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Artificial Intelligence Usage in Communication Field: An Analysis on Communication Journals

İletişim Alanında Yapay Zekâ Kullanımı: İletişim Dergileri Üzerine Bir Analiz

Sevgi KAVUT [1]

Abstract

Artificial intelligence usage in the communication field is of strategic importance. However, most communication practitioners and academicians have not noticed the gains in momentum substantially artificial intelligence. Through communication journals, this study aims to examine how artificial intelligence is used, its effects, and how important it is in communication. This study was designed as a content analysis and bibliometric analysis study. The sample of this study is AI-based articles in Web of Science Q1 indices communication journals. It selected and examined the first sixteen journals in communication keyword search based on SCImago Journal & Country Rank. This study revealed artificial intelligence usage in the communication industry and field, in addition to AI's impact and significance and AI-based technologies in communication. It was found that the most used method for artificial intelligence-based articles in communication journals was the semi-structured interview method. It is seen that common keywords in AI-based articles and communication journals are announced as human-machine communication, machine learning, artificial agent, artificial intelligence, bias, and social media concepts. In this study, a positive correlation between communication science and artificial intelligence technologies was observed. This study contributes to new studies on artificial intelligence, communication, the impacts of artificial intelligence on communication, new communication technologies, generative AI, human-machine communication, and other related areas.

Keywords: *Artificial Intelligence, Communication Studies, Communication Journals, AI Technology, Communication Science*

Öz

İletişim alanında yapay zeka kullanımı stratejik bir öneme sahiptir. Ancak çoğu iletişim profesyonelleri ve akademisyenler yapay zekanın önemli oranda ivme kazandığının farkında olmamaktadır. Bu çalışma, iletişim dergileri üzerinden yapay zekânın nasıl kullanıldığını, etkilerini ve iletişim alanında ne kadar önemli olduğunu incelemeyi amaçlamaktadır. Bu çalışma bir içerik analizi ve bibliyometrik analiz çalışması olarak tasarlanmıştır. Çalışmanın örneklemi Web of Science Q1 indeksli iletişim dergilerinde yayınlanan yapay zeka tabanlı makalelerdir. SCImago Journal & Country Rank ölçüm verilerine dayalı olarak iletişim alanı anahtar kelimesine göre ilk 16 makale seçilmiş ve incelenmiştir. Bu çalışma iletişim sektörü ve iletişim bilim alanında yapay zekâ kullanımını, yapay zekânın etkilerini ve önemini ve iletişim alanında yapay zekâ tabanlı teknolojileri ortaya koymaktadır. İletişim dergilerinde yapay zekâ tabanlı makaleler üzerinden en çok kullanılan yöntemin yarı yapılandırılmış mülakat olduğu tespit edilmiştir. İletişim dergilerindeki yapay zekâ tabanlı makalelerde ortak anahtar kelimelerin insan-makine iletişimi, makine öğrenme, yapay ajanslar, yapay zekâ, önyargılar, sosyal medya kavramları olduğu görülmüştür. Bu çalışmada iletişim bilimi ve yapay zekâ teknolojileri arasında pozitif bir ilişki olduğu gözlemlenmiştir. Bu çalışma yapay zekâ, iletişim, iletişimde yapay zekânın etkileri, yeni iletişim teknolojileri, üretken yapay zekâ, insan-makine iletişimi ve diğer ilişkili alanlardaki konularda yapılacak yeni çalışmalara katkı sağlamaktadır.

Anahtar Kelimeler: *Yapay Zekâ, İletişim Çalışmaları, İletişim Dergileri, Yapay Zekâ Teknolojisi, İletişim Bilimi*

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Introduction

Artificial intelligence technologies become necessary day by day, particularly with the common use of communication technologies in every walk of life. Communication is an area that increases the importance of these technological developments. Artificial intelligence is a pivotal innovation and technology in communication. It is evident that as the gamut of artificial intelligence applications and systems broaden, communication and artificial intelligence relationships have developed and transformed.

