ARTIFICIAL INTELLIGENCE IN DIGITAL PUBLIC RELATIONS: A DELPHI STUDY*

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Abstract

Digitalization has brought many new technologies. One of these technologies is artificial intelligence, which has started a new change process in public relations. Some digital public relations duties are currently being performed using artificial intelligence, but it is still unclear what role this technology will play in the field's future. In this study, artificial intelligence is discussed in the context of digital public relations. In this vein, the primary purpose of this study is to identify new technologies and trends that may affect the future transformation of public relations. According to the purpose of the study, expert opinions were used by applying the Delphi technique in the research part. The goal of the first round of this research, which consists of two rounds, was to gather as many opinions as possible from participants on the study's subject. In the second round of the research, the points on which the experts agreed and disagreed were determined. As a result of the research, experts agreed on 55 of 59 opinions and did not agree on 4. Depending on the findings of the research, digital public relations activities in the future will likely be based on human and artificial intelligence cooperation.

Keywords: digital public relations, artificial intelligence, Delphi technique.

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DİJİTAL HALKLA İLİŞKİLERDE YAPAY ZEKÂ: BİR DELPHI ÇALIŞMASI*

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Öz

Dijitalleşme birçok yeni teknolojiyi beraberinde getirmiştir. Bu teknolojilerden biri de halkla ilişkilerde yeni bir değişim sürecini başlatan yapay zekadır. Günümüzde yapay zekâ, dijital halkla ilişkilerde bazı görevlerde kullanılmaktadır; ancak bu teknolojinin alanın geleceğinde nasıl bir rol oynayacağı belli değildir. Bu çalışmada yapay zekâ dijital halkla ilişkiler bağlamında ele alınmıştır. Bu doğrultuda çalışmanın temel amacı halkla ilişkilerin gelecekteki dönüşümünü etkileyebilecek yeni teknolojileri ve trendleri belirlemektir. Çalışmanın amacı doğrultusunda araştırma kısmında Delphi tekniğine başvurularak uzman görüşlerinden faydalanılmıştır. İki turdan oluşan bu araştırmanın ilk turunda araştırma konusuna yönelik olarak mümkün olan en fazla görüş elde edilmeye çalışılmıştır. Araştırmanın ikinci turunda ise ilk turda elde edilen görüşlere ilişkin olarak uzmanların üzerinde uzlaştığı ve uzlaşmadığı hususlar belirlenmiştir. Bu kapsamda araştırmanın ilk turunda 4 farklı tema altında toplam 59 farklı görüş elde edilirken ikinci turda ise bu görüşlerin 55'i üzerinde uzlaşıldığı ve 4'ü üzerinde uzlaşılmadığı belirlenmiştir. Araştırmanın bulgularına bağlı olarak gelecekte dijital halkla ilişkiler faaliyetlerinin insan ve yapay zekâ iş birliğine dayalı olarak gerçekleşeceğini söylemek mümkündür.

Anahtar Kelimeler: dijital halkla ilişkiler, yapay zekâ, Delphi tekniği.

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Introduction

Starting by the 21st century, it is seen that new technologies have increased significantly in communication, as in many other fields. Today, people do not need to communicate face-to-face with others to socialize, shop, pay their bills, or meet their various needs. They can also meet these needs with their smartphones, tablets, computers, and other tools. Because of this, it is conceivable to assert that technological advancements have altered how people communicate. Due to digitalization, communication has started to take place through new tools and platforms that have never been in our lives before. From this point of view, using new communication tools in public relations has become necessary. Artificial intelligence (AI) technology, which has become widespread with digitalization, is one of these tools. AI has started to be used in education, health, law, art, and production, as well as in communication. Thus, artificial intelligence has become a technology that has started to be used in public relations (PR) today.

