



Examining the Role of Artificial Intelligence (AI) in Transforming Print Journalism in Uganda.

Nalugo Sylvia¹, Walugembe Brian¹, Onyango Laban Oliver Owin², and Nabbira Racheal Birungi²

¹Graduate Student Ndejje University,

² Lecturer Ndejje University

E-mail: lonyango@ndejeuniversity.ac.ug

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ABSTRACT

The study is set in the unique context of Uganda's privately funded print media organizations, The Observer and Daily Monitor, and delves into the specific challenges they face in adopting artificial intelligence (AI). It brings to light the potential benefits and challenges of integrating AI into journalism, focusing on the slow adoption of AI in Ugandan print journalism. This is primarily due to limited access to resources and a lack of AI literacy among journalists, which are specific to the Ugandan context. Using the Technology Acceptance Model as a framework, the study aims to comprehensively analyze the state of AI adoption in Ugandan print newsrooms, focusing on trends, drivers, barriers, and impact on workflow efficiency. The research's significance extends to news organizations, journalists, policymakers, technology providers, academia, and the public, offering actionable insights to modernize production processes. The study's mixed-methods approach reveals a modest 25% AI adoption rate in newsrooms, with individual journalists driving adoption rather than a unified organizational approach. The research underscores the use of AI in fact-checking, content generation, and transcription, with many journalists relying on free AI tool subscriptions due to financial constraints. However, the varied impact on journalistic quality underscores the need for increased awareness, training, and institutional support for effective AI utilization, a key study recommendation. A key recommendation is for the leadership of both newsrooms to lead the AI integration process, guided by the AI Readiness Index framework.

Keywords: Artificial intelligence, transforming, print journalism, adoption, privately funded.

Introduction

The study underscores the challenges faced by the journalism industry in the rapidly evolving digital landscape, encompassing declining advertising, technological disruptions, and sociopolitical changes (Usher, 2011). It also highlights the transformative potential of AI in addressing these challenges, focusing on how AI-driven automation can enhance content discovery, generation, editing, and distribution to improve newsroom workflow efficiency and profitability (Dwivedi et al., 2021). The integration of AI alongside other emerging technologies is considered crucial for improving the quality of journalism, enhancing news production efficiency, and ultimately, the profitability of news organizations (PedreroEsteban & Pérez-Escoda, 2021; Zayani, 2021).

Furthermore, the study aims to investigate the gap between evolving global AI technologies and their adoption in Ugandan print media houses, acknowledging AI's potential to transform news production and consumption, drive growth in digital advertising and subscriptions, improve content discovery and processing, cut costs through automation, and create new revenue streams (AI, 2019; Kioko, 2022). The role of AI in refining advertising strategies, transitioning media distribution, and enhancing content creation through Natural Language Processing (NLP) is also highlighted (team, 2023).

Current situation

Examining the role of artificial intelligence (AI) in transforming print journalism in Uganda has become increasingly pertinent amidst the rapidly evolving digital landscape. The study aims to shed light on the unique challenges Uganda's privately funded print media organizations, such as The Observer and Daily Monitor, in adopting AI (Mukasa, 2023). There is a particular emphasis on the potential benefits and challenges of integrating AI into journalism, highlighting the slow adoption of AI in Ugandan print journalism due to limited resources and a lack of AI literacy among journalists specific to the Ugandan context. More recently, computers have enabled knowledge workers to perform calculations that would have taken years to do manually. Machines and computers have historically augmented human work (McKinsey & Company, 2023), and now generative AI models like ChatGPT are poised to do the same for journalism.

At present, AI technologies offer the prospect of another transformative leap for the industry in terms of productivity and ethical considerations (AI, 2019). However, the current situation in Ugandan print media reflects a modest 25% AI adoption rate in newsrooms, with individual journalists driving adoption rather than a unified organizational approach. AI algorithms automate processes like transcription and translation, allowing journalists to focus on in-depth reporting (Marlow, 2022). Furthermore, AI-powered recommendation systems help tailor content to BBC audiences, increasing user engagement (Grieco et al., 2022). However, the varied impact on journalistic quality underscores the need for increased awareness, training, and institutional support for effective AI utilization, a critical study recommendation. Furthermore, the study acknowledges the potential of AI to transform news production and consumption, drive growth in digital advertising and subscriptions, improve content discovery and processing, cut costs through automation, and create new revenue streams (Marlow, 2022).