The proliferation of artificial intelligence technologies has paved the way for transformative changes in various sectors from communication to telecommunication (Voicu, R. C., Pande, A. K., Tanveer, M. H., & Chang, Y., 2024). Artificial intelligence technologies have changed interactions and communication between people and organizations along with the usage of communication technologies (Gholami & Al Abdwani, 2024). Artificial intelligence is a computer science field and communication technology enhancing science and technologies. AI provides the capability of dealing with other technologies such as big data, high accuracy, speedy processing, and complexity. AI has been used in a variety of areas including communication, computer sciences, education, engineering, health, medicine, finance, and so on (Alsamhi, S., Ma, O., & Ansari, M., 2018). Artificial intelligence is becoming commonplace in commerce, finance, retail, communication industries, and sciences and an inseparable part of daily life (Zerfass et al, 2020). Artificial intelligence systems provide opportunities for communication. These advantages epitomize perceiving better digital environments, making informed decisions, carrying out tasks with autonomy, comprehending digital content, and so on (Voicu, R. C., Pande, A. K., Tanveer, M. H., & Chang, Y., 2024). The present-day society has transformed with the rise and spread of artificial intelligence technologies. The penetration, and growing usage of artificial intelligence impact in terms of various implications in different fields including communication (Gil De Zúñiga vd., 2024). (Gil de Zuniga et al., 2024). The interaction between society and science is important for innovative and creative new studies, ideas, and projects. Molfino et al. (2024)indicate that these interactions inspire. Artificial intelligence is developing at an unprecedented pace and continuing to transform with epochal changes and revolutions in human life and societies thanks to the spread of AI technologies (Chen, 2024, p. 3266).

In the present digital society, artificial intelligence has a widespread presence for all digital citizens. Cutting-edge technologies and rapid development of AI technologies enable to prevalence of artificial intelligence in every sphere of life (Jungherr, 2023, s. 1). Artificial intelligence spread in large areas from the private sector to government applications and from science fields to national research funders. In this context, Williams et al (2023) indicate that artificial intelligence research areas are supported by government, decision-makers, and private sector professionals. They announced that governments have revealed to support national AI strategies and develop local AI research in cooperation with public-private partnerships.

1. Artificial Intelligence and Communication

Artificial intelligence is associated with intelligence behaviors in artifacts like humanoid and non-humanoid robots. AI involves a set of abilities such as understanding, comprehending, perception, learning, evaluation, communication with other people and machines, acting, and

solving problems in complex environments (Zerfass et al., 2020, p. 2). Human-machine interactions enable the development of artificial intelligence and communication relationships. An emerging field of communication called "human-machine communication" focuses on giving robots and humans meanings (Guzman & Lewis, 2020, p. 2). Artificial intelligence usage in communication industry and field serve at cross purposes. For example, this situation epitomizes such as exchanges of messages, communication with other people, interactions with AI-based programs, applications and tools, navigation systems, and facility of payment with AI technologies (Guzman & Lewis, 2020, p. 3). Besides, artificial intelligence is important in communication in terms of staying abreast of agendas and new ideas. The examples like Google News constitute substantial evidence.

Artificial intelligence has revealed new notions and concepts in communication sub-areas like public relations, advertising, marketing, and interpersonal communication. Artificial intelligence in terms of public relations provides opportunities to evaluate crisis communication and management, form content, write data-based content, and even stay abreast of agendas and the latest news (Kavut, 2022, p. 85). Artificial intelligence also enables digital security and digital privacy with improved face recognition systems, especially in digital identity usage and digital profiles. Artificial intelligence presents measurable, reliable, fast, and interactive solutions to digital identity security in all digital environments. Algorithm impacts the lives of people from communication patterns to online shopping, from digital banking to smart telephone usage (Kavut, 2021, p. 541). Artificial intelligence and communication areas maintained studies as two independent areas for more than 70 years. However, these two areas affect each other in terms of technological development, and communication skills. The relationship between artificial intelligence and communication has revealed new concepts like human-machine communication and human-machine interaction. Artificial intelligence has brought a new dimension to communication (Kavut, 2024, p. 39). Another concept is computer-mediated communication regarding artificial intelligence and communication. Hiltz and Troff defined "computer-mediated communication" as human communication made possible by computers in 1978 (Gholami & Al Abdwani, 2024, p. 31).

Artificial intelligence has given rise to apprehension in the communication field in terms of workforce loss. However, the present-day studies on artificial intelligence's effects in communication show that such apprehensions are needn't in industry. According to current studies, humans are still needed in the communication area, communication professionals announce only a 1.5 percent chance of losing their jobs to artificial intelligence technologies. Creativity, critical thinking, innovation, emotional intelligence, body language, empathy, study, and examining skills have revealed the differences between humans and artificial intelligence technologies (Zerfass et al., 2020, p. 4).

Artificial intelligence technologies have an infrastructure reshaping the communication field. Artificial intelligence is a force that is changing people's everyday lives in addition to being a technology. The transformative effect of artificial intelligence in the communication field enables how people communicate with other people and humanoid artificial robots, and how content is generated and classified. Therefore, it is known that AI is a pivotal driving force in the personalization of communication content (Hermann, 2022, p. 2). Artificial intelligence also benefits business communication. Communication professionals may produce better digital content, higher productivity, and developed communication patterns. Present-day businesses use AI-based tools for collaboration, teamwork, and communication among different department employees, business partners, media, and all stakeholders (Getchell et al., 2022, pp. 9-10).

