



Strategy for Strengthening Digital Transformation and Implementation of Telemedicine in Accelerating Health Center Performance

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Abstract. The problems studied by the author are related to digital transformation by transforming the organization of the Puskesmas in the era of the covid 19 pandemic. This study aims to find out how to optimize the digital transformation strategy by implementing telemedicine in puskesmas services in the Covid-19 pandemic era. Research method The method used in this study is a literature study with two variables, namely Digital transformation and Puskesmas Performance. The Telemedicine program was first discovered around the 1960s, developed rapidly after the 1990s, and is now transformed into a digital application-based health service. Most researchers agree that telemedicine is the key to future health services. It can be concluded from some literature that the performance of the Puskesmas is closely related to the digital transformation carried out by the leaders of the puskesmas organization so that they can provide faster, more efficient, and more quality services for the community with all the challenges and opportunities.

Keywords: Digital Transformation · Telemedicine · Organizational Performance

1 Introduction

The problems studied by the author are closely related to digital transformation and organizational performance in the 4.0 revolution era and preparations for entering the 5.0 era. The current VUCA (Volatility, Uncertainty, Complexity, Ambiguity) situation, which refers to an increasingly volatile, complex, and increasingly uncertain environment, describes the battle situation of health workers in the face of the covid 19 pandemic. According to Otok Kuswandaru (Deputy of BKN), Indonesia in 2019 was ranked 77th out of 119 countries with a performance score of 38.04. In addition, Indonesia is the lowest in terms of global knowledge skills. The results of the evaluation of the performance of government organizations or agencies within a period of 2 (two) years from 2018 to 2019 obtained the following data; 3.3% of agencies are very good, 35% of agencies are good, 50% are adequate, and 11.7% are bad.

According to Fanila Kasmita Kusuma (2022) State, civil servants (ASN) are bureaucratic assets that are expected to be able to realize the ideals of a classy government in

2024. For this reason, ASN must prepare to face increasingly complex world challenges, such as digitalization, globalization, and pandemics, such as Covid-19. Globalization and digitalization require ASN to become a generation of learners where the progress of science and technology today will be a challenge and an opportunity for ASN to win the global competition.

Digitalization is one of the critical keys to increasing the productivity of an organization through digital technology that is built and increasing human resources. All of this will impact increasing customer satisfaction, faster processes, simpler operations, efficient processes, and quality products and services [1]. Significant innovations will be made to change a company to be more effective and efficient in running its business with digital transformation [2].

Digital transformation will also change and improve a company's performance in achieving its organizational goals radically [2]. The pace of technological development forces an organization to carry out digital transformation where competitors will continue to adapt new technologies with high customer satisfaction standards and better and faster services anytime and anywhere and with any technology [3]. According to [1], the strategic decisions that most organizations choose are highly dependent on digital transformation [4]. Then when viewed from the aspect of previous studies, it was found that studies on digital transformation in government organizations are still few compared to research in business organizations and companies.

Digitization is defined as how digital technology can change business processes from analog information to digital information [5]. In digitization, technology is a crucial enabler in capturing new business possibilities by changing existing business processes (Ramaswamy & Ozcan, 2016; Van Doorn et al., 2010). Through digitization, companies will create additional customer value by improving the company's user experience by implementing digital technology so that business processes are more efficient (Pagani & Pardo, 2017).

The phenomenon of digital transformation throughout the company which has broad implications for the organization, especially in the company's core business model, where digital capabilities are the most essential thing needed to transform towards digital technology (Agarwal et al., 2010; Iansiti & Lakhani, 2014; Li). Strategic digital transformation is a must and a solution in today's business, which was previously a legacy business into a new business by implementing innovation (Christensen, Bartman, & Van Bever, 2016; Markides, 2006). Digital transformation with a real change from the old model will impact the existing business model. For entrepreneurs or business people and organizational leaders today, they must start by making changes, gradually turning traditional businesses into technology-based businesses [6].

Previous researchers have different research results (gap research) in relation to the study of digital transformation and performance. Several researchers whose research results state that digital transformation affects performance, namely, H. Wang, J. Feng, H. Zhang, X. Li, (2020), JK. Nwankpa (2021), VG. Ortiza, NG. Navarro, WF. Garcia and WV. Ramosa (2021), K. Nayal, RD Raut, VSYadav, P. Priyadarshinee, BE. Narkhede (2021). The one who stated that digital transformation had no effect on performance was Agus Purwanto (2022). Another difference between previous researchers regarding digital transformation on performance is that some make digital transformation

an independent variable; H. Wang, J. Feng, H. Zhang, X. Li,(2020), VG. Ortiza, NG. Navarro-Acostaa, WF. Garcia and WV. Ramosa (2021), agus purwanto (2022), Based on the results of previous research, it was found that there is a significant direct influence of digital transformation on the organization and business of the company.