Various tasks such as online press releases, automated e-mails, media monitoring, event management, sentiment analysis, and digital asset management are carried out within the scope of digital public relations activities. In this respect, artificial intelligence and algorithms are becoming essential in digital public relations activities. However, academic studies on the role of artificial intelligence technology in public relations are limited. Artificial intelligence is a constantly evolving technology, and its usage in public relations is anticipated to increase. Although artificial intelligence provides some convenience and advantages regarding digital public relations, it also brings some concerns. The comprehensive studies on the role of artificial intelligence in public relations can contribute to public relations research.

Digital Public Relations

The first quarter of the 21st century emerged as a period in which significant developments were experienced in information and communication technologies compared to previous centuries. In the digitalized world, new communication channels have emerged and become an integral part of the daily lives of new generations. As McLuhan (1994, p. 90) said, technologies have become an extension of people, increasing people's power and speed. Today, people use new means of communication to access digital platforms for various purposes. Therefore, besides having a place in people's daily lives, digital platforms are becoming increasingly essential for various institutions and organizations to reach their target audiences. Public relations, which includes communication activities carried out by various institutions and organizations for the target audience, is also digitalized in line with these developments. As a result, unlike traditional public relations activities, digital public relations, which includes communication activities carried out for the target audience on digital platforms, emerges as a new phenomenon.

Digital public relations is defined as result-oriented, cost-effective, fast, and strategic public relations activities carried out through information and communication technologies (ICT) in computer-based environments (Herbert, 2005, p. 135). In other words, it is the systematic and broad-based application of computer-aided or computer-aided information and communication technologies to modern public relations (Herbert, 2005, p. 139). According to Gifford (2010, p. 64), digital public relations includes publishing an online newsletter to inform stakeholders about the organization's activities, leveraging the power of journalism networks, and disseminating information via the Internet. In this respect, performing public relations activities with various digital tools on the internet means digital public relations.

Digital platforms are increasing daily due to communication technology and the developments in infrastructure. It is possible to say that digital public relations emerge depending on the changes in the target audience. According to a report prepared by *We Are Social* and *Meltwater*, 68% of the world's population uses mobile phones (Kemp, 2023). The same report states that 64.4% of the world population is an internet user, while 60% of the world population is a social media user. As can be seen from these data, more than half of the world's population access the internet and use digital platforms. Digital platforms, which have gained a vast place in the daily use of individuals, have started to digitize the target audience. In this respect, carrying out public relations activities through digital platforms has become necessary. Therefore, digital public relations emerged due to the digitalization of the target audience.

As a strategic communication management, public relations uses various communication tools. Social networks that occur spontaneously on the Internet without the limitation of time and space have allowed public relations to carry out activities such as forming public opinion in these networks, obtaining consent, trust, approval, and prestige (Grunig and Hunt, 1984, p. 42). Therefore, today, various tools and methods such as corporate blogs, websites, search engine optimization (SEO), online newsletters, instant messaging applications, and social media platforms are used as digital public relations tools.

As in traditional public relations, digital public relations aims to create a mutual understanding with the target audience. Today, many traditional public relations practices are carried out on digital platforms. In this respect, digital public relations encompasses various activities such as digital reputation management, digital crisis management, digital storytelling, digital corporate social responsibility, risk management, and marketing-oriented public relations activities.

New Tool in Digital Public Relations: Artificial Intelligence

Artificial intelligence, a technology developed based on the human brain, has

started to be used in many areas today. There are various definitions of artificial intelligence. According to the Council of Europe (n.d), artificial intelligence is defined as a 60-year-old discipline that encompasses a range of sciences, theories, and techniques (including mathematical logic, statistics, probabilities, computational neurobiology, and computer science) aimed at imitating human cognitive abilities. In another definition, artificial intelligence is the science and engineering of creating intelligent machines and intelligent computer programs. It is not limited to human biological issues. (McCarthy, 1998). In this respect, while humans need to sleep, eat, and rest, artificial intelligence does not have such needs. In many definitions, it is stated that artificial intelligence is designed to perform various tasks that require human intelligence (Copeland, 2022; Liu et al., 2020; Oracle, 2022). So, human intelligence is at the core of artificial intelligence and isn't dependent on human biology.

