E-Services: Implementation of Digital-Based Public Services in The 4.0 Era

S Supardi[1], Danu Eko Agustinova[2], Sutanto Tri Juni Putro[3], Riko Septiantoko[4]

[1,4]Department of Social Science Education, Faculty of Sosial Science Law and Politic Science, Universitas Negeri Yogyakarta, Yogyakarta, Indonesia
[2]Department of History Education, Faculty of Sosial Science Law and Politic Science, Universitas Negeri Yogyakarta, Yogyakarta, Indonesia
[3]Department of Geography Education, Faculty of Sosial Science Law and Politic Science, Universitas Negeri Yogyakarta, Yogyakarta, Indonesia

Author Email: pardi@uny.ac.id[1], danu_eko@uny.ac.id[2], sutanto.tp@uny.ac.id[3], rikoseptiantoko@uny.ac.id[4]

Orcid: https://orcid.org/0000-0003-3642-1029[1], https://orcid.org/0000-0001-9432-496X[2], https://orcid.org/0000-0001-6452-8910[3], https://orcid.org/0000-0002-9570-3555[4]

Abstract. Globalization has numerous significant impacts that have an effect on people's lives. One of these impacts is the advancement of information and communication technology, which has many promising benefits, such as time efficiency, speedy delivery of information, transparency, and affordability. Technological advancements have infiltrated various sectors, including the government. In today's era of regional autonomy, it is essential to achieve good governance, which is balanced with the use of information and communication technology, commonly referred to as e-government. The use of technology and information indirectly encourages the adoption of electronic-based service systems (e-Services) in government institutions. The development of e-services is a media innovation that supports the provision of excellent services for the community, particularly in rural areas. Furthermore, the development of more varied service features such as letter submissions, complaint services, village information, and administrative procedures is expected to accelerate and facilitate access for service users more efficiently and transparently. This study aims to 1) create a public service e-service design; 2) fulfill the wishes of the community in efficient and effective village government public services; 3) understand the transparency of the village government, which can be accessed digitally. The development of letter disposition e-services in Sriharjo Village has improved the quality of public services and increased.

Keywords: E-Government, E-Service, Srihardjo Village

1 Introduction

In the 20th century, there was an explosion of information and communication technology that occurred throughout the world, one of which was Indonesia. The explosion of information and communication technology then influenced the lifestyles of the world community globally, both in the education, health, trade, and government services sectors. According to Rosana (2010), advances in information and communication technology have opened a new stage for people in the world in general and Indonesian people, in particular, to obtain information autonomously [1]. Advances in information technology can eliminate by itself the existence of global information barriers caused by initiatives from individuals in society who want to know the conditions of the surrounding environment and global environmental conditions [1]. The entry of Information and Communication Technology (ICT) into the government domain is an important starting point in supporting the availability of public services. In addition, the development of ICT certainly opens opportunities for government agencies to provide services more broadly not only for the public, known as G2C (Government to Citizen) but also across government agencies (G2G) and the private sector (G2B). The presence of ICT, especially the Internet, has revolutionized how the delivery of public services is carried out, from traditional methods to electronic forms.

New media that provide and deliver information and services electronically to the public are known as Electronic Government (E-Government). E-Government is a form of electronic service that can serve the interests of public administration in a region more effectively and efficiently. The World Bank (2021), defines

e-Government as the Use of Information Technology such as Wide Area Networks, the Internet, and Mobile which has the ability to transform relationships with communities, businesses, and other government agencies [2]. United Nations (2005), defines e-Government as the utilization of Information and Communication Technology (ICT) and its application by the Government to provide information and public services [3]. E-Government can be said as a provider of information and public services by a government institution both at the local and national levels through the internet and other digital technologies which are a form of government initiative in improving the flow and process of information services in government institutions. E-Government is a relatively new field of research, so it needs to be studied in more depth.

E-Government can also increase accountability and transparency, reduce corruption, increase public trust, and community involvement, higher efficiency, and reduce usage costs [4]. E-Government is an electronic media that is very important for the running of government institutions because it can improve the flow of processes and information in these government agencies. Various benefits can be obtained from implementing e-Government including reducing costs, effort, and time of its users, increasing the quality of public services and their level of satisfaction, increasing computer literacy for users, and creating new business models. All of these benefits can be received by all levels of society, which can also indirectly encourage user adoption of electronic-based service systems (e-Services) in government institutions. According to Noris (2010; Wirtz & Daiser, 2015), e-Government can lead to a fundamental transformation in the relationship between government and citizens [5].