AI tools serve at cross purposes. Figure 1 gives an overview of the Veen Diagram displaying artificial intelligence tool samples according to performance level. Gil de Zuniga et al. (2024) state that artificial intelligence approaches can be used for a wide range of activities, decisions, and projections.They are epitomized by some AI tools. While Apple Siri has been used in the process of decisions and tasks, Google Assistant has been used for decisions and predictions and future implications, and Shazam, and Health&Fitness applications have been used for tasks and predictions. ChatGPT, GPT-3, GPT-4, Google Meet, Zoom Meetings, Google Speech to Text, Otter, AI, Google Voice, True Caller application, and so on based on tasks AI tools have been used in all sectors including communication.

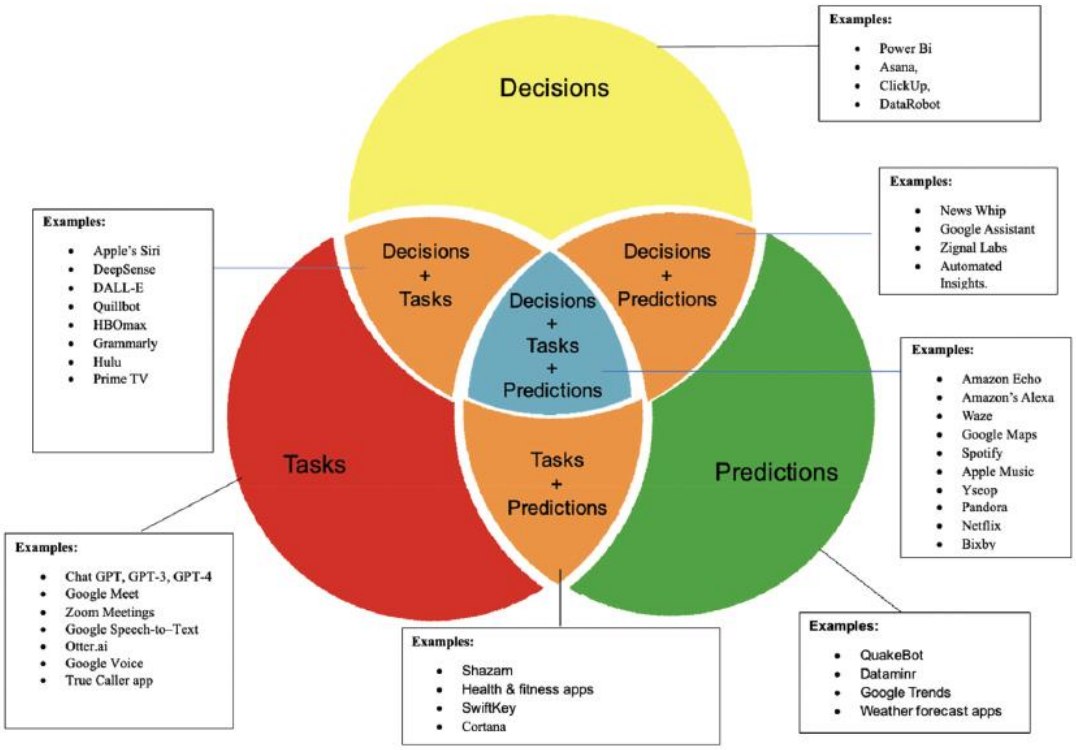

Figure 1. Venn diagram illustrating several AI tools according to their performance levels (Gil De Zúñiga et al., 2024).

As seen in Figure 1, all AI tools have been used for different aims and goals. Artificial intelligence tools enable easy usage of these technologies and the processes of decision-making, tasks, prediction analyses, and so on. AI systems and technologies must interact fluidly and responsively for capturing data in real time, storing data, accumulating knowledge over time, and using a variety of modalities and languages.AI branches are classified into knowledge & representation, machine learning, perception, planning, and reasoning. The core functions of artificial intelligence are thought to be reasoning and decision-making (Molfino vd., 2024, p. 118). AI is a process covering a set of transactions like knowledge, representation, machine learning, decision-making, prediction, planning, and reasoning. In this context, we can say that the gamut of AI technologies has been associated with the different branches of AI.

2. Aim and Method

The present study was designed as a content analysis and bibliometric analysis study. The research is conducted with bibliometric analysis and content analysis methods. It was prepared frequency analysis tables and coding tables to examine AI-based articles in the

communication field according to the AI's effects on the communication field and sector, changing trends, new ideas in communication, and so on. It is selected Web of Science database for bibliometric analysis. Through communication journals, this study aims to examine how artificial intelligence is used, its effects, and how important it is in the field of communication. Bibliometric analysis is a common and strict approach to examining and analyzing the large size of data. This approach enables the evolutionary nuances and new perspectives in a determined specific field (Donthu vd., 2021, s. 285). The following research questions are being looked into in relation to this goal:

Research Question 1: How are journal qualities distributed?