Agrawal et al. (2018, p. 1) mention artificial intelligence as an advanced prediction technology. AI can be used in prediction because it includes machine learning, deep learning, natural language processing, and robots. In this aspect, AI can be an important tool in future studies. Artificial intelligence, in which technologies such as image processing, natural language processing, robotics, and machine learning are integrated, is also a cognitive science (Jay et al., 2018). There are some common elements in all these views and definitions regarding artificial intelligence. In this respect, artificial intelligence is believed to think like humans and fulfill specific roles and tasks carried out by humans in social life. As mentioned before, artificial intelligence is not limited to some biological factors specific to humans. In this respect, artificial intelligence can operate uninterruptedly for seven days and 24 hours, and it is possible to perform human activities without biological limitations specific to humans.

Artificial intelligence is inspired by the human brain. Although neuroscience plays an active role in artificial intelligence studies, according to some views, artificial intelligence is a part of computer science, and the purpose of artificial intelligence is to create useful systems, as in any engineering field. For this reason, the biological plausibility of algorithms developed through artificial intelligence is ignored (Alpaydın, 2016, p. 19). In this respect, artificial intelligence differs from the human brain. Vision, speech recognition, and learning functions are some of the brain's abilities. Applying these capabilities to machines is thought to have significant economic benefits (Alpaydın, 2016, p. 19). Artificial intelligence technology is expected to become more widespread with the increase of algorithms to fulfill these functions.

Artificial intelligence technology has various application areas in different fields and has also become visible in public relations today. Galloway and Swiatek (2018) mentioned that artificial intelligence is defined differently in different fields, so it is vital to conceptualize it in terms of public relations. So, they described artificial intelligence in public relations as follows: "Tech-

nologies showing humanoid cognitive abilities and performing humanoid functions in undertaking public relations activities, independently or together with public relations practitioners" (Galloway and Swiatek, 2018).

As can be understood from the definition above, artificial intelligence is a tool that can function independently or with public relations practitioners in public relations processes. Although its origins are old, artificial intelligence is a new technology in digital public relations. However, the use of artificial intelligence as a new tool in digital public relations is increasing. Considering the marketing aspect of public relations, it is necessary to analyze the target audience well and carry out suitable communication activities for the target audience's expectations. Artificial intelligence is essential at this point, especially in analyzing the target audience on digital platforms. Today, it is known that artificial intelligence-based software is used to carry out public relations activities for the target audience on digital platforms. These kinds of software have functions such as digital asset management, communication management, content management, campaign management, e-mail distribution, press monitoring, and press release creation (Capterra, 2021). Various software with these functions is used in digital public relations activities today.

Research Design

In this study, a Delphi method was conducted to determine the opinion of experts on the role of artificial intelligence in public relations. This study aimed to gather opinions from experts about the effect of artificial intelligence technology and identify new trends, technologies, and developments in the field of public relations.

Methodology

The method determined by the subject and purpose of the research is the Delphi technique. The Delphi technique, which Dalkey and Helmer developed in the 1950s, is a method used to determine the opinions of people who are considered experts on a particular subject (Hsu & Sandford, 2007). According to Kennedy (2004), the Delphi method allows experts (panelists) to share their opinions and knowledge about a complex problem anonymously, see how their assessment of the problem matches that of others, and change their minds, if necessary, after reconsidering the results of the group's work.

