

The Impact of Using Artificial Intelligence on Public Services in Indonesia

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Abstract

The development and advancement of technology are entering a new father, where almost all aspects of life are using and utilizing technology a lot. The presence of technology aims to make it easy for users to meet human needs in activities and also provide comfort to its users. Dynamic technological advances demand government readiness to balance these developments; using and applying artificial intelligence (Artificial intelligence/AI) in public service is possible because it will increase public trust in the government. This study uses a qualitative approach and descriptive method, which aims to describe social phenomena that occur in society, which are then collected and analyzed to describe and describe existing phenomena, both natural and human-made, which pay more attention to characteristics, quality, and interrelationships between activities.

Keywords: *Usage Impact, Artificial Intelligence, Against Public Services.*



A. INTRODUCTION

Globalization is interpreted as a development that can affect all aspects of life; globalization has a relationship with cross-country interdependence, cross-regional, and between people in all parts of the world (Henman, 2020; Wirtz et al., 2019). One of the global influences that is being felt today is the presence of technology in telecommunications. Telephone technology is not only used to make calls or contact someone, but currently, the use of telephones has experienced developments far from our expectations and imagination (Wang et al., 2021). The telephone we know as a connecting tool or a communication tool that can connect us with other people is not limited by distance and time (de Sousa et al., 2019; Gesk & Leyer, 2022).

Technological developments and advances have now entered a new phase, where almost all aspects of life are currently using and utilizing technology a lot; these advances have had a very significant impact on people's lives as if the world has no boundaries (Susar & Aquaro, 2019; Al-Mushayt, 2019). This is because it is so easy for people to carry out daily activities with advances in technology, nowadays people communicating do not always have to meet face to face; it is enough to use telephone technology or better known as smartphones, we can already connect and have conversations with other people (Reis et al., 2019).

Not only that, at this time, we are also meeting our daily needs, which used to require time and effort, and the cost is costly. However, with technological advances, we can do it all simply by using technological advances, in this case, smartphone technology. A smartphone has more capabilities than a telephone or ordinary cell phone; a smartphone has various sophisticated features and supports meeting human

needs.

The presence of technology aims to make it easy for users to meet human needs in activities and also provide comfort to its users. So that the presence of telecommunications technology has a vital role, where currently many people are dependent and even depend on themselves to fulfill their daily needs through communication technology (smartphones) (Mikhaylov et al., 2018; van Noordt & Misuraca, 2020). Smartphone facilities are more comprehensive than just functions such as telephone or SMS. However, they can also be used as a learning tool, where one can know and learn new things related to developments and progress in the current era of globalization. The other side of today's smartphones is not only a means of communication, but for some people, smartphones are also a model of contemporary lifestyle; where according to Kotler (Intan et al. et al., 2017), lifestyle is a person's pattern of life which is poured or expressed into daily activities by their talents, interests, and ways of thinking, so that smartphones are seen as a communication tool that can provide entertainment while at the same time being able to channel hobbies such as playing games, not only that but with the presence of smartphones it can also help people in carrying out their business activities (Online based business).

The magnitude of the influence of globalization in the world of technology is not limited to the development of telecommunications equipment (Abdekdaiem & Aldulaimi, 2020). However, rapid globalization has also seen progress in the use of other technologies; many people are competing to develop technology, one of which is the development of technology-based service technology called artificial intelligence (Natalisa, 2020), which is currently being talked about almost all over the world. Layers of society, where many people say that artificial intelligence will replace the role of humans in all aspects of life; as stated by Diah Natalisa (2020), artificial intelligence can be used to improve public services.

The use of artificial intelligence in the literature has been widely implemented, one of which is in the service of complaints, directing and answering complaints, the use of Artificial intelligence can be used on reception desks or entrances when people want to apply for services at a government agency, not only in the service sector but in the use of Artificial intelligence is currently being carried out in the field of supervision and law enforcement, one example is the use of electronic ticketing by the Republic of Indonesia Police, known as Electronic Traffic Law Enforcement (ETLE).

