International
SOCIAL SCIENCES STUDIES Journal
Open Access Refereed E-Journal & Indexed & Publishing
e-ISSN: 2587-1587

REVIEW ARTICLE
Communication Studies

Communication Revolution: The Rising Power of Human Interaction with Artificial Intelligence

İletişim Devrimi: Yapay Zeka İle İnsan Etkileşiminin Yükselen Gücü

Eda Sezerer Albayrak [1]

ABSTRACT

As the pace of technology's integration into our lives accelerates, artificial intelligence (AI) is leaving deep traces in every aspect of the human experience. Especially in recent years, the interaction of AI with humans has rapidly found a place in our daily lives and transformed our traditional forms of communication. The ability of computers and algorithms to think, learn and even empathize in a human-like way is no longer just a topic of science fiction, but a real phenomenon. From education to health, from commerce to personal relationships, AI is reshaping the fundamental dynamics of human communication. The power of artificial intelligence to change human communication follows a parallel path with the evolving needs and expectations of human beings along with technology. In education, artificial intelligence, which offers students a personalized learning experience, creates a more effective educational environment by lightening the burden on teachers. In the healthcare sector, AI accelerates patients' access to the right diagnosis and treatment, while making healthcare services more accessible. In the field of commerce, AI interacts with humans at every stage from customer service to sales, providing faster, more efficient and personalized service. However, this rapid integration of artificial intelligence brings with it many questions and debates. As the boundary between humans and machines becomes increasingly blurred, the impact of these interactions on human values is also being observed. How empathetic AI can be, what ethical issues it can raise, and even the future dynamics of human-robot relationships present as many challenges as opportunities. In this article, we will examine the impact of AI on human communication from a broader perspective, detailing the roles of AI in areas such as education, health and commerce. We will also open the doors to a new era for humanity by discussing the advantages AI offers, the potential dangers it brings, and the future potential of this technology.

Keywords: Artificial Intelligence Communication, Human-Machine Interaction, Personalized Learning

ÖZET

Teknolojinin hayatımıza entegre olma hızı arttıkça, yapay zeka (YZ) insan deneyiminin her alanında derin izler bırakıyor. Özellikle son yıllarda, YZ'nin insanlarla etkileşimi günlük hayatımızda hızla yer edindi ve geleneksel iletişim biçimlerimizi dönüştürdü. Bilgisayarların ve algoritmaların insan benzeri bir şekilde düşünme, öğrenme ve hatta empati kurma yeteneği artık sadece bir bilim kurgu konusu değil, gerçek bir olgu. Eğitimden sağlığa, ticaretten kişisel ilişkilere kadar, YZ insan iletişiminin temel dinamiklerini yeniden şekillendiriyor. Yapay zekanın insan iletişimini değiştirme gücü, teknolojiyle birlikte insanların gelişen ihtiyaçları ve beklentileriyle paralel bir yol izliyor. Eğitimde, öğrencilere kişiselleştirilmiş bir öğrenme deneyimi sunan yapay zeka, öğretmenlerin yükünü hafifleterek daha etkili bir eğitim ortamı yaratıyor. Sağlık sektöründe, YZ hastaların doğru teşhis ve tedaviye erişimini hızlandırırken, sağlık hizmetlerini daha erişilebilir hale getiriyor. Ticaret alanında, YZ müşteri hizmetlerinden satışlara kadar her aşamada insanlarla etkileşime girerek daha hızlı, daha verimli ve kişiselleştirilmiş hizmet sağlıyor. Ancak yapay zekanın bu hızlı entegrasyonu beraberinde birçok soru ve tartışmayı da getiriyor. İnsanlar ve makineler arasındaki sınır giderek belirsizleştikçe, bu etkileşimlerin insan değerleri üzerindeki etkisi de gözlemleniyor. Yapay zekanın ne kadar empatik olabileceği, hangi etik sorunları gündeme getirebileceği ve hatta insan-robot ilişkilerinin gelecekteki dinamikleri bile fırsatlar kadar birçok zorluk sunuyor. Bu makalede, yapay zekanın insan iletişimi üzerindeki etkisi daha geniş bir perspektiften incelenecek ve eğitim, sağlık ve ticaret gibi alanlardaki yapay zekanın rolleri ayrıntılı olarak açıklanacaktır. Ayrıca, yapay zekanın sunduğu avantajlar, getirdiği potansiyel tehlikeler ve bu teknolojinin gelecekteki potansiyeli tartışılarak insanlık için yeni bir çağın kapıları açılacaktır

Anahtar Kelimeler: Yapay Zeka İletişimi, İnsan-Makine Etkileşimi, Kişileştirilmiş Öğrenme

How to Cite This Article
Sezerer Albayrak, E. (2025). "Communication Revolution: The Rising Power of Human Interaction with Artificial Intelligence" International Social Sciences Studies Journal, (e-ISSN:2587-1587) Vol:11, Issue:5; pp:794-803. DOI: https://doi.org/10.5281/zenodo.15535535

Arrival: 10 February 2025
Published: 30 May 2025

ARTIFICIAL INTELLIGENCE AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES

There are various long-standing debates on the definition of artificial intelligence. Since the beginning of the field of artificial intelligence, different theories about intelligence have been put forward. Most experts have argued that when the concept of intelligence is viewed from a narrow perspective, there may be different definitions of

