

## Communication in the Era of Artificial Intelligence: Its Impact on Human-Technology Interaction

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### ABSTRACT

*In the increasingly advanced digital era, artificial intelligence (AI) has changed the way we interact with technology and with each other. This study aims to explore the impact of artificial intelligence on human communication, as well as how this technology affects the dynamics of social and professional interactions. This study uses a qualitative approach with literature analysis and in-depth interviews with technology and communication practitioners in Indonesia. The results of the study show that artificial intelligence has a significant impact on increasing communication efficiency, but also brings challenges in terms of emotional relationships and privacy. The impact of artificial intelligence on human communication is very visible in various aspects of life, both in the professional and social worlds. The use of AI in chatbots, recommendation systems, and virtual assistants has accelerated the communication process, but also raises questions about its impact on the authenticity and quality of relationships between people. This study identifies the main challenges faced by Indonesian society in adapting to this new technology, including limited technological literacy and concerns about privacy. Overall, this study reveals the importance of managing communication more wisely amid the rapid development of artificial intelligence. Although this technology provides many benefits, organizations and individuals need to be aware of the potential risks that can arise, such as over-reliance on AI or negative impacts on more personal social interactions. This research is expected to provide deeper insights for communication practitioners, technology developers, and the wider community in facing communication challenges in the era of artificial intelligence.*

**Keywords:** Artificial Intelligence, Communication, Human Interaction Technology

### INTRODUCTION

In recent decades, the development of artificial intelligence (AI) has brought about major changes in the way technology interacts with humans. Artificial intelligence, which was once a futuristic concept, has now become an integral part of everyday life (Abdillah. et al. 2020). With this progress, AI has changed the way we work, learn, communicate, and even relax. However, the development of AI also poses new challenges, such as privacy, security, and ethical issues (Abdillah, et al. 2020). Therefore, it is important to continue to



monitor and regulate the use of AI so that its benefits can be felt to the maximum without ignoring these important aspects. AI is now used in various sectors, from e-commerce, customer service, education, to health, introducing systems that are able to imitate human behavior in processing information and communicating. One of the most visible applications of AI is virtual assistants such as Siri, Google Assistant, and chatbots that are used by companies to serve customers automatically.

With AI's ability to process large amounts of data and produce fast and precise responses, many argue that this technology can reduce dependence on direct human interaction. AI allows systems to talk to users, provide recommendations, and even complete complex tasks without human intervention. However, the big question that arises is whether this increase in efficient communication will reduce the quality of human relationships or even affect more personal social interactions (Alayida, 2023).

In Indonesia, the adaptation of AI technology is quite rapid, although there is still inequality in digital literacy in various levels of society. Some factors that cause this inequality include limited access to technology, lack of education and training on the use of technology, and differences in economic and social levels (Sulianta, F. 2020). To overcome this inequality, collaborative efforts are needed from the government, private sector, and educational institutions. The government can provide adequate technological infrastructure and develop training programs to improve digital literacy. The private sector can contribute by providing wider access to technology and supporting educational initiatives. Educational institutions also play an important role in integrating AI technology into the curriculum and providing relevant training to students (Kirana, et al. 2024).

Many large companies and organizations have used AI to optimize communication with customers, but the general public outside the business sector does not fully understand the potential and risks of using artificial intelligence. On the other hand, although this technology provides convenience, many parties are concerned about privacy and data security issues involving the use of AI. For example, the large number of chatbots used in customer service, or automated systems that replace administrative work, makes human interaction with machines increasingly intensive. On the one hand, this brings benefits in the form of efficiency and cost reduction, but on the other hand, human interaction is limited. Technology users, especially in Indonesia, are starting to feel uncomfortable when dealing with machines that cannot provide emotional responses as human interactions in general (Suprpto, et al. 2021).

In addition, the development of this technology also raises concerns about the potential for disinformation that can be spread by AI. With sophisticated algorithms, the spread of inaccurate information or even hoaxes can occur very quickly without adequate verification. When inaccurate information or hoaxes spread quickly, it can cause confusion, distrust, and even panic among the public (Wulandari, et al. 2023). Therefore, it is important for users to always verify information before sharing it, and to rely on trusted sources. In addition,

technology and social media platforms also have a responsibility to develop and implement more responsible algorithms. This includes identifying and reducing the spread of inaccurate information, as well as providing warnings or labels on unverified content. With joint efforts from users, technology platforms, and the media, it is hoped that the spread of inaccurate information or hoaxes can be minimized, so that the public can receive more accurate and reliable information (Manurung, C. 2023).

This adds to the challenges in communication, especially for organizations and individuals who rely on social media as a tool to engage with their audiences. Therefore, it is crucial to understand the impact of artificial intelligence on human communication and how this technology affects social and cultural relationships. Artificial intelligence has also impacted the professional world, especially in the communications and marketing sectors. For example, many companies are now using AI to analyze customer data, predict consumer behavior, and even design personalized marketing campaigns. While this is very beneficial in terms of efficiency and market segmentation, the use of AI also brings challenges related to ethics and transparency. How can we ensure that the data used by AI is valid and does not discriminate against certain groups?

