Use of Artificial Intelligence and its Impact on the Media Industry

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ABSTRACT

The use of artificial intelligence in the process of human social communication through today's mass media has grown rapidly. As artificial intelligence continues to spread throughout all aspects of human life, both in terms of potential and challenges in human social communication, the primary objective of this research was to examine the effects of artificial intelligence in media use. The primary research problem of this research was to investigate how artificial intelligence affects the media industry. Identifying the use of artificial intelligence in the media is an intervention in performing important tasks such as communicating with others, planning, and meeting the expected needs in communication. Since the use of artificial intelligence helps to complete the communication tasks in media use faster and more efficiently, it is the hypothesis of this research that it has significantly contributed to the human communication process. Accordingly, this article outlines that various artificial intelligence applications in media use have influenced the human mind to perform productive communication tasks more accurately and faster than the human mind. The research methodology of this research is based on the discourse analysis approach. Accordingly, this paper contributes to the existing literature in identifying the effects of artificial intelligence on media use. Accordingly, this paper is a conceptual paper based on a review of the literature. Discourse analysis is used to identify how the use of artificial intelligence has significantly contributed to the human communication process, as a review of the existing literature suggests that artificial intelligence is used to complete communication tasks in the media faster, more efficiently and effectively. As a primary finding of this research; The advancement of automation and editing capabilities by artificial intelligence-powered technology in the media industry has revolutionized the creation and processing of media content. The use of artificial intelligence has facilitated the customization and personalization of media content creation and distribution spaces, the way consumers consume and distribute media. It has also been recognized that technologies powered by artificial intelligence open up opportunities for improved efficiency, personalization, and user experience. Accordingly, the use of artificial intelligence applications in performing communication tasks in the media sector has been successful, and the primary conclusion was that the trend of using artificial intelligence applications to solve many problems related to those tasks and to obtain results with a high level of efficiency and accuracy has increased.

Keywords: artificial intelligence; communication; media; media industry; technology

INTRODUCTION

The industrial revolution that produced the use of artificial intelligence in the current media space integrates all aspects of people's real lives in the human communication society with digital systems. As a result, unlimited capabilities are produced that help to collect and execute tasks through various networks on a large amount of information and data (Coldrey, N. 2014:67). Artificial intelligence and its applications imitate human intelligence. The tasks of human thinking and use performed by the human mind are performed by modern technology. These machines perform those tasks more efficiently and faster than humans, therefore overcoming environmental impacts (Ottomania, A. 2019:262). Accordingly, the most important characteristics of artificial intelligence are the factors of representing knowledge, processing symbolic data, being characterized by the ability to deduce possible solutions to problems, and producing the ability to formulate acceptable solutions to problems that exist in the process of human communication (Khayyat, F. & Sabah, J. 1998:16-19).

The use of artificial intelligence in mass media is an intervention in the performance of important tasks such as communicating with others, planning and meeting the desired needs in communication (Arnos, B. 2008:10). The use of artificial intelligence can significantly contribute to the human communication process, as it helps to complete the communication tasks in media use faster and more efficiently. Accordingly, various artificial intelligence applications in media use perform communication tasks more accurately and faster than the human mind. The use of artificial intelligence applications in the field of mass media has been successful in performing communication tasks, and the trend of using artificial intelligence applications to solve many problems related to those tasks and to obtain results with a high level of efficiency and accuracy has increased (Khalifa, I. 2017:63-64). The media and communications industries, including newspapers, radio and television, and advertising and marketing, are experiencing significant growth in the use of artificial intelligence applications, and various opportunities for the use of artificial intelligence can be identified based on the diversity and multiplicity of unique characteristics present in these industries.

In particular, AI applications perform several functions in journalism: keeping news reports and informing journalists with relevant new information; extracting data and information links and converting them into graphic formats; automatic spelling and grammar correction; generating news, short reports and articles on topics based on statistical data; and detecting fake news and manipulating photos or videos (Sharif, K. 2018).

The use of AI in communication work in the media communication industries, such as journalism, television and radio, and its functions can be identified under several scenarios. Improving audiovisual quality and achieving statistical spectrum efficiency in television and radio distribution processes, producing new programs based on data obtained from archives, directing content by analyzing the advertising, viewing, and audience responses of television and radio programs, and creating a tool to analyze and benefit from audience responses during television and radio programs (Layadi, N. 2018:56).