Electronic Traffic Law Enforcement (ETLE) is a cellphone-based electronic ticket, a new method of applying traffic discipline using mobile phone camera photo evidence by police officers. ETLE is prioritized in areas or areas that have static cameras installed. The use of ETLE is a step forward by the police in suppressing the increasing number of traffic violations, especially motorized vehicle users; many people who use motorized vehicles do not use personal protective equipment such as helmets, and also many motorized vehicle users use fake number plates, with ETLE violations on the streets can be monitored by police officers through monitoring cameras in the areas where the cameras are installed. The results of the camera

recordings are distributed to officers on duty on the roads sent via smartphone, and officers in the field will fast enforcement of law enforcement against traffic violators. The use of AI technology is solely to improve the quality of public services, as stated by Montoya & Rivas (Adi Nuryanto, 2020), and also to foster citizen trust in the government (Yogesh et al. et al., 2021).

Artificial intelligence was first developed by Alan Turing in 1947 (Kurniati, 2023). "If Humans Can Process Information and solve problems and can also make decisions from that information, then machines can do that too." What was conveyed by Alan Turing has become a reality; where since the development of the internet world, many community activists who used to use human abilities and labor have now been replaced by many computer systems, where the computer system works using programming algorithms.

Innovation in the field of services using artificial intelligence (artificial intelligence) can provide benefits and convenience for its users, especially for the government in improving public services (Sun & Medaglia, 2019; Yigitcanclar et al., 2023). On the negative side, such as the irresponsible use of applications on smartphones, and the many frauds that use smartphones, the most worried about the presence of artificial intelligence can replace the human role. Many fields of work that used to use human power have now been replaced with technology, such as robots. This progress changes people's lifestyles and habits, which can lead to the emergence of complex needs and problems that occur in society (Endang et al., 2020).

The government's use of Artificial intelligence (AI) in improving the quality of public services still needs several obstacles in its application, such as the need for qualified mastery of technology and high operational costs. This study aims to determine the government's readiness to improve the quality of public services by using artificial intelligence.

B. METHOD

This study uses a qualitative approach and a descriptive method. Research that aims to describe social phenomena that occur in society, which is then collected and analyzed data in the form of human words and actions, and researchers do not try to calculate or quantify the qualitative data that has been obtained and thus do not analyze the numbers (Afrizal, 2016). Meanwhile, (Nana et al., 2011) qualitative descriptive research aims to describe existing phenomena, both natural and human-made, which pay more attention to characteristics, quality, and interrelationships between activities. In addition, descriptive research does not provide treatment, manipulation, or changes to the variables studied but instead describes a condition as it is. The only treatment given was the research carried out through observation, interviews, and documentation. This research aims to use a qualitative descriptive approach, aiming to explore current phenomena related to the use of artificial intelligence in public services.

C. RESULT AND DISCUSSION

1. The Concept of Good Governance

The birth of the concept of Good Governance is in the background due to the ineffectiveness of the government's performance, which has been trusted as the organizer of public affairs. Good Governance is considered a new paradigm based on the values of effective governance—almost every critical activity or event related to government issues (Sedarmayanti & Mulyana, 2020).

In the administration of good governance, there are at least 8 (characteristics) of general/or essential a condition for the implementation of good governance, including participation, law enforcement, accountability, transparency, responsiveness, effectiveness and efficiency, equity (equality), foresight, and power. The responsiveness of the success of implementing good governance is primarily determined by the involvement and synergy of three main actors, namely government officials, the public and the private sector. Government officials are essential to control the ongoing governance process in administering the government. The involvement of government officials in supporting the success of government administration is primarily determined, among other things, by understanding the concept of good governance and its practice, which is closely related to bureaucracy and government bureaucratic management (Sedarmayanti & Mulyana, 2020). In later developments, the concept and application of digital governance were born to increase the effectiveness of electronic or digital-based government.