Taylor (1978) defines the Delphi technique as a tool used by policymakers to predict the future and make plans (as cited in Wakefield & Watson, 2014). For this reason, it would be helpful to use the Delphi technique to investigate various issues in the field of public relations. Although there is no universally accepted definition, rule, or procedure regarding the Delphi technique, a typical model has been developed for Delphi studies (Powell, 2003). Delbecq et

al. (1975) outlined ten steps in the early use of the method; however, the ten steps were reduced to six main elements over time (as cited in Wakefield & Watson, 2014). These:

1. Selection of participants and requesting their participation

2. Determination of the number of rounds required for the study

3. Development of various tools

4. Responses and participation as the study progresses

5. Analysis of data at various stages and

6. Preparation of a final report

The Delphi technique was determined to be the most appropriate method in light of the study's topic and goals. Although there are no strict rules in the execution of the Delphi technique, all stages have some standard features. These are anonymity, controlled feedback, and statistical analysis of participants' responses (Dalkey, 1969). In this respect, anonymous participation in the Delphi process reduces the possibility of one of the participants being dominant over the others (Dalkey, 1969). It is stated that the studies made with the Delphi technique can take up to 2 years; however, it is noted that the public relations studies carried out with this method in the last ten years are generally completed in 3-6 months (Delbecq, 1975; as cited in Wakefield and Watson, 2014). It is possible that digital technologies have a role in shortening the research period.

Selection of experts

The selection of experts is essential to ensure that the most accurate information is represented among the panelists within the scope of the research topic (Delbecq, Van de Ven, & Gustafson, 1975; as cited in Wakefield and Watson, 2014). If the experts are not selected by the research topic and method, it is possible that the research will be interrupted or that the desired results may not be achieved. For this reason, it was found appropriate to include participants from three different segments by the subject and method of the research. These:

1. Public relations scholars

2. Public relations agency representatives

3. People who work in the public relations unit of institutions or organizations.

In this context, participants who are experts in their fields from all three groups mentioned above were included in the study. The criteria for the participants to be considered as experts are as follows:

1. To have training or professional experience in public relations

2. Actively working in the public relations or media industries

3. Having experience in content management, media monitoring, SEO expertise, and reputation management on digital platforms

4. Having used artificial intelligence-based public relations software before

5. Having done academic studies on artificial intelligence, big data, and public relations

It is criterion sampling, a method determined within the abovementioned criteria. According to Patton (1987), while generalizations are made about the universe through probabilistic sampling, an in-depth analysis of situations containing rich information about a particular subject is made with purposive sampling (as cited in Yıldırım & Şimşek, 2016). In this context, individuals who met at least two of the criteria mentioned above were accepted as experts and included in the study. Ten experts who stated that they would participate in all stages of the research were included in the study. The experts' professions and areas of expertise participating in the research are shown in the table below.

Table 1. Occupation and expertise area of the participants

Expert	Gender	Occupation	Expertise Area
A1	Male	Academician	New Media and Communication
A2	Female	Academician	Communication, Digital Communication, Media
A3	Male	Academician	Corporate Communication, Public Relations
A4	Male	Academician	Public Relations, Digital Communication
A5	Female	Academician	Public Relations, Corporate Communication
A6	Female	Academician	Public Relations, Digital Communication
B1	Male	Head of Public Relations Agency	Public relations
B2	Male	Media Monitoring Center Assistant Manager	Media Monitoring, Public Relations
C1	Female	Marketing Communication and Media Relations Specialist	Marketing Communication, Media Relations
C2	Male	Corporate Communication Specialist	Corporate Communication

As shown in the table, participants from all three segments, including academics, agency representatives, and sector employees, were determined and included in the study. Academicians are represented by the letter A, agency representatives B, and industry experts with the letter C.

Research questions

This study was carried out in two rounds. In the first round of the survey, open-ended questions were asked to the participants, while in the second stage, semi-structured questions in the Likert scale type were asked depending on the answers obtained. In the first round of the research, the following open-ended questions were sent to the experts via e-mail:

1. What kind of roles can artificial intelligence, big data, and algorithms play in the future of public relations?

2. What kind of competencies should future public relations professionals have when you consider the developments such as digitalization, social media, big data, and artificial intelligence?

3. What kind of communication technologies, social media innovations, or trends may come to the fore more in the field of public relations in the future?

With these open-ended questions prepared for the first round of the research, it is aimed to obtain as many opinions as possible within the scope of the research topic. In this context, during the preparation process of the research questions, care was taken not to direct the participants and to arrange them in a way that would encourage them to express all kinds of opinions and thoughts. After all participants submitted their responses, the data obtained were analyzed.