The problem formulation is that the COVID-19 pandemic has disrupted the performance and activities of government public service organizations. The research question is how to optimize the digital transformation strategy by implementing telemedicine in puskesmas services in the era of the covid-19 pandemic. While the research objective is to find out how to optimize the digital transformation strategy through implementing telemedicine in puskesmas services in the Covid-19 pandemic era. The benefits of the research are expected to be input for leaders in an organization to make changes in the business model strategy during the COVID-19 pandemic in stages with a digital basis to improve services for the better and faster.

According to [7], the concept of service in public services is not absolute and does not last long. According to Kotler [8], offering any service activity or activity to another party is essentially intangible and does not result in any ownership. The public service referred to by the author is a public service organized by the government. Moenir (2001) defines public service as an activity carried out by an agency or person in meeting the needs of people's lives in the form of goods or services. [9] distinguish two types of public services, namely public services or public services organized by public organizations and public services or public services organized by private organizations. In providing public services, there is an important thing that must be considered, namely the quality of service.

The development of information technology (IT) in the current decade is very fast, especially those carried out by the government in the context of public services. This has a significant effect on government management. One of the tangible manifestations of good governance policies is the implementation of e-government according to the Presidential Instruction of the Republic of Indonesia Number 3 of 2003 concerning the National Policy and Strategy for the Development of E-Government. This service model will benefit public service innovation, especially during the COVID-19 pandemic. It is time to optimize public services by the government to the community based on digital.

Digital transformation (DT) is a process that aims to increase significant changes in a product by utilizing existing digital technology in the organization and so on (J. Lonan et al., 2018). Some define it as a change to the structure, values, processes, position, or ecosystem within the organization and the environment outside the organization as an impact obtained from the use of a combination of digital innovations [10]. [11] conclude that digital transformation is an evolutionary process based on digital capabilities and technology to create value by changing business processes, operational processes, and customer experiences. From some of these definitions, it can be concluded that digital transformation is a very extraordinary process that involves resources and utilizing digital technology that is owned so as to produce outputs from the organization to provide new value obtained by consumers such as ease of transacting, shopping, communicating, and so on.

The digital transformation strategy, according to [12], can be characterized by two dimensions, namely the level of mastery of digital technology and the level of readiness

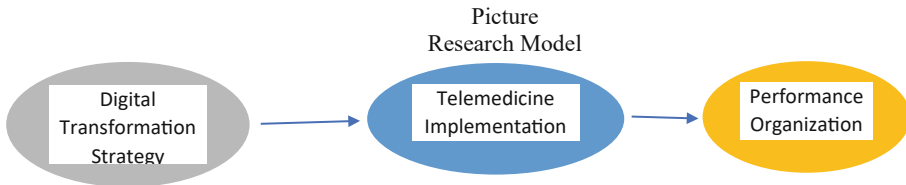


Fig. 1. Research Model

of the business model. It is necessary to choose what kind of transformation process suits the current organization in order to achieve the goals. The transformation strategy will undoubtedly differ in the process from one organization to another, which is influenced by the state of the organization.

Telemedicine is defined as the science and art of digitally managing health, both prevention and treatment (Waller & Stotler, 2018) [13]. Meanwhile, according to WHO (2010) that, telemedicine or telehealth is the provision of health services remotely with the help of information equipment and communication technology in treatment, prevention, and consultation by all health workers. Telemedicine programs were first discovered around the 1960s (Grigsby & Sanders, 1998) [14] and experienced rapid development in the 1990s (Craig & Patterson, 2005) [15]. Furthermore, with the rapid development of technology, the telemedicine program is transforming into a digital application-based health service (Wiweko, Zesario, and Agung, 2016) [16]. Various works of the literature suggest that telemedicine will continue to grow and become an essential thing in health services in the future (Pacis, Subido, and Bugtai, 2018) [17].

In some business literature, digital transformation is closely related to organizational performance as a complex and multidimensional phenomenon (Al Khajeh, 2018) [18]. According to Jangsiriwattana (2019) [19], there are two categories of organizational performance, namely subjective; culture, social responsibility, employee commitment, and job satisfaction. Both objectives are market share, financial market performance, and others. Organizational performance can be defined as a measurable organizational output compared to the organization's goals and objectives. The indicators for measuring organizational performance are employee satisfaction and all employees use resources efficiently in doing work.

The Community Health Center (Puskesmas) as an organization can be defined as a health service facility that organizes SME (public health efforts) and UKP (individual health efforts) activities at the primary level, with priority for promotive and preventive efforts (Permenkes 43 of 2019 concerning Puskesmas). In carrying out its activities, the puskesmas organizes technology-based activities, including the puskesmas information system as a medium that presents various health information, which will later assist the puskesmas management team in making decisions (Fig. 1).