[1] Assoc. Prof. Dr., KTO Karatay University, Faculty of Economics, Administrative and Social Sciences, Department of Communication Design, Konya, Türkiye. ORCID: 0000-0002-2195-0772

intelligence (Seyrek, Yıldız, Emeksiz, Şahin, & Türkmen, 2024, p. 846). The concept of artificial intelligence was first mentioned by John McCharty, Marvin L. Minsky, Nathaniel Rochester and Claude E. Shannon in a proposal letter submitted to the Dartmouth Conference in 1956. In addition, John McCharty is recognized as the inventor of the concept (Alpaydın, 2013). McCharty defines artificial intelligence as "the science and engineering of making human-like intelligent machines, especially intelligent computer programs" (Arslan, 2020, p. 76). Machines create neural networks similar to the human brain and create an artificial information processing system by imitating the working strategy of the human brain. As a result of these imitations, brand new artificial processes similar to the processes of the human brain emerge (Armağan, Efe, Güzel, & Uluışık, 2024, p. 60). If it is necessary to make a general definition for artificial intelligence, it is the event of imitating human behaviors such as reasoning and inferring meaning (Öztemel, 2003). It goes through processes such as reasoning, concluding and determining the problem by looking at the input and output of an event and utilizing the data pool it has (Yılmaz, 2012). Artificial intelligence has been a continuously developing system from past to present. Studies in the field of artificial intelligence are also increasing day by day. While these studies initially focused only on certain techniques, as technology has developed, the field of these techniques has expanded in the same way. Usage areas have diversified and ease of use has increased. The concept of artificial intelligence cannot be considered as a technology alone. "It is a general term used to describe a set of technologies and methods such as machine learning, natural language processing, data mining, neural networks or an algorithm" (Akdeniz & Özdinç, 2021, p. 913). Artificial intelligence is all advanced machines and computer programs that mimic the functions of the human brain and perform similar functions. The term artificial intelligence was first used by McCharty and his team in 1956. From the first time it was used until this period, artificial intelligence technologies have been divided into various sub-branches depending on the situation of the event to be analyzed. These include fuzzy logic, artificial neural networks, expert systems, machine learning and genetic algorithms (İşler & Kılıç, 2021, pp. 2-3).

Fuzzy Logic: Description is a method based on using verbal expressions in place of mathematical expressions in order to avoid ambiguities that may arise when using mathematical expressions. It is very difficult to express the sentences we use in daily life in a mathematically understandable way. Here, we encounter the concept of fuzziness. In fuzzy logic, there is a specific fuzzy controller (Uygunoğlu & Ünal, 2005, p. 14)

Artificial Neural Networks: It was developed by imitating the nervous system in a human-like manner. These developed nerve cells collect the data they receive from the outside, produce the output by entering activation and deliver it to other cells (Akdeniz & Özdinç, 2021, p. 914). Öztemel defined artificial neural networks in his book as "Computer systems developed to automatically realize the abilities such as deriving, creating and discovering new information through learning, which are the characteristics of the human brain, without any help" (Öztemel, 2003, p. 29)

Expert Systems: It is a system designed by transferring the knowledge and experience of people who are experts in a field to technological machines, and using this knowledge and experience to find solutions to problems that arise without the need for an expert through computers. In short, it is the imitation of how an expert would solve a specific problem by computers (Şahin & Börklü, 2008, p. 117). There are 4 basic elements in expert systems; Provision of Knowledge, Knowledge Base, Inference Mechanism and User Interface (Öztemel, 2003, p. 15).

Machine Learning: It is a technology for technological machines to learn. Computers learn the relationship between inputs and outputs of an event through examples (Öztürk & Şahin, 2018, p. 27).

Genetic Algorithm: It is a technology developed to solve problems that are difficult to solve with traditional technological ways more easily. It tries to produce better and new solutions by scanning the solutions used for previous problems. This process continues to produce newer and better solutions (Öztemel, 2003, p. 23)

ARTIFICIAL INTELLIGENCE FROM YESTERDAY TO TODAY

The historical origins of artificial intelligence are rooted in mythological and philosophical debates about the creation of "intelligent" beings in human history. In ancient cultures, the ability of non-human beings to think and act was depicted as gods or mechanical constructs. In these early approaches, the fundamental questions of artificial intelligence were posed on issues such as the nature of human intelligence, information processing capacity and consciousness, paving the way for the first steps of technological developments (Duymaz & Şahin, 2023). In this context, the history of AI (artificial intelligence) can be considered as a part of not only technological innovations but also the evolution of human thought.

The first steps of artificial intelligence, which has been developing from the past to the present and has recently become very popular and has found its place in many fields, started to be taken in the early 17th century. The 17th

century was a century that hosted a great race, especially the aristocrats and the ruling class, to create machines that imitate human and mortal behavior. Descartes, one of the most important philosophers of the period, likened human beings to machines working with a clock-like technique (Coşkun & Gülleroğlu, 2021, p. 948).

Since that time, human beings have been working on animating machines and adding the ability to think just like a human being. This desire to collect data and revitalize machines, which started many years ago, has created the advanced system we call artificial intelligence. In this system, the main development has been experienced in the last 50 years with the increasing dominance and desire to create (Öztürk & Şahin, 2018, p. 23).

The process of mechanization has triggered developments in artificial intelligence. The new things produced with industrialization have always aroused in people the desire to reach more and more. Thus, the search continued and the desire to produce self-operating industrial machines led to the invention of computers and developments in information technology. In this way, automatic machines and software became widespread. In the light of these developments, scientists in the mid-20th century carried out some studies, thinking that since they could build automatic machines, they could also imitate the brain. Although very limited compared to today's technology, certain scientists managed to write some programs and paved the way for robots to copy human intelligence. In 1956, at the Dartmouth Conference, McCharty and his team called these studies “Artificial Intelligence” and led to the birth of a new science (Öztemel, 2020, p. 101). Since the 1950s, artificial intelligence has developed into various sub-disciplines. In the early periods, expert systems and symbolic structures came to the forefront; this approach was used to model human expert knowledge in a computer environment Grzybowski et al., 2024). In the 1970s and 1980s, with the emergence of artificial neural networks and machine learning techniques, the adaptability of AI to complex problems increased. During this period, advances in the technical infrastructure of AI expanded its application areas and enabled its integration into industry, medicine, education and many other sectors (Chang, 2020; Grzybowski et al., 2024). In particular, the increase in algorithms and computational power has laid the groundwork for modern approaches such as deep learning, which has been an important milestone in the evolution of AI from yesterday to today (Sfetcu, 2024).