In this context, research on the impact of artificial intelligence on human communication becomes very relevant. Understanding how AI is changing the way we interact with technology and other people will help us manage its impact more wisely. Therefore, there is a need for an in-depth discussion of how AI plays a role in social interactions and how we can use this technology without sacrificing the quality of human relationships.

Meanwhile, this study also aims to explore the challenges and opportunities that exist for Indonesian society in adapting to artificial intelligence. Given that Indonesia still faces challenges in terms of technology accessibility, digital divide, and understanding of the use of AI, it is imperative for the government, education sector, and technology industry to work together to improve digital literacy and artificial intelligence among the public.

This study will also examine how organizations in Indonesia can design effective communication in the era of artificial intelligence. In managing communication between humans and technology, organizations need to ensure that even though technology is central, the values of authentic interpersonal communication are maintained.)

## **METHODOLOGY**

This study uses a qualitative approach to gain a deeper understanding of the impact of artificial intelligence on human-technology interactions (Rochim, AA 2024). This approach was chosen because it allows researchers to explore the perspectives and experiences of individuals and organizations in adapting to AI technology. Data were collected through in-depth interviews with communication practitioners, technology developers, and academics who have an understanding of the development of AI and its impact on communication. In

addition to interviews, this study also involved document analysis and case studies that examined the implementation of AI in communication, both in the context of marketing, customer service, and social interaction in Indonesia. The documents analyzed included industry reports, media articles, and policies related to the use of artificial intelligence in communication.

In analyzing the data, this study uses thematic analysis method, where researchers will identify themes that emerge from interviews and documents analyzed. The main focus of this analysis is to understand how AI technology is used in communication, as well as its impact on social relationships, professionals, and human interactions with technology.

This study also considers variables that influence the adoption of AI technology in Indonesia, such as digital literacy, the gap in access to technology, and ethical challenges arising from the use of AI in communication. Thus, the results of the study are expected to provide more comprehensive insights into human and technology interactions in the era of artificial intelligence. In addition, this study also involved a survey of the public to measure their level of understanding of artificial intelligence and how they feel its impact on daily social interactions and communication.

## RESULTS AND DISCUSSION

The results of the study show that artificial intelligence has brought significant changes in the way organizations and individuals communicate. One of the main findings is that the use of AI in customer service systems has increased efficiency, but there is dissatisfaction with the mechanical feel of interactions and the lack of emotional responses from machines. Users prefer to interact with humans in situations that require empathy and emotional understanding, such as personal issues or sensitive complaints.

As from the results of an interview conducted with Iwan Awaluddin Yusuf, Ph.D, Communication Practitioner and Academic:

*"AI provides many benefits to the communications profession, such as faster and more accurate data analysis, and the ability to personalize messages to audiences. However, AI cannot replace humans completely. Creativity, empathy, and understanding social context are still very important aspects of effective communication."*

According to his explanation, Overall, AI can be a very useful tool in the communication profession, but collaboration between humans and AI is still needed to achieve optimal results. Humans bring creativity, empathy, and understanding of social context, while AI provides fast data analysis and sophisticated personalization capabilities. This combination can increase the effectiveness of communication as a whole.

On the other hand, the use of AI in digital marketing and data analytics shows great potential in personalizing customer experiences. Companies that use AI to analyze customer data can design more relevant and targeted campaigns.

As explained by Dr. Andi Wijaya, Technology Developer at PT. Tech Innovate explained that:

*"The primary benefit of using AI in customer data analytics is the ability to personalize the customer experience. AI can analyze large amounts of data quickly and accurately, identifying patterns and trends that may not be visible to humans. With this information, companies can provide product recommendations that are more tailored to individual needs and preferences, increasing customer satisfaction and loyalty."*

The use of AI in digital marketing and data analytics shows great potential in personalizing customer experiences. With AI's ability to deeply analyze customer data, companies can better understand individual preferences, behaviors, and needs.

This allows companies to design more relevant and targeted marketing campaigns. For example, AI can help in more accurate market segmentation, so that marketing messages can be tailored to specific customer groups. In addition, AI can also be used to recommend products or services that match the interests and needs of each customer, increasing customer satisfaction and loyalty. With better personalization, companies can increase the effectiveness of their marketing campaigns, reduce marketing costs, and increase sales conversions. AI also allows companies to respond to changing trends and customer needs more quickly, so they can stay competitive in an ever-evolving market. Overall, the use of AI in digital marketing and data analytics provides a great opportunity for companies to improve customer experience and achieve better business outcomes. However, many consumers have expressed concerns about the use of their personal data by AI, which raises privacy and security issues. In addition, research also found that Indonesians still have limited understanding and digital literacy related to artificial intelligence. Although this technology is increasingly developing, many people do not fully understand how AI works and how it affects their communications. This shows the importance of increasing technological literacy in Indonesia to prepare the community to face rapid technological developments.

