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Systematic Review and Presentation of a Management Model for the Application of Artificial Intelligence in Online News Platforms of Khuzestan Province

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Abstract

The rapid advancement of artificial intelligence has confronted media organizations with numerous managerial, ethical, and technological opportunities and challenges. While the applications of artificial intelligence in the production, processing, and distribution of media content are rapidly expanding, the absence of a comprehensive managerial framework may lead to a decline in audience trust, erosion of media legitimacy, and organizational inefficiency. The present study aims to develop a management model for the application of artificial intelligence in media, with a focus on online news platforms in Khuzestan Province. In terms of purpose, this research is applied, and in nature, it is qualitative–developmental, conducted using a meta-synthesis approach. To this end, relevant domestic and international studies in the field of artificial intelligence and media were systematically reviewed, and after screening, key components and dimensions were extracted. The data were coded using a qualitative content analysis approach and organized into a conceptual and flowchart-based model. The findings indicate that managing the application of artificial intelligence in media is a multidimensional phenomenon influenced by components such as artificial intelligence governance and policymaking, ethics and media legitimacy, strategic management and leadership, technological infrastructure and resources, human resource management, intelligent content production and processing, editorial control, decision-making and media performance, audience engagement and interaction, and digital innovation and transformation. The results suggest that success in implementing artificial intelligence depends less on technological factors and more on the integrated management and alignment of these dimensions. The proposed model can serve as a guiding framework for media managers, policymakers, and researchers in designing, implementing, and evaluating the application of artificial intelligence in online news media.

Keywords: Artificial Intelligence, Media Management, Online Media, Meta-synthesis, Digital Transformation

1. Introduction

The rapid evolution of artificial intelligence (AI) has fundamentally transformed the structure, processes, and functions of contemporary media systems. Over the past decade, AI technologies—ranging from machine learning algorithms to natural language processing and generative models—have increasingly been integrated into various stages of media production, distribution, and consumption, thereby reshaping the epistemological and operational foundations of journalism and media management (Marconi, 2020; Mehmood, 2025). This transformation is not merely technological but deeply institutional, affecting how media organizations construct narratives, interact with audiences, and sustain legitimacy in a highly competitive

and data-driven environment (Couldry & Mejias, 2019; van Dijck et al., 2018). As such, the application of AI in media must be understood within a broader socio-technical framework that encompasses governance, ethics, organizational dynamics, and audience engagement.

One of the most significant contributions of AI to media lies in its capacity to automate and augment journalistic practices. Automated news production, algorithmic content curation, and AI-assisted editorial decision-making have enabled media organizations to increase efficiency, reduce operational costs, and respond more rapidly to evolving audience demands (Graefe, 2024; Wu et al., 2024). Studies have shown that AI-driven systems can process large volumes of data and generate news content with remarkable speed and accuracy, thereby enhancing productivity and enabling data-driven journalism (Kang et al., 2024; Kim & Lee, 2024). Moreover, the emergence of generative AI has introduced new possibilities for creative storytelling and content innovation, allowing journalists to explore novel narrative forms and interactive media experiences (Dodds et al., 2025; Gynnild, 2024). However, these developments also raise critical questions regarding the role of human agency in journalism and the extent to which AI can—or should—replace traditional editorial functions (Lewis et al., 2023; Montal & Reich, 2023).

Beyond production processes, AI has also transformed the relationship between media organizations and their audiences. Algorithmic personalization and recommender systems enable the delivery of tailored content based on user preferences, behaviors, and demographic characteristics, thereby enhancing audience engagement and retention (Newman, 2024; Zamith, 2024). This shift toward personalized media consumption reflects broader trends in digital transformation, where user-centric models and data analytics play a central role in shaping communication strategies (Sundar, 2020). Nevertheless, personalization also introduces challenges related to filter bubbles, information asymmetry, and the potential erosion of shared public discourse (Napoli, 2024; Noble, 2018). Consequently, media organizations must carefully balance the benefits of personalization with the need to maintain diversity, inclusivity, and democratic accountability in information dissemination.

The integration of AI into media systems has also intensified concerns regarding ethics, transparency, and accountability. Algorithmic decision-making processes are often opaque, making it difficult for users and regulators to understand how content is selected, prioritized, or generated (Ananny & Crawford, 2024; Diakopoulos, 2023). Issues such as algorithmic bias, misinformation, and data privacy have become central to debates حول the responsible use of AI in media (Floridi et al., 2018; Unesco, 2021). Ethical frameworks emphasize the importance of fairness, transparency, and human oversight in AI applications, particularly in contexts where automated systems influence public opinion and democratic processes (Helberger et al., 2024). Furthermore, maintaining audience trust has emerged as a critical challenge, as users may question the credibility and authenticity of AI-generated content (Carlson, 2023; Naderi, 2023). Addressing these concerns requires the development of robust governance mechanisms and ethical guidelines that align technological innovation with societal values.