The use of artificial intelligence plays several prominent roles in the advertising and marketing sectors, including the newspaper, television, and radio media industries, especially in analyzing potential trends for advertising campaigns, analyzing the effectiveness of smart ads and future changes, improving targeted advertising, analyzing customer markets and their experiences, automating marketing, and improving content marketing (Hisham, Sh. 2019).

The primary research direction of this research is to examine the effects of artificial intelligence in media use. The primary research problem of this research was to investigate how artificial intelligence affects media communication and the industry. The hypothesis of this research is that since the use of artificial intelligence helps in completing communication tasks in media use quickly and efficiently, it has made a significant contribution to the human communication process. Accordingly, this article outlines that various artificial intelligence applications in media use have influenced the human mind to perform effective communication tasks more accurately and quickly than the human mind. The research methodology of this research is based on the discourse analysis approach. Accordingly, this article is a conceptual paper based on a literature review. Discourse analysis is used to identify how the use of artificial intelligence has significantly contributed to the human communication process. A review of the existing literature suggests that artificial intelligence is being used to complete communication tasks in the media faster, more efficiently, and more effectively.

LITERATURE REVIEW

Artificial intelligence and media industry

The use of artificial intelligence in the current human social communication process has grown rapidly. The communication process carried out in the structures of human, society, culture and economy has been strongly involved in the way individuals interact with each other and the outside world in their daily lives. As artificial intelligence continues to spread throughout all aspects of human life, both in terms of potential and challenges in human social communication, it is very important to examine the impact of artificial intelligence in media use.

Artificial intelligence is another revolutionary technology that the media has. The use of artificial intelligence technology was first introduced in the media industry in the 1990s (Luxton, D. D. 2014). As a result, artificial intelligence has contributed to the automation of media creation processes. In particular, audiovisual effects and computer-generated audio and visual powering software and algorithms are fundamental to identifying and analyzing trends in audiovisual data and increasing the efficiency of media production processes (Chan-Olmsted, S. M. 2019). In the current media space, the media industry and the role of journalism have focused on the revolutionary power of artificial intelligence technology in the human communication process. That is, as the use of artificial intelligence continues to spread in all aspects of human life, both in terms of the potential it offers and the challenges it presents, examining the effects of artificial intelligence on human society and media use has led to human progress.

The media industry, which has historically relied on human creativity, storytelling, and information transmission, is experiencing a technological communication revolution as a result of the integration of artificial intelligence technology. Artificial intelligence, a multidisciplinary field of study that combines technology, machine learning, natural language processing, computer vision, and data analytics, allows robots to perform tasks that were previously handled by humans (Shehab, A. 2019). The use of artificial intelligence in the media sector is enabling media organizations to improve communication flows, increase output, personalize content, and rethink the way media is produced, distributed, and consumed in a way that has never been done before in the history of media. The creation and processing of communication content is becoming the most important method in which artificial intelligence has transformed the use of media industries in the process of human communication. Artificial intelligence systems use a significant amount of data, including user preferences, historical data, and social media trends, to provide engaging and personalized content. Also known as Robo-journalism, it uses artificial intelligence to produce news articles, sports summaries, and financial evaluations quickly and accurately (Dalen, A. 2012). While the technology can increase the speed and quality of news production, it also raises concerns about the role of human journalists, the standard of reporting, and the ethical implications.

Thus, the use of artificial intelligence in today's media space has resulted in a transformation in the processes of media content creation, production, distribution, and consumption. In this way, AI-powered communication processes have led to higher user retention and engagement. AI-powered communication processes ensure that users only see information that supports their own beliefs and interests, limiting their exposure to other perspectives (Dahlgren, P. M. 2021). Accordingly, the impact of AI technology can be seen as a significant transformation in the media industry.

In relation to the analysis of how artificial intelligence has impacted the media industry, the theoretical and conceptual approaches that guide the analysis and interpretation of research findings can be used to identify the potential, benefits, disadvantages and risks of using artificial intelligence technology in the media industry. In light of these theoretical and conceptual approaches, media organizations need to develop responsible policies and processes for the use of artificial intelligence technology and its ethicality, taking into account technical principles, content creation, data processing and development, as well as ethical principles, rights and virtues.