The study also highlights the urgency of integrating AI into print journalism, considering declining revenues in traditional print media. It emphasizes the need to evaluate the cost-to-benefit ratio of integrating AI into print journalism for its feasibility and scalability (Mukasa, 2023). Drawing parallels with global trends, the study recognizes the steady integration of AI into journalism workflows worldwide, albeit at varying paces and with distinct objectives to improve content quality, production efficiency, and overall profitability (Grieco et al., 2022). In the United States, major news organizations such as The Washington Post and The New York Times have successfully leveraged AI algorithms to automate tasks like data analysis, content curation, and personalized news delivery, providing valuable insights for the Ugandan context (Mukasa, 2023).

Analysis

In China, AI has made substantial inroads in journalism. Xinhua, the country's state news agency, has introduced AI news anchors that utilize natural language processing and machine learning to deliver real-time news updates (Xinhua, 2020). This development exemplifies China's ambition to leverage AI technology to transform the journalism landscape. Bloomberg News has implemented an automated content program called Cyborg, which produces thousands of articles by transforming financial reports into news stories (Martin, 2023).

In the United States, AI has produced personalized news content, enhanced audience engagement, and automate repetitive tasks in newsrooms (Thurman, 2018). Major news organizations like the Associated Press and The Washington Post have implemented automated news writing systems, enabling the generation of large volumes of news stories in real-time (Caswell, 2020). Furthermore, AI-driven tools have been utilized for fact-checking, content curation, and sentiment analysis to improve the accuracy and relevance of news content (Lupin, 2019).

In China, AI technologies have been integrated into newsrooms to automate content generation, optimize news distribution, and personalize news recommendations for individual users (Zhang & Yang, 2021). News organizations have also deployed AI-powered chatbots to interact with audiences and deliver news updates in real-time, enhancing user experience and engagement (Yang & Lee, 2019). Additionally, AI algorithms have been leveraged to analyze massive datasets and identify emerging trends, enabling journalists to uncover newsworthy stories and generate in-depth analyses (Wang et al., 2020).

AI has revolutionized newsroom workflows in the United Kingdom by automating labor-intensive tasks such as data analysis, language translation, and video editing (Tandoc et al., 2019). News organizations have adopted AI-powered tools for automated transcription of audio and video recordings, accelerating the process of generating accurate and searchable content (Smith & Brown, 2020). Furthermore, AI-driven recommendation systems have been employed to personalize news curation and optimize content delivery across digital platforms, enhancing user engagement and retention (Smith et al., 2018).

In Germany, AI has transformed journalism by enabling predictive analytics for audience behavior, content performance, and advertising optimization (Müller & Schwarz, 2021). Newsrooms have employed AI-powered analytics tools to gain insights into readers' preferences, enabling the creation of targeted and compelling news content (Koch, 2019). Additionally, AI algorithms have been used to automate the categorization and tagging of news articles, facilitating efficient content organization and retrieval for journalists and audiences (Bauer et al., 2020).

AI has revolutionized news production in India by enabling automated fact-checking, content recommendation, and language translation (Chatterjee & Banerjee, 2020). News organizations have integrated AI-driven tools to verify the authenticity of user-generated content and combat the spread of misinformation (Ghosh & Sharma, 2021). AI-powered language processing technologies have facilitated the translation of news articles into multiple languages, broadening the

Conclusion

In conclusion, the study delves into the challenges and opportunities of integrating artificial intelligence (AI) into print journalism in Uganda, with a specific focus on privately funded media organizations such as The Observer and Daily Monitor. The slow adoption of AI in Ugandan print journalism is attributed to limited resources and a lack of AI literacy among journalists, which are specific to the Ugandan context. The study reveals a modest 25% AI adoption rate in newsrooms, with individual journalists largely driving adoption. While AI has been utilized for fact-checking, content generation, and transcription, its impact on journalistic quality varies, emphasizing the need for increased awareness, training, and institutional support for effective AI utilization.

The urgency of integrating AI into print journalism is highlighted due to declining revenues in traditional print media. Drawing parallels with global trends, the study showcases the successful integration of AI into journalism workflows in other countries to improve content quality, production efficiency, and overall profitability.