From an organizational perspective, the adoption of AI necessitates significant changes in management practices, resource allocation, and strategic planning. Media organizations must invest in technological infrastructure, data management systems, and cybersecurity measures to support AI integration (Kim & Lee, 2024; Taheri, 2021). At the same time, they must develop human capital by training journalists and media professionals in digital skills, data analytics, and AI literacy (Hansen et al., 2024; Tandoc et al., 2023). The transition toward AI-driven media also requires effective change management strategies to address resistance, uncertainty, and skill gaps among employees (Dehghani & Yousefi, 2023; Mirzaei, 2022). In this context, leadership plays a crucial role in guiding organizational transformation, fostering innovation, and ensuring the alignment of AI initiatives with broader strategic objectives (Ahmadi & Karimi, 2023; Fallahi & Ahmadpour, 2023).

Despite the growing body of international research on AI in media, there remains a significant gap in context-specific studies that account for the unique cultural, institutional, and structural characteristics of different media ecosystems. For instance, the adoption and impact of AI in media may vary considerably across regions due to differences in regulatory frameworks, technological capabilities, and professional norms (Adjin-Tettey et al., 2024; Patil et al., 2024). In developing countries, including Iran, challenges such as limited infrastructure, resource constraints, and regulatory ambiguities may hinder the effective implementation of AI technologies in media organizations (Abbasi & Mohammadi, 2022; Amiri & Maleki, 2024).

Moreover, domestic studies highlight the importance of aligning AI applications with local cultural values and audience expectations to ensure social acceptance and sustainability (Rajabi & Nasrollahi, 2023; Roshandel Arbatani, 2023).

In the Iranian context, research on AI in media has primarily focused on technical applications, such as automated content production, data analysis, and algorithmic recommendation systems (Jafari & Ghorbani, 2021; Rezaei, 2022). While these studies provide valuable insights into the functional capabilities of AI, they often overlook the managerial, ethical, and strategic dimensions of AI adoption. Some scholars have emphasized the need for comprehensive frameworks that integrate technological, organizational, and human factors to guide AI implementation in media (Soleimani & Mahmoudi, 2022; Soltanpour et al., 2023). Additionally, issues related to governance, regulation, and accountability have been identified as critical areas requiring further investigation (Zanganeh, 2023; Zare, 2023). These findings underscore the necessity of developing a holistic management model that addresses the multifaceted nature of AI in media.

The concept of AI governance has emerged as a key theme in both academic and policy discussions, highlighting the need for regulatory frameworks that ensure responsible and transparent use of AI technologies. Governance mechanisms encompass a wide range of elements, including policy formulation, risk management, accountability structures, and stakeholder engagement (Helberger et al., 2024; Napoli, 2024). Effective governance not only mitigates potential risks associated with AI but also fosters innovation by providing clear guidelines and standards for implementation (Pena-Fernandez et al., 2025; Yang et al., 2025). In this regard, international organizations and scholars have called for collaborative approaches that involve governments, media organizations, technology companies, and civil society in shaping the future of AI in media (Forja-Pena et al., 2025; Unesco, 2021).

Another critical dimension of AI in media is the transformation of professional roles and identities. The increasing reliance on AI tools has led to the emergence of new skill requirements, such as data literacy, computational thinking, and interdisciplinary collaboration (Mirzaei, 2022; Tandoc et al., 2023). At the same time, traditional journalistic values—such as objectivity, accuracy, and public service—must be reinterpreted in the context of algorithmic mediation (Brennen et al., 2020; Carlson, 2023). This transformation raises important questions about the future of journalism as a profession and the extent to which AI can enhance or undermine its core principles. While some scholars argue that AI can augment human capabilities and improve journalistic quality, others caution against over-reliance on automated systems that may lack contextual understanding and ethical judgment (Longoni et al., 2019; Wolker & Powell, 2021).

Furthermore, the economic implications of AI adoption in media cannot be overlooked. AI technologies have the potential to create new revenue streams, optimize advertising strategies, and enhance market competitiveness (Akbari, 2022; Kazemi & Yaghoubi, 2022). However, they also pose challenges related to job displacement, market concentration, and the commodification of user data (Couldry & Mejias, 2019; Napoli, 2024). In this context, media organizations must develop sustainable business models that leverage AI capabilities while addressing ethical and social concerns. The interplay between technological innovation and economic sustainability is therefore a critical area of inquiry in contemporary media studies.

In summary, the application of artificial intelligence in media represents a complex and multidimensional phenomenon that encompasses technological, organizational, ethical, and societal dimensions. While existing research provides valuable insights into various aspects of AI in media, there is a clear need for integrative models that synthesize these dimensions into a coherent framework. Such models can guide media organizations in effectively managing AI applications, ensuring alignment with ethical standards, and enhancing overall performance. Therefore, the aim of the present study is to develop a comprehensive management model for the application of artificial intelligence in online news media by identifying, categorizing, and integrating the key influencing factors based on systematic review and meta-synthesis of existing literature.

