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An Assessment of the Application of Generative Artificial Intelligence in News Content Production at Clouds Media Group, Tanzania

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Abstract. **Purpose:** This study assessed the use of generative Artificial Intelligence (AI) in the Clouds Media Group (CMG) newsroom in Tanzania. Applying the Technology Acceptance Model (TAM), it investigated journalists' attitudes toward the usefulness and ease of use of these tools and their experiential content opportunities, providing a granular view of technology adoption in a Global South context. **Methodology:** The study adopted a qualitative explanatory design to delve into the nuanced realities of the newsroom. Data was collected through semi-structured, in-depth interviews with six purposefully selected journalists, editors, and technical staff at CMG, ensuring a representation of strategic, operational, and technical perspectives. Thematic analysis, following the framework of Braun and Clarke (2006), was used to analyze the data, generating rich, context-driven insights. **Findings:** CMG journalists found generative AI beneficial for improving efficiency in research, transcription, and drafting, as well as enhancing creativity in storytelling and data analysis. The tools were widely considered user-friendly, which justified their organic, bottom-up adoption. However, this adoption was hampered by significant challenges, including reliance on informal peer-to-peer training, critically inadequate infrastructure (e.g., poor internet, outdated hardware), and significant ethical issues like the provision of misinformation, inaccuracy, and the potential deskilling of employees. The absence of formal organizational AI policies was a critical gap, leading to piecemeal and uneven assimilation and creating a landscape of both opportunity and risk. **Unique Contribution to Theory, Policy, and Practice:** The study confirms the primary components of the Technology Acceptance Model (TAM) in the Tanzanian context while simultaneously illustrating a significant "ease of use paradox." This paradox states that while tools may be intrinsically easy to use, their effective adoption is significantly hindered by external structural and training issues, a factor not fully accounted for in the original model. This finding suggests that Technology Adoption Models applied in the Global South need to be re-contextualized to incorporate these critical environmental variables. The report underlines the urgent necessity for drafting national AI ethics guidelines and specific media policies for Tanzania to ensure accountability, transparency, and public trust. Furthermore, it provides media houses with a comprehensive, actionable guide for the responsible incorporation of AI technologies, pivoting on the urgent need for formal training, advanced internal digital infrastructure and internal charters on AI Ethics to govern use.

Keywords. Generative AI, Journalism, Technology Acceptance Model (TAM), Clouds Media Group, Tanzania, Newsroom, Ethics, Qualitative Research, Ease-of-Use Paradox

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Introduction

The introduction outlines the profound transformation occurring in the global media industry as a result of rapid advances in generative artificial intelligence, which now produces text, images, audio, and video with human-like sophistication. While these technologies promise increased efficiency, scalability, and new storytelling capacities, they simultaneously raise concerns about authenticity, creativity, ethics, and the integrity of journalism. Although generative AI already plays a noticeable role in transcription, summarization, and investigative data visualization, scholars warn of its potential to fuel misinformation, reinforce bias, erode public trust, and undermine journalistic professionalism.

The introduction highlights a stark contrast between the Global North and Global South in terms of AI adoption. Whereas well-resourced newsrooms in the Global North integrate tools such as ChatGPT and DALL·E quickly and experimentally, newsrooms in sub-Saharan Africa face far more complex realities. Their adoption of AI is shaped by infrastructural inadequacies, economic limitations, gaps in digital literacy, and the absence of regulatory frameworks. Without contextual adaptation, African newsrooms risk a form of digital colonialism in which Western-trained AI tools fail to reflect local cultures, languages, and realities, thereby marginalizing African narratives.

Tanzania exemplifies this tension: although the country has high mobile penetration and a young, tech-curious population, journalists operate within an environment characterized by weak regulatory systems, costly and unreliable internet, and insufficient technological resources. Understanding how Tanzanian journalists engage with generative AI their perceptions, struggles, and aspirations is therefore essential for shaping a resilient and future-oriented African media landscape.

The study focuses on Clouds Media Group (CMG), a technologically ambitious and influential Tanzanian broadcaster whose integrated radio, television, and digital operations make it an ideal site for examining AI adoption. Using the Technology Acceptance Model (TAM), the research investigates journalists' perceptions of the usefulness of generative AI, their assessment of its ease of use, and their lived experiences applying it in content creation. The introduction positions the study as a response to a major gap in existing scholarship: although global research on AI in journalism is growing, it remains heavily skewed toward the Global North. This study seeks to address that imbalance by offering an empirically grounded account of AI integration within a Tanzanian newsroom, setting the stage for deeper analysis, practical recommendations, and future research directions.