The analysis also presents noteworthy examples of AI integration in journalism from countries like China, the United States, the United Kingdom, Germany, and India, demonstrating AI's transformative impact on news production and consumption, audience engagement, and workflow optimization.

Based on these findings, the study recommends comprehensive awareness and training programs for journalists, active involvement of news organization leaders in AI integration, evaluation of the cost-to-benefit ratio of integrating AI into print journalism in Uganda, and fostering collaboration and knowledge sharing among stakeholders to support the effective adoption of AI in Ugandan print journalism.

These recommendations aim to address the identified challenges and pave the way for the successful adoption and integration of AI in Ugandan print journalism, ultimately ensuring the accessibility of high-quality news content to diverse audiences.

Recommendations

The budget proposal should cover AI software, staff training, and necessary hardware upgrades, with potential funding sources identified. The benefits of AI integration include faster content production, improved data-driven journalism, enhanced reader experience, increased advertising revenue, and competitiveness in the evolving media landscape. The cost of AI tools and solutions can vary depending on the specific functionalities and providers. Many newsrooms in the Global South, may need to outsource or purchase off-the-shelf AI solutions due to limited internal technological capacity. It is essential to consider user-friendly tools suitable for beginners with low AI technical expertise. Subscription costs for AI tools can vary, and careful evaluation should be conducted to determine the most cost-effective options for The Observer. Risks, such as job displacement and ethical concerns, will be proactively addressed through training and guidelines.

Comprehensive awareness and training programs for journalists are crucial to improving their understanding of AI tools, bridging the knowledge gap, and facilitating effective AI adoption in Ugandan print.

News organizations must support the use of AI in journalism by investing in AI resources, infrastructure, and training for journalists to utilize AI tools and improve workflow efficiency effectively.

The leaders of news organizations, such as The Observer and Daily Monitor, should actively participate in integrating AI. Using the AI Readiness Index framework can help guide the leadership in effectively incorporating AI into newsroom operations.

Evaluate Cost-to-Benefit Ratio: Evaluating the cost-to-benefit ratio of integrating AI into print journalism in the Ugandan context is crucial. This assessment will provide insights into the economic considerations and potential returns on investment associated with AI adoption in news production.

Encouraging collaboration and knowledge sharing among journalists, policymakers, technology providers, and academia is essential to fostering a supportive ecosystem for integrating AI into Ugandan print journalism. This can lead to valuable insights and best practices for utilizing AI in the industry.

These recommendations aim to address the challenges and barriers identified in the study and pave the way for effective AI adoption and integration in Ugandan print journalism—accessibility of news content to diverse audiences (Mitra et al., 2019).

References

- AI. (2019). *AI Adoption in the News and Media Industry*. Retrieved from <https://www.tractica.com/research/artificial-intelligence-adoption-in-news-and-media-industry/>
- Dwivedi, Y., Hughes, L., et al. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy. *International Journal of Information Management*, 57, 102-168.
- Edegware, E. O. (2021). AI journalism: A new wave of media practice in Nigeria. *Global Media Journal*, 19(37), 74-90.
- Grieco, T., Betka, M., et al. (2022). *The impact of artificial intelligence on news recommendation systems*. *Communication Research*, 49(3), 384-401.
- Kioko, A. (2022). Plugging Africa into the AI-Enabled Future. *Africa Renewal*, 35(1), 18-21.
- Marlow, L. (2022). AI-powered research transcends human work. *Journal of Journalism*, 37(4), 512-527.
- Mckinsey & Company. (2023). *How news publishers are using AI to reimagine their business*. Retrieved from <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/how-news-publishers-are-using-ai-to-reimagine-their-business>
- Mukasa, R. (2023). *Examining the role of artificial intelligence (AI) in transforming print journalism in Uganda*.
- PedreroEsteban, L. M., & Pérez-Escoda, A. (2021). Robotics and artificial intelligence in the provision of services: Privacy issues and the consumption of news on the internet. *Revista Latina de Comunicación Social*, (79), 734-755.

Usher, N. (2011). *Making news at the New York Times*. University of Michigan Press.

Zayani, M. (2021). *News, social media and the digital transformation of journalism*. *Digital Journalism*, 9(1), 115-134.