Communication campaign optimization is the process of using technology and data to improve the effectiveness and efficiency of marketing campaigns. With the help of AI, companies can analyze campaign data in real-time and adjust strategies to achieve better results. For example, AI can identify the audience most likely to respond to a particular ad and target them with relevant messages, thereby maximizing Return on Investment (ROI) (Sugiana, 2023).

AI also allows companies to test different elements of a campaign, such as headlines, images, and messages, to see which ones are most effective. This process is known as A/B testing, and AI can speed it up by quickly analyzing results and making recommendations based on the data it collects. In addition, AI can continuously monitor campaign performance and make automatic adjustments to improve performance. With communication campaign optimization, companies can ensure that every dollar invested in marketing is

delivering maximum results. This not only increases cost efficiency but also ensures that the message delivered is more relevant and engaging to the target audience. Overall, communication campaign optimization with the help of AI helps companies achieve their marketing goals more effectively and efficiently (Prahendratno, et al. 2023).

The study also reveals ethical challenges that arise along with the adoption of AI in communication. One of them is the risk of disinformation that can be spread through AI systems, which can worsen communication crises if not managed properly (Tarigan, et al. 2024). Organizations need to ensure that the AI algorithms used to disseminate information or communicate with audiences do not add confusion or provide misinformation. To address these issues, organizations must ensure that their AI algorithms are designed with ethical and transparent principles (Lestari, 2024). Cendikia Mulia Mandiri. This includes ensuring that the data used to train the algorithm is accurate and free from bias. In addition, organizations must have mechanisms to verify information before it is disseminated by AI, as well as provide a way for audiences to report and correct misinformation. Creativity, empathy, and understanding social context are three key elements that are essential to effective communication.

Creativity allows us to convey messages in an interesting and innovative way. In a world full of information, creative messages can grab the attention of the audience and make them more engaged. Creativity also helps in finding new solutions to complex communication problems, as well as in designing more effective communication strategies (Priyono, et al. 2023).

Empathy is the ability to understand and feel what others feel. In communication, empathy allows us to connect with our audience on an emotional level, which can increase trust and build stronger relationships. With empathy, we can tailor our messages to be more relevant and meaningful to our audience, and avoid misunderstandings that can arise from a lack of understanding of another person's perspective (Prihanti, GS 2017).

Understanding social context is the ability to understand the situation, culture, and social norms that influence communication. Each audience has a different social context, and understanding this context is essential to conveying a message in an appropriate manner. For example, the way we communicate with coworkers at work may be different from the way we communicate with friends at a social event. By understanding the social context, we can adjust our communication style to be more effective and appropriate to the situation (Alamsyah, 2024).

Overall, creativity, empathy, and understanding social context are complementary and essential elements in communication. By combining the three, we can convey messages in a more engaging, relevant, and meaningful way, and build stronger and more effective relationships with our audiences.

It is also important for organizations to continuously monitor and evaluate the performance of their AI algorithms. By conducting regular audits, organizations can identify and fix potential problems before they become bigger (Gunawan, 2023). In addition, education and training for teams managing AI are

also very important to ensure that they understand how the algorithm works and can take appropriate action if something goes wrong. Furthermore, although AI offers many advantages in terms of efficiency and ease of access to information, there is an urgent need to balance the use of technology with authentic human communication. Organizational decisions in using AI in communication must consider its impact on social relationships and the quality of interactions that occur. The benefits of AI in communication are diverse and significant. AI is able to process and analyze large amounts of data quickly and accurately, helping companies understand audience behavior, market trends, and the effectiveness of communication campaigns. With the insights generated, companies can make better and more strategic decisions. In addition, AI allows personalization of messages to audiences based on their preferences and behaviors, making communication more relevant and effective. Automation of various communication processes, such as sending emails, managing social media, and customer service, is also made easier with AI. AI-powered chatbots and virtual assistants can provide fast and precise responses to customers, reducing the workload of communications teams. AI can also analyze communications campaign data in real-time and adjust strategies to improve performance, maximizing ROI. By automating routine and repetitive tasks, AI allows communications teams to focus on more strategic and creative tasks, increasing overall efficiency and productivity. Overall, AI provides many benefits in communications, from fast and accurate data analysis to message personalization and process automation, all of which contribute to increased communication effectiveness.

## CONCLUSION

The study concludes that artificial intelligence has a significant impact on human communication, both in the professional and social worlds. While AI can improve efficiency and provide convenience in interaction, this technology also brings challenges in terms of maintaining the quality of social relationships and communication ethics. Therefore, it is important for organizations to manage communication wisely and ensure that the use of AI does not sacrifice the basic values of authentic human interaction. Moving forward, Indonesia needs to continue to improve digital literacy and artificial intelligence among the public to maximize the benefits of this technology. The government, industry, and academia must work together to create policies and education systems that can overcome challenges and optimally utilize the potential of AI.

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