2. Use of Artificial Intelligence (AI) in Public Services

Technology in public services is generally used to process data, including processing, obtaining, compiling, storing, and manipulating data in various ways to produce quality, accurate, timely, and accountable information used in the public interest that can be utilized in decision-making. The decision to use technology that allows the government to interact directly with its people without being constrained by space and time (Sedarmayanti & Mulyana, 2020).

At present, the government is faced with problems in improving services; one of the policies taken is through the utilization of artificial intelligence technology (AI); the use of artificial intelligence in the provision of services by the government aims to make the bureaucracy run by the state civil apparatus run effectively and efficient. Artificial intelligence is a computer program with an algorithm that studies data and uses it to carry out processes of thinking and acting like humans (Endang et al., 2020).

Van Meter and Van Horn (in Winarno, 2008) define the implementation of public policy as actions in previous decisions. These actions include efforts to convert decisions into operational actions within a certain period and to continue efforts to achieve significant and small changes determined by policy decisions made by public organizations directed at achieving goals that have been set.

According to Fredrich, a policy is a series of actions or activities proposed by a person, group, or government in a particular environment where there are obstacles (difficulties) and possibilities (opportunities) where the policy is proposed to help

overcome it to achieve goals, referred to (Awang Setiawan et al., 2021). Meanwhile, public service is all forms of service, in the form of services and goods, which the government principally carries out to meet community needs (Ratminto & Atik Septi Winarsih, 2005).

The use of artificial intelligence (AI), in the public sector, especially in improving the quality of service, is possible because it will facilitate and assist officers in providing services to the public; the use of artificial intelligence (AI) application of computer programs or devices software that has intelligence on par with human intelligence to assist the government in managing and meeting people's needs in an era that integrates the physical and digital world (Endang et al., 2020), but of course, all of this must be supported by the government's readiness to face these dynamic conditions, especially the readiness of its resources because the use of artificial intelligence (AI) requires funds that are not small but quite large in the implementation process.

The impact of artificial intelligence (Artificial Intelligence/AI) is very influential on the implementation of public policy in Indonesia. Like it or not, it will have an impact on various things, even almost all parts related to systems in government and non-government, so of course, this will affect the policy system and public services that have been implemented by the government (Sedarmayanti & Yaya Mulyana, 2020). The existence of artificial intelligence (AI) is a necessity that will be experienced and lived by every country. Therefore experts or experts try to define it from various points of view so that the understanding of artificial intelligence (AI) is also different, different depending on the background of thought, but what must be understood from artificial intelligence (AI) is the positive impact and negative impact on human survival.

As the author has said that, the positive side of the application of artificial intelligence (Artificial intelligence/AI), public services organized by the government will be more effective and more efficient, besides that the application of artificial intelligence (Artificial Intelligence/AI) based on applications will make it easier for the community to submit services, the public only needs to download the intended application. It can be done at home without having to come to service centers, so this will reduce in terms of costs and time. However, the application of artificial intelligence (Artificial intelligence/AI) will reduce the use of work in the public sector, resulting in high unemployment, especially for workers who cannot keep up with these technological advances. Following are some examples of applications carried out in the city of Bandung, where the city of Bandung in providing convenience and improving services, has used artificial intelligence-based technology, including:

1. GAMPIL (Gadget Application Mobile for Licence)

This online mobile/smartphone-based licensing service application complements HAYU Bandung! The only mobile/smartphone-based licensing application in Indonesia that provides convenience and makes licensing. Assuming that most people in Bandung already have smartphones and understand how to operate them, this will facilitate services and provide a sense of justice for all people

who apply for licensing services.

