ASSESSMENT OF THE IMPLICATIONS OF ARTIFICIAL INTELLIGENCE ON THE FIELD OF JOURNALISM IN ENUGU STATE, NIGERIA

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ABSTRACT

This paper assessed the implications of artificial intelligence on the field of journalism in Enugu state, Nigeria. The population for this study comprises all journalists working in various media organizations in Enugu State, Nigeria. This includes journalists from print media, broadcast media (radio and television), and online media platforms. The study utilizes a stratified random sampling technique to ensure that different categories of journalists are adequately represented. Based on the estimated population of 500 journalists and a desired confidence level of 95% with a margin of error of 5%, the sample size is calculated to be 120 journalists. Data collected through structured questionnaires and semi-structured interviews. Quantitative data collected from structured questionnaires was analyzed using statistical software such as SPSS (Statistical Package for the Social Sciences) version 21. On the other hand, Qualitative data gathered from semi-structured interviews was analyzed using thematic model. The paper highlighted that, AI has the potential to significantly enhance the field of journalism by improving efficiency, accuracy, and the quality of news content. However, the recommends that Media organizations should encourage journalists to adopt AI tools to enhance their productivity and efficiency. Training programs should be provided to help journalists integrate AI technologies into their workflow, ensuring they can leverage these tools effectively without compromising the quality of their work.

Keywords: Artificial Intelligence, Journalism, News Production, Ethical Implications

Introduction

The rapid advancement of artificial intelligence (AI) has brought about transformative changes across various sectors, including journalism. In recent years, AI has been increasingly integrated into journalistic practices, influencing how news is gathered, produced, and disseminated (Adeoye & Akinfenwa, 2020; Nkosi *et al.,* 2019). This study aims to assess the implications of AI on the field of journalism in Enugu State, Nigeria, exploring both the opportunities and challenges it presents.

The problem statement for this research is centered on understanding the implications of AI on journalistic practices and the associated consequences for journalists in Enugu State. As AI technologies continue to evolve, there is a growing concern about their potential to disrupt traditional journalism, potentially leading to job losses, changes in news quality, and shifts in audience expectations. These concerns are echoed in various studies across Africa, which highlight the need for a deeper understanding of AI's role in media and its broader implications (Mutahi *et al.,* 2019).

However, the research objectives of this paper are, to examine the perceptions of AI in journalism, to determine the possible impacts of AI taking over journalism practice, and to determine the level of worry exhibited by journalists in Enugu state, Nigeria regarding their job security has increased with the emergence of AI-driven media technologies.

The scope of the study is limited to Enugu State, Nigeria, focusing on local journalists and media organizations operating within this region. The study encompasses both qualitative and quantitative methods to gather diverse perspectives and robust data. This localized focus allows for an in-depth analysis of the specific challenges and opportunities faced by journalists in Enugu State, which may differ from those in other regions or countries.

The significance of this study lies in its potential to inform media stakeholders, policy makers, and journalists about the current

and future implications of AI in journalism. Understanding these implications is crucial for developing strategies to mitigate potential negative impacts while leveraging the benefits of AI technologies. Previous research from across Africa underscores the importance of preparing for AI's integration into various sectors, including media. By focusing on Enugu State, this study contributes to the broader discourse on AI in journalism within the African context, offering valuable insights that can be applied in similar settings across the continent.

Literature Review

AI in News Gathering and Production

AI technologies have revolutionized news gathering and production processes, bringing a myriad of tools and applications that enhance the efficiency and effectiveness of journalistic practices. Automated news writing software, data mining, and natural language processing (NLP) are at the forefront of these advancements, enabling journalists to process large datasets quickly and uncover stories that may have otherwise been overlooked (Carlson, 2019). By identifying patterns and trends in data, AI facilitates investigative journalism, providing insights that significantly enhance reporting quality (Lewis *et al.,* 2020). Automated news writing software, such as those developed by companies like Narrative Science and Automated Insights, can generate news articles based on data inputs. These tools are particularly useful for producing routine reports, such as financial earnings, sports scores, and weather updates. For instance, the Associated Press uses an AI tool called Wordsmith to produce thousands of earnings reports each quarter, which has drastically increased the volume and speed of its financial news coverage (Diakopoulos, 2021).

