A PHENOMENOGRAPHY PERSPECTIVE ON DIGITAL TRANSFORMATION IN PUBLIC SERVICE: CONCEPTIONS OF JOGYAKARTA SMART SERVICE (JSS)-INRI INGGRIT

by Layanan Digital

A PHENOMENOGRAPHY PERSPECTIVE ON DIGITAL TRANSFORMATION IN PUBLIC SERVICE: CONCEPTIONS OF JOGYAKARTA SMART SERVICE (JSS)

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Abstract

The study aims to explore the actors' conceptions of the digitization of public services through their experiences, perceptions and understanding. These actors consist of the government as a service provider, users including business actors who use the digitalization of public services to meet their needs and administrative interests. In principle, the sustainability of the digitalization of public services will be largely determined by the participation and support of its users or citizens. The study was conducted in Yogyakarta as one of the cities that provided digitalization of one-door public services namely JSS (Jogya Smart Service) since 2018. The method used in this study is Phenomenography and the informants involved are 8 people consisting of government officials, users and businessmen. Data collection was conducted with interviews. The results of this study revealed that there was a variation in the conception of the actors. These conceptual variations relate to the use of media, the benefits and obstacles in digitalizing public services as well as the stakeholder engagement required in the transformation of public services. The outcome space showed that the digitalization of public service implies three understandings those are new skill needed, implications of technological adoption, co-production and shared values as well.

Keywords: transformation; digitalization of public services; Jogya smart services; phenomenography; conceptions

Introduction

After regional autonomy, Indonesia experienced quite significant dynamics of bureaucratic and governance transformation. Each region is working hard to increase transparency, accountability and public participation. Public services that were previously carried out conventionally have undergone a transformation, moving towards smart government-based information technology. Several large cities that have adopted information and communication technology in providing public services are Yogyakarta through JSS (Jogya Smart Service). JSS began to be used by the Yogyakarta City Government in 2018, with an application platform and website that

provides digital public services ranging from health issues. population issues to accessing real time broadcasts on CCTV installed in several corners of the city of Jogya.

The introduction of information and communications technology (ICT) or digital into public administration has resulted in a major change in the way public services are served (Kemal & Shah, 2023). The citizens' need for fast and real-time access to their services can no longer be avoided by the demands and dynamics of globalization. Digitalization is then the answer to the government's obligation to interact with the public, provide servants and the most effective way to change the behaviour of governments and citizens in solving problems related to economics, politics, culture and society (Davis, 2021).

In this context, in its implementation, these changes imply the presence of cultural demands, perspectives and behaviours so that users of public services can get the maximum benefit from the digitalization of the public service(Hamjen, 2023). Public service transformation is seen as successful when the culture, behaviour and viewpoint of both government and users have shifted in accordance with the objectives of digitalizing public services. Physical presence or face-to-face interaction that originally became a must in public service mechanisms shifted with the presence of applications or websites (Review et al., 2014). The digital transformation is not only expected to transform services into online services but it emphasizes on an integrated service system so that all social groups in society can experience innovation in public services (Third et al., 2019).

Digitizing public services automatically improves business processes to make availability faster, easier, cheaper, transparent and accountable. In this context, the digitization of public services has prompted governments to redefine business processes that require changes in operational procedures. Public services digitization also focuses on accuracy in time or real-time as well as developing digital devices that support the operationalization and provision of services to the public(Dunleavy et al., 2011). Digitalization of public services also helps governments to continue to innovate and modify business processes to respond to or change behavior, demographic differences and individual preferences in the digital age (Safarov, 2021). It is a public service challenge given that people's lives are changing and dynamic and require faster, easier, cheaper and more transparent services.

Digitalization in governance begins with the implementation of e-government. E-Government is a fundamental tool for governments to transform into responsive, transparent, and facilitating access to information, freedom of expression, efficiency, productivity, and social inclusion(Kassen, 2019). The use of mobile devices (Mobile, Tablet, Pads, etc.) is the key point of smart government. Thus, many researchers refer to SMART Government using the term 'm-Government' (Al-obaithani et al., 2018). Mobile devices have become a part of human life, and this reality provides an opportunity for public service providers or governments to start changing their activities according to the demands, convenience and efficiency of interaction for governments and citizens(Simmonds et al., 2021). Smart government is not a second stage of e-government or a complement to such services. However, it can be regarded as part of the e-government that consists of other channels to provide government information and services [9]. Besides, this service has its own functions and features. There are some advantages of smart government over e-government. On the other hand, some researchers believe that smart government will not

completely replace e-governing activities, and therefore should be complementary to e-Governing efforts.

