Qualitative Evaluation of the Academic Reflections of Artificial Intelligence Applications in the Fields of Communication and Public Relations

Yapay Zekâ Uygulamalarının İletişim ve Halkla İlişkiler Alanlarındaki Akademik Yansımalarının Niteliksel Değerlendirilmesi

Emel KUŞKU ÖZDEMİR

Dr. Öğr. Üyesi, İzmir Kavram Meslek Yüksekokulu, Pazarlama ve Reklamcılık Bölümü, Halka İlişkiler ve Tanıtım Programı

Asst. Prof. Dr., İzmir Kavram Vocational School, Department of Marketing & Advertising, Public Relations & Publicity Program

emel.ozdemir@kavram.edu.tr

ORCID: 0000-0001-7232-9233

Abstarct

Artificial Intelligence (AI), as in various other fields, is causing significant changes in the fields of communication and public relations by modernizing traditional methods and tools. AI applications, which have evolved with technological advancements, introduce new tools that make communication processes more efficient and effective, enabling both time and resource savings. Notably, comprehensive data analyses and the ability to understand target audience behaviors, along with continuous communication opportunities provided by automated response systems and chatbots, are particularly striking. In this context, the new opportunities that AI brings to the fields of communication and public relations are creating positive impacts in current sectoral practices and are also being reflected in academic studies conducted in the field. This study is a descriptive research aimed at examining academic studies on artificial intelligence in the fields of communication and public relations published in journals included in the Dergi Park system. The sample of the study consists of articles published in the Dergi Park system between 1990 and 2023, identified using the keywords communication-artificial intelligence and public relations-artificial intelligence. Data were analyzed using the MAXQDA20 software. The analysis of the study is based on a systematic and interpretive approach that considers the titles, abstracts, keywords, publication years, publication languages, research methods used, and the authors' fields of study. According to the findings, a total of 32 articles on communication, public relations, and artificial intelligence were identified, and it was determined that the majority of these articles were conducted using a qualitative research approach. The research findings indicate that the number of academic studies published on artificial intelligence has increased over the years, but the total number of published articles remains insufficient. Additionally, among the communication subtopics associated with artificial intelligence, public relations stands out as a diverse and multidimensional field, with the most intensive studies found in the areas of corporate communication, crisis communication, and reputation management, respectively.

Öz

Yapay zekâ (A.I.), çeşitli alanlarda olduğu gibi iletişim ve halkla ilişkiler alanlarında da alışılmış yöntem ve araçları modernize ederek önemli değişikliklere neden olmaktadır. Teknolojik gelişmelerle birlikte evrim geçiren yapay zekâ uygulamaları, iletişim süreçlerini daha verimli ve etkili hale getiren yeni araçları tanıtarak hem zaman hem de kaynak tasarrufunu mümkün kılmaktadır. Özellikle kapsamlı veri analizlerinin, hedef kitle davranışlarını anlama yeteneklerinin yanı sıra otomatik yanıt sistemleri ve sohbet botları (chatbotlar) aracılığıyla sağlanan sürekli iletişim fırsatları dikkat çekicidir. Bu bağlamda, yapay zekânın iletişim ve halkla ilişkiler alanlarına getirdiği yeni fırsatlar, güncel sektörel uygulamalarda olumlu etkiler yaratmakta ve alanda konuyla ilgili yürütülen akademik çalışmalarda da yerini almaktadır. Bu çalışma, Dergi Park sisteminde yer alan dergilerde yayımlanmış olan iletişim ve halkla ilişkiler alanındaki yapay zekâ konulu akademik çalışmaları incelemeyi amaçlayan tanımlayıcı bir araştırmadır. Çalışmanın örneklemini, Dergi Park sisteminde 1990-2023 yılları arasında iletişim-yapay zeka ve halkla ilişkiler-yapay zekâ anahtar kelimeleriyle yayınlanmış makaleler oluşturmaktadır. Veriler, MAXQDA20 yazılımı kullanılarak analiz edilmiştir. Çalışmanın analizi, makalelerin başlıkları, özetleri, anahtar kelimeleri, yayınlanma yılları, yayın dilleri, kullanılan araştırma yöntemleri ve yazarların çalışma alanlarını dikkate alan sistematik ve yorumlayıcı bir yaklaşıma dayanmaktadır. Bulgulara göre iletişim, halkla ilişkiler ve yapay zekâ konulu toplamda 32 makale tespit edilmiştir ve bu makalelerin çoğunluğunun nitel araştırma yaklaşımı kullanılarak gerçekleştirildiği belirlenmiştir. Araştırma bulguları, yapay zekâ konusunda yayınlanan akademik çalışmaların sayısının yıllar içinde arttığını ancak toplam yayınlanan makale sayısının yetersiz olduğunu göstermektedir. Bununla birlikte yapay zekâ ile ilişkilendirilen iletişim alt konuları arasında çeşitlilik ve çok boyutlu bir yapı gösteren alan olarak halkla ilişkiler alanı dikkat çekerken, halkla ilişkiler uygulama alanları arasında en yoğun

çalışmaların sırasıyla kurumsal iletişim, kriz iletişimi ve itibar yönetimi alanlarında olduğu görülmektedir.