AI-driven tools like chatbots and virtual assistants are increasingly being used for routine reporting tasks. These tools can handle initial information gathering, conduct interviews through scripted questions, and even write first drafts of news articles. The New York Times has experimented with a chatbot named "The Assistant," which can help reporters by suggesting follow-up questions during interviews and providing background information on topics being discussed. Moreover, AI-powered transcription services such as Otter.ai and Trint have become indispensable for journalists. These tools automatically transcribe audio and video recordings, saving reporters significant time and effort that would otherwise be spent on manual transcription. This allows journalists to focus more on analysis and writing, thus enhancing the overall productivity and efficiency of the newsroom (Diakopoulos, 2021).

AI is also making strides in visual journalism. Machine learning algorithms can analyze video footage to identify key moments, recognize faces, and even detect emotions. This technology is particularly useful for broadcasters and online news platforms that need to quickly sift through hours of footage to find the most relevant clips. AI can also assist in the creation of data visualizations and infographics, making complex data more accessible and engaging for audiences.

Implications for Journalistic Quality and Ethics

While AI offers significant advantages in news gathering and production, it also raises concerns about the quality and ethics of journalism. The automation of news production can lead to homogenized content, potentially reducing the diversity of perspectives in news coverage (Flew *et al.,* 2019). This homogenization occurs because AI-generated content often relies on pre-set templates and data sources, which may not capture the nuances and complexities of a story. There is also the risk of spreading misinformation if AI algorithms are not properly supervised or if they rely on biased data sources. AI systems learn from the data they are trained on, and if that data contains biases, the output will reflect those biases. This can perpetuate stereotypes and misinformation, undermining the credibility of news organizations (Hendrickson, 2021). For instance, an AI tool trained on biased data might inaccurately report on crime rates in certain communities, exacerbating public misconceptions.

Ethical considerations are paramount when integrating AI into journalism. Transparency in AI-generated content is crucial to maintaining audience trust. News organizations must ensure that readers can distinguish between human-

authored and AI-generated articles (Zhao & Liu, 2022). This can be achieved through clear labeling and disclosures about the role of AI in content creation. Additionally, the deployment of AI in journalism necessitates a robust framework for data privacy and security, given the sensitive nature of the information handled by media entities (Santos et al., 2020). Journalists must be vigilant about the ethical use of AI, ensuring that data used for reporting is obtained legally and ethically, and that privacy rights are respected. As AI continues to evolve, balancing innovation with ethical standards will be a key challenge for the journalism industry. Media organizations must invest in ongoing training and education for their staff to ensure they understand the ethical implications of AI and are equipped to use these tools responsibly. By fostering a culture of ethical journalism, news organizations can harness the benefits of AI while safeguarding the integrity and trustworthiness of their reporting.

Theoretical Framework

Technological Determinism Theory

Technological determinism, proposed by Marshall McLuhan, asserts that technology is a fundamental driver of societal change, shaping human behavior and social structures (McLuhan, 1964). In the context of journalism, AI technologies significantly influence how news is gathered, produced, and consumed. The rapid integration of AI tools, such as automated news writing and data mining, underscores how technology can redefine journalistic practices and priorities (Carlson, 2019). This theory highlights that as AI becomes more prevalent, it may lead to shifts in employment patterns and editorial decisions, emphasizing the profound impact of technological advancements on the media landscape (Lewis et al., 2020).

Social Construction of Technology (SCOT) Theory

The Social Construction of Technology (SCOT) theory, developed by Wiebe Bijker and Trevor Pinch, emphasizes that technology is shaped by social, cultural, and political factors rather than being an autonomous force (Bijker & Pinch, 1984). This framework posits that the integration of AI in journalism is influenced by various stakeholders, including journalists, media organizations, and audiences. For example, how AI tools are implemented in newsrooms can vary greatly depending on organizational policies and cultural attitudes toward technology, reflecting the diverse interpretations and uses of AI within the journalistic field (Zhao & Liu, 2022). SCOT underscores the importance of context in understanding the implications of AI in journalism.

Actor-Network Theory

Actor-Network Theory (ANT), proposed by Bruno Latour, suggests that both human and non-human actors (including technology) play essential roles in shaping social practices and institutions (Latour, 2005). In journalism, AI can be seen as a key actor that interacts with journalists, media organizations, and audiences, influencing the production and dissemination of news. This framework encourages the examination of how relationships between these actors evolve and affect journalistic practices. For instance, the way AI tools are utilized in reporting processes can reshape editorial workflows and audience engagement strategies, highlighting the interconnected nature of technology and journalism (Marconi & Siegman, 2020).