A previous study had clarified the differences between e-government and M-Government. The study shows that the adoption of e-government via the PC-based Internet is largely limited to educated groups that have their own efficiency in using computers, software, and the Internet. Unlike mobile devices that can be used for any purpose including interacting with government sites to search for various public services and does not require very sophisticated knowledge and skills. This has caused the use of mobile and its applications to have become popular among urban, suburban, and rural residents (Shareef et al., 2012).

The digitization of public information services in Jogyakarta city began in 2018 with the launch of JSS as an integrated public service application. Currently JSS is continuously transforming and has provided 299 public services integrated, which can be accessed by the entire community. JSS is a super app with the concept of Single ID, Single Window, and Single Sign On so users can access various services through just one app and one account. As of April 2023, there are more than 200 servers that have been integrated into JSS with the number of users reaching 220,479 accounts by April 2023. (Source: The Innovations from Yogyakarta and Central Java, Exhibited at KIPP 2023 Day Six, 06 July 2023). According to the latest data in 2022, the number of active users of the Jogja Smart Service app has reached 75,970 active accounts. The data suggests that the transformative governance system in Yogyakarta City needs stakeholder support so that redundancy by accelerating the use of information and communication technology can have an impact on public satisfaction with government performance (Indriyani et al., 2022; Gumilar. 2020). JSS is also one of the 45 commended innovations in public service by the Ministry of PANRB in 2023.

Research on digital transformation in public service governance in Indonesia is currently widely conducted (Pratama et al., 2023; Kusumastuti et al., 2022) but not many have explored how actors understand the digitalization of public services. The understanding of these actors is vital for the survival of a collaborative, synergistic and increasingly democratic public administration. As public services digitization involves several actors other than the government and stakeholders such as, educators and society in general, this study would then like to study how the conceptual understanding of digital bureaucracy transformation is carried out in smart government-based governance in Jogyakarta.

Method

The method used in this study is phenomenography that emphasizes conception as the center for describing knowledge (Marton, 2004). Knowledge is a product of the process of thinking and depending on the world outside the individual. Knowledge assumes a relational nature, and involves a constant connection between thought, experience, and a phenomenon. Phenomenography focuses on three things. First, the public on interests. Second, content-oriented. And third, describing conceptions of various aspects of their reality (Marton, 1981; Yates et al., 2012). The informants in this study include the elements of bureaucracy that exist in the Yogyakarta City Government, citizens and businessmen who have used digital facilities in public services or JSS as well as academics.

The research subjects were selected purposively by a sampling consisting of several heads of government services, government/ASN officials and citizens who use public services including businessmen. Data collection techniques were live interviews and secondary data collection. The interview results are transcribed and stored on a flash disk. During the interview, any variation in the conception revealed by the informant is considered valid as the recorded data source. The phase of data analysis covers three aspects, namely datadesignation (data structure and digestion) and data categorization/coding (variation of understanding and empirical manner) using Nvivo 12, as well as formulation of results (identification of conception and outcome space) and preparation of research reports.

Results and Discussion

Transformation of Public Service Digitalization

Based on the results of the interviews, the informants' understanding of the transformation ofdigitized public services is attached to four concepts, namely related to the media used, benefits, obstacles and the significance of stakeholder engagement in the digitization of public services. The table below visually illustrates that transformation towards the digitalization of public service, both by public, users and businessmen, which is characterized differently based on their experience which then produces four conceptions as mentioned above.