Anahtar Kelimeler: Yeni Medya, Dijital İletişim, Dijital Halkla İlişkiler, Dijital Kurumsal İletişim, Dijital Kriz İletişimi, Dijital İtibar Yönetimi, Yapay Zekâ (A.I.)

Introduction

Human adaptability to the environment encompasses both cultural and biological evolution. In this context, each new generation encounters a different environment from the previous one, necessitating the development of new goals, values, and norms for adaptation (Talug - Eken, 2023, 25). The current era is characterized by technological advancements that are fundamentally transforming work and communication domains, prompting institutions to rapidly adopt new communication technologies to gain a competitive edge. Thus, it is crucial for institutions to keep pace with these developments and understand how to leverage new trends to ensure their sustainability (Baygül Özpınar, 2021, 150).

Artificial Intelligence (AI) is one of the most significant technological advancements of our era, emerging with the principle of mimicking the human brain and becoming widely used across various sectors today (Çataldaş - Özgen, 2021, 5227). Moreover, AI is increasingly influencing the field of communication, becoming an important and detailed area of study due to its extensive applications.

Studies have shown that AI can function as an assistant for communication professionals, enabling them to identify risks, take preventive measures, create content, write and edit news articles, and conduct target audience analysis. These algorithms can reduce the workload of communication specialists, allowing them to work more effectively, and it is emphasized that algorithms focusing better on target audiences can improve over time with usage. It is suggested that positioning AI algorithms correctly and effectively in communication can yield significant business results, supporting communication professionals in areas such as campaigns, copywriting, advertising, and events (Yıldız, 2023, 38).

In alignment with global and local changes, the discipline of public relations, like the field of communication, is undergoing evolution. Initially focused on one-way communication, this discipline has become a broad-ranging profession due to the influence of various factors (Yaman, 2023, 99). For instance, in the past ten to fifteen years, advancements in information and communication technologies have integrated concepts such as artificial intelligence, big data, machine learning, and natural language processing into corporate communication. Additionally, the role of the masses as content creators has shifted crises and crisis management efforts from traditional media to different platforms. Furthermore, tools like voice assistants and chatbots have added new dimensions to customer communication (Soldan 2022, 191).

In this context, the present study aims to examine the impacts of developments and changes in artificial intelligence on the fields of communication and public relations. To this end, the transformation in the communication and public relations profession influenced by artificial intelligence is analyzed within the framework of recent academic research, thereby attempting to forecast the future of communication and public relations with a focus on artificial intelligence. Using a descriptive method, the reflections of artificial intelligence on communication and public relations applications in academic studies published in the Dergi Park system from 1990 to 2023 were examined. The study aims to contribute to future research on the topic by outlining a framework to understand AI-supported public relations practices highlighted in academic studies.

1. Literature Review
1.1. The Concept of Artificial Intelligence

In the literature, the transition from capitalist society to an information society is described as occurring with the recognition of information as the primary factor in the production process. The concept of a super-intelligent society extends beyond the information society, representing a social structure integrated with digitalization and artificial intelligence. In this context, artificial intelligence is a critical element of the super-intelligent society, characterized by its diverse applications and fragmented structure (Canöz at.

al, 2023, 335). AI is defined as a technology capable of processing accumulated data in a meaningful way and providing feedback. This technology has many applications, including virtual digital assistants, autonomous vehicles, and real-time translation services. Particularly, chatbots are automated software applications that can quickly perform repetitive tasks (Baygül Özpınar, 2021, 163). AI systems, designed to mimic human behavior and process large amounts of data, focus on four main areas: image processing, voice recognition and understanding, natural language processing and understanding, and reasoning (Çataldaş - Özgen, 2020, 5287).

The rapid proliferation of AI and its adoption across many professional fields has spurred numerous national and international studies. According to the 2021 National Artificial Intelligence Strategies report by the Ministry of Industry and Trade in Turkey, six main themes have been identified under national AI strategies: training specialists, increasing R&D efforts, preparing ethical and legal frameworks, developing international collaborations, managing the impacts of AI on employment and professions, and transforming institutions and businesses through AI applications. Evaluations of these policies suggest that AI-supported employment and the number of AI-related professions will increase in the near future, AI-based policies and systems will become more widespread in businesses, and efforts will be made to address deficiencies in digital ethics and security (Kavut, 2024, 333).

1.2. Artificial Intelligence and Digital Communication

Today, artificial intelligence continues to influence the shape of the business world and transform many job areas across different sectors. Among these impacts, AI contributes to reducing workloads, enhancing the quality and efficiency of tasks, and serving as an assistant element for experts. Rapidly updated AI algorithms have begun to play significant roles in the communication sector (Yıldız, 2023, 37).

Media researchers initially theorized communication as a human-centric activity, focusing on the sender, receiver, or communicator. However, today, AI programs and devices, such as automated news writing programs and chatbots, signify a new era where AI is not merely a tool or channel but a transformative force in communication sciences and journalism. This

evolution marks a shift towards computer-mediated communication evolving into machine-human interaction, thereby starting a new phase in communication sciences (Şenyüz, 2021, 207–8). AI, originating from computer science, has found applications in communication sciences, software, advertising, digital marketing, interpersonal communication, psychology, business processes, and management. By integrating human-like features into machine software, AI enables time and cost savings, representing a new communication technology (Kavut, 2022, 84).