2 Research Methods

The method used in this study is literature study or literature study. Where this method is carried out by collecting data and searching for data and information through documents, both written and electronic. In this study, the researcher only bases on various literature,

both library research and field research, which are primary and secondary. In conducting data analysis, the researcher used a systematic literature review technique, where the researcher carried out the process of identifying, assessing, and interpreting several data related to the research theme that had been previously determined in order to fulfill the research objectives (Kitchenham & Charters, 2007) [20]. Sources of data that researchers use in this study include e-mail, books, articles, journals, and proceedings both nationally and internationally as well as websites, electronic news, e-mails, laws and regulations, Ministerial Decrees and encyclopedias.

3 Discussion

3.1 Benefits of Digital Transformation in Public Services

The development of information technology is the key to improving human life in the future. The use and utilization of information technology can optimize increasing economic growth, social, political, and other aspects. In this case, the government that is given the authority to manage the country for the better must take advantage of digital transformation technology. Technological progress is currently so fast and massive, not only in the corporate sector but also in the public service sector. The presence of internet technology is getting cheaper, making globalization of information an everyday thing. The internet is used by various organizations, both companies, in their business and public services in carrying out government affairs. According to Jimly Asshiddiqie (2005), technological developments have changed people's behavior, where there is no longer a limit on space and time.

Singh (2009:8) asserts that governments everywhere are already using digital technology for economic, social, and political development. With digital transformation, the government can act as a catalyst in bridging the digital divide. This provides opportunities and opportunities for entrepreneurs to invest and cooperate with the government, including as a provider of goods and services directly to the government. In governance, digital transformation is significant to improve public services in line with the demands and needs of today's society. Digital Transformation is one of the keys to the success of a country in running its government organizations.

3.2 Implementation and Acceleration of Telemedicine Implementation

Some literature suggests that the use of telemedicine in handling COVID-19 has been carried out and succeeded in several countries, including China and Singapore. The State of China built a National Telemedicine Center and established an emergency consultation system through telemedicine as an emergency response and outbreak warning network in collaboration with the private sector in providing 5G technology in hospitals. In Singapore, telemedicine is used to monitor COVID-19 patients who are currently in quarantine so that their health conditions can be monitored.

On December 10, 2018, the government issued a policy through a letter from the director general of health services containing an application for the use of an integrated referral system via telemedicine to all District/City/Provincial Health Offices. With the

fourth largest population in the world, Indonesia has enormous opportunities for the development and utilization of digital health technology (e-Health). This technology is expected to be a solution to getting more accessible access to health. Another benefit that will be obtained by implementing telemedicine is that it can prevent the transmission of COVID-19 to doctors, nurses, and other health workers, as well as patients who come to health facilities. The Ministry of Health urges all healthcare facilities to develop and use telemedicine. This system functions to perform data documentation, consultation, and simple diagnosis remotely in providing health services to the community. There are many types of telemedicine that can be applied in health services, including; teleconsultation, telemonitoring, telehomecare, to Tele-education, and others.

From several journal literature on telemedicine services at puskesmas, including; [19] Analysis of Differences in the Level of Satisfaction of Pregnant Women with Direct Assistance and Telemedicine Models at the Semarang City Health Center. Wilda Isnaeni, (2018) Utilization of Smart City Infrastructure as a Community Development Program Case Study of Home Care and Telemedicine, Makassar City. [21] Implementation of Vital Sign Abnormality Warning on Telemedicine Workstation. [22] Addition of a Vital Sign Module and a Non-Invasive Blood Sugar Checker Module for Telemedicine Workstations. Fatmawati, (2021) The role of telemedicine for health workers in the new normal era. [14], Challenges of Connectivity and Accessibility in the Development of Telemedicine-Based Health Services in Indonesia: An Overview.

Health services through telemedicine are beneficial, especially for service facilities in remote areas, and protect health workers who are elderly and have a history of comorbidities from direct disease exposure. So that it becomes a solution to overcoming the shortage of health workers who died due to exposure to COVID-19. Behind the many benefits of implementing telemedicine, it turns out that there are obstacles and limitations in its implementation related to data security and privacy, which are not fully guaranteed, there are disturbances in internet connections, and not all services can be carried out through telemedicine as in patients with emergency situations. Policies in the implementation of telemedicine really require an increase in human health resources who are professional, dedicated, committed, and ethical. It requires the involvement of many parties and the collaboration of several institutions/institutions in developing integrated telemedicine.

4 Conclusion

The implementation and utilization of telemedicine have been carried out in several health centers and are very useful, especially in health services in the era of the covid 19 pandemic. In its implementation, there are still several challenges, including those related to data security and privacy, which are not fully guaranteed, and disturbances in internet connections. Government policies support the development of health services through telemedicine.

Organizational performance in health services is closely related to the strategies carried out by leaders or policymakers in an organization by carrying out digital transformation according to the situation and conditions faced. Heads of puskesmas need to adopt a digital mindset to openly transform digitally by making changes and supporting

the growth of continuous improvement. The Industrial Era 4.0 in the world of health is a challenge as well as an opportunity to be better at providing health services to the community faster, more efficiently, and of higher quality.

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