Review of Related Works

Adetunji and Adebayo, (2021) conducted a study on the Impact of AI on News Production in Nigeria: Challenges and Opportunities. The primary aim of the study is to explore how Nigerian journalists perceive AI and its integration into their work processes. The findings indicate that journalists generally view AI positively, recognizing it as a valuable tool for enhancing productivity within the newsroom. AI technologies are seen as capable of streamlining workflows, improving reporting efficiency, and aiding in data analysis, which ultimately supports more comprehensive journalism. This perspective highlights a growing acknowledgment of AI's potential to transform traditional practices in the Nigerian media landscape. However, alongside the advantages, the study reveals significant concerns regarding job security among journalists. Many participants expressed apprehension that the increasing reliance on AI could lead to job losses and a reduction in employment opportunities within the industry.

This fear underscores the broader anxieties surrounding automation in various sectors, including journalism. Moreover, the authors emphasize the critical need for training and professional development to ensure journalists can effectively integrate AI into their work. Participants stressed that equipping journalists with the necessary skills and knowledge is essential for navigating the changing landscape and leveraging AI technologies to their advantage.

Osei and Adu-Agyem, (2020) explored AI in Ghanaian Journalism: Enhancing Efficiency or Eroding Ethics? The findings indicate that Ghanaian journalists actively use AI for various tasks, particularly in data analysis and content generation. This integration has significantly improved reporting speed, allowing journalists to produce news articles more efficiently while maintaining a high level of accuracy. By leveraging AI tools, journalists can analyze large datasets and extract relevant information swiftly, thereby enhancing the quality and depth of their reporting. Despite the positive impact of AI on efficiency, the study uncovers significant ethical concerns among journalists. Participants voiced apprehension regarding biases inherent in AI algorithms, which could lead to skewed reporting and the dissemination of misinformation. This concern emphasizes the importance of critically evaluating the technologies used in journalism to prevent negative consequences that could undermine the integrity of the news.

Muriithi, (2022) investigates the role of artificial intelligence (AI) in Kenyan newsrooms, employing a case study methodology to delve into the perceptions and practices of media organizations regarding AI integration. The research seeks to understand how AI technologies are being utilized within the Kenyan media landscape and their impact on journalism.The findings reveal that Kenyan media organizations increasingly leverage AI for content curation and enhancing audience engagement. By utilizing AI tools, journalists can efficiently analyze user data to tailor content to audience preferences, ultimately improving interaction and loyalty among readers. This capability allows media outlets to remain competitive in a rapidly evolving digital environment. However, despite the advantages offered by AI, the study highlights concern regarding the potential homogenization of news content. Journalists and media professionals' express apprehension that reliance on AI-driven processes may lead to uniformity in reporting, with diverse perspectives and unique narratives being overshadowed by algorithmically generated content. This homogenization could ultimately diminish the richness and variety of news coverage, raising questions about the diversity of viewpoints presented to the audience.

Diakopoulos and Koliska, (2020), explore the ethical implications of artificial intelligence (AI) in European journalism. The research investigates how journalists navigate the complexities and challenges posed by the integration of AI technologies into their reporting practices. The findings indicate that journalists frequently encounter ethical dilemmas related to AI usage. These dilemmas arise from concerns about the integrity of AI-generated content, the potential for bias in algorithms, and the overall impact of automation on journalistic standards. Participants expressed a strong need for transparency and accountability in the processes surrounding AI-generated news. Journalists emphasized that audiences must be able to discern the origins of news content whether it is produced by humans or AI to maintain trust in the media. Additionally, the study reveals that the lack of standardized ethical guidelines for AI implementation in journalism exacerbates these concerns. Journalists often feel unprepared to tackle the challenges posed by AI, leading to a call for more robust training and clear policies that address the ethical dimensions of AI integration.

Methodology

Research Design

This study adopts a mixed-method research design, integrating both quantitative and qualitative approaches to provide a comprehensive assessment of the implications of artificial intelligence (AI) on the field of journalism in Enugu State, Nigeria. The mixed-method design allows for the triangulation of data, enhancing the validity and reliability of the findings. Quantitative data is gathered through structured questionnaires, while qualitative data is collected via semi-structured interviews. This approach ensures that both

statistical trends and in-depth insights are captured, providing a holistic view of AI's impact on journalism.