2. Methods and Materials

Selecting an appropriate methodology and adhering to scientific research principles play a crucial role in the quality of a scientific study. The present study adopts a qualitative approach and is based on a meta-synthesis method. To develop an innovation roadmap, the meta-synthesis approach was employed, as it is an appropriate method for obtaining a comprehensive

synthesis of the subject based on findings from both domestic and international studies. Considering that the method proposed by Margarete Sandelowski and Julie Barroso is one of the most prominent approaches for conducting meta-synthesis and yields more robust results, this study utilized their seven-step method, which is explained in the following section.

3. Findings and Results

Step 1: Formulation of the Research Question

The first step in any scientific research is to formulate a research question or define the research objective. To formulate this question, it is first necessary to determine what is to be examined. In the present study, a systematic review of the factors influencing the application of artificial intelligence in media was considered the main focus. In the next step, the question "who" is raised to define the population under study. In this research, the study population includes scientific articles published in reputable domestic and international journals and databases that address the application of artificial intelligence in the media domain. Subsequently, the question "when" determines the temporal scope of the reviewed studies. Accordingly, domestic studies published between 2019 and 2023 and international studies published between 2018 and 2023 were examined. The final question, "how," refers to the data collection method. In this study, data were collected through the review and analysis of studies employing qualitative, quantitative, and mixed-method approaches in the field of artificial intelligence applications in media and were analyzed using a systematic review and meta-synthesis method. Based on the above, the research question guiding the subsequent steps of the meta-synthesis is formulated as follows: "What are the factors influencing the application of artificial intelligence in media during the five-year period (2019–2023 and 2018–2023), and how can these factors be classified and categorized?"

Step 2: Systematic Search of Sources

In this study, during the implementation of the systematic review and meta-synthesis process, which follows a structured and standardized procedure, a time frame from 2018 to 2023 was defined for selecting studies. To conduct a systematic search of articles published in journals, periodicals, and various databases, relevant keywords (factors influencing the application of artificial intelligence in media) were used.

Table 1. Databases Searched

English Databases	Persian Databases
Emerald	Magiran (Iran Journals Database)
ScienceDirect (Elsevier)	Scientific Information Database (SID)
ResearchGate	IranDoc
Google Scholar	ISC Database
ProQuest	Noor Specialized Journals Database (Noormags)

In this study, five English-language and five Persian-language databases (a total of 10 databases) were searched using the defined keywords.

Step 3: Search and Selection of Relevant Texts

In this step, after multiple rounds of review and screening of scientific articles and theses, a number of sources were excluded and were not included in the meta-synthesis process.

A. Sampling Framework for Study Selection

The sampling method in this study is purposive sampling. To select relevant texts, two criteria—"inclusion criteria" and "exclusion criteria"—were applied. These criteria were used to ensure accuracy, validity, and significance, as well as to facilitate a more precise evaluation and selection of the studies under review. After four stages of screening, out of 123 studies, 73 were excluded, and 50 studies were selected for data analysis.

B. Inclusion Criteria

In this study, inclusion criteria refer to the conditions under which a study is admitted into the research. These criteria were established based on scientific principles and standards, as well as expert judgment.

C. Exclusion Criteria

Exclusion criteria serve as the second filter in selecting appropriate studies.

Table 2. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Published scientific articles and theses indexed in IranDoc within the relevant field	Studies that did not report sufficient information regarding the research objectives
Studies conducted using quantitative, qualitative, or mixed scientific research methods	Studies with identical titles and objectives
Studies that reported sufficient data and information related to the research objectives	Studies lacking an appropriate methodological framework
Studies that underwent peer review and were published in full-text format (online or print)	Studies lacking sufficient scientific quality due to publication in low-quality journals
Studies published between 2018 and 2023	Review and purely library-based studies
Studies addressing the research topic and innovation roadmap using scientific methods	Studies published before 2018

The process of screening and reviewing based on the above inclusion and exclusion criteria is summarized in Figure 1.

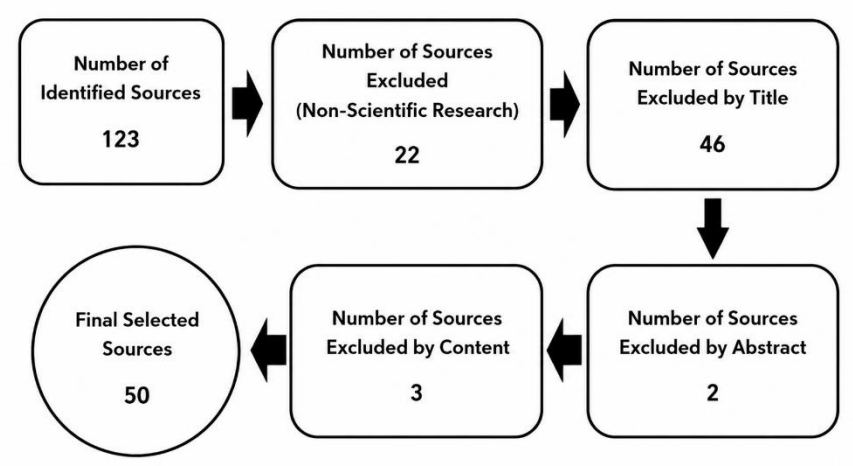

Figure 1. Stages of Selecting the Checklist of Reviewed Studies from the Selected Databases

