



Leveraging Artificial Intelligence in Journalistic Reporting: An Empirical Review

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Abstract

Original Research Article

This study is an empirical review on leveraging artificial intelligence (AI) in journalistic reporting. The objective of this study is to examine how artificial intelligence can be used in enhancing effectiveness and efficiency in journalistic reporting. With the potential benefits of artificial intelligence, journalism practice can profit from technological advancements in production, innovation, and efficiency. AI in the media can undoubtedly make journalism easier for overworked resources. However, the broad use of AI technology has generated a great deal of discussion and raised significant concerns about the caliber of outputs produced by AI systems as well as their potential to compromise journalism's core values and ethical standards. One of the biggest dangers of using AI in journalism is misinformation. False information may spread due to AI systems' lack of human judgment and critical analysis, which could have far-reaching effects. Thus, for optimal professionalism in the field of journalism, AI is one sure tool that can be employed to make this possible. It is therefore recommended that over reliance in the use of artificial intelligence and automated journalism should be discourage; there should be a balance between human input and machine input. Also, Journalists should be trained effectively in the proper and efficient use of artificial intelligence in journalistic reporting.

Keywords: Artificial Intelligence, Journalism, Journalists, Journalistic Reporting.

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1. INTRODUCTION

Artificial intelligence (AI) has become more prevalent in journalism and has spread quickly throughout society. With the use of AI, jobs and procedures can be codified into algorithms that provide results that are comparable to those generated by people. As a result, the use of AI offers mass media and news organizations a variety of advantages while also bringing about changes on at least three levels: the role of journalists in text production, their replacement in performing specific tasks, and audience

interaction (Noain-Sanchez, 2022). AI has quickly evolved from a cutting-edge experiment to a crucial element of contemporary journalism (Nurelmadina et al., 2021 cited in Amponsah and Atianashie, 2024).

For more than 50 years, the practice of journalism in Africa has been based on educational pedagogies that produced journalists who adhered to conventional news production procedures. The inverted pyramid and pyramid styles for story formulation were highlighted by the structures. AI offers the potential to alter the



production and storytelling processes in the context of African journalism (Radoli, 2024). The practice of journalism has seen a significant transformation in recent years, mostly as a result of the introduction of new technologies that have fundamentally changed human contact and activities on a global scale. The introduction of AI-generated smart templates has become a crucial part of the media environment, radically changing how news is gathered, edited, and reported. This innovation represents a profound change in the way journalists work. Algorithms can now independently gather and distribute news reports on a variety of subjects thanks to artificial intelligence. Notably, this revolutionary advancement has enabled robots to produce genuine news articles, and algorithms convert complicated data into news articles that the general public can understand (Guanah et al., 2020 cited in Makinde, 2024).

Society as a whole is being impacted by the development and management of artificial intelligence (AI). As a result, coverage of AI must educate viewers about the technology's implications outside of journalism. Reporting on the power dynamics in the evolving relationships between corporations, authorities, citizens and computer chips, and between data and algorithms, for example. While many AI applications benefit the public, journalists also require knowledge and experience to raise awareness of issues including exclusions, unequal benefits, and human rights violations (UNESCO, 2023). AI is transforming media operations, especially in newsrooms across all three areas. There is currently minimal focus on how AI may improve the productivity and efficiency of the media industry's commercial side. Some of the most popular uses of AI are in content creation and audience behavior analysis. Additionally, media outlets in all three areas are having difficulty finding and keeping employees with the necessary technology expertise (Ogola, 2023).

An important development in news reporting and the media landscape is the incorporation of Artificial Intelligence (AI) into journalism. AI has quickly evolved from a fresh experiment to a crucial part of contemporary journalism since its

first introduction into the field. Simple algorithms created to automate common news articles, such as financial summaries or sports results, marked the beginning of this shift. But AI's function has grown significantly, now including data analysis, content tailoring, supporting investigative journalism, and even influencing editorial choices. AI's introduction into journalism is part of a larger trend of digital transformation that is changing how news is obtained, reported, and consumed. It is increasing importance is evidence of both technological progress and the shifting demands and dynamics of news consumption in the digital era. (Amponsah and Atianashie, 2024). Hence, the need for this study.

Problem Statement

Artificial intelligence's progress, especially in recent years, is changing journalism while also sparking discussion about the advantages and disadvantages it may have for the industry and the journalists who work in it. Furthermore, a field of academic research that is still in its infancy but is presently generating a variety of increasingly intriguing lines of inquiry is facing new hurdles due to AI (Parratt-Fernandez et al., 2021). The conventional job of human journalists has been replaced by the ability for readers to read stories that are totally created by automated systems (Makinde, 2024). Readers are beginning to trust journalistic information written by software more than that written by human journalists as the use of these technologies grows. This may further discourage hardworking journalists who before the advent of AI, were dutiful, diligent and efficient in scouting for news stories (Jung et al. 2017).