Population of the Study

The population for this study comprises all journalists working in various media organizations in Enugu State, Nigeria. This includes journalists from print media, broadcast media (radio and television), and online media platforms. According to records from relevant journalist associations and media houses in Enugu State, the estimated total population is approximately 500 journalists.

Sampling Technique

The study utilizes a stratified random sampling technique to ensure that different categories of journalists are adequately represented. The population is divided into strata based on the type of media (print, broadcast, online), years of experience, and roles within the media organization (e.g., reporters, editors, news producers). From each stratum, a random sample is drawn, ensuring that the sample accurately represents the diversity within the journalism field in Enugu State.

Sample Size

The sample size for this study is determined using the formula proposed by Tejada & Punzalan (2012), which is appropriate for stratified random sampling. Based on the estimated population of 500 journalists and a desired confidence level of 95% with a margin of error of 5%, the sample size is calculated to be 120 journalists. This sample size is deemed sufficient to provide reliable and generalizable findings on the implications of AI in journalism in Enugu State.

Method of Data Presentation and Analysis

Data collected through structured questionnaires and semi-structured interviews was analyzed using both quantitative and qualitative methods:

Quantitative Data: Quantitative data collected from structured questionnaires was analyzed using statistical software such as SPSS (Statistical Package for the Social Sciences) version 21. The results were presented in tables to facilitate easy interpretation and comparison.

Qualitative Data: Thematic analysis was employed to analyze qualitative data from the interviews. This method involves coding the data to identify key themes and patterns that emerge from the participants' responses.

Discussion of Findings

According to the interview results, journalists mainly perceive AI technology as a tool that acts as an intermediate, providing support by increasing efficiency and improving communication and journalistic performance.

One benefit I find when utilising tools such as artificial intelligence is that they serve as a reminder of the breadth and extent of the subject matter. During periods of intense deadlines, we can experience hyper-focus. However, I often discover that the topic matter is more extensive than I initially anticipated, which occasionally prompts me to reconsider my reporting approach. Although this is a novel experience for me, I find it beneficial to occasionally inquire, "Am I overlooking any important details?" as a means of engaging my intellect. Is my viewpoint limited and narrow, and should I take into account additional factors? That is beneficial.

Mark and James discuss the benefits of utilising AI-driven reporting tools including transcribing services that employ AI technology, such as Otter AI, Rev, and Happy Scribe. James provided a comment regarding the overall use of AI-powered assistive technologies, with a specific focus on the application of Otter AI for aiding in transcription services during interviews:

I believe that the reporters have more flexibility to engage in extensive and reflective work known as "enterprise" work. That has been my personal experience. It has significantly reduced the amount of tedious work and although it hasn't completely replaced it, it is satisfactory. Lately, I have been utilising the Otter automated recording and transcription programme, which is exceptional. Previously, individuals would need to utilise a portable digital recording device and subsequently transcribe the recorded content. Indeed, this has been a significant enhancement. Mark utilises AI-powered transcribing services to assist with their reporting.

Furthermore, participants voiced apprehensions regarding the potential influence of AI-

generated content on the calibre and criteria of journalism. John is worried that viewers are being trained to anticipate less complex news content prior to the widespread acceptance of AI technology in news reporting. This could lead to a trade-off between technological advancement and audience satisfaction, resulting in news material that is satisfactory but not necessarily ideal.

I am able to perceive and comprehend content that is evidently produced using automated means... and I find it deeply disturbing. This falls significantly short of my expectations for being informative and precise, as it has numerous inaccuracies. My fear is not that AI will imminently supplant my work, but rather that individuals will become accustomed to an increasing amount of content generated by AI and hence tolerate lower quality standards. I anticipate that an increasing number of individuals will be unable to discern that distinction.

Emerson has a positive perspective on integrating AI to enhance editorial standards.

He believes that artificial intelligence will revolutionize certain elements, particularly beat reporting, and potentially introduce a degree of empirical analysis that is now lacking or has been absent in recent times. And I am uncertain whether that is a negative occurrence.

The interviewees propose utilising artificial intelligence (AI) to detect patterns and eliminate ideas that have the potential to become projects. Artificial intelligence can be employed to determine if a specific topic has already received comprehensive attention, so assisting journalists in avoiding unnecessary expenditure of time on themes that have already been fully addressed.