Step 4: Data Extraction from Texts

To extract the factors influencing the application of artificial intelligence in media, the following table presents and categorizes the layers and indicators related to innovation and its roadmap based on recent domestic and international studies.

Table 3. Identification of Components Reported in International Studies

No.	Author(s) (Year)	Study Title	Identified Components
1	Jung et al. (2025)	AI governance models in digital media	Policymaking, risk management
2	Peña-Fernández et al. (2025)	AI management in local journalism	Localization, resource management
3	Dodds et al. (2025)	Impact of generative AI on professional authority	Change management, professional ethics
4	Kazemi & Ali (2025)	Integration of AI in news organizations	Workforce training, leadership
5	Yang et al. (2025)	Human–AI collaboration in news production	Workflow optimization
6	Ansari et al. (2025)	Role of large language models in news production	Content production, editorial oversight
7	Kheirjou et al. (2025)	Systematic review of AI in journalism	Research theme mapping
8	Mahmoud (2025)	Journalism, media, and AI	Conceptual modeling
9	Forja-Pena et al. (2025)	Bibliometric review of AI and journalism	Research trends
10	Hernández & Corsi (2025)	AI discourse in news media	Framing, narrative analysis
11	Ousby & Sack (2025)	AI in media management	Strategic management, media marketing
12	Griefe (2024)	Guide to automated journalism	Automated content production, quality assurance
13	Hansen et al. (2024)	AI adoption management in media organizations	Strategic planning, organizational leadership
14	Zamit (2024)	News recommendation algorithms	Content personalization, audience analytics
15	Newman (2024)	Technology trends and digital journalism	Digital transformation, media strategy
16	Ananny & Crawford (2024)	Algorithms in media	Algorithmic governance, opacity
17	Kim & Lee (2024)	AI-based news production systems	System integration, efficiency
18	Kang et al. (2024)	Smart newsrooms	Data-driven decision-making
19	Marconi (2024)	AI and journalism	Innovation management, automation
20	Broussard (2024)	Artificial ignorance	Algorithmic bias, ethical challenges
21	Gynnild (2024)	Creative AI in news media	Innovation, narrative construction
22	Wu et al. (2024)	AI-supported editorial decision-making	Predictive analytics, professional judgment

23	Helberger et al. (2024)	AI, democracy, and news media	Regulation, social responsibility
24	Napoli (2024)	Social media and public interest	Platform governance, algorithms
25	Diakopoulos (2023)	Algorithmic accountability in news media	Algorithmic governance, transparency, editorial control
26	Lewis et al. (2023)	Automation and augmentation in journalism	Human–machine collaboration, editorial processes
27	Beckett & Yaseen (2023)	Generative AI in newsrooms	Content automation, ethics, productivity
28	Carlson (2023)	AI and journalistic authority	Professional control, trust, legitimacy
29	Montal & Reich (2023)	AI as an actor in newsrooms	Technological agency, accountability
30	Tandoc et al. (2023)	Journalists' attitudes toward AI	Technology acceptance, perceived usefulness

A review of international studies indicates that global researchers have examined diverse dimensions of the application of artificial intelligence in the media domain and have analyzed the factors influencing the adoption of this technology at technological, organizational, and environmental levels. However, the structural, cultural, and institutional conditions of media systems across countries may influence how this technology is adopted and utilized. Therefore, to achieve a more comprehensive understanding of the components affecting the application of artificial intelligence in media, it is necessary to also examine studies conducted at the national level. Accordingly, the key components identified in domestic studies are extracted and categorized below in order to provide a clearer picture of the state of research in Iran and the dimensions emphasized by domestic scholars regarding the application of artificial intelligence in media.