Research Question 2: How are reviewed publications in communication journals distributed based on the different types of artificial intelligence?

Research Question 3: How are the reviewed articles in communication journals distributed in terms of keywords and topics?

Research Question 4: In communication journals, how are assessed articles distributed based on the methodology used?

Research Question 5: In communication journals, how are studied papers distributed in terms of citations?

Research Question 6: What is an article in a communication journal's bibliometric analysis?

The universe of this study constitutes communication journals and these journals' web pages. All published articles in selected communication journals in 2023 were examined on the journals' web pages' archive. The sample of this study is AI-based articles in Web of Science Q1 indices communication journals. It is used purposeful sample method is one of the non-probability sampling types in this study. This study draws on purposeful sampling and its criterion sampling sub-dimensions. Purposeful sampling refers to obtaining the maximum level sample and providing of best available level to constitute theory (Kavut, 2023, s. 354). Criterion sampling involves reviewing to construct a comprehensive understanding to make certain pre-determined criteria (Suri, 2011, s. 69). It is examined that Web of Science Q1 indices articles in the Communication field in 2023 year. It selected the first sixteen journals in communication keyword search based on SCImago Journal & Country Rank (SciMago, 2024). Firstly it is the first of ten journals in communication keyword search based on SCImago Journal & Country Rank. However, according to these examinations, it is found that some journals haven't artificial intelligence-based articles in communication journals. Therefore, six journals were added to the sample. The journals' websites were used to review every issue published in 2023. This year's published articles were all assessed in the web pages' archive. Article reviewing is limited to artificial intelligence topics and evaluating research articles. This study has two limitations. Firstly, this study is limited to artificial intelligence and communication topics in literature. Second, this study examines articles in communication journals in terms of AI's effects on the communication industry and, the relationship between AI and communication. Only original research articles are evaluated and examined in this study.

3. Findings

Research on the significance of artificial intelligence as well as the effects and ramifications of communication journal samples are presented in this part.

Table 1. *The characteristics of journals.*

Journals' Name	**Subject category of the journal**	**Issues (per year)**
Communication Methods and Measures	qualitative and quantitative methodology in communication studies	4
Transactions of the Association for Computational Linguistics	computational linguistics and natural language processes	1
Political Communication	Politics and communication	6
Communication Research	research and theory in all areas within the field of communication.	8
Journal of Advertising	All research related to all types of advertising	5
International Journal of Press/Politics	-the role of the press and politics in a globalized world. -new media and political processes	4
Journal of Communication	communication research, practice, policy, and theory	6
Digital Journalism	Digital journalism studies, digital news storytelling, AI in journalism, data journalism	10
Annals of the International Communication Association	in all areas within the field of communication.	4
International Journal of Advertising	all aspects of marketing communications	8
Big Data and Society	The implications of Big data for societies	2
Journal of Computer-Mediated Communication	social science researches on communication via computer-based media technologies.	6

Research on Language and Social Interaction	empirical and theoretical research bearing on language as it is used in interaction.	4
Group Processes and Intergroup Relations	social psychological processes within and between groups	8
Social Media and Society	social media and its impact on societies past, present and future	4
New Media and Society	The scale and speed of new media development	12

Web of Science QI indices communication journals are presented in Table 1. These journals were selected according to SCImago Journal & Country Rank data in the 2023 year. Web of Science Q1 indices communication journals classified into from 1 to 12 according to issues per year.

Table 2. *The distribution of examined articles according to artificial intelligence*

Journals' Name	**Article Frequency**	**AI-based article frequency**
Communication Methods and Measures	18	None
Transactions of the Association for Computational Linguistics	98	None
Political Communication	37	None
Communication Research	40	1
Journal of Advertising	45	1
International Journal of Press/Politics	47	None
Journal of Communication	47	1
Digital Journalism	99	3
Annals of the International Communication Association	20	None
International Journal of Advertising	62	1
Big Data and Society	106	18
Journal of Computer-Mediated Communication	57	4
Research on Language and Social Interaction	16	None

Group Processes and Intergroup Relations	89	None
Social Media and Society	194	2
New Media and Society	170	1
Total	1145	32

Table 2 shows that AI based article rate constitutes 1 percent of Web of Science Q1 indices communication journals of total articles in 2023. In this study, in the first stage, it is examined about 1150 articles. In the second stage, it is evaluated 32 artificial intelligence-based articles in communication journals. The most AI-based articles having journals is Big Data and Society journal with 18 articles.