Possible impact of AI taking over journalism practice in Nigeria

Table 1: Shows the possible impact of AI taking over journalism practice in Nigeria

Impacts	Frequency	Percentage
Accuracy of news	19	15.83
Current news	15	14.6
Efficiency	18	15
Elimination of prejudice	16	13.33
Unemployment	13	10.83
Job creation	10	8.33
All of the above	29	24.17
Total	**120**	**100**

Source: Field Survey, (2024)

According to the data presented in table 1, 15.83% of the respondents (120 out of the total) mentioned news accuracy and current news as important factors. Additionally, 14.6% (15 respondents) expressed the same sentiment. On the other hand, 13.33% (16 respondents) and 10.83% (13 respondents) identified the elimination of prejudice and unemployment as significant concerns. Furthermore, 24.17% (29 respondents) agreed with all the statements. Nevertheless, the majority of respondents concurred with all the statements. These findings align with Ubabukoh's (2017) perspective that the majority of AI applications possess the ability to not only analyse vast quantities of data quickly, but also minimise errors to an extremely low level. This characteristic makes them a more logical choice compared to expensive and error-prone human accounting or consultancy teams.

The level of worry exhibited by journalists in Nigeria regarding their job security has increased with the emergence of AI-driven media technologies

Table 2: Level of worry exhibited by journalists in Nigeria regarding their job security

Level of fear	Frequency	%
Very high	74	61.66
High	34	28.33
Undecided	2	1.67
Low	8	6.67
Very low	2	1.67
Total	**120**	**100**

Source: Field Survey, (2024)

According to the data in table 2, out of all the responses, 120 respondents (61.66%) indicated that the level of something was very high, while 34 respondents (28.33%) stated it was high. Additionally, 2 respondents (1.67%) were indecisive and 8 respondents (6.67%) said the

level was low. Only 2 respondents (1.67%) reported that the level was very low. Nevertheless, the majority of respondents concurred that the amount was exceedingly high. The findings were consistent with the study conducted by Hendricks (2018), which indicated that the rise of AI would lead to some vocations, including journalism, becoming obsolete. Based on the report, additional individuals who would be impacted include accountants, editors, customer service representatives, store managers, and administrative assistants.

Conclusion

Undoubtedly, AI has the potential to outperform human beings in news reporting due to its lack of fatigue, unlike humans. AI can reduce the cost of news collecting and improve the quality of news by eliminating human errors and editing issues. Automation is the inevitable direction of the future, and it is imperative that we do not be left behind in the global shift towards a fully automated society. Therefore, we must equip ourselves to wholeheartedly embrace automation in order to effectively compete on a global scale. While the adoption of AI-driven media applications may eventually result in employment loss and the dominance of Nigerian media organisations, now they may not pose a danger due to the numerous challenges associated with AI utilisation. When it comes to AI, there is no scope for engaging in negotiations with human people. Moreover, Nigeria has been sluggish in embracing technology advancements, as demonstrated by its prolonged failure to implement a digital switch over system.

In conclusion, artificial intelligence does not present a danger to the field of professional journalism. Artificial intelligence technologies are seen as an additional benefit to journalism in the digital era. However, they are not capable of totally replacing journalists. Instead, these technologies are expected to enhance the work of journalists.

Recommendations

I. Media organizations should encourage journalists to adopt AI tools to enhance their productivity and efficiency.

II. Training programs should be provided to help journalists integrate AI technologies into their workflow, ensuring they can leverage these tools effectively without compromising the quality of their work.

III. Media organizations should establish guidelines for the use of AI in news production, ensuring that AI-generated content meets the same quality and accuracy standards as human-produced content.

IV. To alleviate fears about job security, media organizations should promote AI as a tool that enhances rather than replaces journalistic work. They should emphasize the role of journalists in providing critical thinking, context, and analysis that AI cannot replicate.

V. Journalists should be encouraged to engage in continuous learning and development to stay updated with the latest advancements in AI and digital journalism. This will help them remain relevant and competitive in the evolving media landscape.

VI. Media organizations should adopt ethical practices in the use of AI, ensuring transparency and accountability in AI-driven news production. This includes clearly distinguishing between human-generated and AI-generated content to maintain trust with the audience.

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