According to Chetty and his team, since the Dartmouth Conference, AI has been divided into 3 evolutionary phases influenced by its subfields. These are the Expert Systems era, the Information Systems era, and the final phase that combines Machine Learning and Data mining. The last phase is better known as the Application era and basically covers the phase we are currently in (Seyrek, Yıldız, Emeksiz, Şahin, & Türkmen, 2024, p. 847). Today, artificial intelligence is achieving more comprehensive and effective applications with the integration of multi-layered algorithmic approaches, big data processing, cloud computing and deep learning techniques (Sfetcu, 2024; . While modern artificial intelligence applications aim to develop systems to understand and imitate human behavior beyond data analysis, they also bring new debates on issues such as ethics, security and social impacts (Duymaz & Şahin, 2023). At this point, the evolutionary process of artificial intelligence is continuously redefining the interaction between humans and machines, accelerating the pace of technological transformation and playing a critical role in shaping future predictions. In the future, it is predicted that both the theoretical and practical dimensions of artificial intelligence technologies will further expand and their integration with human intelligence will increase.

The evolution of artificial intelligence from the past to the present is a multi-layered development journey, starting from ancient mythological examples to the pioneering works of the 20th century, from expert systems to deep learning-based solutions. Mythological approaches that questioned the nature of human intelligence in early representations, combined with technological innovations in the modern era, have formed today's comprehensive application areas (Chang, 2020; Grzybowski et al., 2024). This historical perspective provides important clues for understanding the potential future developments of AI and developing robust strategies against ethical, legal and technological challenges.

USAGE AREAS OF ARTIFICIAL INTELLIGENCE

The studies that have emerged as a result of artificial intelligence imitating human intelligence can be explained as advanced machines taking human learning as a role model. In addition, what artificial intelligence can do is limited by its capacity and the system installed on it. With this situation, artificial intelligence has been expanding its areas of use in recent years. With its developments, artificial intelligence can find a new field of study every day (Coşkun & Gülleroğlu, 2021, p. 950). Artificial intelligence has recently become such a big part of our daily lives that people do not even realize how many areas it is used in. With all kinds of technological devices and advanced applications, it helps us on most platforms we need during the day. At this point, even houses and cars have become smart just like the cell phones we use constantly and can be controlled by artificial intelligence (İşler & Kılıç, 2021, p. 2). In today's world, the impact of artificial intelligence has spread to almost every sector. From

personalized treatment protocols to early diagnosis systems in healthcare; from individualized learning environments to digital curriculum transformations in education; from customer relationship management to optimizing data analytics in trade and marketing; and from strategic decision support systems in diplomacy, many application areas have been developed and discussed in depth (Erol & Özkan, 2021; Eltimur, 2022). In this context, the applications of artificial intelligence supported by advanced methods such as data mining, machine learning, deep learning, natural language processing, image processing and even the integration of emotional intelligence bring innovation at every stage of the technological process and enable the creation of transparent, data-based decision-making mechanisms. In addition, the social, ethical, legal and cyber security dimensions of artificial intelligence have become more important with the rapid spread of this technology. Factors such as information security, algorithmic bias, privacy protection, and the observance of human rights are at the center of discussions on the implementation of AI. Therefore, in every sector where artificial intelligence will be applied, the risks that the technology brings along with its advantages need to be systematically addressed (Özdemir & Bilgin, 2021).

Education

Artificial intelligence, which accompanies us in almost every part of our lives, has started to enter the education system over time and it is believed that its widespread use in education will offer important developments for education. There are 4 main components in education. These are; students, teachers, education curriculum and of course the area where education will take place. Artificial intelligence here mostly affects students and teachers and is useful for their work (İşler & Kılıç, 2021, p. 2). Until this period, most of the artificial intelligence technologies that will be useful for teachers in education are technologies that they can only use through advanced machines, i.e. computers. In this case, it can be said that the available technology is mostly used to store data and is limited in performing activities in the classroom (Timms, 2016, pp. 701-702). Although it is thought that artificial intelligence remains limited in the field of education, it can be said that artificial intelligence has started to be utilized in education with virtual classrooms and that this utilization has paved the way for certain developments. Although it is still discussed how artificial intelligence applications will be included in education in a way that will benefit education, there are many theories on the subject (İşler & Kılıç, 2021, p. 4). When we look at the education classrooms today, we can see many advanced technological devices in the classrooms. In most classrooms, we can see many artificial intelligence products such as smart boards, computers, laptops, and even tablets and phones. These devices have been integrated into education over time. Some courses have even been taught directly over the internet. However, even in this period, some academics and teachers prefer more traditional methods and refrain from trying artificial intelligence, a method they are not used to. Besides, it can be said that artificial intelligence has already started to be used in classrooms. Examples of this are artificial intelligence programs such as IBM Watson and Duolingo that answer the questions asked. However, when looking at these AI programs, it is clear that the focus is on teaching style and learning. At this point, AI plans to make the educational experience more personalized for learners (Garcia, 2019). In this sense, student-oriented artificial intelligence programs are advanced learning systems that students use while studying and can be adjusted according to the individual. The teacher-facing ones are systems that automate applications such as feedback and plagiarism to reduce the administrative workload of teachers. Just as there are AI systems for teachers and students, there are also system-oriented ones. These are systems that direct information to the administrative department in faculties and schools (Akdeniz & Özdinç, 2021, p. 916). Today, it is observed that the United Nations is working on integrating artificial intelligence into education.

