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Journalists and Machines: Applying the Technology Adaptation Model to Understand AI Use in TV Journalism

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Abstract

This study explores the incorporation and interpretation of artificial intelligence (AI) technology in journalism through in-depth interviews with six journalists from three significant Indonesian news television channels: CNN Indonesia, Kompas TV, and TV One. This research seeks to gain insight into the manner in which journalists adjust to and perceive the integration of artificial intelligence (AI) into their workflow, using the Technology Adaptation Model (TAM). The results indicate that AI is primarily employed for administrative and basic functions, such as transcribing and initial research, which leads to faster completion times and allows journalists to concentrate on more crucial areas of newsgathering and reporting. Nevertheless, the journalists hold a contradictory viewpoint on AI, seeing it as a "paradoxical tool." Although AI improves productivity in repetitive jobs, it is not as effective in tasks that demand complex human judgement, such as comprehensive reporting and contextual interpretation. Considerable concerns around ethics and job security have arisen, indicating a broader disapproval about the potential displacement of traditional journalistic professions by AI. This study emphasizes the significance of maintaining a balanced approach when incorporating AI into media.

Keywords: AI in Journalism, Technology Acceptance Model, TV Journalism, Indonesian TV Journalist, Qualitative Research

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Introduction

The incorporation of artificial intelligence in various sectors of industries is becoming more and more common; nevertheless, not all individuals have adjusted to this technological shift. In the sphere of journalism, AI has been utilized to enhance operational efficiencies by streamlining fact-checking processes, assisting in research endeavors, and producing written material (Zalova, 2022; Biswal & Gouda, 2020). This advancement signifies a critical evolution in the methodologies of news acquisition and dissemination.

As news organizations increasingly adopt AI tools, the potential for improved accuracy and faster reporting times raises important questions about the future role of human journalists in a landscape that is rapidly transforming (Marconi, 2020). The challenge lies in finding a balance between leveraging AI's capabilities and preserving the essential human elements of storytelling, ethics, and critical analysis that are vital to quality journalism.

AI, defined as "a branch of computer science focused on simulating human intelligence" (Broussard et al., 2019), is increasingly utilized for tasks ranging from transcription to data analysis. Researchers have described AI in journalism with terms like "automated journalism" (Caswell & Dörr, 2018), "computational journalism" (Cohen et al., 2011), and "robojournalism" (Clerwall, 2014). While these advancements promise increased efficiency and accessibility, they also spark debates about the displacement of human journalists and the ethical implications of AI-generated content (Galily, 2018).

AI technologies in television journalism are often evaluated based on their ability to improve efficiency and accuracy. Research by Opdahl et al., (2023) explored the role of AI in enhancing journalistic trustworthiness, finding that tools like automated fact-checking and transcription software were valued for their utility in streamlining repetitive tasks. However, the perception of usefulness varies depending on the task. Clerwall (2014) found that journalists were more likely to trust AI for routine activities, such as data aggregation, than for creative tasks like story development, which require human judgment and empathy.

The Rise of Indonesian AI TV Presenter

In April 2023, Sasya and Nadhira were presented to the Indonesian public as two of the inaugural human digital-AI generated television presenters by TV One, a prominent news television network in Indonesia. This month heralded the commencement of the "AI TV Presenters showcasing season." (Alvina, 2004). Initially, TV One's AI presenter was utilized solely for reading news on social media platforms; subsequently, Sasya and Nadhira featured in TV One's afternoon Free to Air news segment titled "Kabar Siang." By August 2023, another Indonesian news television outlet, iNews Media Group, followed suit by introducing their AI TV Presenter, which was proclaimed to be the first AI presenter for Free To Air (FTA) broadcasting. Since then, an increasing number of news television stations in Indonesia have begun to unveil their own AI TV presenters.

The rapid adoption of AI technology in broadcasting reflects a broader trend towards automation in the media industry, raising questions about the future role of human presenters and the impact on viewer engagement (Kim et al., 2022). Numerous studies have indicated that the integration of AI within the domain of journalism has been ongoing for an extended period. Discussions regarding AI and journalism are heavily focused on the use of automation in the news production process, as well as the possibilities of AI technology

(Túñez-López et al., 2020; Moran & Shaikh, 2022; Montaña-Niño, 2023). However, the adoption of AI is not without challenges. Factors such as organizational support, training, and the perceived reliability of AI tools significantly impact how these technologies are integrated into newsroom workflows. Also, the extent of acceptance of such technologies within local newsrooms in Indonesia, particularly among television journalists, remains largely unknown.