While artificial intelligence (AI) technologies focus on replicating human intelligence in machines, the discipline of communication has historically centered on the exchange of messages between humans. With the advancement of AI, increasingly intelligent machines and autonomous decision-making systems have entered our lives as tools for constructing, transmitting, and creating messages in communication. This development has prompted communication scholars to gain a more detailed understanding of AI. Beyond merely assisting technologically in communication, AI plays a significant role in areas such as generating personalized communication messages from company customer databases. Today, continuous conversations and interactions facilitated by digital assistants have made AI a direct communication partner. This change signifies a profound transformation in seemingly simple everyday communication (Koç- Başfırıncı, 2023, 125–26). Considering the roles that AI algorithms can undertake in communication, areas such as reputation management, crisis management, content creation, news writing, and media monitoring stand out (Yıldız, 2023, 37). It is noted that understanding the personality types of current and potential customers, along with their expectations from brands, provides businesses with many conveniences in responding to consumer demands (Kavut, 2022, 85).

1.3.   Artificial Intelligence and Digital Public Relations Application Areas

Cataldas and Ozgen (2023, 99) highlighted that digitization has brought about a significant transformation in public relations since the 21st century, converting social media and big data into practical tools. The emergence of

artificial intelligence technology as a new tool in digital public relations activities, along with its ability to mimic human intelligence and perform tasks without being affected by obstacles, suggests the potential for AI to support new possibilities in public relations. In their study on the ideal use of artificial intelligence in public relations, Çeber and Bilbil (2024) outline a conceptual framework for 'meta intelligence' as a new concept emerging from the collaboration between public relations practitioners and artificial intelligence.

With digitization, the target audience, which is critical for the public relations strategies of institutions and organizations, has begun to maintain many of their habits on digital platforms. Consequently, the necessity for public relations activities targeting the target audience to be conducted on digital platforms has arisen; therefore, the analysis and monitoring of the attitudes and behaviors of the target audience active on digital platforms are of great importance (Cataldas - Ozgen, 2023, 5228).

Artificial intelligence algorithms have the capability to perform some of the daily tasks of public relations professionals more quickly and systematically. Hence, artificial intelligence assists professionals in routine tasks such as calendar planning, meeting note-taking, social media management, and email scheduling, effectively working in real-time processes regardless of the various daily problems people encounter (Ilıcak Aydınalp, 2020). Furthermore, artificial intelligence is changing public relations practice by providing professionals with new opportunities to create effective content targeting the audience (Koç - Başfırıncı, 2023, 126). Özgen and Tiryaki (2024, 100), examined AI-supported tools used in the field of public relations through the websites of 300 organizations and identified that applications are currently being utilized in three areas: content creation, media monitoring, and social listening.

Soldan (2022) evaluated the changes brought about by artificial intelligence in areas such as audience analysis, crisis management, campaign design, measurement and reporting, automation of repetitive tasks, influencer identification, content creation, and media monitoring for public relations practitioners. The research findings indicated that public relations

professionals have a positive attitude towards the use of artificial intelligence, positioning it as an effective tool in the industry to leverage new media opportunities. Particularly, they emphasized that the success of artificial intelligence in audience analysis depends on the right strategy and highlighted that with effective use of analysis, the human element can be adequately preserved. Additionally, professionals made a general assessment that artificial intelligence will continue to have a positive impact in areas such as measurement, reporting, task automation, and audience analysis (Soldan, 2022, 202).

The global digital transformation will bring innovative tools and thought models to the field of public relations. In this context, new media and technologies will provide a different perspective on public relations. While the rapid rise of digital and social media has made them indispensable, artificial intelligence, which processes big data and offers practical work methods, will be of interest to both academia and the industry (Yaman, 2023, 114). Supporting this, Türksoy (2022) has identified three main themes highlighting the potential of artificial intelligence applications to transform the public relations profession. Firstly, artificial intelligence will make public relations more efficient by helping professionals make data-driven decisions based on facts and trends. Secondly, artificial intelligence will make it easier to understand consumer preferences and habits, which will be frequently used to create customized content. Thirdly, the public relations profession requires social relationships, political connections, and emotional intelligence. Key activities in this profession include human assessment, intuition, reasoning, and empathy, which cannot be replaced by artificial intelligence (2022, 399).

In Çağlayan's study (Çağlayan, 2021, 809), it was revealed that 94.5% of the participants considered artificial intelligence as an opportunity to accelerate public relations processes, increase their impact, and gain a competitive advantage. Additionally, the majority of participants showed a tendency to follow and incorporate suitable technological developments into their work, while organizations are planning artificial intelligence-based skill development training for their employees. The reason for this is shown to be the automation of repetitive tasks such as sending press releases and creating media lists by artificial intelligence, thereby reducing the workload of public

relations professionals. Furthermore, it is indicated that artificial intelligence-based programs supporting general public relations processes also strengthen crisis communication by enabling public relations professionals to predict potential threats in advance and respond quickly, thus preventing the escalation of negative situations. It is suggested that these applications enable professionals to focus on more strategic tasks by delegating mundane tasks to artificial intelligence, providing support in terms of time, work, efficiency, control, and reporting in processes, and bringing a new perspective to the field of public relations (Ilıcak Aydınalp, 2020). However, data security, which comes with artificial intelligence, is also one of the prominent topics in the literature. Çerçi (2024, 143), highlights the importance of responsible use of artificial intelligence technology in the field of public relations. Emphasizing the need to create security protocols and prevent data breaches, Çerçi underscores that managing stakeholders' data securely is essential in corporate reputation management processes.