Tabel 1. Digitalization of public service
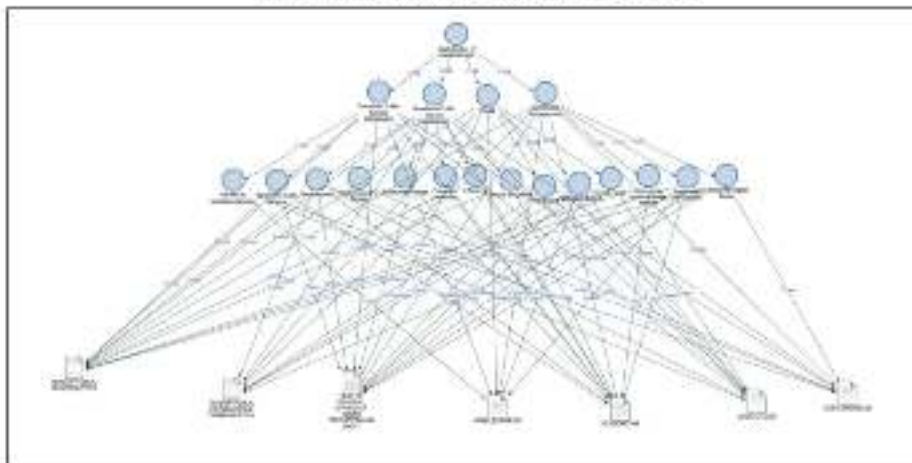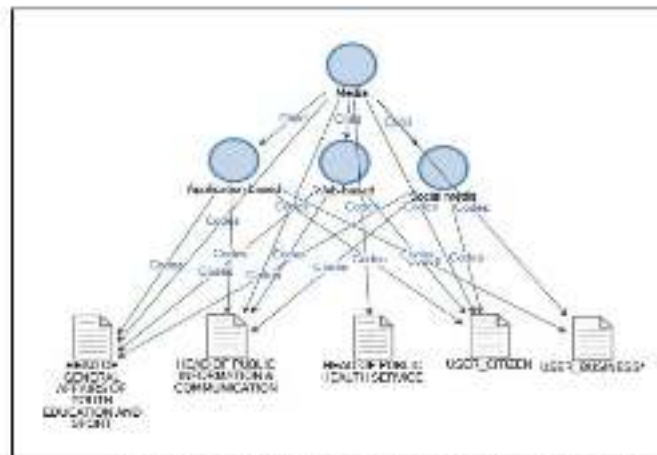

Source: Data obtained by researchers, 2023

The digitization of public services in developing countries refers to the process of integrating technology and digital platforms to improve the delivery and accessibility of government services to the public. The goal of this transition is to improve efficiency, transparency, and accessibility of government. Digitalization as an innovation that drives efficiency and transparency in the public sector, significantly improves government-citizen relations, improves the quality of services, reduces bureaucratic barriers, and drives economic growth. Digitalization, which is a transformation from the private sector to the public, involves a major shift from paper-based and manual services to technology and automation (Johansson et al., 2023). This transformation aims to increase the efficiency, accessibility, transparency, and effectiveness of public services provided by the government to its citizens. Digitalization also encourages collaboration with a wide range of stakeholders, including government agencies, businesspeople, social organizations, and individuals. Stakeholder relations open up opportunities to bring together all stakeholders thus facilitating the collection of different information and perspectives, which will ultimately result in a more comprehensive digitization approach(Trunova et al., 2022).

Digital governance and e-governance emphasize the role of ICT in city governance, linked to people's desire to provide electronic services and their interaction with ICT-informed governments, such as better access to public services and information, shorter response times, availability of online applications and transactions and cost savings for citizens. In this context, digital governance is defined as progress in improving the delivery of public information and services through organizational processes and technologies that make information more accessible and disseminated in all government agencies(Pereira et al., 2018).

Media in the transformation of public services

This study shows that the concept of transformation into a digitized public service is understood by almost all informants as an innovation that uses information and communication technology – digital media such as websites, social media and applications. Manual or conservative governance of public services has been shifted with the presence of information and communication technology. As shown by the informant, the data shows in the visualization below,

Tabel 2. Media Usage in digitalization of public service

Source: data obtained by researchers, 2023

Based on the visualization above, it was found that governments represented by the three services as public service providers understand that digitization is closely linked to information and communication technology. In this context, public services are then closely related to the digital media that is used, among others, based on the web, applications and social media. Similar understanding is also found at the user level of digitalization of public services. The users revealed that the mediated public service is a form of service that does not completely replace the face-to-face service but is effective in cutting the bureaucracy of services so that digital media becomes a tool that brings benefits to governments and citizens users. As revealed by the informant below.