In 2022, the United Nations Educational, Scientific and Cultural Organization announced the mission and vision of the countries working with artificial intelligence in education within the framework of the "International Artificial Intelligence Curriculum", which was approved by major states. In addition to the G20 being a pioneer in laying the foundations of artificial intelligence, OECD (Organization for Economic Co-operation and Development) countries have conducted worldwide research since 2019, establishing the basic principles of artificial intelligence. It is known that many developed and well-known centers and organizations have investments for the realization and spread of artificial intelligence studies (Armağan, Efe, Güzel, & Uluışık, 2024, p. 62). When it comes to the use of artificial intelligence applications in education, many people imagine a situation in which robot teachers with artificial intelligence teach students and every system in the environment is mechanized, but the reality is different than imagined. There are 3 main areas of artificial intelligence. These are data-based, logic-based and knowledge-based fields (Arslan, 2020, p. 81).

Health

The applications of artificial intelligence (AI) in healthcare are playing a critical role in restructuring the digital health ecosystem. AI is making revolutionary contributions in analyzing medical data and optimizing clinical processes using machine learning, deep learning and big data techniques (Wamba & Queiroz, 2021; Secinaro et al.,

2021). For example, the bibliometric analysis conducted by Wamba and Queiroz (Wamba & Queiroz, 2021) emphasizes that responsible AI serves as the "secret ingredient" in digital health applications and the need to maintain ethical standards while providing data-driven solutions. Machine learning-based models and deep learning algorithms are widely used for medical diagnosis and prediction. Adigwe et al., 2024; demonstrated the potential of AI in disease diagnosis, risk prediction and personalized treatment strategies in the Nigerian healthcare sector. Yang Yang, 2022; states that increasing clinical and operational competencies with explainable AI models is an important step in gaining the confidence of physicians and clinical staff.

AI-enabled systems used in the clinic can provide high accuracy rates in medical image analysis (e.g., CT, MRI, X-ray), enabling early diagnosis and accurate classification. This development, observed by Reddy et al. Reddy et al., 2018, enables applications to alleviate the workload of clinicians while increasing the efficiency of healthcare services. Furthermore, the study by Chen et al. (Chen et al., 2023) shows that next-generation medical assistance systems developed within data-driven approaches play an important role in patient safety and process optimization.

The transformation of AI applications in the healthcare sector is not limited to clinical diagnosis and treatment processes; this technology is reshaping the functioning and management of healthcare organizations. While Long et al.'s (Long et al., 2023) research reveals that AI contributes to the selection process in healthcare supply chain planning, Ismail et al. (Ismail et al., 2022) discuss strategic governance practices that accelerate digital transformation in the healthcare ecosystem. In this context, the increasing use of AI applications supports the sustainability of healthcare from both clinical and managerial perspectives. On the other hand, the use of AI in health brings along some ethical, legal and socioeconomic debates. Dost (2023) details the positive and negative aspects of AI in terms of international law and its impact on fundamental human rights such as the right to life, freedom of expression and protection of personal data. In a study by Silesian University of Technology (2022), healthcare workers' lack of knowledge about the functions of AI and their concerns about the potential employment impact of AI were revealed, indicating the need for training and capacity building.

In particular, AI technologies applied in perinatal medicine constitute an important example. Ekrem and Daşıkan In the applications examined by Ekrem & Daşıkan (2021), the digitalization of processes such as pregnancy follow-up, genetic screening, remote patient monitoring has enabled timely and personalized implementation of medical interventions. Such applications make significant contributions to early diagnosis and achieving positive results in patient care, as well as increasing patient safety and treatment effectiveness. Recently, the COVID-19 pandemic has also attracted attention as a period that reinforced the importance of AI in healthcare. Studies developed by Ho Ho (2020) have shown that the use of AI in drug development processes is critical to go beyond traditional methods, especially in optimizing combination therapies. In addition, the federated learning-based approach of Li et al. (2024) focuses on robust data processing and model development by sharing and integrating different data sources with privacy.

In addition, AI-powered smart assistants and chatbot applicationsdevelop human-centered service modeling in both clinical and administrative processes by providing patient education, virtual assistance and information services. These approaches enhance patient-physician interaction, improve decision support mechanisms and contribute to clinical risk management.

In general, the role of artificial intelligence in digital health transformation manifests itself in areas such as health management, supply chain optimization and patient communication, as well as clinical diagnosis and treatment processes. This multidimensional transformation requires the integration of comprehensive studies in the fields of technology, ethics, legal regulations and education, and paves the way for more personalized, efficient and safe delivery of healthcare services in the future (Yang, 2022).

The possibilities offered by AI in healthcare are transforming both clinical practice and health management, supply chain and patient interaction. Findings from various studies show that AI has significant contributions in areas such as personalized treatment, early diagnosis, digital health assistants and information integration. However, ethical, legal and information security issues need to be meticulously addressed as this technology becomes widespread. This comprehensive perspective provides guidance for the creation of more inclusive, reliable and efficient healthcare services in the future and reveals the necessity of multidisciplinary collaborations and continuous innovation.

