., Im, H., & Oh, S. (2017). Intrusion of software robots into journalism: The public's and journalists' perceptions of news written by algorithms and human journalists. *Computers in Human Behavior*, 71, 291–298.
- Mark, H., Meritxell, R., Jon, K., & George, K. (2017). *Artificial intelligence: Practice and implications for journalism*. Tow Center for Digital Journalism and the Brown Institute for Media Innovation.
- Newman, M. (2018). *Network* (2nd ed.). Oxford University Press. <https://doi.org/10.1093/oso/9780198805090.003.0018>
- Noain-Sánchez, A. (2022). Addressing the impact of artificial intelligence on journalism: The perception of experts, journalists and academics. *Communication & Society*, 35(3), 105–121.
- Okiyi, G. O., & Nsude, I. (2019). Adopting artificial intelligence to journalistic practices in Nigeria. *University of Nigeria Interdisciplinary Journal of Communication Studies*, 24(1).
- Omebring, V. (2016). Artificial intelligence and journalism. *KIU Journal of Social Sciences*, 7(2), 205–212.
- Rashid, A. B., & Kausik, M. A. K. (2024). AI revolutionizing industries worldwide: A comprehensive overview of its diverse applications. *Hybrid Advances*, 7, 100277. <https://doi.org/10.1016/j.hybadv.2024.100277>
- Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: A modern approach*. Pearson Education Limited.

- Sharadga, T. M. A., Tahat, Z., & Safori, A. O. (2022). Journalists' perceptions towards employing artificial intelligence techniques in Jordan TV's newsrooms. *Studies in Media and Communication*, 10(2), 239–248.
- Smith, E., & Selfe, C. L. (2007). Teaching and transformation: Donna Haraway's "A manifesto for cyborgs" and its influence in computer-supported composition classrooms. In *Springer eBooks* (pp. 159–188). [https://doi.org/10.1007/978-1-4020-3803-7\\_5](https://doi.org/10.1007/978-1-4020-3803-7_5)
- Sowri, B. V., & Krishna, B. D. (2024). A study on narrow artificial intelligence – An overview. *International Journal of Engineering Science and Advanced Technology*, 24(4), 210. <https://www.ijesat.com>
- Udoh, W. A., Nsude, I., & Oyeleke, A. S. (2022). Awareness of artificial intelligence for news production among journalists in Ebonyi State, Nigeria. *International Journal of Network and Communication Research*, 7(1), 33–45.
- Umeora, C. C. (2025). Artificial intelligence and journalistic practices in Nigeria: Navigating awareness, adoption, and structural challenges. *Multidisciplinary Research and Development Journal International*, 7(1), 136. <https://mdrdji.org>
- Veglis, A., & Bratsas, C. (2017). Towards a taxonomy of data journalism. *Journal of Media Critiques*, 3(11), 109–121. <https://doi.org/10.17349/jmc117309>
- Wajcman, J. (2010). Feminist theories of technology. *Cambridge Journal of Economics*, 34(1), 143–152. <http://www.jstor.org/stable/24232027>
- Yu, Y., Huang, K., & Jones, B. (2020). Artificial intelligence in media: Journalists' perceptions and organizational talk. *Communication, Technologies et Développement*, 8.
- Zangana, A. (2017). *The impact of new technology on the news production process in the newsroom* (Ph.D. thesis). University of Liverpool. <https://livrepository.liverpool.ac.uk/3008664/>