Use Zoom. Later, children who want to join can join, those who don't want to join but want to watch can watch via YouTube. On YouTube, sometimes someone asks via chat on YouTube Live. (Source: Fajar, 2023)

Well, there are now maybe around 197 applications in it at our place. So, we call that single sign-on, single ID. We are on Facebook Yogyakarta City Government, then Instagram, then Twitter. Then we also come from the Ministry of Tourism, we have SP4N Report, then the DIY Differentiator, we have E-Report. (Source: Frans, 2023)

You can choose the time, what time it is, then you can register to use it on the website. Then after registering, you will be told which center you will go to. (Source: Mitra, 2023)

Based on the exposure of informants, this study shows that online platforms have been seen as developments in communication relations between citizens and

governments as public service providers. Three heads of government ministry stated that the transformation of digitized public services provides media that enables to facilitate and accelerate interaction with the public so as to enable citizens to participate effectively in decision-making processes.

In terms of public service users, the emergence of the media shows that the public has the autonomy to use the services according to their needs. The presence of social media and Web 2.0 plays an important role in creating a new style of participation. (e-participation). Digital media in public services such as apps, websites and social media also transforms passive public behavior into active, thus building independence in the implementation of service procedures. The use of social media in government has many benefits, such as better collaboration and communication between citizens and governments (Dunan, 2020), citizen empowerment, government transparency, and, also, building stakeholder engagement (Kolb, 2018).
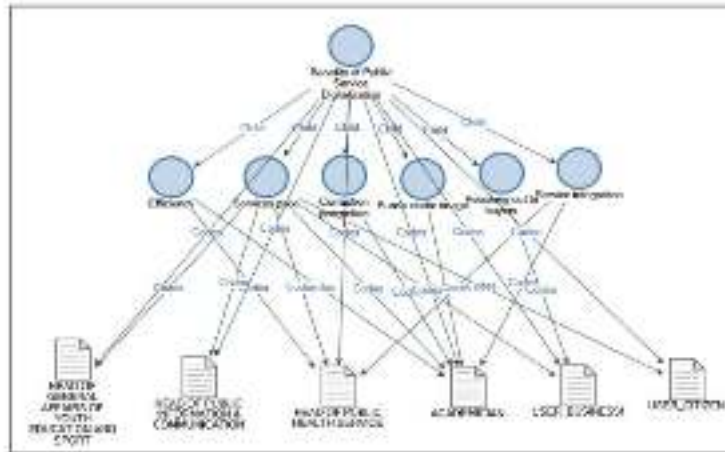
The informant's experience and understanding of the emergence of digital media in public transformation reinforces the character of social media and Web 2.0 as a crowdsourcing that potentially enhances interaction, distribution of information (Tania & Cahyono, 2022), and exchange of content by users. In this context, social media contributes to participatory democracy (Priyowidodo et al., 2019) that allows governments to communicate and involve individuals or citizens in policymaking. The role of social media in the public sector has a positive impact on openness and accountability, as well as encouraging creative governance mechanisms and public involvement and interaction in public policy making.

In this section, this study confirms that digital media or technology is closely related to management or governance in serving the public. Although JSS has not been fully implemented online yet, the technology has played an important role that goes beyond the traditional purpose of helping to optimize community services and improve the quality of Yogyakarta citizens (Iqbal, 2021). ICT is a solution used to improve the quality of interaction between the government and its components, as well as to build networks that connect individuals with the government.

Public Service Digitization Benefits

Understanding the transformation of digitized public services is closely linked to the concept of the benefits obtained from digitization of public services. This concept emerges   from   the rationality of informants, who believe that digitization has the potential for modernization in government governance as visualized below.