Table 4. Identification of Components Reported in Domestic Studies

No.	Author(s) (Year)	Study Title	Identified Components
1	Dehghani & Yousefi (2023)	Artificial intelligence and the future of journalism in Iran	News automation, change in journalists' roles
2	Ahmadi & Karimi (2023)	Application of artificial intelligence in digital media management	Intelligent decision-making, organizational productivity
3	Rezaei (2022)	Data-driven journalism and the role of algorithms	Data analysis, content personalization
4	Mousavi & Sharifi (2023)	Ethics of artificial intelligence in news media	Transparency, accountability, fairness
5	Ghasemi (2021)	Digital transformation in Iranian online media	Technological innovation, structural change in media
6	Sadeghi & Hemmati (2023)	Intelligent content management in news platforms	Automated content production, editorial control
7	Hosseini (2022)	Impact of artificial intelligence on news quality	News accuracy, publication speed
8	Najafi & Moradi (2021)	Online media and recommendation algorithms	Audience interaction, user loyalty
9	Zare (2023)	Role of artificial intelligence in media governance	Policymaking, media regulation
10	Abbasi & Mohammadi (2022)	Challenges of AI implementation in Iranian media	Infrastructure, human resources
11	Rahimi (2021)	Robotic journalism: opportunities and threats	Automation, audience trust
12	Fallahi & Ahmadi Pour (2023)	Artificial intelligence and strategic media management	Strategic planning, competitive advantage
13	Akbari (2022)	Smart media and the future of communication	Technological convergence, innovation
14	Jafari & Ghorbani (2021)	Intelligent content analysis in online news agencies	Natural language processing, text analysis
15	Naderi (2023)	Audience trust in algorithm-based media	Media legitimacy, transparency
16	Kazemi & Yaghoubi (2022)	Role of AI in media marketing	Audience behavior analysis, targeting
17	Taheri (2021)	Data governance in digital media	Data security, privacy
18	Rostami & Bahrami (2023)	Artificial intelligence and editorial decision-making	Decision support, error reduction
19	Mirzaei (2022)	Media, technology, and transformation of journalism profession	Role changes, new skills
20	Soleimani & Mahmoudi (2022)	Conceptual model of smart media management	Conceptual modeling, managerial dimensions

The findings of the systematic review indicate that although numerous studies have addressed the technical applications of artificial intelligence in media, comprehensive managerial models with a localized and context-oriented approach—particularly at the level of local and regional media—have received limited attention. This research gap highlights the necessity of the present study and underscores the importance of integrating literature review findings with expert field data.

Table 5. Conceptual Clustering of Components

Conceptual Cluster	Key Components	International Sources	Domestic Sources
AI Governance and Policymaking	Establishing macro frameworks, control, accountability	Jung et al. (2025); Helberger et al. (2024); Napoli (2024); Diakopoulos (2023); Ananny & Crawford (2024)	Zare (2023); Taheri (2021)
Ethics and Media Legitimacy	Trust preservation, transparency, algorithmic fairness	Broussard (2024); Carlson (2023); Diakopoulos (2023); Dodds et al. (2025)	Mousavi & Sharifi (2022); Naderi (2023); Rahimi (2021)

Strategic Management and Leadership	Guiding media organizations in AI adoption	Hansen et al. (2024); Ousby & Sack (2025); Dodds et al. (2025)	Fallahi & Ahmadi Pour (2023); Ahmadi & Karimi (2023)
Infrastructure and Technological Resources	Technical, data, and security infrastructures	Kim & Lee (2024); Peña-Fernández et al. (2025)	Abbasi & Mohammadi (2022); Taheri (2021)
Human Resource Management	Training, skill development, role transformation	Kazemi & Ali (2025); Lewis et al. (2023); Tandoc et al. (2023)	Dehghani & Yousefi (2023); Mirzaei (2022)
Intelligent Content Production and Processing	Automation and content analysis	Griefe (2024); Ansari et al. (2025); Beckett & Yaseen (2023)	Sadeghi & Hemmati (2023); Jafari & Ghorbani (2021)
Editorial Control and Supervision	Quality assurance, professional authority	Carlson (2023); Wu et al. (2024)	Hosseini (2022); Sadeghi & Hemmati (2023)
Decision-Making and Media Performance	Productivity, decision support	Kang et al. (2024); Wu et al. (2024)	Ahmadi & Karimi (2023); Rostami & Bahrami (2023)
Audience, Market, and Interaction	Personalization, audience loyalty	Zamit (2024); Newman (2024)	Rezaei (2022); Najafi & Moradi (2021)
Innovation and Digital Transformation	Competitive advantage, sustainability	Marconi (2024); Gynnild (2024); Newman (2024)	Ghasemi (2021); Akbari (2022)

To transform the identified components and subcomponents derived from previous studies into a coherent conceptual model, it is first necessary to determine the underlying logic governing the relationships among them and then organize these components into classifiable macro-level dimensions. Given that the factors influencing the application of artificial intelligence in media are multidimensional and multi-level in nature, merely listing them cannot provide a clear understanding of the mechanisms of influence and interaction among these factors. Therefore, in this study, the extracted components were categorized using a "conceptual aggregation" approach based on semantic and functional similarities into several main domains. This categorization reduces conceptual dispersion and enables systematic and comparable analysis. The outcome of this process is the development of a conceptual model in which key components are organized into four domains: environmental/institutional, organizational, technological, and human. The model illustrates how these domains interactively shape strategies for the application of artificial intelligence in media and ultimately lead to performance, content-related, audience-oriented, and social outcomes.