E-Commerce

In today's digital age, the rapid growth of the e-commerce sector is supported by the integration of technological innovations into business models. While the proliferation of internet and mobile technologies has transformed traditional commerce methods, artificial intelligence (AI)-based solutions have become one of the key drivers of

this transformation. AI analyzes customer behavior, develops predictive models and automates processes through methods such as machine learning, deep learning, natural language processing and big data analytics. Thus, e-commerce platforms personalize the customer experience, improve inventory and supply chain management, develop dynamic pricing strategies and gain competitive advantage (Erişen&Yılmaz, 2023)

AI-powered personalisation works by holistically analysing the customer's previous search and purchase data, as well as data from social media interactions, product reviews and other digital impressions. The approaches put forward by Salvarli and Kayişkanet al., (2022) show that discovering customer preference patterns in unstructured data plays an important role in the development of personalised marketing strategies; in this way, companies can balance between standardisation and personalisation individually or synergistically by segmenting specific to their target audiences.

In addition, Atlı (2024) emphasizes artificial intelligence-supported customer experience solutions offer an enriched shopping experience with recommendation systems and interactive content that customers encounter in real time while browsing digital platforms. Such systems not only increase conversion to sales, but also provide lasting improvements in customer satisfaction by enabling customers to interact more during online shopping processes and strengthen their ties with the brand. Studies by Başal Castagno & Khalifa (2020) show that the scales developed to measure customer experience in artificial intelligence-based products and services are an important tool in determining dynamics such as user satisfaction and loyalty. These studies highlight the need to develop scales to accurately measure the effectiveness of artificial intelligence applications, and provide guidance in determining the dimensions in which the personalised experience offered by companies to customers is effective. Taşkın et al.'s research shows that artificial intelligence-based chatbots and interactive systems increase the quality of customer interactions and, as a result, contribute to the creation of competitive advantage for brands by improving the customer experience in depth. The fact that users receive immediate answers to their questions, recommendation systems develop customer-focused predictions, and even the emotional experience of customers during the shopping process becomes measurable, reinforces the importance of AI-based systems in the sector. Aktepe and Karakulle Schönberger, 2019) reported that artificial intelligence integration increases both customer satisfaction and the competitiveness of businesses in e-commerce experiences through mobile applications; these studies provide extremely valuable results in terms of closely following the changes in customer behaviour and developing strategies in line with the dynamics of the market.

The data analysis capabilities of artificial intelligence enable e-commerce companies to make significant improvements to their operational processes. Research presented by Richard Begum (2024) and Shaulska Mian (2022) shows that AI-enabled inventory management, demand forecasting and dynamic pricing algorithms reduce costs and increase margins by being able to respond quickly to market fluctuations. For example, dynamic pricing models allow product prices to be continuously optimised by taking into account real-time customer data and market conditions Begum (2024). This approach improves overall operational efficiency by supporting the automation of order intensity and replenishment processes. AI algorithms play a critical role not only in customer experience or pricing, but also in supply chain management and the digitisation of overall business processes. Case studies by Nathalie et al. (Legg & Hütter, 2007) show that AI-based CRM systems increase efficiency in areas such as order management and logistics optimisation. Wilson et al. Koç (2023) found that in the adoption of omnichannel marketing strategies, artificial intelligence is effective in providing a holistic customer experience by providing integration between digital and physical sales channels. The automation of these processes increases the competitiveness of companies by triggering the digital transformation of business models.

Studies of applications in the US, European and Asian markets show that artificial intelligence is enabling both operational and strategic change in the e-commerce process on a global scale. In the comprehensive analysis of Bekleviç & Sağır (2024), trends such as increasing competition in global markets, strengthening supply chain resilience and expanding customer-specific services are highlighted through e-commerce examples using AI technologies. Raji et al. (Schönberger, 2019) state that AI-supported personalisation techniques are constantly evolving and play an important role in adapting to changing consumer expectations.

The evolution of e-commerce with artificial intelligence is driving radical change in areas such as personalising the customer experience, increasing operational efficiency, dynamic pricing and supply chain optimisation. Through data-driven insights and automation, AI-enabled solutions are helping businesses develop customer-centric strategies and gain competitive advantage in the global marketplace. However, addressing data security, cyber risks and ethical issues is critical to the sustainable and reliable use of this technology. In the future, supporting e-commerce applications that integrate artificial intelligence with multidisciplinary collaboration, high-level technological infrastructures and robust regulatory frameworks will enable the development of more innovative, flexible and competitive solutions in the global e-commerce ecosystem.

Diplomacy

Although diplomacy and artificial intelligence do not seem to be related fields, it is seen that developments in technology have always affected diplomacy for centuries. Technology and artificial intelligence have been effective in diplomacy until the way diplomacy is practiced. Especially developments in technology and new inventions have significantly affected diplomacy. To give an example in this sense, the most important invention that provided diplomats with significant mobility on land was the railways. Thanks to the railroads, diplomats made intercity journeys and made developments in the field of diplomacy (Yılmazel, 2022, p. 98).

Artificial intelligence is a technology that also improves the regions where diplomacy is practiced. Historically, technology has always influenced international relations. The use of artificial intelligence in diplomacy has many benefits for diplomacy. Artificial intelligence benefits diplomacy in many areas such as providing faster service to citizens, achieving higher efficiency, making more effective decisions and making longer-term plans. If we examine the areas of use of artificial intelligence in diplomacy; it helps police departments analyze a significant amount of data to identify trends in public safety and prevent crimes that are likely to be committed, it offers great benefits in identifying roads and traffic lights that need repair to regulate traffic circulation and to help plan road works. In services provided to citizens, and especially in urban planning, artificial intelligence has many benefits for diplomacy (Jackley, 2024).