Artificial Intelligence (AI) has progressively become more common in news agency newsrooms and mass media over the past ten years. This increasing trend has sparked a heated discussion regarding the detrimental effects on journalism, especially on ethical standards and standards of quality (Noain-Sanchez, 2022). Furthermore, as journalists may believe that AI makes news scouting easier, research on the use of AI in improving journalistic reporting is

necessary. However, chances are that there is the possibility of access to fake news; news validation and verification becomes core in this sense. Thus, this study will explore how to leverage on artificial intelligence in carrying out journalistic reporting.

Objective of the Study

The objective of this study is to examine how artificial intelligence can be used in enhancing effectiveness and efficiency in journalistic reporting.

2. LITERATURE REVIEW

Artificial Intelligence

Over the past few years, researchers have confirmed that artificial intelligence (AI) skills are improving annually, resulting in lower costs and more accessible processing power. This has allowed them to broaden their knowledge and expertise. More specifically, artificial intelligence is defined as "a branch of computer science focused on simulating human intelligence" (Broussard et al. 2019 quoted in de-Lima-Santos and Ceron, 2022). Although the term "artificial intelligence," or AI, has been conceptualized from a variety of angles, it consistently emphasizes that it is "the capability of a machine to imitate intelligent human behavior" (Aghion et al., 2019 cited in Parratt-Fernandez et al., 2021) and that it can be used in a variety of fields, including journalism.

In contrast to humanistic intelligence as determined by the Intelligence Quotient (IQ) and occasionally the Emotional Quotient (EQ), artificial intelligence, also known as machine intelligence, is linked to the intellectual capacities of computers. Machine-powered intelligence is capable of learning, planning, problem-solving, and speech recognition. Artificial intelligence (AI) demonstrates human cognitive skills, such as reasoning, thinking, understanding facts, judgment, and deduction (Radoli, 2024). Artificial intelligence is defined as "smart machines that learn from experiences and perform humanlike tasks," according to Marconi (2020, referenced in Ogola, 2023). AI is

"the activity of computationally simulating human activities and skills in narrowly defined domains, most commonly through the application of machine learning approaches, a subfield of AI, in which machines learn from data or their own performance," according to Mitchell (2019 referenced in Ogola, 2023).

Journalism

The creation and dissemination of reports on the interplay of events, facts, concepts, and individuals that constitute the "news of the day" and that at least somewhat accurately enlighten society is known as journalism. According to Reese (2010), the term encompasses both professional and non-professional occupations, information gathering techniques, and literary style organization.

Reporting and writing for newspapers, periodicals, news websites, or preparing material for broadcast are all considered forms of journalism. Gathering, confirming, analyzing, publishing, and presenting news about current events, trends, and issues to the public are all part of the dynamic field of journalism (Perumal, 2025). The process of obtaining, evaluating, producing, and disseminating news and information to the general public is known as journalism (American Psychological Association, 2025). Reporting and news writing are both included in journalism. Journalism as an occupation refers to writing for journals, particularly newspapers and magazines (Brian, 2014).

Positive Impact of Artificial Intelligence in Journalism

With the potential benefits of artificial intelligence, journalism practice can profit from technological advancements in production, innovation, and efficiency (Radoli, 2024). Without taking the place of journalists' specialized abilities, AI in the media can undoubtedly make journalism easier for overworked resources. Additionally, AI can utilize new products that could boost news media consumption and improve new kinds of

involvement (de-Lima-Santos and Ceron, 2022). Elmas (2003 referenced in Radoli, 2024) asserts that AI will have a bigger influence on the internet in the near future since it can generate data that aids websites in finding the most pertinent content.

A paradigm change has occurred in journalism with the introduction of Artificial Intelligence (AI), especially in terms of increasing productivity and efficiency. AI's ability to automate repetitive processes like gathering data and sifting through massive amounts of information is revolutionary. AI frees up journalists to focus more time and effort on the subtleties of storytelling by handling these laborious duties. This change represents a substantial improvement in journalism quality rather than just a convenience issue. By utilizing their human intuition, empathy, and investigative abilities in previously unattainable ways, journalists may now delve deeper into complicated issues. AI solutions, which offer real-time data analysis and content recommendations, are particularly useful in fast-paced settings like breaking news or live reporting. This feature significantly speeds up news distribution, guaranteeing that viewers obtain pertinent and timely information (Amponsah and Atianashie, 2024).