1.4. Methodology

In many fields, there are national and international studies focusing on artificial intelligence. This study aims to systematically examine research on artificial intelligence in the field of public relations. In this context, a deductive approach was used to identify a sample of articles published between 1990 and 2023 on the subject in the Dergi Park system, resulting in 32 accessible articles. During the sampling process, articles containing keywords such as "communication and artificial intelligence," "public relations and artificial intelligence," "crisis communication and artificial intelligence," "corporate communication and artificial intelligence," and "reputation management and artificial intelligence" were scanned. The included studies were analyzed using the content analysis method through the MAXQDA analysis program, focusing on titles, abstracts, keywords, publication years, publication languages, research methods used, and authors' areas of expertise.

The analysis aims to provide a general evaluation of the articles and determine which concepts stand out in communication and public relations studies on artificial intelligence conducted in Turkey. By identifying points of differentiation and commonalities between studies conducted in Turkey and

those conducted internationally, this study aims to provide recommendations for future research. The focus is on identifying the communication practices highlighted in studies on public relations and artificial intelligence, with the aim of providing recommendations based solely on key concepts, excluding considerations of quality (Tricco et al. 2016).

1.5.   Scope and Limitations

This study addresses the limited academic research on the impacts of artificial intelligence technologies in the field of communication and public relations. It aims to contribute to the field by evaluating emerging trends in the role of artificial intelligence in communication and public relations applications within the academic realm. The findings of the study are limited to academic research on artificial intelligence in the field of communication and public relations published between 1990 and 2023 and accessible through Dergi Park.

2.   Research Findings
2.1.   Descriptive Findings

When the study sample is evaluated, it is observed that the communication and public relations studies conducted on artificial intelligence have increased over the years. However, it can be noted that the majority of studies are presented in Turkish, while English is the second most common language in which publications are produced (Table 1).

Table 1. Distribution of Studies by Year and Language Variables

Kod Sistemi	2023	2022	2021	2020	2019	TOPLAM
∨ Language						0
> English	3	2	2	1		8
> Turkish	8	6	9		1	24
∑ TOPLAM	11	8	11	1	1	32

When the communication and public relations studies on artificial intelligence in the sample are evaluated in terms of the methods used, it is observed that studies based mostly on literature review (F=14) are conducted. After literature review method, the most preferred methods are descriptive analysis (F=5), content analysis (F=3), survey (F=2), social media (F=2), and

document analysis (F=2) methods, respectively. The least used methods are thematic analysis, experiment, visual content analysis, visual content analysis, and case study analysis. When examined in terms of changes over the years, it is observed that in 2023, one of the years with the highest number of studies published, the most used method is literature analysis. In addition, the necessity of conducting studies on the subject is highlighted by the fact that studies including literature analysis are conducted every year to establish the conceptual field on artificial intelligence, which is a current research topic (Table 2).

Table 2. Distribution of Methods Used in Studies by Year Variable

Kod Sistemi	2023	2022	2021	2020	2019	TOPLAM
Method						0
Thematic Analysis	1					1
Survey- Quantitative Analysis	1		1			2
Content Analysis			3			3
Experiment		1				1
Visual Content Analysis		1				1
Social Media Analysis	1	1				2
Case study	1					1
Document Analysis		1	1			2
Descriptive Analysis		2	3			5
Literature Analysis	7	2	3	1	1	14
Σ TOPLAM	11	8	11	1	1	32

The fields of study of academics conducting research on communication and public relations on the topic of artificial intelligence constitute one of the aspects evaluated within the scope of the research. When the studies are evaluated, it is observed that the majority of the research on this topic is conducted by academics in the field of public relations and promotion. Academics in the fields of public relations and promotion are followed by those in public relations and advertising, as well as visual communication and design. When examining the distribution of publications by year in these fields, it is again observed that publications by academics in public relations and promotion, public relations and advertising, and visual design and communication remain consistent over the years. It can be stated that artificial

intelligence is one of the primary research topics in these communication fields (Table 3).

Table 3. Yıl Distribution of Author Research Areas by Year Variable

Kod Sistemi	2023	2022	2021	2020	2019
Fields					
Business Administration	■				
Cartoon & Animation		■			
Public Relations			■		
Journalizm	■		■		
Radio Tv and Cinema	■		■		
Visual Communication Design	■	■	■		
Advertising	■		■		
Communication Studies	■				
PR & Advertising	■	■	■		
PR & Publicity	■	■	■	■	
Articial Intelligence & Data Mining		■			
Philosophy					■

2.2. Theme and Subtheme Analysis

In this study, content analysis was conducted by including titles, keywords, and abstracts of the communication and public relations studies conducted on artificial intelligence, applying the content analysis method. The resulting topics were analyzed as themes, subthemes, and categories. The aim here is to determine how artificial intelligence, which is increasingly influential in the private sector, is transforming the academic fields of communication and public relations, and to identify new application areas for the subject's various sub-disciplines.