MATERIALS AND METHODS

The research methodology is based on the discourse analysis approach. Accordingly, the theoretical approaches indicated by the existing literature to identify the impact of using artificial intelligence in media contribute to this article. Accordingly, this article is a conceptual paper based on a literature analysis. Discourse analysis is used to identify how the use of artificial intelligence has significantly contributed to the human communication process. A review of the existing literature indicates that artificial intelligence is used to complete the communication tasks of the media faster, more efficiently, and effectively.

Table 01 has been prepared according to the methodology for conducting discourse analysis based on the author and theory to analyze the use of artificial intelligence on media communication and the impact on the formation of receiver perception. According to this methodology, the paper is concerned with identifying and analyzing the impact of artificial intelligence on media use based on existing literature and theory. In order to systematically conduct discourse analysis, the theory used has been classified under eight basic antecedent

codes. The codes used in discourse analysis are technology independence, technological change leads to social change, technology is a socially determined object, shaping human experience using technology, moral dilemma, moral consequences, emphasizing non-moral obligations and values, and moral principles.

Table No. 01. Theorizing on various precedents of the impact of artificial intelligence on the media industry

Antecedents (Codes)	Authors	Theories
Technology is independent/ Technological changes lead to social changes.	Thorstein, Veblen (1929)	Technological Determinism Theory
Technology is a socially determined object.	Joyce, K. et al., (2021)	Social Construction of Technology Theory
Shaping the human experience, using technology.	Nystrom, C. L. (1973)	Media Ecology Theory
Moral dilemma.	Hagendorff, T. (2020)	Ethical Framework Theory
Ethical consequences.	Kinghorn, P. (2015) West, R. & Turner, L. (2000)	Utilitarianism Theory
Emphasizing non-moral obligations and values.	Ryan, M. & Stahl, B. C. (2020)	Deontology Theory
Moral principles.	Bonde, S. et al., (2016) Hagendorff, T. (2020)	Virtue ethics Theory

RESULTS AND DISCUSSION

Discourse analysis of technical determinism and artificial intelligence

Thorstein Veblen (1929) first explained the concept of technological determinism in his book “The Engineers and the Price System”, and argued that technological determinism is based on two approaches. The first approach is that technology is autonomous. The second approach is that technological changes lead to social changes (Agrawal, A., et al., 2019). Technological determinism, as a theoretical approach that guides the analysis and interpretation of research findings on how artificial intelligence has affected the media industry, points out that technology shapes social structures, behaviors, and processes. According to the technological determinist perspective, artificial intelligence is not just a passive tool, but helps to understand how the application of artificial intelligence technology in the media industry has changed content creation, distribution, advertising, and employee dynamics (Okiyi, G. O. & Nsude, I. 2019).

With the help of tools and algorithms that empower the use of artificial intelligence in the media industry, media organizations can streamline workflows, automate various operations, and increase productivity. There, information development can be improved or automated Machine learning and natural language processing algorithms enable users to receive specific and personalized content (Carlson, M. 2014). Accordingly, technological determinism points out that the media industry has already adopted a process of artificial intelligence-based recommendation systems and adaptive advertising algorithms that meet user preferences and increase audience engagement, changing the distribution of content and advertising strategies. Technological determinism further points to the potential and social impacts of using artificial intelligence in the media business. The ability of artificial intelligence algorithms to regulate the flow of information, select content, and influence user experiences raises concerns about power dynamics. It calls for vigorous debate and legislation to address the concentration of power in the hands of technology companies and the potential for algorithmic bias. Ethical considerations, such as fairness and openness of AI algorithms, are essential to ensure a diverse and objective media environment (Chan, A. 2022). Accordingly, researchers need to use the theoretical framework of technological determinism to examine the complex interactions between AI technology and the media industry.