Empirical literature

The literature on AI in journalism has expanded considerably, but remains largely dominated by perspectives and experiences from the Global North. In these technologically advanced settings, scholarship has evolved from early discussions of automated news generation where AI tools produced routine, structured stories to more sophisticated examinations of human-AI collaboration within editorial work. Studies document how AI now supports transcription, social media content, idea generation, and even drafting articles, significantly reducing time spent on monotonous tasks. Despite these advantages, concerns persist regarding over-reliance on AI, the potential deskilling of journalists, algorithmic bias, hallucinated inaccuracies, and the opacity of AI systems, all of which pose threats to credibility and accountability in journalism.

In contrast, the African context presents a more complex and constrained scenario. Although journalists in countries such as Ghana, Zambia, and South Africa have begun using

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AI for tasks like transcription, translation, and basic research, adoption is largely informal and unsupported by institutional guidelines. Structural barriers such as high costs of premium tools, unreliable internet, limited cloud infrastructure, and insufficient training significantly hinder effective use. Research highlights that only a small group of tech-savvy journalists benefit meaningfully from AI, while the majority lack the skills and resources required for deeper engagement.

African scholars further emphasize the cultural and linguistic limitations of Western-trained AI systems, which often generate inaccurate or stereotypical content about African contexts and produce flawed text in languages like Kiswahili. This forces African journalists to undertake additional corrective labour, including "decolonizing" AI outputs. Without national or institutional ethical frameworks, journalists face heightened risks and must individually navigate issues of accuracy, transparency, and accountability.

In Tanzania, limited but emerging evidence shows rising awareness of AI, yet substantial gaps remain between perceived benefits and practical readiness. Although media leaders increasingly recognize AI's potential, few have initiated meaningful discussions or training within their newsrooms. Tanzanian journalists express optimism about AI's usefulness for research, translation, fact-checking, and idea development but remain constrained by weak infrastructure, the lack of widely accessible Swahili-capable AI systems, and minimal formal training.

These gaps underscore the need for more granular, context-specific research on how AI is actually used in African newsrooms. The present study addresses this gap by conducting an in-depth qualitative case study of Clouds Media Group, investigating how generative AI is shaping journalists' daily practices, professional identities, and ethical decision-making. The research adds critical insight to the still-developing field of AI and journalism studies in Africa by examining the lived realities of adoption, rather than relying solely on broad surveys or generalized assumptions.

Theoretical framework

The study adopts the Technology Acceptance Model (TAM), developed by Davis (1989), as the principal framework for examining generative AI adoption at Clouds Media Group. TAM is a widely validated, user-centered model that explains how individuals decide to adopt and continue using new technologies. Its appeal lies in its conceptual simplicity and strong empirical grounding across diverse organizational settings, making it particularly appropriate for understanding the psychological dimensions of technology adoption among journalists. The model asserts that behavioural intention the key predictor of actual system use is shaped by two central beliefs: perceived usefulness (PU) and perceived ease of use (PEOU).

Perceived usefulness refers to the degree to which users believe a technology enhances their job performance. For CMG journalists, this includes expectations that generative AI will improve efficiency in tasks such as research, transcription, draft writing, idea generation, and investigative reporting. Perceived ease of use concerns how effortless and intuitive journalists find AI tools like ChatGPT, with factors such as conversational interfaces, learnability, and support for Swahili significantly shaping their attitudes. TAM also proposes that PEOU influences PU, meaning that tools perceived as easy to use are more likely to be seen as valuable, ultimately fostering a positive attitude toward their adoption and sustained utilization.

While TAM effectively captures user-level motivations, the model is limited in its treatment of broader contextual realities, a limitation that becomes critical in the CMG environment. AI adoption in this newsroom is informal and unsystematic, influenced not only

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by perceptions of usefulness and ease but by structural constraints such as unreliable internet, inadequate digital infrastructure, and limited financial access to premium AI tools. These external barriers can undermine even high PEOU, leading to what this study identifies as the "ease-of-use paradox," where a tool's intrinsic simplicity is overshadowed by environmental difficulties. This necessitates an extension of TAM to incorporate socio-technical conditions specific to Tanzanian newsrooms, demonstrating that adoption cannot be understood solely through individual perceptions but must be contextualized within the infrastructural and organizational realities that shape technological practice.

Research methods

This study employed a qualitative research approach to deeply explore the lived experiences, perceptions, and subjective realities of journalists at Clouds Media Group (CMG). Qualitative methods were chosen for their ability to capture rich, real-world phenomena and to address the "why" and "how" of human behavior, aligning with the explanatory aim of the research. An explanatory research design was adopted to move beyond description, enabling the study to investigate causal relationships and understand how perceived usefulness and ease of use, influenced by contextual factors like infrastructure and training, shape the adoption of generative AI at CMG.