DANGERS AND HARMS OF ARTIFICIAL INTELLIGENCE FOR HUMANITY

While the rapid development of artificial intelligence (AI) technologies brings tens of thousands of applications into our lives, it also brings unforeseen risks and harms. In particular, the possibility of general artificial intelligence (AGI) exceeding human intelligence and becoming uncontrollable has caused serious debates on the possibility of causing potential existential crises (Hole, 2023; Bucknall & Dori-Hacohen, 2022). However, the potential for even existing AI systems to be abused by faulty data, algorithmic biases and malicious actors raises far-reaching societal and ethical issues (McLean et al., 2021; , Akhter et al., 2024). In this context, a comprehensive assessment of the harms that artificial intelligence may pose to humanity is vital in terms of measures to be taken at both technological and societal levels.

The potential existential risks of general AI focus on control problems and inherent goal incompatibilities, as in Nick Bostrom's 'superintelligence' (Hole, 2023; . Vold and Harris Vold & Harris (2021) argue in their detailed discussion that an uncontrollable AGI could have devastating effects on a global scale. Bucknall & Dori-Hacohen Bucknall & Dori-Hacohen, 2022; discuss in their study that existing and soon to be developed AI technologies could become a risk factor for humanity, albeit indirectly. These risks include warnings that if AI sets its own goals independent of human values, it could spiral out of control and impose serious costs on human existence (Growiec, 2024).

AI systems, if misconfigured or misused, can cause great damage through cyber and adversarial attacks. Walter et al. (Walter et al., 2023), by analysing adversarial attack scenarios in maritime automation systems, showed that poorly developed AI applications can have fatal consequences. Furthermore, such attacks can also target other technological infrastructures, causing cross-system effects. Hendrycks & Mazeika Hendrycks & Mazeika, 2022; draw attention to long-term 'tail risk' scenarios, detailing the dangers of future advanced AI systems that could be triggered by malicious attacks Hendrycks & Mazeika, 2022; . This is particularly critical in the military and defence sectors, where weaponised AI applications could lead to uncontrollable attack scenarios (Mamak, 2024). The proliferation of AI technologies has also led to deep ethical and socio-political debates. As Akhter et al. (Akhter et al., 2024) argue, ignoring ethical principles and governance frameworks in the development of AI systems can lead to the undermining of societal values and disruption of labour markets.

Examining global ethical guidelines for AI, Jobin et al. (2019) argue that AI can propagate bias and undermine principles of fairness and transparency. In particular, gaps in data representativeness, biased algorithms and automated systems increase the risk of violating the rights of minority groups and vulnerable communities (Naik et al., 2022). This situation is leading to important debates in the international arena on human rights, privacy and justice issues (Saveliev & Zhurenkov, 2020). In order to mitigate the potential harms of AI, it is essential to develop effective governance and regulatory policies. Fan et al. Fan (2024) argues that existing legal and ethical regulations cannot keep pace with the rapid development of AI and that new normative frameworks are required. Cruz Cruz (2024) draws attention to the necessity of polycentric governance and argues that international cooperation and robust regulatory mechanisms should be established against the existential risks of AGI. Furthermore, Helfrich Helfrich (2024) argues that the use of terminology and the spread of the concept of ‘frontier AI’ may exaggerate the perception of risk and create unnecessary panic, but still emphasises the importance of strengthening ethical and regulatory frameworks. The potential dangers and harms of artificial intelligence for

humanity should be addressed not only as a risk factor parallel to technological development, but also with its social, ethical, legal and socio-political dimensions. From existential risks to security vulnerabilities, from adversarial attacks to malicious uses, as well as ethical and regulatory shortcomings, many areas can cause irreversible damage if AI is misguided or uncontrollable. Therefore, multidisciplinary co-operation and continuous monitoring mechanisms need to be established in the development, implementation and supervision of AI. In addition to the potential benefits offered by AI, a comprehensive and systematic assessment and management of these risks is essential for the construction of a safe AI ecosystem for the benefit of humanity

CONCLUSION

Artificial intelligence (AI) and human interaction have attracted attention as a rapidly growing field in recent years. The opportunities offered by AI are transforming human-machine interaction in every field, from education to health, from commerce to personal relationships, and are creating new forms of communication. However, this transformation comes with ethical issues and concerns about social inequalities. In the field of education, the capacity of AI to provide personalized learning experiences increases student engagement and makes teaching processes more effective. By offering content suitable for students' learning styles, AI enriches teaching methods and creates a deeper learning experience Sreedharan (2023). However, the concern that current systems cannot adequately evaluate the personalization opportunities offered by AI and that teacher-student relationships may weaken should not be ignored (Hinsen et al., 2022). In this case, it is critical how educational institutions will optimize human interaction with AI and shape their educational policies on AI data security (Meijer, 2024). The healthcare sector has been one of the areas where AI has shown its most remarkable benefits. It is often considered necessary and valuable in the acceleration of diagnostic processes and modern medical practices. Users appreciate the ability of AI-powered systems to provide faster and more accurate healthcare services. However, this also brings with it ethical issues such as the risk of algorithmic bias and the privacy of individuals' health data (Krittanawong et al., 2017; Ahmed et al., 2022). The potential of AI to reduce human interaction can compromise the human dimension of healthcare. Therefore, healthcare systems and professionals need to carefully integrate AI technologies, considering their impact on patients. AI applications in the commercial field offer businesses the opportunity to reduce costs and increase efficiency while enriching the customer experience. Chatbots and virtual assistants accelerate service processes by responding to customer requests and make personalized improvements. However, customers' experiences with AI-based systems sometimes fall short of expectations, which can lead to long-term customer dissatisfaction (Adam et al., 2020).