However, concerns have been raised about the ethical implications of AI persuading users of their beliefs and preferences in the process of media use and human communication. The use of AI in media operations has raised several issues that need to be addressed. These include ethical issues such as algorithmic bias, inclusion, and accountability. Media companies should consider the ethical implications of using AI to create content and make judgments in order to achieve justice, diversity, and inclusion. Because the use of AI in the media business also has implications for the workforce. Although AI technology can automate repetitive processes, increase productivity, and reduce costs, there is a problem of job displacement and the need for retraining and skills to adapt to the changing environment (Porayska, K. & Rajendran, G. 2019). Understanding these processes is crucial for formulating legislation that promotes effective communication between humans and AI systems. Accordingly, the focus should be on providing an in-depth analysis of the various aspects of AI adoption in media operations, as well as the impacts on the workforce, advertising, and content distribution.

Social construction of technology

The social construction of technology paradigm is a gateway to the use of artificial intelligence in the media industry. According to the social construction of technology theory, technology is a socially constructed object. Rather than being a specific outcome of society, it influences society through a number of social, cultural, and institutional factors. The social construction of technology approach in the context of the media environment reflects on the social dynamics surrounding the creation, acceptance, and use of AI technologies (Joyce, K. et al., 2021).

That is, the social construction of technology in the media industry demonstrates how media companies, content creators, incumbent governments, and other stakeholders have influenced the use of AI and its subsequent implications. It recognizes that AI technologies are not neutral but rather reflect the beliefs, preferences, and values of the institutions, individuals, and governments that worked to create and implement them (Craiut, M. V. & Iancu, I. R. 2022).

Understanding the social construction of AI in the media industry requires analyzing how media institutional practices, power relations, and sociocultural settings influence the development and use of AI technologies. Media organizations use AI the use of intelligence tools and approaches, the incentives and other factors that influence such decisions, as well as the institutional and cultural changes brought about by the integration of artificial intelligence, are all subject to the social constructionist authority of technology.

The concept of media ecology can be used to understand the relationships between media technology, human communication, and the environment. The primary research areas of media ecology are the study of the dynamic interactions and impacts between media technologies, their users, and the larger social, cultural, and economic contexts that emerge from that context. That is, media ecology in the context of AI integration in the media industry is the analysis of how AI technologies interact with current media ecosystems to influence communication patterns, content consumption patterns, and the dynamics of media organizations (Joyce, K. et al., 2021).

The use of AI in the media industry will have a major impact on media ecology. AI technologies are changing the way people interact with media by influencing the way media content is produced, consumed, and distributed. Personalized content delivery algorithms and AI-powered recommendation systems, for example, are influencing users' content preferences and consumption habits (Sorbán, K. 2021). With AI-based data analytics, media organizations can gain valuable insights into how consumers behave and, as a result, change their content strategies. Media ecosystems Growth is aided by changes in media consumption habits and content distribution methods, which are a result of the social construction of technology.

Media ecology

Media ecology is the study of the media environment and its impact on human communication and culture. It is concerned with the role of media in shaping and transforming human experience and how media technologies and practices evolve. Media ecology is a multidisciplinary field that draws from a number of disciplines, including communication studies, media studies, sociology, anthropology, psychology, and

cultural studies. It studies the role of media in shaping and transforming human experience and how media technologies and practices evolve and are shaped by different media technologies and practices (Nystrom, C. L. 1973). It is based on the idea that media technologies, techniques, and information and communication methods play a major role in shaping human social, cultural, and individual experience. Accordingly, media ecology focuses on how communication media affect human perception, understanding, emotion, and value, and how our interactions with media facilitate or hinder our chances of survival (Lance, S. 2002). Media ecology is the study of media environments, and the idea that technology and techniques, information systems, and communication codes play a prominent role in human affairs. Media ecology emphasizes the connection between media technology, human communication, and the environment (Strate, L. 1996). Using this approach, it is possible to analyze the interaction between artificial intelligence technologies and current media ecosystems. It analyzes how they change media organizational dynamics, communication patterns, and content consumption patterns, and thus offers ideas about the impacts of integrating artificial intelligence on society and the environment.

Ethical frameworks

Ethical frameworks are essential to assess the ethical dilemmas facing AI in the media sector. By applying ethical theories such as Utilitarianism, Deontology and Virtue ethics, the ethical implications of AI use, including algorithmic bias, privacy issues and employee dynamics, can be assessed (Hagendorff, T. 2020). This approach helps to create standards for ethically questionable AI applications and to identify those standards.