Tabel 3. Benefits of digitalization of public service

Source: data processed by researchers, 2023

The data in the visualization above suggests that all informants have an understanding and experience of the value or benefits of JSS. Digitalization of public services offers a number of benefits by using technology to improve government efficiency and communication with individuals. It improves accessibility for the general public by enabling them to use online services as they wish and eliminating the need for face-to-face visits. In addition, it promotes resource efficiency and cost savings for governments as the transition from paper-based systems to digital platforms reduces operational costs and administrative liability.

JSS also drives innovation in decision-making through the use of data analysis and automation to enable governments to customize services, increase transparency, and encourage greater citizen participation. Overall, digitization of public services improves service delivery, improves efficiency and enables more responsive and accountable administration. The following is the informants said,

How then the use and improvement of the entire communication technology is happening, especially in those sectors of how the public is asking for speed, this feels right. (Source: Sulhan, 2023)

Yes, integration, so correlation, the relationship with us, we at the time of using the main admin data to check related to bpjs participation, participation not our participants that we are always coordinative, so one application is enough (Source: Wiryono, 2023)

Well, in this application it is hoped that people will now use more digital methods to obtain public services. There is no need to keep coming to cityhall and bringing documents and files (Source: Frans, 2023)

Coincidentally, we are self-employed, sir, and in terms of marketing we are also very helpful. So we don't have to rent a place so

expensively. After this application was available, it really helped us. We can upload it there and sell it. (Source: Sukirman, 2023)

The understanding and experience of the heads of government service above shows that the application in JSS simplifies the process of public service. JSS as a public service transformation has improved the overall experience of Yogyakarta citizens towards information and communication technology-based services. Governments can provide quick, customized, and convenient access to a wide range of services, ranging from health, education, and information. At the business level, the applications provided by the Yogyakarta City Government are also able to provide efficiency in the marketing of products thereby reducing distribution costs (Falentina et al., 2021). This study shows that the efficiency of digitalization of public services is a major sub-concept in the understanding and experience of informants. Both citizens and governments benefit from the efficiency of public service transformation.

Digitization in public service governance helps policymakers make data-based assessments thus optimizing resource allocation and policy development through data analysis and insights. Moreover, this is to ensure that all groups of society have access to services, promoting inclusion, reducing digital gaps and advancing social justice. Basically, digital transformation in public services modernizes administration while also empowering citizens and promoting community progress (Trischler et al., 2023).

Digitized public services are part of digital governance, as a manifestation of democratization and greater public participation in government activities. The benefits achieved by the two sides show that digitalization has promoted collaboration and engagement as well as the modernization of government-people communication. In the end, digitalization emphasizes service-oriented, user-centric or public-centric (Barnard et al., 1999). Digitalization brings transparency to governance and increases citizens' confidence and satisfaction. Citizens feel satisfied when they can meet their needs, such as obtaining the information they are looking for and enjoying a service experience that meets their interests. Interoperability between various government departments is achieved through investments in shared infrastructure and applications (hardware and software), data management services, system integration and adaptation, and other initiatives. Increased local government investment in information and communications technology will further boost administrative efficiency, automation, and performance, thus having a significant impact on services, improvements and accessibility for citizens (Dema et al., 2023).

Barriers to Public Service Digitalization

In this section, the informants stated about their experience and understanding that the adoption of technology in the administration of public services does have obstacles. This barrier is also understood as a process in the transformation of digitized public services. The informants stated that the obstacles are related to the access and readiness of human resources in managing the digitalization of public services. Below is the visualization,

Table 4. Barriers to digitalization of public services
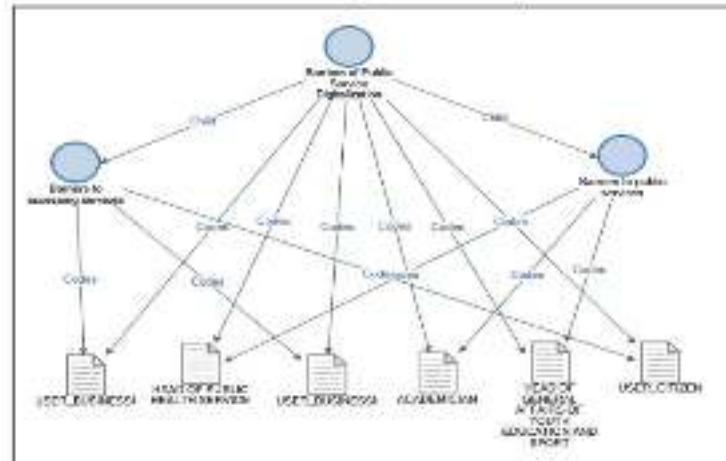
Source: data processed by researchers, 2023