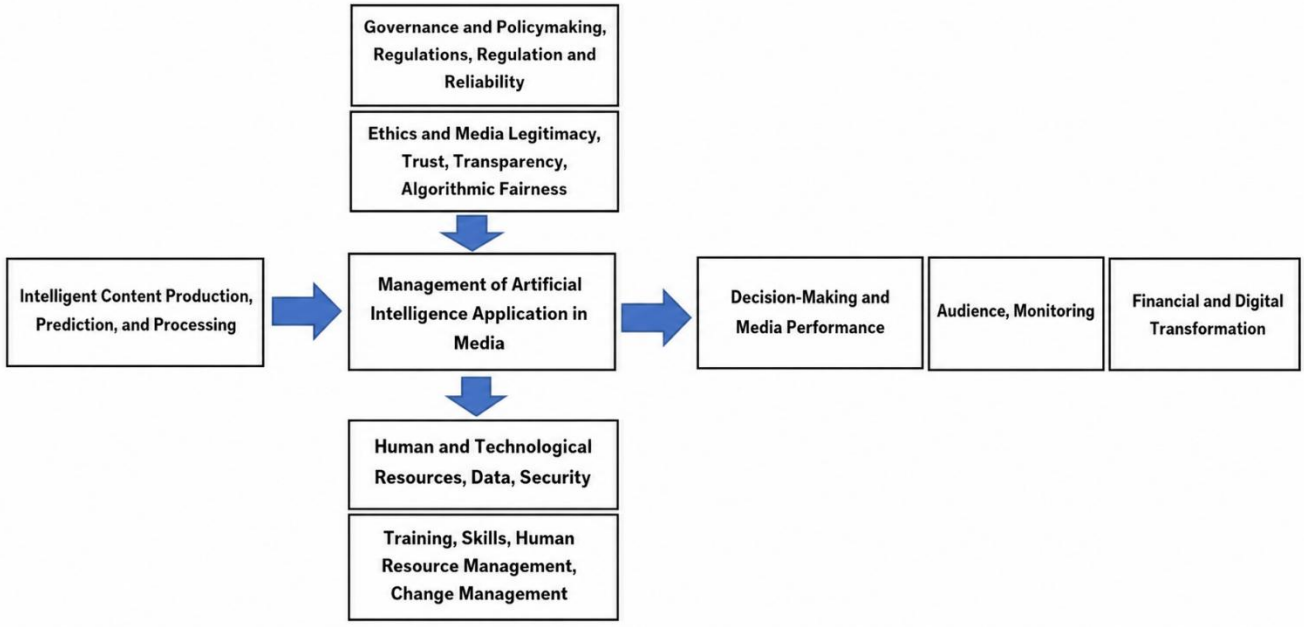

Figure 2. Conceptual Model of the Research

The proposed model demonstrates that the application of artificial intelligence in media is not a unidimensional or purely technological phenomenon but rather the result of the simultaneous interaction of governance, ethical, managerial, human, and technological components operating within an integrated system. In this model, the "application of artificial intelligence in media" is considered the central construct, with all components exerting direct or indirect influence on it. The direction of arrows represents the causal and reinforcing roles of these components in achieving effective AI management.

AI governance and policymaking are positioned at the top of the model, indicating that any application of artificial intelligence in media requires clear governance frameworks, regulations, accountability, and responsibility mechanisms. In the absence of transparent policies and monitoring mechanisms, the use of AI may lead to unstable decision-making, algorithmic misuse, and a decline in public trust. Therefore, AI governance plays a foundational role in guiding other dimensions of the model.

Ethics and media legitimacy function as an intermediary layer between policymaking and implementation. This dimension emphasizes algorithmic transparency, fairness, impartiality, privacy protection, and audience trust. The findings indicate that even with high technical efficiency, the absence of ethical considerations can undermine media legitimacy and challenge the social acceptance of artificial intelligence.

Strategic management and leadership serve as a connecting mechanism between policy, ethics, and implementation. Media managers determine how, at what level, and for what purposes artificial intelligence is applied. The results suggest that managerial attitudes, decision-making capabilities, and leadership in digital transformation are key determinants of success or failure in AI implementation in media organizations.

The dimension of infrastructure and technological resources refers to the availability of data, security, processing systems, and technological platforms. The model indicates that even the best policies and managerial decisions cannot be implemented without adequate technological infrastructure; thus, infrastructure is a necessary condition for operationalizing AI applications.

Human resource management focuses on training, skill development, change management, and reducing employee resistance. The findings reveal that concerns about workforce replacement and skill gaps are among the most significant challenges in implementing artificial intelligence in media, and effective management of this dimension plays a decisive role in the success of the model.

The component of intelligent content production and processing refers to the direct application of artificial intelligence in content creation, processing, and analysis. The use of intelligent tools can enhance the speed and accuracy of content production; however, the model emphasizes that this process must be conducted under managerial and editorial supervision to maintain quality and credibility.