Results

As a result of the analysis of the answers to the open-ended questions sent in the first round of the research, it was understood that 10 participants expressed 84 opinions. 84 opinions were reduced to 59 Likert scale questions under four different categories for the second round of the research. The four categories identified are as follows:

a. Tasks performed in digital public relations through artificial intelligence, big data, and algorithms.

b. Advantages of using artificial intelligence in the field of public relations.

c. Competencies that public relations specialists should have.

d. Future public relations in the context of artificial intelligence and algo-

rithms.

The opinions expressed by each participant were prepared in the Likert scale question type and presented to all participants in the second round. Thus, the consensus and non-consensus opinions were determined at the end of the second round. According to Loughlin and Moore (1951), while the consensus rate should be at least 51%, this rate is at least 80% for Ulschak (1983) and at least 75% for Mitchell (1991) (as cited in Bahar & Somuncu, 2021). In this study, the consensus threshold was determined as 80%. For this reason, opinions with a consensus rate of 80% and above were accepted as consensus opinions and opinions below 80% consensus rate were accepted as non-consensus opinions. The findings obtained in the second round of the research are presented in the tables below.

Tasks performed in digital public relations through artificial intelligence, big data, and algorithms.

Table 2. Findings regarding the first theme

		Frequency	Arithmetic mean	Consensus Rate
1	Automation-based functions and management of strategic communications	10	4.7	%94
2	Natural language processing, e-bulletins, social shares, voice command systems become more common with the use of artificial intelligence in public relations	9	4.55	%91,11
3	Routine tasks such as social media monitoring, online press releases, creating media lists, transcoding audio and video speech, calendar scheduling, note taking, scheduling e-mails, creating content, predicting media trends are used in digital public relations through artificial intelligence based systems	10	4.4	%88
4	In case of an advanced data set, algorithms can play an active role in sentiment analysis.	10	4.5	%90
5	There must be sufficient data for media monitoring.	10	4.3	%86
6	Artificial intelligence-supported software is not yet able to fulfill the task of creating a sufficient level of press releases, However the need for staff may decrease in line with future developments.	10	4.1	%82

7	Apart from routine tasks based on automation, it is possible for artificial intelligence to perform some tasks that it can intervene instantly on digital platforms; however, artificial intelligence algorithms must have the right datasets for this.	9	4.22	%84,44
8	Artificial intelligence, big data and algorithms can play roles in all research, planning, implementation and measurement phases of public relations.	10	4.5	%90
9	With artificial intelligence, the target audience can be segmented and personalized content can be produced.	10	4.5	%90
10	Big data and algorithms make the implementation and measurement phases transitory. In this case, simultaneous measurement becomes possible during the implementation process.	10	4.4	%88
11	Algorithms send alerts about negative developments, allowing public relations professionals to respond more quickly.	10	4.3	%86
12	Many institutions cannot benefit from artificial intelligence because they do not have sufficient knowledge and technical equipment yet.	10	4.0	%80

The first theme created within the scope of the research is "Tasks performed in digital public relations through artificial intelligence, big data, and algorithms". As can be seen from the table above, a consensus was reached on all 12 opinions under this theme. Reaching a consensus on all the views under this theme is also compatible with the conceptual framework. In this context, marketing expert Christopher Penn also expressed that artificial intelligence provides convenience to public relations experts regarding automation-based jobs (Maldonado, 2020). It is possible to create e-bulletins, social shares, and commands with artificial intelligence software. In addition, in terms of sentiment analysis, artificial intelligence software makes analyses based on various algorithms today. While performing tasks such as sentiment analysis and media monitoring with artificial intelligence software, the target audience's characteristics also become more evident. This makes it possible to better identify the target audience through artificial intelligence (Mason, 2019). Determining the target audience also makes it possible to segment it. So digital public relations activities can be carried out more effectively.