Based on Presidential Instruction (Inpres) 3 of 2003, there are 4 stages in the development of e-Government, namely; 1) preparation (information); 2) maturation (interaction); 3) consolidation (transaction); and 4) utilization (integration). E-Government public services can be divided into four types of services, namely those related to information, communication, transactions, and integration [5]. According to [6], currently, Indonesia's position is still using interactive website media which is included in the second stage, namely maturation (interaction)[6]. While the benchmark for the third stage, namely stabilization (transactions) as a form of e-Government development, is the use of e-Services. This proves that the use of e-Services as a benchmark for the development of e-Government is still running very slowly since the issuance of Presidential Instruction 3 of 2003. The development of e-Government in Indonesia is still inferior to several neighboring countries such as Malaysia, Singapore, Brunei Darussalam, etc. If you look at its implementation in neighboring countries such as Malaysia, e-Services have been implemented thoroughly by government agencies that provide various services or online transactions ranging from paying taxes, job applications, and permit extensions to e-commerce [7]. There are several factors inhibiting the implementation of e-services in Indonesia, including the absence of clear standardization, uneven infrastructure, low public literacy of community culture, and organizations that are less supportive of change. So, based on the problems above, the use of e-Service by Indonesian government agencies must be further improved by looking for what factors can influence the success of e-Service development, especially in government agencies in Indonesia. This research does not specifically target certain services but e-Services in general in government agencies. It is hoped that the success factors obtained can be accommodated by various related parties, especially government agencies to encourage the development of e-Services in Indonesia.

In the current era of globalization, product, and service offerings have liberally shifted to digital forms which are then delivered via electronic media using the internet. E-Services are seen as content that is interactive, centralized, and is an Internet-based customer service. E-Services are driven by users and technology to increase the synergy between users and service providers. The concept of e-Services is a new paradigm of e-Service in an electronic-based environment for both business and government which consists of three parts. The first part is in the business domain, organizations interact with customers (customers) which are called B2C (Business to Customer) while in the government domain, interaction with the public is known as G2C (Government to Citizen). The second part is in the internal environment of the organization itself (internal e-Service). Then the third part is in the business domain, relations with external parties such as suppliers or with the government which is known as B2B or B2G while in the government domain, interactions with the business world and between government agencies are called G2B or G2G. Types of interaction can include all or some of the following such as information-based interactive exchanges, negotiation interactions, promotional flows, and products/services. So that e-Service has created significant traction, especially for academics and practitioners in understanding how the Internet environment can be utilized to provide an effective e-Service system for its users.

Based on the description above, e-Services can be said to include three main components, namely service providers, service recipients and service channels (ie technology). For example, for electronic-based public services, public institutions are referred to as service providers, the public and the business world are service recipients, while the service channel is using the Internet. This research will try to examine public service innovation in the form of e-service disposition letters which will then focus on improving public services and village government transparency. This study aims to develop a public service e-service design that fulfills the wishes of the community in an efficient and effective village government public service; knowing the

transparency of the village government that can be accessed digitally, improving the quality of public services and increasing efficiency and transparency so that it will make it easier for village officials and the people of Sriharjo Village.

2 Research Methods

This research is qualitative research. According to Creswell (2013), a qualitative research method is an approach or search that aims to understand, analyze and explore a central phenomenon [8]. In line with this, Anggito in [9] describes that qualitative research is the collection of data in a natural setting that aims to interpret a phenomenon that occurs with the key instrument, namely the researcher [9].

This research took place at the Sriharjo Village Office. Data were obtained from primary data and secondary data. Primary data was obtained from informants related to village public services and local communities, while secondary data was source of data obtained indirectly which supported research and strengthened research results. Data were obtained through interviews, documentation, and observation results.

The data analysis technique uses the data analysis technique [10] which includes analysis used include data reduction, data presentation, and drawing conclusions or data verification [10]. Data reduction is done by sorting data that is considered important. Furthermore, the activity of presenting data in qualitative research is carried out in the form of a brief description in the form of narrative text. The last stage, namely the stage of drawing conclusions or data verification. To check the validity of the data used the triangulation technique.

3 Results and Discussion

Globalization has many major impacts that affect life in the economic, social, cultural, technological, and political fields of society in the world. One of the impacts of globalization is the advancement of information and communication technology with various promising benefits such as making time efficient, speedy delivery of information, transparency, and affordability. According to Dreher, et al. (2006), Globalization makes it easier for the implementation of a government because it goes hand in hand with the development of information and communication technology, which provides significant efficiency and effectiveness for the course of government administration [11].