Editorial control ensures the accuracy, quality, and accountability of content generated by artificial intelligence. The model demonstrates that artificial intelligence does not replace professional editorial judgment but rather complements it, with final decision-making remaining under human authority.

In the dimension of decision-making and media performance, artificial intelligence functions as a decision-support tool for data analysis, audience behavior prediction, and performance improvement. The findings indicate that data-driven decision-making can enhance efficiency, effectiveness, and competitiveness in media organizations.

The audience, market, and interaction dimension focuses on content personalization, intelligent audience engagement, and market development. The model shows that artificial intelligence transforms media from one-way communication systems into interactive and audience-centered platforms.

Innovation and digital transformation are presented as synergistic outcomes of the interaction among other components. In other words, when governance, ethics, management, human resources, and infrastructure operate in alignment, media organizations can achieve sustainable innovation and genuine digital transformation.

Overall, the proposed management model for the application of artificial intelligence in media demonstrates that success in implementing AI is not solely the result of technological advancement but rather the outcome of an integrated managerial system. This model can serve as a guiding framework for media managers, policymakers, and researchers in designing, implementing, and evaluating the application of artificial intelligence in online news media.

4. Discussion and Conclusion

The findings of this study provide a comprehensive and integrative understanding of the factors influencing the application of artificial intelligence in online news media, revealing that AI adoption is not merely a technological phenomenon but a multidimensional process shaped by governance, ethical, organizational, human, and technological dimensions. The results demonstrate that the successful implementation of AI in media depends on the alignment and interaction of these dimensions within a coherent management framework. This finding is consistent with prior research emphasizing that AI integration in

journalism requires a systemic perspective that considers institutional, social, and technological contexts simultaneously (Mehmood, 2025; Yang et al., 2025). The identification of governance and policymaking as a foundational dimension in the model highlights the critical role of regulatory frameworks, accountability mechanisms, and institutional oversight in guiding AI applications. This aligns with studies that underscore the importance of algorithmic governance and public accountability in maintaining trust and legitimacy in AI-driven media systems (Diakopoulos, 2023; Helberger et al., 2024; Napoli, 2024). Moreover, the emphasis on governance reflects concerns raised by scholars regarding the risks of algorithmic opacity, misuse, and lack of transparency in automated media environments (Ananny & Crawford, 2024).

Another key finding of the study is the central role of ethics and media legitimacy as a mediating dimension between policy and practice. The results indicate that ethical considerations—such as transparency, fairness, and privacy—are essential for ensuring the social acceptance of AI in media. This finding corroborates the ethical frameworks proposed in the literature, which emphasize that AI systems must adhere to principles of fairness, accountability, and transparency to avoid bias and discrimination (Floridi et al., 2018; Unesco, 2021). The study also confirms that audience trust is a critical determinant of media legitimacy, particularly in the context of AI-generated content, where concerns about authenticity and credibility are prevalent (Carlson, 2023; Naderi, 2023). In this regard, the results align with previous research indicating that the absence of ethical safeguards can undermine the perceived reliability of media organizations and hinder the adoption of AI technologies (Mousavi, 2023; Rahimi, 2021).

The findings further highlight the importance of strategic management and leadership in facilitating AI adoption in media organizations. The study reveals that managerial attitudes, strategic vision, and leadership capabilities play a decisive role in determining how AI is implemented and integrated into organizational processes. This is consistent with the literature on digital transformation, which emphasizes the role of leadership in driving innovation and managing organizational change (Fallahi & Ahmadpour, 2023; Hansen et al., 2024). The results also suggest that effective leadership is necessary to balance technological opportunities with ethical and organizational considerations, thereby ensuring sustainable AI adoption. Previous studies have similarly argued that AI implementation requires a strategic approach that aligns technological capabilities with organizational goals and market demands (Ahmadi & Karimi, 2023; Pena-Fernandez et al., 2025).

In terms of technological infrastructure and resources, the study confirms that the availability of data, processing systems, and secure technological platforms is a prerequisite for AI implementation. The findings indicate that without adequate infrastructure, even well-designed policies and strategies cannot be effectively executed. This observation is consistent with research highlighting the importance of technological readiness and data governance in AI adoption (Kim & Lee, 2024; Taheri, 2021). Furthermore, the study underscores the role of data as a strategic asset in media organizations, enabling advanced analytics, personalization, and predictive modeling. This aligns with the growing body of literature on data-driven journalism, which emphasizes the transformative potential of big data and analytics in media production and decision-making (Kang et al., 2024; Rezaei, 2022).