Within this scope, the data, coded based on words and sentences, were analyzed and thematized using content analysis method. As a result of the theme analysis, it was observed that two main themes, digitalization and communication, emerged in the studies on artificial intelligence in communication and public relations. The digitalization theme consists of eight subthemes, while the communication theme comprises ten subthemes.

Moreover, some subthemes under the communication theme exhibit a rich categorical feature containing various sub-disciplinary topics.

2.2.1. Digitalization Theme and Subthemes

Based on the content analysis, the first identified theme is the theme of digitalization. The predominant main concepts related to the theme of digitalization in the studies are digital technologies, the Internet of Things, and human-machine interaction, respectively. In other words, studies on artificial intelligence in the field of communication and public relations are predominantly conducted in conjunction with these topics. Following these topics, other significant subtopics include digital identities, virtual reality, digital hegemony, metaverse, and big data (Figure 1). Based on the findings, it can be stated that a significant portion of the emerging subtopics associated with digitalization influences the field of communication and public relations. These topics are among the forefront of academic interest and research regarding how they will change and transform the field of communication and public relations.
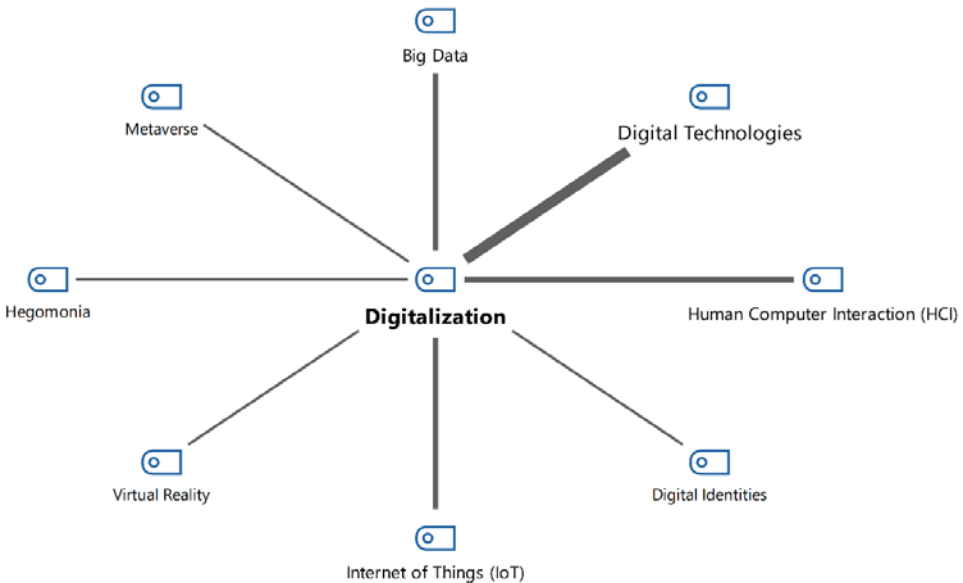

Figure 1. Digitalization Theme and Subthemes

2.2.2.   Comparative Analysis of Studies Conducted in the Field of Digitalization

The examination of the distribution of studies conducted in the field of artificial intelligence in communication and public relations over the years is one of the aims identified in the research scope. It is observed that studies on digital technologies, one of the most conducted topics, were only carried out in 2023. Studies on other topics such as big data and the Internet of Things are attributed to the years 2022 and 2023, while studies on human-computer interaction belong to 2021 and 2022. When considering all the findings, it is noteworthy that studies encompassing all these topics were conducted in 2023. Based on this finding, it can be expressed that studies on artificial intelligence in communication and public relations have become more comprehensive in terms of subtopics over the years (Table 4).

Table 4. Distribution of Studies Conducted on Subthemes of Digitization Over the Years

Kod Sistemi	2023	2022	2021	2020	2019
∨ Digitalization					
Big Data	■	■			
Digital Identities			■		
Metaverse	■				
Virtual Reality	■				
Human Computer Interaction (HCI)		■	■		
Hegomonia	■				
Internet of Things (IoT)	■	■			
Digital Technologies	■				

2.2.3.   Communication Theme and Subthemes

The second theme identified through content analysis is the communication theme. The subthemes of the communication theme include sustainability, media, public relations, digital governance, TV and cinema, art and creativity, communication research, journalism, visual communication, and new communication technologies.

The identified subthemes within the scope of the study were evaluated in terms of the topics with the most studies conducted. It is observed that studies were predominantly conducted on public relations, communication research, new communication technologies, and visual communication media. In addition to these prominent topics, areas such as TV and cinema, digital governance, art and creativity, journalism, and sustainability and social responsibility can be expressed as relatively less explored fields where research has been conducted.

2.2.4. Distribution of Studies Conducted in Sub-Topics of Communication over the Years

Investigating the Distribution of Studies on Artificial Intelligence Conducted in Sub-Topics of Communication over the Years is another aim identified within the scope of the research. When examining the distribution over the years, it is notable that the areas with the most studies conducted as sub-topics under the communication theme are public relations-promotion and communication research. It is observed that studies in these areas have been present since 2019 when these topics began to be studied together. On the other hand, studies in other sub-areas emerged in 2022 and 2023. Based on this finding, it can be stated that studies conducted in sub-areas of communication have become more inclusive over the years (Table 5).