Utilitarianism theory

Utilitarianism is a rational correspondence theory that is concerned with the overall ethical consequences of an action. The goal of utilitarianism is to maximize the overall well-being or utility of human society (Kinghorn, P. 2015). The current media space operates with a large amount of data using artificial intelligence, which is both a technical tool for human communication and very close to the main goals of moral theory. Utilitarianism is a more general approach to making ethical decisions about the greater good of society in media use, especially because it guides an analytical perspective on the various levels of good and evil produced by media communication (West, R. & Turner, L. 2000). Utilitarianism involves an analytical focus on the benefits and harms that these technologies provide to many stakeholders, including companies, content providers, and consumer audiences.

Deontology

The deontology approach emphasizes ethical and non-ethical obligations and values in the deontology. The use of artificial intelligence in the media sector requires consideration of ethical principles and rights that should guide decision-making by applying deontological frameworks. It is necessary to evaluate whether artificial intelligence systems support ideas such as justice, privacy, and personal autonomy (Ryan, M. & Stahl, B. C. 2020).

Virtue Ethics

Ethics are the moral principles that guide human life in society. It is an internal governor that belongs to everyone in human society and is socially disciplined. Ethics is involved in all levels of human life. Accordingly, ethics is a philosophy of how to balance right and wrong about the issues of what human society is? Who is humanity? What is human existence? That is, ethics provides good reasons for why something is moral (Bonde, S. et al., 2016). Accordingly, the primary purpose of ethics is to develop moral character and virtues. When using artificial intelligence technologies, professionals and media organizations should demonstrate certain personal traits and virtues according to virtuous ethics. These qualities include things like accountability, fairness, empathy, and transparency. 05. Within media organizations, ethics promote a culture of ethical decision-making and the development of ethical artificial intelligence practices (Hagendorff, T. 2020).

Recommendations for media organizations on the ethical use of AI

Ensuring diversity in data

By sourcing data from diverse sources and ensuring balanced representation, continuously monitoring AI outputs to flag biases of media professionals, producing unbiased content, taking corrective action as needed to maintain fairness and accuracy in reporting, and training AI models on diverse datasets that accurately represent a wide range of perspectives and demographic groups, approaches such as training AI models on diverse datasets not only improve the quality and credibility of media work but also support the goal of integrating ethical AI into the industry (Wardle & Derakhshan, 2017).

Implement strict privacy policies

Media organizations should establish and implement strict privacy policies to protect personal information and ensure ethical data use. These policies should be consistent with data protection regulations, such as the General Data Protection Regulation, which sets strict requirements for data handling and user consent (Napoli, 2019). In addition to regulatory compliance, organizations should implement strong security measures, such as encryption and anonymization, to protect personal information from unauthorized access or breaches (Sweeny, 2013). This will make it possible to protect user data in AI-driven media.

Promoting awareness and transparency

Transparency complements privacy measures by ensuring that audiences are aware of how their data is being used and how AI technologies are being used. By informing audiences about the existence and impact of AI in media, organizations can build greater trust and accountability. Media organizations that build on the foundation of strong privacy policies should also emphasize transparency and awareness in their use of AI (Floridi et al., 2018).

CONCLUSION

This research aims to theoretically and conceptually examine how artificial intelligence is impacting the media industry. In the media industry, the advancement of automation and editing capabilities through AI-powered technologies has revolutionized the creation and processing of media content. The use of AI has facilitated the customization and personalization of media content creation and distribution spaces, and the way consumers consume and distribute media. This has improved advertising and marketing strategies through personalization, targeted advertising, and other methods.

The theoretical and conceptual analysis demonstrates how artificial intelligence has significantly changed the media industry. It also opens up opportunities for improved efficiency, personalization, and user experience through AI-powered technologies. But it is important to address ethical concerns, be vigilant about biases, and ensure that AI technologies are used ethically and responsibly. It is also important to develop standards and recommendations for the responsible use of AI, to embrace the potential of AI, and to use it to promote innovation and improve the user experience in the media industry. The potential, benefits, disadvantages, and pitfalls of using AI technologies in the media industry can be identified in terms of theoretical and ethical concepts. In light of these theoretical and conceptual approaches, media organizations need to develop ethical, responsible policies and processes for using AI technologies, taking into account technical principles, content creation, data processing, and development, as well as ethical principles, rights, and virtues.

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