Advantages of using artificial intelligence in the field of public relations

Table 3. Findings regarding the second theme

		Frequency	Arithmetic mean	Consensus Rate
1	Goal-oriented decisions can be made.	9	4.33	%86,6
2	Better adaptation of the profession to today's fast and flexible communication process can be achieved.	10	4.2	%84
3	Tasks that require time, such as media monitoring and campaign planning, can be accomplished more quickly and efficiently.	10	4.4	%88
4	Thanks to artificial intelligence, large amounts of data can be analyzed and interpreted and thus transformed into a value in terms of public relations.	10	4,6	%92
5	Algorithm-based systems enable a process that allows us to act reactively in public relations activities.	10	4.6	%92
6	Automating tasks can reduce employee workload. However, the cooperation of the public relations professionals with artificial intelligence-based systems is important.	10	4.4	%88
7	AI brings together different areas of expertise in public relations	10	4.4	%88
8	Problems and opportunities can be identified in a more practical way.	10	4.4	%88
9	Simulations created with artificial intelligence can enable different options to be evaluated.	10	4.2	%84
10	It makes it possible to make predictions about the future.	10	4.1	%82
11	Public relations campaigns can be planned more accurately.	10	4.0	%80
12	AI can remove communication barriers with some of its features such as language translation.	10	4.22	%84,44
13	AI enables more efficient use of scarce resources.	10	4.3	%86
14	Artificial intelligence applications, which have digital asset management features, can play a role in both creating and preserving corporate culture and corporate memory.	10	4.1	%82

15	Basic features in artificial intelligence software such as digital asset management, media monitoring, content management provide benefits to public relations agencies in terms of time saving, efficiency and security.	10	4.1	%82
16	Media analysis and tracking can be done globally thanks to algorithms.	10	4.4	%88
17	Digital technologies have increased the speed and capacity of doing business in public relations, but they have not changed the essence of the field. Today, public relations is still based on creating a strategy with a social stakeholder approach.	10	4.2	%84

The second theme created within the scope of the research is "Advantages of Using Artificial intelligence in the field of public relations". A consensus was reached on all 17 opinions under this theme. Reaching a consensus on all views under this theme is also consistent with the conceptual framework. Through artificial intelligence, target-oriented decisions can be made, the profession can be adapted to the fast and flexible communication process, tasks can be fulfilled faster and more practically, reactive action can be taken, routine work can be automated, and efficiency can be achieved. All these views are compatible with the view that artificial intelligence benefits the field of public relations in terms of automation, speed, and accuracy (Maldonado, 2020) and makes it more cost-effective (Galloway and Swiatek, 2018).

Competencies that public relations specialists should have

Table 4. Findings regarding the third theme

		Frequency	Arithmetic mean	Consensus Rate
1	Should have proficiency in new communication technologies and software.	10	4.5	%90
2	Although not as much as a data expert, they should have a good grasp of the basic concepts of data science.	10	4.2	%84
3	They need to have knowledge about all processes related to AI based application and software.	10	3.4	%68
4	Must work with data analysts and be proficient in reading and evaluating data.	10	4.4	%88
5	Should have digital literacy skills.	10	4.7	%94
6	Should have extensive knowledge of search engine optimization (SEO).	10	4.4	%88

7	They should have professional-level technical knowledge of social media advertising.	10	4.1	%82
8	Must have the ability to use software to process big data	10	3.8	%76
9	Should be open-minded and aware of innovations.	10	4.7	%94
10	Since they save time through AI based software, they should use their time for more creative and effective public relations work.	10	4.7	%94
11	They should have basic statistical knowledge.	10	4.0	%80
12	They must be proficient in foreign languages, including English.	10	4.7	%94
13	The birthplace of the public relations profession, many technological companies and software operating around the world today are based in the USA. For this reason, public relations experts should be able to examine the US-based case studies well.	10	4.2	%84
14	They should follow social media trends.	10	4.7	%94
15	They should follow the media through independent channels and be able to look at the events from multiple perspectives.	10	4.9	%98