It is impossible to overestimate the influence of AI on automated reporting and content creation. AI's capacity to produce accurate and cohesive reports from structured data has become crucial, especially for data-driven and time-sensitive stories. AI is currently frequently used to provide automated financial summaries, sports scores, and election reports, all of which guarantee quick, accurate, and consistent coverage. In a news cycle that runs around the clock, this automation is essential to helping newsrooms satisfy the growing need for quick news distribution. The use of AI in journalism has significantly advanced the sector by streamlining a number of procedures and improving the context and substance of news reporting (Amponsah and Atianashie, 2024). Adoption of AI offers mass media and news organizations a number of advantages while also bringing about changes on at least three levels: the role of

journalists in text production, their replacement in performing specific tasks, and audience interaction (Gomez-Diago, 2022 cited in Noain-Sanchez, 2022).

Negative Impact of Artificial Intelligence in Journalism

The main obstacles to the adoption of AI, according to Ogola (2023), are a significant lack of knowledge about AI, resource limitations, fear of the detrimental effects of algorithmic systems and professional precarity among journalists, cultural resistance within newsrooms, marginalization of women in the newsroom, weak policy and legal infrastructure and a lack of suitable AI business strategies. According to a study by Amponsah and Atianashie (2024), there is growing worry about ethical compliance in AI journalism, which is exemplified by striking a balance between transparent procedures, bias reduction, and the influence of AI. The study emphasizes the necessity for clarity in the way news is algorithmically filtered and emphasizes the significance of transparency in AI-driven news operations. Algorithmic prejudice is another major problem. If left unchecked, AI systems have the capacity to reinforce prejudices, which could compromise journalistic integrity. Scholars like emphasize the necessity to preserve editorial independence and protect journalistic ethics in the face of quickly developing technology as AI's involvement in newsrooms expands.

According to a study by de-Lima-Santos and Ceron (2022), a number of obstacles, including opposition to change, the institutional environment, past competition, inadequate budget, a lack of expertise, and complementing goals, tend to impede technological advancements in newsrooms. AI in journalism raises several issues, according to UNESCO (2023). The potential for AI to produce fake news is a serious one. This is due to the fact that AI can be used to create stories that sound realistic but aren't. People may get misinformed or believe misleading information as a result of this. The possibility that AI will be used to dictate which stories get covered is another

worry. This is due to the fact that AI may be used to determine which stories are most popular and shared on social media, then rank those articles. A skewed and one-sided perspective of the news could result from this.

3. EMPIRICAL REVIEW

The potential of technologically driven approaches in the creation, production, and distribution of news products and services has significantly altered the media in recent years, according to de-Lima-Santos and Ceron (2022). According to the study, “Science fiction gave rise to artificial intelligence (AI), which is now a very real instrument that may help society solve a variety of problems, including the difficulties the news industry faces. The seven subfields of artificial intelligence (AI)—machine learning, computer vision (CV), speech recognition, natural language processing (NLP), planning, scheduling, and optimization, expert systems, and robotics—were the basis for our analysis of the news industry's use of AI. Results indicate that three subfields—computer vision, machine learning, and planning, scheduling, and optimization—are developing more in the news media. In the realm of journalism, other areas have not been completely utilized. The majority of AI news initiatives depend on funding from big giants like Google. This restricts AI's potential to a few news industry participants. We concluded by presenting an agenda for further research and examples of how these subfields are being developed in journalism”.

Journalists and producers in heritage media (newspapers, radio, and television) were multitalented in the newsrooms of the past. Their commitment to provide an unbiased narrative and serving as the voice of the unheard was a fundamental component of their multidimensional approach. To create a good tale, the classic journalist used human, ethical, and analogous procedures. They were faces on the screen, fingers on the keyboard, sounds behind the story, and voice actors for the camera. In order to convey the story and keep the public informed, the newsroom operations completely depended on these human beings. With the

advent of AI-assisted news production, our perception of journalism is rapidly changing. Over the past few decades, technical developments have advanced in the African context. But during the last decade past, AI has greatly impacted and advanced technological processes (Radoli, 2024).

Another study produced by Ogola (2023), reveals the current situation of AI use in Africa's media. Through carefully chosen country case studies from Eastern, Southern, and West Africa, it investigates AI's potential to boost public interest media. We used document analysis, newsroom observation, and qualitative in-depth key informant interviews. The study discovered that although AI is used by a number of African news organizations, the utilization of AI tools and systems in African media is still very low. Additionally, the use of AI varies by location and medium, with South Africa and Kenya having the highest use cases. The large, well-funded media companies have made investments in a number of high-end AI systems and are also creating a number of unique AI tools. Nevertheless, the majority of smaller media companies either haven't included AI into their newsroom operations or, if they have, mostly rely on open-source tools. The most popular AI systems are functional ones, which are utilized in various editorial practices, content/news dissemination and audience engagement, content processing, and content/news collection. The study comes to the conclusion that artificial intelligence (AI) has enormous potential to improve the creation and dissemination of public interest journalism across the continent, even though technology is not a cure-all for the problems plaguing African journalism. The report makes a number of suggestions, one of which is how foreign media development organizations might assist African media in utilizing AI. This might entail sponsoring research and innovation, including the creation of regional AI tools, supporting capacity building programs to close knowledge and gender gaps, and advocating with other media players for improved AI laws and regulations around the continent.