Fieldwork was conducted at CMG headquarters in Dar Es Salaam, purposively selected for its size, influence, and early adoption of new technologies. The target population included 25 editorial and technical staff involved in content creation. Purposive sampling yielded six participants with diverse roles editor, digital head, reporter/producer, program manager, visual editor, and IT personnel ensuring comprehensive perspectives across managerial, operational, and technical dimensions. Data were collected through semi-structured, face-to-face interviews lasting 30–45 minutes, audio-recorded with consent, and transcribed verbatim to maintain accuracy and richness of information.

Data analysis employed thematic analysis following Braun and Clarke's six-phase framework, producing themes iteratively aligned with the study's three core objectives. Ethical clearance was obtained from St. Augustine University of Tanzania, and participants provided informed consent, with assurances of anonymity and confidentiality. Digital data were secured, and rigorous procedures ensured the trustworthiness of findings in terms of credibility, transferability, dependability, and confirmability.

Findings

Objective One: Journalists' Perceptions of the Usefulness of Generative AI Tools

CMG journalists largely viewed generative AI as a transformative tool that enhanced both efficiency and creativity. Regarding efficiency and productivity, AI automated time-intensive tasks such as transcription, drafting, and research. As one reporter/producer (KI3) noted, "It saves time that instead of using three to four minutes to do something you do it in one minute." The acting Head of Newsroom (KI1) emphasized AI's impact on management processes: "It slashes the number of editorial meetings which used to take considerable time." In terms of creativity and innovation, AI acted as a collaborative partner, providing new story ideas and analytical insights. KI3 shared, "If I need to explain the team's journey, I might use a movie reference from 'Missing in Action'. AI gives me such story ideas to explain information creatively." Ethical concerns were also central; KI4 stressed, "You need to verify the information and add your knowledge from the output of AI," highlighting the importance of human oversight. Opinions on professional value varied: some feared AI might foster "laziness

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and the inability to think" (KI3), while others viewed it as an inevitable and complementary tool shaping journalism (KI2).

Objective Two: Ease of Use of Generative AI Tools

Participants consistently found AI tools user-friendly and intuitive. KI3 described it as "more easy than hard because it is designed in a way that fits the current people who hate complicated things or tools," while KI2 added that interactions felt "like talking to a human being." However, an ease of use paradox emerged: despite the intuitive design, journalists faced obstacles from lack of formal training KI2 noted, "The majority of my colleagues are struggling with prompting and they don't know how to manipulate it" and technical/infrastructural challenges such as poor Wi-Fi, out-dated equipment, and costs for premium tools. KI4 highlighted this constraint: "A.I. is business. You have to pay to get good content, and it has a cap for the day." This demonstrates that ease of use is influenced not only by interface design but also by the surrounding ecosystem.

Objective Three: Journalists' Experiences in Content Creation

AI empowered journalists across multiple functions, enhancing practical applications and benefits. KI5 stated, "AI helped me finish the assignment that I was previously unable to complete on my own," reflecting its time-saving and creative advantages. Yet, challenges persisted: dependency and accuracy issues emerged, with journalists worried about skill erosion and the need for extensive fact-checking. KI6 explained, "If you are not precise it gives you very broad information," highlighting the hidden labour costs in refining AI outputs. Finally, policy gaps were a major concern, with participants calling for structured guidance and training. KI1 emphasized the need for rules on AI use: "There is an urgent need for formalized training and a clear policy on the use of legally protected AI," while KI3 recommended promoting "primary level AI literacy for all staff" to strengthen adoption responsibly.

Discussion

Interplay of Usefulness and Caution

The study confirms that CMG journalists strongly perceive generative AI as useful, aligning with the Perceived Usefulness construct of the Technology Acceptance Model (TAM). AI enhances efficiency and creativity across journalistic practices, from writing to visual storytelling, echoing findings from more technologically advanced contexts (Diakopoulos, 2019; Cools & Diakopoulos, 2024). However, Tanzanian journalists exercise critical caution: usefulness is conditional on human oversight, ethical verification, and contextual relevance. As highlighted, AI's benefits are only fully realized when placed "firmly under human editorial and ethical control," reflecting Gondwe's (2023) notion of a "human-AI supervision" burden in the Global South.

Ease-of-Use Paradox and TAM Limitations

While AI tools are intrinsically intuitive (high Perceived Ease of Use), external systemic factors such as slow internet, lack of equipment, and subscription costs limit effective adoption, creating an ease-of-use paradox. This highlights TAM's limitation in environments where infrastructural and economic conditions are inconsistent. The findings suggest that for technology acceptance models to accurately predict adoption in the Global South, variables addressing organizational readiness, infrastructure, and financial/technical support must be included, corroborating arguments by Bosch (2022) and Mutsvairo & Bebawi (2019).