The third theme of the research is "Competencies that public relations specialists should have". While consensus was reached on 13 of the 15 opinions under this theme, it was seen that no consensus could be reached on 2 of them. Opinions where consensus could not be reached are related to the ability of public relations professionals to use big data and artificial intelligence software. In this context, the most important criterion stated in previous studies on this subject is the opinion that it is sufficient to have a basic using skill (Galloway & Swiatek, 2018). From this point of view, it is possible to say that it would not be the right approach to expect public relations experts to be technology experts as much as data experts. In this respect, it is possible for public relations specialists to cooperate with other experts when necessary, and they do not have to be as competent as data experts.

Future public relations in the context of artificial intelligence and algorithms

Table 5. Findings Regarding the Fourth Theme

		Frequency	Arithmetic mean	Consensus Rate
1	It is thought that artificial intelligence, big data and algorithms will play a helpful and guiding role in the field of public relations; because public relations applications are increasingly moving to virtual channels.	10	4.7	%94
2	It is thought that "algorithmic public relations", where algorithms play an important role in public relations processes, will come to the fore.	10	4.5	%90
3	The data created by artificial intelligence for the target audience can play an important role in strategy development in public relations activities.	10	4.3	%86
4	In the future, autonomous vehicles may become important in exhibition, and organization areas. In this context, autonomous robots can be used especially in organizations in terms of public relations activites.	10	4.0	%80
5	Almost all the daily repetitive routine work will be automated with little or no human need.	10	3.5	%70
6	It will be possible to create dynamic bulletins specific to the person/audience such as ad targeting.	10	4.6	%92
7	More focused and personalized work will come to the fore through AI.	10	4.6	%92
8	In the future, the technological competencies of experts will come to the fore and multi-disciplinary studies will gain importance.	9	4.66	%93,3
9	In 10 years, all the instruments currently used in the field of public relations will change radically.	10	3.7	%74
10	Individual, technology and abstract concepts will come to the fore in public relations	10	4.5	%90
11	It will be possible to measure public relations activities more effectively.	10	4.4	%88
12	It is expected that a hybrid business model, in which human and artificial intelligence cooperation comes to the fore, will become increasingly common in the field of public relations	10	4.5	%90

13	In the near future, like 10 years later, it is not possible to talk about a public relations activity that can only be carried out through artificial intelligence, without human involvement.	10	4.3	%86
14	PR will turn into an indispensable field in both public and private sectors with technological developments.	10	4.1	%82
15	Measurement and social media analytics will gain more importance in PR	10	4.4	%88

The last theme created within the scope of the research is "Future Public Relations in The Context of Artificial Intelligence and Algorithms". While consensus was reached on 13 of the 15 opinions under this theme, it was seen that no consensus could be reached on 2 of them. The first view, without consensus, is that human workforce will not be needed for routine tasks. However, in another view, experts agreed on a hybrid working model based on human and artificial intelligence cooperation. Although there are certain advantages provided by artificial intelligence technology in public relations today, it is not yet realistic to discuss a PR process that is entirely automated. Another viewpoint that could not be agreed upon said that all public relations instruments will alter during the next ten years. Although change and transformation are accepted in public relations, nobody anticipates that all PR tools will look completely different in at least 10 years.

Conclusion and Discussion

Individuals, nature, and all objects in the world change over time for various reasons. Although its past is as old as the history of humanity, public relations have also changed over time for various reasons. Digitalization has been very effective in the transformation that has taken place in public relations since the 21st century. Due to digital transformation, social media and big data have become practical tools in public relations. In addition to these tools, artificial intelligence technology is now emerging as a new tool in digital public relations activities.

The concept of artificial intelligence, which emerged in the 1950s, has become a technology used in many areas since the 21st century. Based on the understanding of imitating human intelligence, this technology constantly learns through various methods, improves itself as it learns, and simultaneously can fulfill the tasks assigned to it without being affected by some physiological barriers specific to human beings. In this respect, it has become a technology used in many areas, as well as in digital public relations. Artificial intelligence is a new technology for public relations and can potentially transform the field with some of the features it offers.