Table 5. The Distribution of Studies Conducted in Sub-Fields of Communication by Year

Kod Sistemi	2023	2022	2021	2020	2019
∨ Communication					
Sustainability & Social Responsibility	■				
> Media		■	■		
> Public Relations	■	■	■	■	
Digital Governance		■			
Tv- Cinema	■		▪		
Art & Creativity	■				
> Communication Research	■	■	■		■
Journalizm	■				
Visual Communication	■	■			
New Communication Tecnologies	■	■	▪		

Another significant finding emerging from the research is that, in contrast to the theme of digitalization, the sub-themes and categories within the communication theme exhibit greater diversity and inclusivity. Accordingly, within the communication theme, a diverse range of studies has been conducted in the sub-fields of public relations, including reputation management, content creation and management, digital PR, crisis communication, and corporate communication. In another heavily researched sub-field, communication studies, research has been conducted on communication practices, communication errors, and communication philosophy. It is observed that studies in the media sub-field have diversified into social media and media studies (Table 6).

Table 6. Distribution of Studies Conducted in the Sub-Theme and Categories of Communication Over the Years

2.3.   Sub-Themes in Public Relations

One of the main research questions of the study is to determine the content of studies on artificial intelligence in the field of public relations. Under the theme of communication, this sub-theme, along with the sub-theme of new communication technologies, stands out as the area where the most studies on artificial intelligence in public relations are produced. When the findings are examined, it can be considered a remarkable research finding that the studies conducted in the field of public relations on artificial intelligence vary and diversify according to the application areas of public relations. Studies on artificial intelligence in the field of public relations are identified in terms of application areas as follows: corporate communication, crisis communication, reputation management, and content design and management (Figure 2).
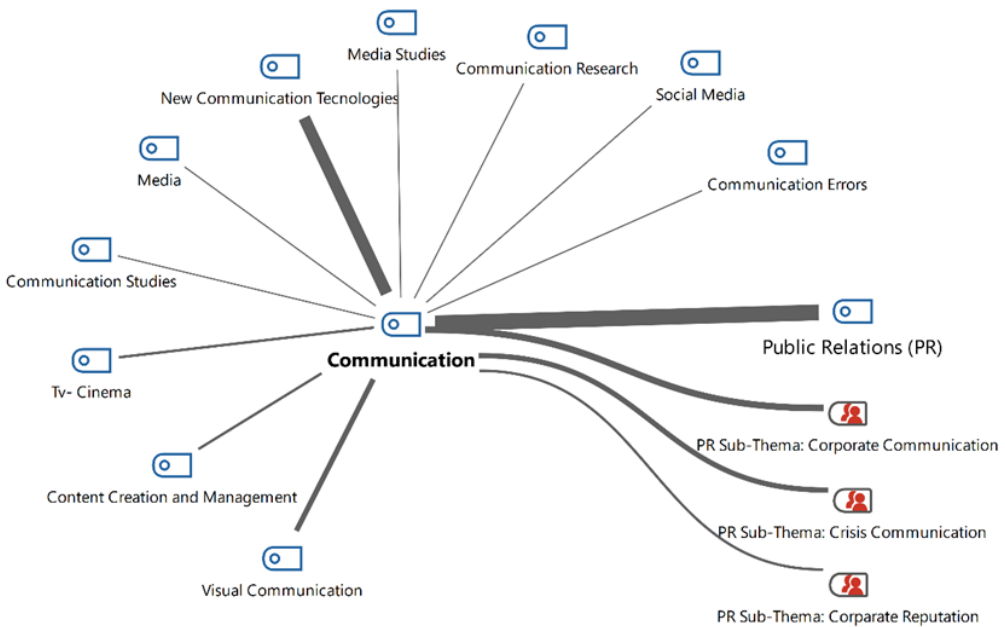

Figure 2. Distribution of Studies Conducted in Subfields of Public Relations

2.3.1. Distribution of Studies in Sub-Fields of Public Relations by Year

Findings indicate that the majority of studies on the use of artificial intelligence in public relations are conducted in the field of corporate communication. Studies focusing on corporate communication and artificial intelligence particularly dominated in 2021. The common feature of these studies from that year is their focus on corporate communication via social media platforms in the post-pandemic period (Table 7).

In the field of public relations, crisis communication has been identified as the second most studied area in terms of the use of artificial intelligence (AI). It would not be inaccurate to say that studies on crisis communication and AI have been conducted almost concurrently since the inception of both topics. Similar to the field of corporate communication, studies focusing on crisis communication through social media alongside digital crisis communication have been observed from the onset of the pandemic in 2020, 2021, and 2022 (see Table 7).

In the field of public relations, reputation management stands out as the third area where the most studies on the use of artificial intelligence are conducted. It can be said that studies on reputation management and artificial intelligence have been addressed in research almost since these topics started to be explored together. Similar to other areas, studies focusing on digital reputation management via social media, along with artificial intelligence, have been observed from the onset of the pandemic in 2020, 2021, and 2022 (Table 7).

The category identified as reputation management stands out as the third area where the highest number of studies on the use of artificial intelligence in public relations is conducted. It can be said that studies on reputation management and artificial intelligence have been addressed in research almost every year since these topics began to be studied together. Similar to other research areas, it is observed that studies focusing on digital reputation management via social media with artificial intelligence have been conducted alongside the topic from the moment the pandemic emerged in 2020, 2021, and 2022 (Table 7).