Table 3. *The distribution of AI-based communication journals' articles according to topics and keywords*

Journals' Name	**Topic**	**Keywords**	**Common Keywords**	**Citation**
Communication Research	Human and Artificial Agent	Stereotyping, machine agency, interpersonal influence, advice, artificial agent, and mind perception	Human-machine communication, machine learning, artificial agents, artificial intelligence, bias, algorithms, social media	4
Journal of Advertising	AI-Generated Charitable Giving Ads	Not mentioned		26
Journal of Communication	Artificial Intelligence and Persuasion	AI agent, communication technology, AI-based persuasion, human-machine communication, AI system design		17
Digital Journalism	Communicative AI	communicative AI, computational journalism, search engine optimization, machine learning, natural language generation and human-machine communication		22

Digital Journalism	AI in Media and Journalism	Not mentioned		29
Digital Journalism	Artificial Intelligence Cues	AI journalism, human-computer interaction, robot journalism, machine agent, hostile media bias, human-machine communication, hostile media effect, automated journalism		27
International Journal of Advertising	Artificial Intelligence and Marketing Communication	digital environments, customer data, digital content assets, IT infrastructure, machine learning algorithms		23
Big Data and Society	Data and AI for Good	technological initiatives, data for good, ICT for development, critical data studies, AI for social good		6
Big Data and Society	AI and human rights	AI, bias, human rights, social justice, privacy		5
Big Data and Society	Extrapolation and AI	AI regulations, transparency, automated systems, AI, extrapolation, machine learning		9
Big Data and Society	AI and media	Journalism, AI, techno-entrepreneurialism media, translation, controversy, STS, political economy		4
Big Data and Society	AI classification	accessibility, artificial intelligence,		2

		disability, deep learning, bias, United States		
Big Data and Society	Biases in AI systems	COVID-19, social determinants of health, AI systems, triage and risk prediction, bias		5
Big Data and Society	AI Literacy	AI education, AI literacy, Responsible AI, ethical AI, AI fairness, AI accountability		6
Big Data and Society	AI policy	single market, Artificial intelligence, European Unionsocio-technical imaginaries, digital innovation, problem analysis		22
Big Data and Society	Online AI courses	machine learning, artificial intelligence, AI industry, online courses, political economy, algorithmic techniques		10
Big Data and Society	AI and language model	chatbot interviews, AI, psychoanalysis, large language models, reinforcement learning from human feedback, automated subjects.		11
Big Data and Society	Artificial intelligence in the workplace	human-AI interaction, skills, artificial		4

		intelligence, human intelligence,		
Big Data and Society	Data protection and AI	anti-discrimination, social inequality, predictive analytics, data protection & privacy, data ethics, profiling		16
Big Data and Society	Perceptions of AI	social media, artificial intelligence, risk perception, risk society, algorithms,		3
Big Data and Society	AI incidents and participation	Artificial intelligence, AI, algorithms, controversies, participation, Twitter		2
Big Data and Society	AI Empire and Global AI	AI Empire, data colonialism, algorithmic oppression, generative AI, critical AI, intersectionality		12
Big Data and Society	Significance of AI	social media content moderation, AI, extreme speech, ethical scaling, decoloniality, ethnography and algorithm auditing		12
Big Data and Society	AI supply chain	located accountability modularity, supply chain, software engineering, artificial intelligence, ethics.		65
Big Data and Society	Hybridity and AI	artificial intelligence, research value,		5

		hybridity, knowledge production, and bibliometrics		
Journal of Computer-Mediated Communication	Speech production uncertainty: AI interviewer	decision-making, job interview, speech production, uncertainty and social presence		5
Journal of Computer-Mediated Communication	AI and radiology	future of work, artificial intelligence, frame, framing and technological promises		3
Journal of Computer-Mediated Communication	Gender biases and Image-generative AI	algorithm auditing, Generative AI, DALL_E 2, gender bias, computer vision.		21
Journal of Computer-Mediated Communication	AI and news	visual framing, artificial intelligence, media logic, gender, digital space		-
Social Media and Society	AI and democracy	democracy, artificial intelligence, self-rule, equality, elections, autocracy		45
Social Media and Society	AI-based Cyberbullying Interventions	cyberbullying, social media, online safety, children's rights and AI		9
New Media and Society	Playing with AI and games on the mobile phone	Mobile ritual, apps, critical design, mobile visualities, play		4

Table 3 shows that AI-based communication journals' articles center on human-machine communication, machine learning topics, and artificial intelligence agent keywords. According to these findings, it is noted that artificial intelligence has a far-reaching situation in the communication field. It was found that there was a strong relationship between human-

machine communication and artificial intelligence topics. It is seen that common keywords in communication journals announced as human-machine communication, machine learning, artificial agent, artificial intelligence, bias, algorithms, and social media concepts. It is found that Big Data & Society is the most artificial intelligence-based journal in the Web of Science Q1 category of communication journals. Besides, the citation rates of the articles are shown in Table 3.