The era of the industrial revolution 4.0, which was marked by advances in the Internet of Things technology, had an impact on all fields, one of which was the field of government. In dealing with industrial bureaucratic reform 4.0, technological innovation is needed to make it easier to provide public services and for the community and create an effective and efficient bureaucracy in government agencies so that good governance is realized [12]. From this, it can be seen that advances in technology and information provide many benefits, one of which is in the field of public services. Through the use of technology and information, it can encourage the process of adopting the use of electronic-based service systems in government agencies, it will increase the efficiency of public services. Moreover, in the current era of regional autonomy, it is necessary to realize good governance which is balanced with the use of information and communication technology or what is commonly called e-government. The existence of e-government is expected to be able to improve good public services according to what the community wants [13]

E-Government is a product that is managed by the government based on applications using the internet which is realized based on current needs. e-Government is used for online services that connect a relationship between government and government (G2G), government and business people (G2B), and government and civil society (G2C). It explains that E-Government is an important media as an initiative to improve processes and information flow in government institutions. E-Government can also increase accountability and transparency, reduce corruption, increase public trust, and citizen involvement, higher efficiency, and reduce costs. E-Government has provided significant benefits to various related parties. The benefits that can be obtained from implementing e-Government are reducing costs, effort, and time from organizations and their users, increasing the quality of public services and their level of satisfaction, increasing computer literacy for users, and creating new business models. indirectly encourage the process of user adoption of electronic-based service systems (e-Services) in government institutions.

Advances in information and communication technology greatly contribute to good governance and e-government. This is because the use of digital technology, information and communication developments can improve public services so that it will encourage the creation of effective, efficient, fast and responsive public services. Utilization of information technology in e-government is generally used to process data, including processing, obtaining, compiling, storing, and manipulating data in various ways so that appropriate, accurate and accountable information results are obtained. The role of internet media is an entity in the form of information technology that allows the government to interact directly with its people without being constrained by space and time [14]

Zulhakim in Sudrajat, et al (2019: 2) explains that the implementation of e-government requires the development of information and data systems that are adapted to the bureaucratic process at that time so that the utilization of information and communication technology will optimally support the bureaucratic process [15]. In the implementation of e-government, careful design, and planning are needed by looking at several things, such as: a) there is compatibility between the vision, mission, and objectives of e-Government with the vision, mission, and objectives of the government; b) there is alignment between data information systems and bureaucratic processes; c) the use of the right strategy; d) have a structured and gradual process; and e) the support of highly supportive human and financial resources.

The community certainly wants convenience in public services, time efficiency, accountability, and transparency in the implementation of public services. This is in line with Law Number 25 of 2009 concerning Public Services. In Article 4 it is explained regarding the principles of public service delivery that are related to e-government, especially in the embodiment of participatory principles, openness, accountability, timeliness, speed, convenience, and affordability [16].

One of the ideas or innovations made to improve public services is the implementation of online public services. The implementation of an online system is a public service that becomes an administrative system in government. According to FDL (2020: 108), the implementation of an online system is one of the innovations from the government which aims to make it easier for the community and to streamline time so that all administrative matters relating to the public will be more easily managed [17].

Public service innovation is widely used by agencies and institutions that connect with other people. Public service innovation policies have the objectives described in Cahyono, et al (2020: 83), including: a) Encouraging the development of public service innovations; b) encouraging the development and transfer of public service innovations; c) accelerating the improvement of the quality of public services; d) increase community satisfaction [18].

One of the village governments that implements an online public service system is the Sriharjo Village government. The Sriharjo Village Government developed a public service in the form of an E-service mail disposition as online mail management. E-Services are seen as content that is interactive, centralized, and is an Internet-based customer service. E-Services are driven by users and technology to increase the synergy between users and service providers.

The process of developing e-services in Sriharjo Village is carried out through several mutually sustainable stages. The first stage is the analysis stage is a preliminary study carried out by conducting a literature study to reveal an outline description of the research conducted. After going through the literature study, observations and interviews were finally carried out which were used to collect information as a preliminary study. The second stage is carried out by compiling a storyboard to compile a series that will be carried out at the development stage. Storyboarding is also carried out for effectiveness and convenience in the product development process. In addition, content preparation is done by creating a design that will be used as the main material for making e-services. Content preparation is done to simplify and speed up the product development process. Content compiled must be based on accurate sources and according to the needs.