In this study, new trends that may affect the future of public relations were investigated by applying the Delphi technique within the scope of ex-

pert opinion. According to the purpose of the research, the sample group was determined, and expert opinions were analyzed. In this context, the possible effects of artificial intelligence and algorithms on public relations, new developments and trends that may occur in the field of public relations, and new areas of expertise needed in the sector were discussed.

The first research question asked to the participants within the scope of the study was about the role of artificial intelligence, big data, and algorithms in the future of public relations. Participants agree that artificial intelligence and algorithms will be functional in public relations. In addition, they agreed that artificial intelligence will be more effective in routine-based public relations activities. This consensus also supports the previous academic literature on artificial intelligence and public relations. In this context, Maldonado (2020) stated that artificial intelligence benefits public relations regarding automation, speed, and accuracy, while Galloway & Swiatek (2018) noted that artificial intelligence makes public relations cost-efficient. Today, various tasks such as media monitoring, press release creation and distribution, calendar planning, forecasting media trends, e-mail scheduling, target audience segmentation, and sentiment analysis can be performed with artificial intelligence-based software. These tasks can take days or weeks to be fulfilled by human power, but they can be fulfilled in much shorter times through artificial intelligence. In this framework, it can be said that artificial intelligence and algorithms will play an active role in the future of public relations. However, a public relations process based solely on artificial intelligence is not possible in the near future. Therefore, a digital public relations model based on artificial intelligence and human cooperation is expected to come to the fore.

The second research question was about the competencies that future public relations professionals should have. In this context, the experts agreed on having competence in new communication technologies and software, having digital literacy skills, having basic statistical knowledge, and being able to follow social media trends. However, there is no consensus on being competent in all aspects of artificial intelligence and big data. Using technologies like artificial intelligence and big data requires high competence. It is unrealistic to expect someone with a public relations background to be proficient in big data and artificial intelligence procedures. In this context, the most important criterion stated in previous studies regarding this issue is the opinion that it is sufficient to have a basic using skill (Galloway & Swiatek, 2018). Because of this, it is a more appropriate strategy for public relations professionals to cooperate with experts in other fields when necessary while performing their duties. Thus, it can be said that digital public relations will have a more collaborative and interdisciplinary structure in the future.

The last research question was about the communication technologies, social media innovations, or trends that may come to the fore more in public relations. According to experts, public relations will soon be dominated by

algorithms, virtual environments, robotics, tailored content, interdisciplinary collaboration, measurement, and human-artificial intelligence interaction. However, they disagree that all public relations techniques would be replaced over the next ten years. In this regard, even if the industry has undergone change and transformation, it is not anticipated that all public relations instruments will significantly change for at least ten years.

This study is important to investigate the effects of artificial intelligence technology on public relations. Academic studies on the relationship between artificial intelligence and public relations are limited. It is believed that this study contributes to the field in terms of addressing the role of artificial intelligence and new trends in public relations, aiming to achieve a common consensus by bringing together expert opinions and being a resource for upcoming research in this area. Within the scope of this study, it can be concluded that artificial intelligence and algorithms will be more visible in the future of public relations. Although artificial intelligence provides some advantages regarding time, space, and cost in public relations activities, it seems impossible to carry out public relations activities without public relations professionals in the near future.

Expert opinions were discussed in this study. All the participants included in the survey are people who continue their profession in Turkey, and it is recommended that experts from different countries should be included in future studies. Thus, the results obtained can be investigated more deeply by performing a comparative analysis in subsequent studies. In-depth interviews can also be conducted with institutions that use artificial intelligence within the scope of digital public relations activities. There are concerns about artificial intelligence because it is a new tool used in digital public relations. For this reason, it is essential to focus on academic studies to minimize these concerns.

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