Table 4. *The distribution of AI-based communication journals' articles according to methods*

Methods	**Frequency**
Experimental design	1
Survey	3
Meta-analysis	2
Semi-structured interview	6
Literature review	3
Online experiment	1
Descriptive research	5
Triangulating	1
Case studies	1
Document analysis	1
Walkthrough method	1
Predictive analytics	2
Focus group	1
Content analysis	2
Bibliometric analysis	1
Linear mixed model	1
Total	32

According to Table 4 findings, it is found that the most used method for artificial intelligence-based articles in communication journals was the semi-structured interview method. Besides, in these journals methods like the walkthrough method and predictive method are seen in this analysis. Table 4 uses not only known methods like bibliometric analysis, content analysis, semi-structured interview, survey, descriptive analysis, and case studies but also unknown methods like the linear mixed model, triangulating, online experiments, walkthrough method, and predictive method in the communication field.

Table 5. *Bibliometric analysis of articles in communication journals*

Article Title	**Author/Authors**	**Author Number**	**SJR**	**h-index**	**Times Citation**

Is artificial intelligence more persuasive than humans? A meta-analysis	Huang&Wang (2023)	2	2.658	162	17
The str (AI) ght scoop: Artificial intelligence cues reduce perceptions of hostile media bias	Cloudy, Banks & Bowman (2023)	3	2.640	73	27
Consumer Responses to AI-Generated Charitable Giving Ads	Arango, Singaraju & Niininen (2023)	3	2.911	132	47
Artificial intelligence ecosystems for marketing communications	Malthouse & Copulsky (2023)	2	2.581	80	23
Exploring Communicative AI: Reflections from a Swedish Newsroom	Stenbom, Wiggberg & Norlund (2023)	3	2.640	73	22
Understanding the Influence Discrepancy Between Human and Artificial Agents in Advice Interactions: The Role of Stereotypical Perception of Agency	Liao et al. (2023)	4	2.943	124	4
The European AI Act and How It Matters for Research into AI in Media and Journalism	Helberger & Diakopoulos (2023)	2	2.640	73	30
Artificial Intelligence and Democracy: A Conceptual Framework	Jungherr (2023)	1	2.156	68	46
Effectiveness of Artificial Intelligence-Based Cyberbullying Interventions From a Youth Perspective	Milosevic et al. (2023)	7	2.156	68	9
Probably not a game Playing with the AI in the ritual of taking pictures on the mobile phone	Neumayer & Sicart (2024)	2	2.118	149	4
Speech production under uncertainty: how do job applicants experience and communicate with an AI interviewer?	Liu et al. (2023)	4	2.445	139	5
Pre-framing an emerging technology before it is deployed	Mehrizi (2023)	1	2.445	139	3

at work: the case of artificial intelligence and radiology					
Smiling women pitching down: auditing representational and presentational gender biases in image-generative AI	Sun et al. (2023)	6	2.445	139	21
The gendered lens of AI: examining news imagery across digital spaces	Chen, Zhai & Sun (2023)	3	2.445	139	0
Stepping back from Data and AI for Good –current trends and ways forward	Aula & Bowles (2023)	2	2.448	69	6
The promises and challenges of addressing artificial intelligence with human rights	Bakıner (2023)	1	2.448	69	5
Extrapolation and AI transparency: Why machine learning models should reveal when they make decisions beyond their training	Cao & Yousefzadeh (2023)	2	2.448	69	9
Freezing out: Legacy media's shaping of AI as a cold controversy	Dandurand, McKelvey & Roberge (2023)	3	2.448	69	5
Outlier bias: AI classification of curb ramps, outliers, and context	Deitz (2023)	1	2.448	69	2
Ethical assessments and mitigation strategies for biases in AI systems used during the COVID-19 pandemic	Manuel et al. (2023)	11	2.448	69	5
Responsible AI literacy: A stakeholder-first approach	Figaredo & Stoyanovich (2023)	2	2.448	69	6
European artificial intelligence policy as digital single market making	Krarup & Horst(2023)	2	2.448	69	31
Learning machine learning: On the political economy of Big Tech's online AI courses	Luch, Apprich &Broersma (2023)	3	2.448	69	10