On the other hand, transparency about the data collection and use methods of these systems has been a critical issue in terms of both customer trust and ethical responsibility (Siddiqui, 2023; Haenlein et al., 2022). Finally, the deepening of the interaction between humans and machines enables the formation of new human-machine relationships and leads to the reconsideration of social values. The effects of AI on humanity not only change communication styles, but also contribute to the reshaping of social structures and relationships. Therefore, it is important not to ignore concepts such as ethics and social responsibility in the face of these new challenges (Bentley et al., 2024).

In conclusion, revolutionary changes in communication with artificial intelligence present invaluable opportunities and accompanying challenges. In order to benefit from the potential of AI in critical areas such as education, health and commerce, relevant stakeholders need to develop human-centered approaches and observe ethical principles in this process. While artificial intelligence has the capacity to improve communication dynamics and enrich the human experience, it is important to create a healthy discussion environment around the principles of transparency, accountability and social justice in order to realize this potential. When developing AI solutions that encompass a wide range of people, from gender to race to age, adopting an open approach to social participation will improve the quality of human experience integrated into technology and contribute to the creation of a more human-centered society in the future.

KAYNAKÇA

Adigwe, O. P., Onavbavba, G., & Sanyaolu, S. E. (2024). Exploring the matrix: knowledge, perceptions and prospects of artificial intelligence and machine learning in nigerian healthcare. Frontiers in Artificial Intelligence, 6. https://doi.org/10.3389/frai.2023.1293297

Akdeniz, M., & Özdinç, F. (2021). Eğitimde Yapay Zeka Konusunda Türkiye Adresli Çalışmaların İncelenmesi. Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, 18(1), 912-932. https://dergipark.org.tr/tr/download/article-file/1773993

Akhter, S., Ahmad, M. R., Chibb, M., Zai, A. F., & Yaqoob, M. (2024). Artificial intelligence in the 21st century: opportunities, risks and ethical imperatives. Educational Administration: Theory and Practice. https://doi.org/10.53555/kuey.v30i5.3125

Alpaydın, E. (2013). Yapay Öğrenme. İstanbul: Boğaziçi Üniversitesi Yayınevi.

Armağan, N., Efe, R., Güzel, S., & Uluışık, M. (2024). Eğitimde Yapay Zeka Kullanımı Ve Gelişimi. Eurasian Academy of SciencesEurasian Education & Literature Journa(19), 59-70. https://eurasianacademy.org/index.php/edulit/article/view/1511/1498

Bucknall, B. S. and Dori-Hacohen, S. (2022). Current and near-term ai as a potential existential risk factor. Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society, 119-129. https://doi.org/10.1145/3514094.3534146

Castagno, S. and Khalifa, M. (2020). Perceptions of artificial intelligence among healthcare staff: a qualitative survey study. Frontiers in Artificial Intelligence, 3. https://doi.org/10.3389/frai.2020.578983

Chang, A. (2020). History of artificial intelligence. Intelligence-Based Medicine, 23-27. https://doi.org/10.1016/b978-0-12-823337-5.00002-0

Chen, S., Chen, J., Hsieh, Y., Chen, W., Liao, Y., Lin, Y., … & Yuan, S. (2023). Improving patient safety in the x-ray inspection process with efficientnet-based medical assistance system. Healthcare, 11(14), 2068. https://doi.org/10.3390/healthcare11142068

Coşkun, F., & Gülleroğlu, H. D. (2021). Yapay Zekanın Tarih İçindeki Gelişimi ve Eğitimde. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 54(3), 947-966. https://dergipark.org.tr/en/download/article-file/1707037

Duymaz, Y. K. and Şahin, Ş. (2023). From ancient mythology to modern technology: the historical evolution of artificial intelligence. European Journal of Therapeutics, 29(4), 964-965. https://doi.org/10.58600/eurjther1895

Dost, S. (2023). Yapay zekâ ve uluslararası hukukun geleceği. Süleyman Demirel Üniversitesi Hukuk Fakültesi Dergisi, 13(2), 1271-1313. https://doi.org/10.52273/sduhfd..1375673

Ekrem, E. C. and Daşıkan, Z. (2021). Perinatal dönemde yapay zekâ teknolojisinin kullanımı. Eurasian Journal of Health Technology Assessment, 5(2), 147-162. https://doi.org/10.52148/ehta.980568

Eltimur, D. (2022). İnsan Haklarinin Korunmasi Bağlaminda Yapây Zeka Uygulamalari. Akdeniz Üniversitesi Hukuk Fakültesi Dergisi, 12(2), 559-594. https://doi.org/10.54704/akdhfd.1155778

Erişen, M. A. & Yılmaz, F. Ö. (2023). Sağlık yönetimi öğrencilerinin tıpta yapay zekâ ile ilgili bilgi, düşünce ve yaklaşımları. Journal of Artificial Intelligence in Health Sciences. https://doi.org/10.52309/jaihs.2023.15

Erol, Ç. and Özkan, Y. (2021). Sağlık alanında siber güvenlik ve yapay zekanın rolü. Tıp Bilişimi, 973-995. https://doi.org/10.26650/b/et07.2021.003.39

Garcia, E. (2019, Ağustos 10). The use of artificial intelligence (AI) in education. Open Access Government: https://www.openaccessgovernment.org/artificial-intelligence-ai-in-education/66346/

Growiec, J. (2024). Existential risk from transformative ai: an economic perspective. Technological and Economic Development of Economy, 30(6), 1682-1708. https://doi.org/10.3846/tede.2024.21525

Grzybowski, A., Pawlikowska–Łagód, K., & Lambert, W. C. (2024). A history of artificial intelligence. Clinics in Dermatology, 42(3), 221-229.