The third stage is the development stage. The development phase is carried out based on the results of the initial needs analysis and the design that will be used as the main development material. E-service development is carried out by research steps and procedures. Product development is carried out using the help of WordPress software. After the product is finished, expert validation is carried out using the instruments that have been developed to obtain the results of the assessment and input. Based on the validation results, the product is revised to produce a more perfect product. Expert validation is carried out to obtain assessments, suggestions, input, and comments from experts on the products being developed. Based on the results of the validation, the product was repaired according to the advice and input of the experts. The aspects that were assessed included: content, material, and language assessment.

Next is the implementation stage. This stage is carried out on prospective users. Implementation is done by doing a pretest before using the e-service, and a posttest after using the e-service. Trials are carried out after the product has been declared feasible by experts. The trial was carried out by providing a test of the community's knowledge and response to the product being developed. The product trial results are then calculated to obtain the results of a community-based assessment of the product before the final stage.

The fifth stage is the evaluation stage. At this stage, the researcher conducted several evaluation stages. Each development process needs evaluation to get maximum results. In this study, evaluation was carried out after the analysis process was carried out, after product design, analysis after the development process at the revision stage based on expert input, and finally evaluation of the implementation of the product that has been developed. After evaluation and revision based on trial results, the product can be disseminated.

The development of letter disposition e-services in Sriharjo Village can improve the quality of public services. This is because the development of this e-service will bring many benefits to village officials and the local community. The development of e-services in Sriharjo Village has also contributed greatly to the provision of good services for village officials and the community. This is because, through the development of an e-

service website, the disposition of letters will make it easier for people to take care of certain letters so that people will be more time efficient because the procedures carried out are easier and not as long-winded as usual. E-services can also be used for agenda reminders, such as when a big event is going to be held in the village, such as during an independence celebration or other big event, the community can access the agenda to be held on the available web. In addition, the e-service also facilitates village officials in delegating tasks to village administrators and evaluating performance so that it will facilitate transparency for the community. Therefore the development of this e-service certainly greatly increases time efficiency and transparency for village officials and the local community.

The existence of this e-service finding will make it easier for policymakers to determine new policies so that the process runs more quickly [19]. This e-service is also expected to be a reference for making innovations or breakthroughs in several places. The letter disposition e-service developed in Sriharjo Village has fulfilled the feasibility of improving the quality of public services and increasing efficiency and transparency so it affects improving public services and village government transparency which greatly facilitates village officials and the people of Sriharjo Village. This is because the use of this mail e-service is very easy. Village officials and the local community only need to access www.e-service.tech on a browser to use it. After that, enter each WhatsApp number and enter the password 123456 so you can open the platform. Easy access to e-service disposition of this letter is very helpful for local people who want to: 1) accommodate letters and invitations, 2) delegation of tasks to pamong desa, 3) agenda reminders, 4) digitalization of letters and documents, 5) performance appraisal.

This research can be further improved by prioritizing website security through data collection of residents so that the website can only be accessed by the local community and cannot be accessed by people from other villages so that data and other security can be maintained properly. For example, when entering the website, it can only be accessed by entering the resident identification number (NIK) of local residents so that other residents who are not from Sriharjo Village cannot access the website freely. Therefore, it is hoped that future research can be developed better by improving the website to advance digitalization-based electronic services which are developed not only in the realm of village community public services but are expected to reach the realm of government institutions.

With the development of e-services in Sriharjo Village, it is certainly hoped that the findings of this study can become a benchmark for other villages to be able to improve the quality of public services through the use of information and communication technology developments because the use of digital technology in public services will encourage the creation of public services so that villages Others can develop similar e-services that provide many benefits for the community and village officials.

4 Conclusion

In the current era of globalization, product and service offerings have liberally shifted to digital forms which are then delivered via electronic media using the internet. One of the ideas or innovations made to improve public services is the implementation of online public services. The implementation of an online system is a public service that becomes an administrative system in government. use of information and communication technology or commonly called e-government. The existence of e-government is expected to improve good public services according to what the community wants.

E-Government has provided significant benefits to various related parties. The benefits that can be obtained from implementing e-Government are reducing costs, effort, and time from organizations and their users, increasing the quality of public services and their level of satisfaction, increasing computer literacy for users, and creating new business models. indirectly encourage the process of user adoption of electronic-based service systems (e-Services) in government institutions.

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