Structured like a language model: Analysing AI as an automated subject	Magee, Arora & Munn (2023)	3	2.448	69	12
Artificial intelligence and skills in the workplace: An integrative research agenda	Margaryan (2023)	1	2.448	69	4
Predictive privacy: Collective data protection in the context of artificial intelligence and big data	Mühlhoff (2023)	1	2.448	69	17
Understanding user interactions and perceptions of AI risk in Singapore	Neyazi et al. (2023)	4	2.448	69	3
AI incidents and 'networked trouble': The case for a research agenda	Shane (2023)	1	2.448	69	6
Dislocated accountabilities in the "AI supply chain": Modularity and developers' notions of responsibility	Widder & Nafus (2023)	2	2.448	69	65
AI Empire: Unraveling the interlocking systems of oppression in generative AI's global order	Tacheva & Ramasubramanian (2023)	2	2.448	69	13
Investigating hybridity in artificial intelligence research	Williams, Berman &Michalska (2023)	3	2.448	69	5
Ethical scaling for content moderation: Extreme speech and the (in)significance of artificial intelligence	Udupa, Maronikolakis & Wisiorek (2023)	3	2.448	69	14

*Impact factors (SJR and h-index) were retrieved from the 2023 Scimago Journal & Country Rank

The bibliometric analysis of papers published in Web of Science Q1 indices communication journals is displayed in Table 5. The most cited article in Web of Science Q1 indices communication journals is one that is related to the "AI supply chain" subjects.
The article has been cited 65 times since its publication in 2023. In the Q1 indices journals author numbers differ from each other. Author number changes between 1 and 11 people.

Conclusion

This study was revealed artificial intelligence usage in communication industry and field, the effects, and the importance of artificial intelligence and AI-based technologies in

communication. Communication science is one of the most related fields to artificial intelligence. Thus, it is selected communication journals as a sample. As human and machine interaction develops, it is thought that the article rate related to artificial intelligence technologies and the communication field will increase in the coming years. It analyzed the importance of AI systems, artificial intelligence's effects on society and individuals, human-machine interaction, and how to use AI technologies in the communication business and field. The present study has two limitations. First, this study is limited to artificial intelligence and communication topics in literature. Second this study examines articles in communication journals in terms of AI technology's effects on communication field and, the relationship between AI and communication. The search was limited to publications in listed Web of Science Q1 indices communication journals. Only original research articles are evaluated and examined in this study.

The methodical dissemination of publications in AI-based communication journals has revealed research methodologies from multiple angles. It was found that the most used method for artificial intelligence-based articles in communication journals was the semi-structured interview method. Besides, in these journals methods not only known methods like bibliometric analysis, content analysis, semi-structured interview, survey, descriptive analysis, and case studies like walkthrough method and predictive method are seen in this analysis. It is seen that common keywords in communication journals announced as human-machine communication, machine learning, artificial agent, artificial intelligence, bias, algorithms, and social media concepts. It is found that Big Data & Society is the most artificial intelligence-based journal in the Web of Science Q1 category of communication journals. In this study, a positive correlation between communication science and artificial intelligence technologies was observed.

It examines artificial intelligence-based journals in communication journals in literature. Jungherr (Jungherr, 2023) notes that artificial intelligence's effect on democracy has already begun to be seen. Artificial intelligence applications have been used in governments, politics, decision-making processes, and so on. Milosevic et al. (2023) explain that children especially girl children need to be self-reliant and should use carefully social media platforms against cyberbullying and other risks. Cyberbullying on social media is an important threat to children and young people. Another comprehension or threat for communication practitioners and professionals is regarded as workforce loss in the communication field and sector. Milosevic et al.'s analysis does not take account of the positive features and contributions of artificial intelligence in communication science. Milosevic et al. explain only artificial intelligence risks and threats for children and young people. This study differs from the Milosevic et al.'s study.Swiatek et al. (2024, pp. 114-115). explain that In July 2023, the first-ever human-robot media conference took place in Geneva, Switzerland. It was mentioned at the conference that artificial intelligence is starting to seriously threaten the jobs of public relations specialists due to its impact on the dynamics of the field. Besides, they emphasize that both public relations scholars and professionals are not ready for these new cutting-edge technologies and developments. However, the present study shows that public relations and all communication professionals and academicians need to artificial intelligence technologies to develop new projects and campaigns. Therefore, this study differs from the Swiatek et al.'s study. Molfino et al. (2024) demonstrate that megatrends and new research trends are made possible by new communication technologies and applications. The development of robots is based on technologies and other cutting-edge technologies. Regarding the functions and impacts of artificial intelligence technology, the results of this study are comparable to those of Molfino's

study. The current study also demonstrates how artificial intelligence technologies have led to the discovery of new research hypotheses.