The dimension of human resource management also emerges as a critical factor in the model, reflecting the need for skill development, training, and change management in AI-driven media environments. The findings indicate that resistance to change, skill gaps, and concerns about job displacement are among the major challenges facing media organizations. This is consistent with prior studies that highlight the impact of AI on professional roles and the need for new competencies in journalism (Mirzaei, 2022; Tandoc et al., 2023). The study also supports the argument that AI should be viewed as a tool for augmenting human capabilities rather than replacing them, as human judgment remains essential for ensuring ethical and contextual accuracy in media content (Lewis et al., 2023; Montal & Reich, 2023). This perspective is further reinforced by research suggesting that collaboration between humans and AI can enhance productivity and innovation in media organizations (Yang et al., 2025).

Another significant finding relates to the role of intelligent content production and processing, which represents the most visible application of AI in media. The study shows that AI technologies can significantly improve the speed, accuracy, and efficiency of content production, thereby enhancing organizational performance. This finding is consistent with previous research on automated journalism, which demonstrates the potential of AI to streamline news production processes and reduce

operational costs (Graefe, 2024; Marconi, 2020). However, the study also emphasizes the importance of editorial oversight in maintaining content quality and credibility. This aligns with studies that caution against the uncritical use of AI in journalism and highlight the need for human supervision to ensure ethical and professional standards (Beckett & Yaseen, 2023; Diakopoulos, 2019).

The results also underscore the significance of editorial control and decision-making processes in AI-driven media systems. The study finds that AI can serve as a valuable decision-support tool, enabling media organizations to analyze data, predict audience behavior, and optimize content strategies. This finding is supported by research demonstrating the role of AI in enhancing decision-making efficiency and effectiveness in journalism (Rostami & Bahrami, 2023; Wu et al., 2024). At the same time, the study highlights that final decision-making authority should remain with human editors to ensure accountability and ethical responsibility. This reflects the broader consensus in the literature that AI should complement, rather than replace, human judgment in media practices (Carlson, 2023).

The audience dimension of the model reveals that AI has transformed the nature of media consumption by enabling personalized and interactive communication. The findings indicate that personalization enhances user engagement and loyalty, thereby contributing to the competitiveness of media organizations. This is consistent with studies on algorithmic personalization, which show that tailored content can improve user satisfaction and retention (Newman, 2024; Zamith, 2024). However, the study also acknowledges the potential risks associated with personalization, such as filter bubbles and information bias, which have been widely discussed in the literature (Napoli, 2024; Noble, 2018). These findings highlight the need for balanced approaches that leverage personalization while maintaining diversity and inclusivity in content delivery.

Finally, the study identifies innovation and digital transformation as key outcomes of the interaction among the various dimensions of the model. The findings suggest that when governance, ethics, management, infrastructure, and human resources are effectively aligned, media organizations can achieve sustainable innovation and competitive advantage. This aligns with research emphasizing the role of AI in driving digital transformation and enabling new business models in media industries (Akbari, 2022; Gynnild, 2024). The study also highlights the importance of continuous adaptation and learning in dynamic media environments, where technological advancements and audience expectations are constantly evolving (Chen et al., 2024; Forja-Pena et al., 2025).

Overall, the discussion demonstrates that the application of artificial intelligence in media is a complex and multifaceted process that requires an integrated management approach. The findings contribute to the existing literature by providing a comprehensive framework that synthesizes diverse dimensions of AI adoption and highlights their interdependencies. This integrative perspective offers valuable insights for both researchers and practitioners seeking to understand and manage the challenges and opportunities associated with AI in media.

The study is subject to several limitations that should be acknowledged. First, the research relies primarily on a meta-synthesis of existing studies, which may limit the generalizability of the findings due to variations in methodological approaches and contextual factors across the reviewed studies. Second, the focus on published literature may introduce publication bias, as studies with significant or positive findings are more likely to be included. Third, the study does not incorporate primary empirical data from media organizations, which could provide deeper insights into the practical challenges of AI implementation. Finally, the rapidly evolving nature of AI technologies means that some findings may become outdated as new developments emerge.

Future research should aim to address these limitations by incorporating empirical data from diverse media contexts, including qualitative and quantitative studies that examine the real-world implementation of AI in media organizations. Comparative studies across different countries and regions could provide valuable insights into the contextual factors influencing AI adoption. Additionally, future research could explore the long-term impacts of AI on media ecosystems, including its effects on employment, professional identity, and democratic processes. There is also a need for interdisciplinary research that integrates perspectives from management, communication, computer science, and ethics to develop more comprehensive frameworks for understanding AI in media.

From a practical perspective, the findings of this study offer several implications for media managers, policymakers, and practitioners. Media organizations should adopt a holistic approach to AI implementation that considers not only technological

capabilities but also ethical, organizational, and human factors. Policymakers should develop clear regulatory frameworks that promote transparency, accountability, and responsible AI use in media. Training and capacity-building initiatives should be prioritized to equip media professionals with the skills needed to work effectively with AI technologies. Furthermore, media organizations should invest in robust technological infrastructure and data governance systems to support AI-driven innovation. By adopting these strategies, media organizations can harness the potential of AI to enhance performance, improve audience engagement, and achieve sustainable digital transformation.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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