The impact analysis thoroughly examined the ways in which journalism has been impacted by artificial intelligence (AI). It highlights the positive effects in particular, emphasizing increased productivity and efficiency as the main advantages. The power of AI to produce simple news reports and its usefulness in automating repetitive processes like data collection and analysis are highlighted. Journalists may now focus on more complex and nuanced aspects of storytelling because to this automation. The focus is on how AI might use human qualities like insight, empathy, and investigative rigor to enable a deeper investigation of difficult subjects. By enhancing human capacities and facilitating a more in-depth journalistic investigation, this change in journalism practices brought about by AI integration is regarded as a major breakthrough that advances the discipline (Amponsah and Atianashie, 2024).

Another research by Makinde (2024) examined the effects of automation and artificial intelligence (AI) on journalism, concentrating on issues and solutions unique to Nigeria. Although the use of AI in newsrooms has transformed audience engagement, content production, and distribution, it also brings up issues including bias, copyright violations, an over reliance on AI, and risks to diversity in news reporting. This paper outlines important issues and provides suggestions for resolving them by looking at case studies and academic research. Enforcing copyright rules, diversity programs, and openness and accountability measures are some of the solutions. Nigerian news organizations can use artificial intelligence and automation in journalism while maintaining journalistic integrity and the diversity of perspectives in news reporting by implementing proactive methods and ethical norms.

The field of journalism has historically been sluggish to evolve and adapt. But as artificial intelligence (AI) grows, journalism is beginning to shift. AI is beginning to be utilized in journalism in a variety of ways, from assisting with story writing to spotting false information. This has certain advantages, but there are drawbacks as well. AI in journalism has the potential to improve storytelling, which is one of

its advantages. AI can assist in spotting trends and patterns that human reporters might miss as well as in gathering facts and data for narratives. This can help reporters write better stories by saving them time and effort (UNESCO, 2023).

Citing Mark et al. (2017), Nnamdi and Nwanyanwu (2021) emphasize the growing significance of AI in a number of journalism-related areas, such as content generation, delivery, audience interaction, and reporting. Fact-checking, brainstorming, and crowdsourcing programs have emerged recently with the goal of improving data collection procedures and efficiently organizing pertinent information. Automated journalism, in which news stories are produced by computer systems, is a significant advancement in this area. This invention is becoming more widely acknowledged as a crucial instrument for preserving competitiveness in the news industry's changing environment. Noain-Sánchez (2022) claims that the necessity to improve news creation and successfully engage audiences is the driving force in the adoption of AI tools in journalism. By enhancing journalists' talents, these technologies enable a variety of tasks in the news production process and raise the caliber of their work to previously unheard-of levels. Investigative journalism, data collection, automatic text translation, news recommendation systems, misinformation verification, and the discovery of interesting patterns are all made possible by AI technologies. Additionally, AI helps journalists operate more efficiently by automating repetitive duties, freeing them up to concentrate on more intricate and creative facets of their jobs.

4. CONCLUSION

It is no longer news that artificial intelligence is being used in journalism. The use of artificial intelligence in news production is becoming more widely acknowledged by Nigerian journalists. A number of Nigerian news organizations are starting to investigate the potential of these AI-driven writing tools, which are gaining popularity in newsrooms. AI writing tools are being tested for a number of activities,

such as editing, fact-checking, and content generation. Journalists who want to expedite their writing process and produce high-quality articles more quickly are increasingly using them. However, the integration of AI into journalism practice is associated with certain setbacks including over-reliance on AI tools. Additionally, sophisticated digital technologies facilitate the rapid spread of information on social media, including false and deceptive content. This rapid distribution has the potential to worsen the spread of erroneous information by influencing other information-propagation pathways and amplifying the impact of misleading narratives; hence, the need for a balance in AI tools usage.

5. RECOMMENDATIONS

From the findings of the study, the following recommendations are hereby made:

- Over reliance in the use of artificial intelligence and automated journalism should be discouraged; there should be a balance, creating an effective integration of both human and machine for optimal journalistic reporting.
- Journalists should be trained effectively in the proper and efficient use of artificial intelligence in journalistic reporting.
- The use of artificial intelligence among journalists and in broadcast media is highly encouraged as it makes journalism carried out easier and quicker.

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