Kumar and Singh (2024) explain that artificial intelligence in the media industry provides both opportunities and threats. They epitomize that artificial intelligence enables fostering innovation, personalizing experiences, and enhancing content creation. Besides, AI can increase pressing concerns about job displacements, deep fakes, and the erosion of privacy. They emphasize that AI affects the media industry in the processes of content creation, consumption, and distribution. According to Türksoy (2022, p.407) artificial intelligence technologies for communication offer competitive advantages, and in the near future, the combination of artificial intelligence and human insight will be necessary for communication professionals to succeed. This study differs from Türksoy's study. Türksoy's analysis does not take account of the use of artificial intelligence in communication science. This study presents the effects of artificial intelligence in terms of the pros and cons like Kumar and Singh's study mentioned. It is thought that the holistic approach to AI technologies is important.

Özgen and Yılmaz-Tiryaki (2024) examined the Artificial Intelligence Initiative (TRAI) map to determine artificial intelligence tools in the field of public relations. As a result of this research, they have found five artificial intelligence-based tools used in public relations in the social listening and analyzing, media watching, and content production categories called Kimola, Sumsocial, Yazmatik, Orbina, and Novus Writer. The outcomes of this study and Çeber's study are similar to in terms of the functions and applications of AI-based technologies in the communication field and sector. Çeber (2024) states that ChatGPT and Midjourney AI applications have been used as useful artificial intelligence-based tools for advertising sector's idea generation, content production, and insight analysis processes. It found that ChatGPT and Midjourney AI applications have changed some job definitions, and new job definitions have emerged. Demirel (2023) examines artificial intelligence studies in communication faculties. The finding of this study shows that there are a total of only 58 artificial intelligence courses in communication faculties courses programs of Türkiye. Another result is that artificial intelligence courses are to be presented as an elective course for students in communication faculties.

As a result, in a study examining Web of Science Q1 communication journals, the role of communication and artificial intelligence tools in literature was not found. Most studies in the field artificial intelligence and communication have only focused on the effects of artificial intelligence and AI based tools in communication. Previous studies of artificial intelligence and communication have not dealt with Web of Science academic communication journals. Previos studies have centered on the viewpoints of communication professionals about artificial intelligence tools. However, this study has revealed new keywords, new research methods and the role of artificial intelligence in the field of communication both academical and sectoral. This study differs from others that one-dimensionally discuss artificial intelligence and communication. These innovative technologies include the pros and cons, as well as opportunities and threats. Therefore, it is believed that studies will need to increase involving relationships between artificial intelligence and communication technologies, artificial intelligence in the communication field.

According to the common ground of the findings of literature and the present study, it is evident that artificial intelligence technologies impact the communication field and communication industry, such as public relations, journalism, advertising, and so on. These technologies may have ushered in a new era in societies. However, AI may cause concerns about privacy and security, and workforce loss for public relations, advertising, and all

communication sector practitioners. As a result, we can state that the crux of AI technologies in the communication field is widely gaining different viewpoints and enabling new innovative ideas, projects, and studies.

Undoubtedly, as communication technology evolves, artificial intelligence in the communication field will continue to gain momentum. In this study, a positive correlation between communication science and artificial intelligence technologies was observed. Proliferating new artificial intelligence technologies and applications has substantially transformed human life and the communication field both sectoral and academic. The study's findings demonstrate that journals pertaining to artificial intelligence in communication have uncovered new ideas and fields of study. Regarding how people utilize AI tools and view the connection between AI and communication, there was a favorable association between these publications' impact and themes relevant to artificial intelligence. This work advances the fields of artificial intelligence, communication, generative AI, novel communication technologies, and human-machine communication.

This study's main contribution is to use communication journal articles to highlight the significance of artificial intelligence systems and technologies in the field of communication. It is offered that in new research researchers discuss relationships of artificial intelligence and new communication concepts with different dimensions and different sample groups and develop new articles and projects. It is thought that AI-based studies in the communication field need practitioners and scholars for sectoral and academic development and different perspectives. Artificial intelligence in the communication field is a topic gaining momentum. Therefore, more study is needed to present the role of AI technologies and tools in communication. This study has provided significant findings that emphasize AI technology's effects on communication, and the use of AI tools in communication topics.

Declarations

* *Ethics Committee Approval:* Since the study does not involve human factors, ethics committee approval is not required.

* *Publication Ethics:* This study has been prepared following the rules outlined in the "Guidelines for Scientific Research and Publication Ethics of Higher Education Institutions." Additionally, the article has been scanned using the Turnitin plagiarism detection software, and no instances of plagiarism have been detected.

* *Author Contribution Rate:* Not appropriate.

* *Conflict of Interest:* The author declared no conflict of interest.

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