However, despite its evident advantages, worries regarding accuracy and dependability emerged as significant concerns. Journalists conveyed unease about the contextual limitations of AI-generated results, especially in assignments that require cultural awareness or subtle understanding. For instance, a reporter from Kompas TV remarked that while drafts produced by AI can act as a foundation, they often necessitate extensive manual revisions to ensure content accuracy and contextual relevance. This dependence on human intervention showcases the careful optimism surrounding AI; it is viewed as a robust assistant but not a substitute for human discernment.

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The adoption of artificial intelligence (AI) tools in journalism, as analyzed through the Technology Acceptance Model (TAM), provides insights into how TV journalists perceive AI's role in their professional workflows. A central theme that surfaced was the considerable perceived effectiveness of AI in boosting productivity, especially in routine functions like transcription and translation.

Findings

Perceived Usefulness (PU)

Journalists across the interviews frequently highlighted the value AI tools bring to routine and repetitive tasks. Tools such as transcription services, ChatGPT for content drafting, and research assistance significantly enhance productivity by saving time and effort. For instance, a journalist from Kompas TV explained how transcription AI accelerates the creation of reports by automating voice-to-text processes. Another participant from TVOne noted that using AI tools for research allowed them to uncover detailed insights faster than traditional methods.

Similarly, reporters shared that AI tools reduce the cognitive load associated with brainstorming and drafting. ChatGPT was often used to generate preliminary ideas for news programs or scripts, providing a foundation that could be refined through human judgment. For example, a producer from BTV explained that AI-assisted brainstorming helped in framing topics more creatively and efficiently. These applications demonstrate the high perceived usefulness of AI, particularly in improving task efficiency and freeing up journalists for more analytical and creative responsibilities.

Perceived Ease of Use (PEOU)

While AI tools are recognized for their utility, their ease of use varies depending on the task and the user's technological proficiency. Journalists frequently noted that AI tools like transcription services were relatively easy to use, as many required simple integration with existing newsroom software. For instance, Adobe Premiere's built-in AI transcription tool allowed seamless operation, making it a favored choice for some participants (as mentioned by journalist from Kompas TV).

However, not all AI tools were perceived as straightforward. ChatGPT, while beneficial for content ideation, posed challenges in terms of accuracy and contextual relevance. For example, one journalist expressed frustration with AI's inability to tailor content to the nuanced requirements of different news segments, emphasizing the need for significant human intervention to edit and validate the outputs. This inconsistency in ease of use highlights the importance of user training and tailored tool development to ensure smoother adoption.

External Factors

External influences such as organizational culture, resources, and technology infrastructure significantly shape AI adoption. Journalists from well-resourced newsrooms reported more frequent and effective use of AI tools. For instance, a reporter from Metro TV described the importance of having access to cutting-edge transcription tools to meet tight deadlines, although limitations in organizational budgets sometimes restricted broader implementation.

Additionally, societal and ethical concerns about AI's impact on journalism emerged as critical external factors. Journalists expressed apprehension about relying on AI-generated content due to its potential to introduce bias and compromise the credibility of news. For instance, one participant discussed the risks of AI perpetuating misinformation and the need for stringent oversight to maintain public trust.

Research Limitation

The constraint of this study lies in the sample size. To establish a more conclusive finding about the employment of artificial intelligence at the individual level among journalists, it is advisable to undertake more meticulous interviews with television journalists hailing from various broadcasting networks. Furthermore, incorporating local television stations would enhance the research.

Conclusion

7 While journalists acknowledge AI's potential to streamline operations and enhance productivity, challenges related to accuracy, ease of integration, and organizational policies underscore the need for balanced adoption strategies. These insights provide a roadmap for optimizing AI implementation in the media industry while preserving journalistic integrity.

The findings further emphasize the specific applications of AI within journalism. Journalists recognized that AI tools are crucial for data gathering and research, but they insisted that human creativity and analytical skills are irreplaceable in crafting nuanced and impactful narratives. This distinction between AI capabilities and human journalist skills reinforces the notion that AI acts as an auxiliary, rather than a replacement, force in the newsroom.

External factors also significantly influenced the integration of AI technologies. Organizational backing, resource availability, and technological infrastructure were noted as vital factors in how journalists interacted with AI. Altogether, these findings offer a detailed view of AI integration in Indonesian television journalism, accentuating both its transformative prospects and the challenges inherent in its assimilation into professional practices.

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