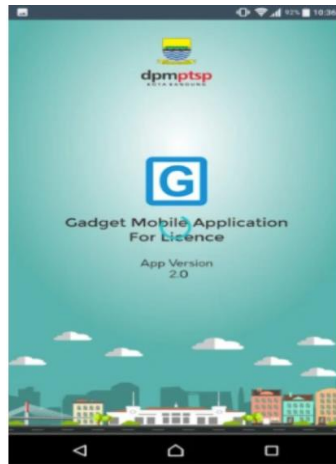


Figure 1. GAMPIL View

2. *Layad Rawat* Application

Layad Rawat is essential health services provided to individuals and families where they live intending to increase, maintain, or maximize the level of independence and minimize the effects of the disease (<https://dinkes.bandung.go.id>)

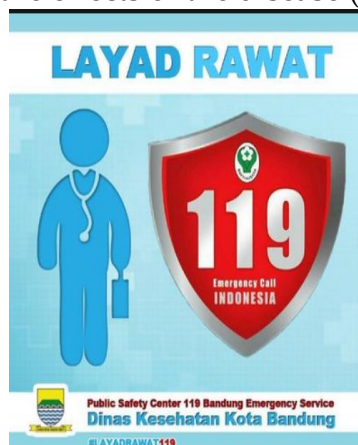


Figure 2. *Layad Rawat* Application

3. BIMMA Application

"Bandung Integrated Manpower Management Application (BIMMA)." The BIMMA application is an integrated employment management information system that integrates all fields in the Bandung City Manpower Office. The objectives of the BIMMA application include: (1) providing labor market information for the community; (2) the increase in the number of people absorbing workers in the City of Bandung; (3) facilitating data management of labor and job market; (4) facilitating the tracking history of Labor Recruitment; and (5) creating the competitiveness of the Bimma Job Exchange application with the current job search application (Felix et al. et al., 2021).



Figure 3. BIMMA Application View

4. e-SATRIa (Electronic et al.)

Online tax reporting application for self-assessment taxpayers, where taxpayers can report their taxes without coming to the local tax office. It is enough to access the application, log in, report the tax and then get a payment number, make a payment, and the process is complete (Endang et al., 2020)

The application that the author described above is a small part of the application of artificial intelligence in public services. The presence of technology-based public service applications is one of the government's efforts to improve public services that better and by the needs of society in the era of digitalization 4.0

3. Impact of Using Artificial Intelligence (AI)

In every implementation of the program launched to improve public services, it becomes natural that a program will have advantages and disadvantages that can positively and negatively impact the public service sector. The positive impact of the application of artificial intelligence (Artificial Intelligence/AI) in the public service sector includes: a) Government performance increases effectively and efficiently; b) Fast bureaucratic processes will reduce costs and time; c) Assisting the government in meeting community needs in the service sector, and d) Public satisfaction with community services has increased.

The negative impacts of the application of artificial intelligence (AI) in the public service sector include: a) The application of artificial intelligence AI will reduce the use of labor in the service sector; b) Reduced social interaction between the government (service providers) and the community (beneficiaries of services); c) The high cost of procuring AI device infrastructure; d) The high operational costs of AI; and e) Will bring up new crimes in the field of cybercrime and hackers who try to steal data on government websites.

As stated above, in carrying out a program to improve service quality by utilizing technological advances in responding to challenges in the 4.0 era, of course, there are two sides to a coin, where there are positive and negative sides of course, this is not An obstacle in improving quality services, and the government must prepare all of this in the face of increasingly dynamic developments in technological progress.

D. CONCLUSION

The magnitude of the influence of globalization in the world of technology is not only limited to the development of telecommunications equipment, but rapid globalization has also made progress in the use of other technologies, one of which is the development of technology-based service technology called artificial intelligence.

Technology in public services is generally used to process data, including processing, obtaining, compiling, storing, and manipulating data in various ways to produce quality, accurate, timely, and accountable information that is used in the public interest. The use of Artificial Intelligence (AI) in the provision of services by the government, aims to make the bureaucracy run by the state civil apparatus work effectively and efficiently. However, all of this must be accompanied by the government's readiness, especially in preparing human resources and infrastructure to make the system Artificial intelligence (AI).

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