Table 7. Distribution of Studies in Sub-Fields of Public Relations by Year

Kod Sistemi	2023	2022	2021	2020	2019
⌄ Communication					
⌄ Public Relations					
Corparate Reputation		■	■	■	
Content Creation and Management		■	■	■	
Digital Public Relations	■		■		
Crisis Communication		■	■	■	
Corporate Communication	■		■	■	

3. Discussion

In the discussion section, findings from similar studies in the literature that support the research findings have been presented, and the research results have been discussed.

3.1. Use of Artificial Intelligence in Digital Corporate Communication

This research finding is consistent with the literature. Çataldaş and Özgen (2021, 5232) state that artificial intelligence and algorithms can play a significant role in digital public relations and corporate communication practices. Due to the difficulty of tracking real-time data flows on digital platforms with individual efforts, artificial intelligence software and algorithms offer an effective solution in this area. From the establishment to the management of corporate identity, digital platforms can be monitored and managed through artificial intelligence. Additionally, with artificial intelligence software, sentiment analysis targeting the audience can be conducted on digital platforms, allowing the monitoring of the emotional reactions of the target audience to the activities of the organization.

Similarly, Özpınar (Baygül Özpınar, 2021, 164–65) examined the new applications of the period from the 1980s to the present day as competitive advantages in contemporary corporate strategies, such as dynamic intranets, live broadcasts over the internet, virtual reality, artificial intelligence, and chatbot applications. The study emphasizes the necessity for companies to develop and integrate the latest technologies to provide a more interactive

and innovative communication experience with their internal and external stakeholders. Moreover, it highlights the need for companies to find the right communication tools to facilitate communication and restructure communication units. Currently, many websites are enriched with chatbot modules, inviting visitors to engage in conversation to increase interaction. Companies that rapidly adopt technological developments such as artificial intelligence, virtual reality, and chatbots, and analyze customer expectations, gain a strategic competitive advantage. As trends shift from social media applications to messaging and chat applications, investing in technologies that enable brands to interact with their target audiences becomes increasingly important.

3.2. Utilization of A.I. in Digital Crisis Communication

This research finding is consistent with existing literature. Similar to the findings of the present study, in research conducted by Soldan (2022, 202), participants unanimously agreed on the importance of using AI in crisis management, with consensus that the current role of AI in crisis management is to anticipate future crises. Particularly with the emergence of social media as a significant crisis platform, it would not be erroneous to assert the prominence of AI in crisis management. AI algorithms have the capability to swiftly detect and mitigate crises that may arise on social media. AI-based programs provide public relations professionals not only with crisis communication but also with the ability to predict potential threats in advance and respond rapidly, thereby preventing the escalation of adverse situations (Ilıcak Aydınalp, 2020, 2292–93).

3.3. Utilization of A.I. in Digital Reputation Management

This research finding is consistent with the existing literature. Especially in social media, users can quickly share their experiences about brands, which necessitates brands to take rapid action and develop a proactive communication strategy to minimize potential damage to their reputation. Therefore, success in digital reputation management is based on stakeholders turning into allies and coming together with a collaborative approach (Kara - Kaya 2023, 181).

3.4. Use of A.I. in Digital Content Design-Management Applications

Another application area where studies on the use of artificial intelligence in public relations are conducted is digital content design and management. It would not be wrong to say that studies on digital content management and artificial intelligence have been addressed in research almost since the inception of these topics being studied together.

This research finding is parallel to the literature as well. Sentiment analysis is considered an effective tool that can be used in public relations activities. The analysis of content shared on digital platforms is critically important for understanding the attitudes of the target audience, and the results of this analysis demonstrate that sentiment analysis can play an effective role in measuring the success of activities (Çataldaş - Özgen, 2021, 5231). Therefore, sentiment analysis, natural language generation (NLG), and natural language processing (NLP) are shown as some areas where communicators strengthen their work using artificial intelligence. While target audiences can be analyzed in detail using natural language processing and sentiment analysis, texts can be successfully generated as if they were produced by a real person thanks to natural language generation. Texts obtained through text mining can be processed through certain processes to make inferences. Additionally, personalized content can be delivered to the target audience using artificial intelligence algorithms; through these personalized algorithms, content can be shaped according to the expectations and needs of the target audience (Yıldız, 2023, 31–34).

3.5. Use of Artificial Intelligence in Digital Campaign Management

Public relations is a discipline aimed at improving communication and persuading target audiences, and public relations campaigns are essential to achieving this goal. These campaigns are comprehensive communication efforts aimed at achieving their objectives over a certain period and include research, planning, action, and evaluation stages. Public relations campaigns are highly effective in influencing and persuading individuals, hence they hold great value for brands. However, creating campaigns and analyzing usable data is a time-consuming and labor-intensive process. Artificial

intelligences can expedite this process by quickly collecting, gathering, and making data usable. Furthermore, artificial intelligences analyze the timing and placement of promotional emails and social media posts for prepared campaigns. As a result, public relations professionals can make highly accurate predictions about the effectiveness of their campaigns by using artificial intelligence to analyze topics, timing, and social channels (Ilıcak Aydınalp, 2020).