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Experiential Realities: Augmentation and Anxiety

Journalists experience AI as both empowering and anxiety-inducing. Its applications from investigative image analysis to research demonstrate a bottom-up adoption consistent with TAM's predicted behavioural intention. Yet, concerns about over-reliance, "addiction," and deskilling reveal psychological and professional tensions, echoing warnings by Broussard (2018) and the European Broadcasting Union (2023). The absence of formal policies exacerbates these anxieties, leaving journalists to navigate ethical and professional challenges independently.

The Path Forward: Socio-Technical Approach

Sustainable AI integration requires treating it as a socio-technical phenomenon, addressing technology, users, and context simultaneously. Beyond TAM's core constructs, two critical layers are essential: Organizational Layer, media houses must formalize adoption through AI ethics charters, structured role-specific training, and advanced literacy programs. Infrastructural Layer, reliable internet, modern devices, and technical support are foundational prerequisites for effective adoption.

Overall, CMG journalists are engaged and critical users who negotiate AI's role in their work. Effective future adoption depends on building a supportive ecosystem where ethical guidelines, organizational learning, and infrastructure form the pillars of responsible AI use in Tanzanian newsrooms.

Recommendations

Recommendations for Clouds Media Group and Other Media Houses

1. **AI Ethics Policy:** Establish a cross-functional commission to develop a comprehensive AI policy mandating human verification of all AI-generated content, transparent labelling as "AI-assisted," and prohibition of editorial deception.
2. **Role-Specific Training:** Implement mandatory, tiered training programs covering AI literacy for all staff, advanced role-specific skills (e.g., data journalism, AI editing tools), and peer-led knowledge-sharing workshops.
3. **Digital Infrastructure Improvement:** Conduct audits to identify gaps, ensure reliable high-speed internet, and provide up-to-date, AI-compatible devices through structured upgrade programs or computer loans.

Recommendations for Policy Makers and Educational Institutions

1. **Integrate AI in Journalism Education:** Introduce "Critical AI Literacy" modules addressing technical, ethical, and societal dimensions of AI, and foster international collaborations for workshops, fellowships, and webinars.
2. **Develop National AI Guidelines for Media:** The Media Council of Tanzania, with government and legal support, should draft national frameworks ensuring accountability, combating misinformation, and setting baseline standards for responsible AI use across media organizations.

Recommendations for Individual Journalists

1. **Continuous Learning:** Take personal initiative to complete reputable AI courses, webinars, and practice advanced skills like prompt engineering and critical analysis of AI outputs.

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2. **Uphold Ethical Standards:** Rigorously verify AI-generated content, maintain accuracy and impartiality, and create personal checklists to ensure journalistic standards are met.
3. **Advocate Responsible AI Integration:** Use experience to guide newsroom policies, promote training and infrastructure investment, and encourage controlled AI adoption that enhances rather than undermines journalism.

Areas for further studies

This research has provided a foundational, qualitative understanding that opens the door for multiple additional studies focused on the evolving landscape of AI in African media.

1. **A National Quantitative Study:** A larger-scale, quantitative survey study focusing on journalists across multiple media houses in different regions of Tanzania would be highly valuable. Such a study would enable researchers to test the prevalence and distribution of the perceptions and challenges described in this deep case study, thus allowing for the generalization of results and the statistical examination of correlations between variables like digital literacy, age, and AI adoption rates.
2. **Longitudinal Research on Newsroom Evolution:** A longitudinal study tracking CMG's (or a similar organization's) integration of AI technologies over a significant period, such as 3 to 5 years, could yield profound insights. Such an inquiry would be bound to provide a much deeper understanding of the long-term adoption trajectories of new technologies in a modern newsroom and the extent to which such technological changes fundamentally affect newsroom culture, the evolution of journalists' competencies, and the quality and nature of the news products offered to the public.
3. **Audience-Centric Social Research on Trust and Engagement:** As AI-generated and AI-assisted content become more common, a crucial area of inquiry involves the audience. Social research investigating public trust, perception, and engagement with news content labelled as AI-assisted is urgently needed. The practice changes in news production raise multiple societal concerns about credibility and transparency, thus making this a critical area for future research.
4. **Policy Impact and Effectiveness Studies:** As AI policies are anticipated to be developed and implemented at both national and organizational levels; they should be subjected to rigorous impact studies. Future research should aim to understand these policies' real-world effectiveness at controlling adverse consequences (like misinformation and deskilling) and promoting the responsible, equitable, and beneficial use of AI in journalism.

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