https://doi.org/10.1016/j.clindermatol.2023.12.016

Hendrycks, D. and Mazeika, M. (2022). X-risk analysis for ai research.. https://doi.org/10.48550/arxiv.2206.05862

Ho, D. (2020). Addressing covid-19 drug development with artificial intelligence. Advanced Intelligent Systems, 2(5). https://doi.org/10.1002/aisy.202000070

Hole, K. (2023). Tools with general ai and no existential risk. AI and Ethics, 4(2), 345-352. https://doi.org/10.1007/s43681-023-00271-y

Ismail, A. F. M. F., Sam, M. F. M., Bakar, K. A., Ahamat, A., Adam, S., & Qureshi, M. I. (2022). Artificial intelligence in healthcare business ecosystem. International Journal of Online and Biomedical Engineering (iJOE), 18(09), 100-114. https://doi.org/10.3991/ijoe.v18i09.32251

İşler, B., & Kılıç, M. Y. (2021). EĞİTİMDE YAPAY ZEKÂ KULLANIMI VE GELİŞİMİ. Yeni Medya Elektronik Dergi, 5(1), 1-11. https://dergipark.org.tr/tr/download/article-file/1106175

Li, N., Lewin, A., Ning, S., Waito, M., Zeller, M. P., Tinmouth, A., … & Shih, A. W. (2024). Privacy-preserving federated data access and federated learning: improved data sharing and ai model development in transfusion medicine. Transfusion, 65(1), 22-28. https://doi.org/10.1111/trf.18077

Long, P., Lu, L., Chen, Q., Chen, Y., Li, C., & Luo, X. (2023). Intelligent selection of healthcare supply chain mode – an applied research based on artificial intelligence. Frontiers in Public Health, 11. https://doi.org/10.3389/fpubh.2023.1310016

Mamak, K. (2024). Agi crimes? the role of criminal law in mitigating existential risks posed by artificial general intelligence. AI &Amp; SOCIETY. https://doi.org/10.1007/s00146-024-02036-5

McLean, S., Read, G. J. M., Thompson, J., Baber, C., Stanton, N. A., & Salmon, P. M. (2021). The risks associated with artificial general intelligence: a systematic review. Journal of Experimental &Amp; Theoretical Artificial Intelligence, 35(5), 649-663. https://doi.org/10.1080/0952813x.2021.1964003

Prakash, S., Balaji, J. N., Joshi, A., & Surapaneni, K. M. (2022). Ethical conundrums in the application of artificial intelligence (ai) in healthcare—a scoping review of reviews. Journal of Personalized Medicine, 12(11), 1914. https://doi.org/10.3390/jpm12111914

Reddy, S., Fox, J., & Purohit, M. (2018). Artificial intelligence-enabled healthcare delivery. Journal of the Royal Society of Medicine, 112(1), 22-28. https://doi.org/10.1177/0141076818815510

Seyrek, M., Yıldız, S., Emeksiz, H., Şahin, A., & Türkmen, M. T. (2024). Öğretmenlerin Eğitimde Yapay Zeka Kullanımına Yönelik Algıları. International Journal of Social and Humanities Sciences Research (JSHSR), 11(106), 845-856.

Schönberger, D. (2019). Artificial intelligence in healthcare: a critical analysis of the legal and ethical implications. International Journal of Law and Information Technology, 27(2), 171-203. https://doi.org/10.1093/ijlit/eaz004

Secinaro, S., Calandra, D., Secinaro, A., Muthurangu, V., & Biancone, P. (2021). The role of artificial intelligence in healthcare: a structured literature review. BMC Medical Informatics and Decision Making, 21(1). https://doi.org/10.1186/s12911-021-01488-9

Sfetcu, N. (2024). Intelligence, from natural origins to artificial frontiers - human intelligence vs. artificial intelligence.. https://doi.org/10.58679/mm97993

Timms, M. J. (2016). Letting Artificial Intelligence in Education Out of the Box: Educational Cobots and Smart Classrooms. International Journal of Artificial Intelligence in Education, 26(2), 701-712.

Özdemir, L. and Bilgin, A. (2021). The use of artificial intelligence in health and ethical problems. Sağlık Ve Hemşirelik Yönetimi Dergisi, 8(3), 439-445. https://doi.org/10.54304/shyd.2021.63325

Öztemel, E. (2020). Yapay Zekâ ve İnsanlığın Geleceği. Bilişim Teknolojileri ve İletişim: Birey ve Toplum Güvenliği (s. 95-112). içinde Türkiye Bilimler Akademisi. https://tuba.gov.tr/files/yayinlar/bilim-ve-dusun/TUBA-978-605-2249-48-2_Ch9.pdf

Öztürk, K., & Şahin, M. E. (2018). Yapay Sinir Ağları ve Yapay Zekâ'ya Genel Bir Bakış. Takvim-i Vekayi, 6(2), 25-36. https://dergipark.org.tr/en/download/article-file/596690

Yang, C. C. (2022). Explainable artificial intelligence for predictive modeling in healthcare. Journal of Healthcare Informatics Research, 6(2), 228-239. https://doi.org/10.1007/s41666-022-00114-1

Yılmazel, S. C. (2022). Yapay Zeka Çağında Diplomasi. Türk Dünyası Araştırmaları, 132(260), 91-112.

Wamba, S. F. and Queiroz, M. M. (2021). Responsible artificial intelligence as a secret ingredient for digital health: bibliometric analysis, insights, and research directions. Information Systems Frontiers, 25(6), 2123-2138. https://doi.org/10.1007/s10796-021-10142-8