Conclusion

Despite the studies on artificial intelligence dating back to the 1950s, it has recently come to the forefront with the widespread use and advancement of technology. While traditional communication and public relations practices continue, the opportunities offered by artificial intelligence have significantly transformed studies in these areas, as in many others (Soldan, 2022, 191–92). Therefore, the field of public relations is also described as one of the areas undergoing change and subject to intense debates (Ilıcak Aydınalp, 2020). Furthermore, recent studies emphasize the value that artificial intelligence will bring to the communication profession, discussing a new perspective where those who embrace this technology can gain a competitive advantage (Türksoy, 2022, 407).

When academic and popular literature on the subject is examined, it is evident that artificial intelligence has increasingly attracted attention in communication research, becoming one of the examined and debated topics. In line with this information, the current study focuses on academic studies on artificial intelligence conducted in the field of communication and public relations. Academic studies on artificial intelligence in communication and public relations were analyzed using content analysis and thematic analysis methods to determine which subfields of communication and public relations the studies predominantly focused on. The research focused on examining studies accessible through the Dergi Park system from 1990 to 2023, with a sample of 32 research articles selected for analysis. In the selection process of research articles, a screening process was conducted using the keywords artificial intelligence-communication and artificial intelligence-public relations in the Dergi Park system.

As a result of the content analysis conducted in the research, two main themes were identified. The main themes of studies on artificial intelligence in communication and public relations were named digitalization and communication. The findings show that the topics studied in articles on artificial intelligence in communication and public relations under the theme of digitalization include digital technologies, the Internet of Things, human-machine interaction, digital identities, virtual reality, digital hegemony, the metaverse, and big data. The topics studied under the theme of communication include sustainability, media, public relations, digital governance, TV-cinema, art and creativity, communication research, journalism, visual communication, and new communication technologies. Based on these research findings, it can be stated that, as mentioned, artificial intelligence has transformed and continues to transform communication and public relations fields like all others.

Another main research problem of the study is the examination of the impact of artificial intelligence on the application areas of public relations. It has been observed that academic studies focus on and intensify discussions on corporate communication, crisis communication, reputation management, content design, and campaign management. Based on these findings, it can be said that traditional public relations application areas are being replaced by digital applications in the literature. Therefore, it is important for communication professionals to gain knowledge and experience about the impact of artificial intelligence on communication and public relations by keeping up with technological developments. However, based on the findings of this study, which includes the evaluation of current academic studies, it can be said that studies on artificial intelligence in communication and public relations are insufficient. Similarly, Koç and Başfırıncı (2023, 124) have also mentioned this deficiency in the literature.

On the other hand, another topic discussed in the literature is the risks associated with artificial intelligence. While the applications of artificial intelligence continue to develop, it is stated that despite the significant advantages it brings to users and organizations, it also has some drawbacks (Koçyiğit - Darı, 2023, 435). One of these is the negative effects it may have on certain professional groups and human creativity in the future. However,

contrary opinions also suggest that current developments indicate the potential of artificial intelligence to support human creativity (Şen, 2022, 1331). Another drawback is related to interaction. In some studies, it has been determined that users do not accept artificial intelligence-generated virtual interactions. Another concern is that users may feel uncomfortable with artificial intelligence interactions and may not approve of this form of interaction. In their study, Garip and İnceli (2021, 974) determined that some users do not approve of the presence of artificial intelligence on social media. Another concern is related to the ethical aspect of the issue. The assumption that these learning artificial intelligences may take people as educators is based on the idea that they may acquire some negative and unethical attitudes from people after interacting with them. This example arises from the fact that a bot owned by Microsoft became racist and sexist at the end of a day of interacting with humans. However, it is debatable whether these bots evolved in this direction by their developers or after interacting with community members (Çanğa Bayer, 2021, 606). Another concern is about data security and verification. With the effects of artificial intelligence, companies have raised questions about the accuracy of media data production methods, such as data storage, selling, sharing, privacy agreements, and courts, as well as visual, auditory, and textual data production methods. In this context, it is stated that with the emergence of applications such as Fakenews and Deepfake, which manipulate data, new data problems have emerged alongside correct or incorrect production methods(Çanğa Bayer, 2021, 616).

However, despite all these negative opinions, it is certain that artificial intelligence will play a more prominent role in communication and public relations studies in the near future. However, as Çataldaş and Özgen (2023, 101) have stated, despite the advantages of artificial intelligence in terms of work, time, space, and cost, public relations professionals will remain indispensable in carrying out public relations activities. During this period of change, communication professionals will only mention their changing roles, and what these will be will be determined. The number of studies and applications supporting this change is increasing day by day. Similarly, Danso et al. (2023, 1391) have determined in their study that artificial intelligence demonstrates superhuman abilities in solving real-world problems in the

context of human-machine and computer-mediated communication in communication and public relations. However, along with these abilities, artificial intelligence, which is becoming increasingly effective, can be complemented by skills such as empathy, emotional reactions, and critical thinking that are lacking in humans (Canöz et. al, 2023, 345). Although their numbers are currently limited, how well artificial intelligence can be integrated into communication and public relations fields will be a criterion for the success of future corporate communication, crisis, reputation, and campaign management applications.

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