The above visualization shows that the conception of barriers to digitization of public services is inherent in the experience and understanding of informants when interacting with technology. The digitization of public services poses a significant barrier in developing countries. The main problem is inadequate infrastructure, which includes reliable internet availability and stable power supply. In addition, it is linked to the characteristics of the population of developing countries that lack digital literacy thus becoming a barrier to using digital services effectively (Hyytinen et al., 2022). Informants from the government showcased their experience in building a digital-based bureaucratic culture such as the human resources' geographical readiness, which leads to unequal bandwidth power in each region, infrastructure and other technical problems. In this context, the implementation of digitalization of public services in developing countries requires investments in a variety of resources to overcome digital gaps, overcome cultural preferences, and ensure the sustainability of building democratic services (Lindgren et al., 2019). Here are what informants said about the barriers,

The problem is actually technical, yes, the technical order, so this technical order is part of that, we have to encourage them to become IT literate again, which is still quite difficult (Source: Wiryono, 2023)

It has to do with the power of the support system of communication, especially bandwidth. (Source: Sulhan, 2023)

Especially for friends whose main socialization is still being improved, because there is no guarantee that friends from below are technologically literate. (Source: Aji, 2023)

For users or citizens, the barrier to the digitization of public services lies in access at the time they use a public service application or website. The informant's

exposure suggests that the creation of available digital infrastructure is not optimal, still requires development as well as improved affordability to ensure that everyone can make use of digital services, regardless of where they live or their level of ability. The ease of accessibility of public services ultimately implies confidence in the government as well as public participation. The availability of digitalization of public services in this context is then related to human-computer interaction, the technical issues both in the context of design and application usability and more crucial is how to improve services based on user needs (Althunibat et al., 2021).

Lack of infrastructure is an important obstacle to the implementation of digitalization of e-government services in Indonesia. The digital divide in Indonesia is linked to the dynamics of problems in Indonesian population demography. These barriers are linked to the viewpoint of the government as a public service provider and the citizen as a user. Governments take positions as managers, which require not only top-down communication but two-way communication between citizens and governments (Sarofah, 2023).

Stakeholder engagement in the digitalization of public services

Based on the informant's statement, the study also found that the concept of transformation of digitized public services is linked to stakeholder engagement. The concept consists of three sub-concepts: stakeholders' participation, solution for digital divide and the presence of improvement factors in public services. As you can see in the table below,

Table 5. Stakeholder Engagement in digitalization of public services
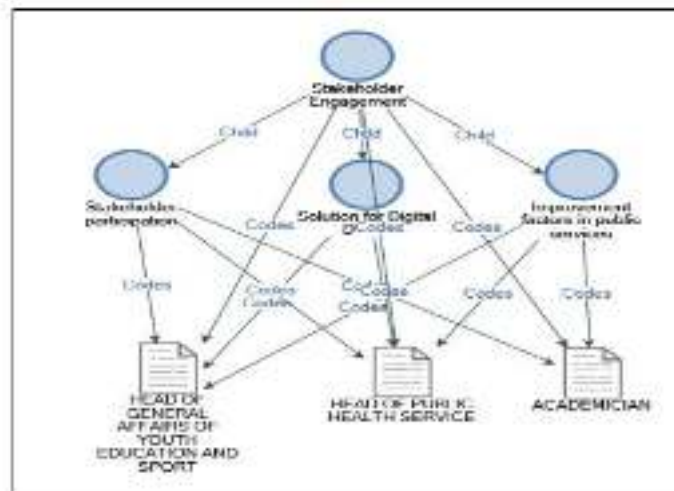
Source: data processed by researchers, 2023

The use of JSS involves many stakeholders, apart from several government agencies as well as facilities at the sub-district and sub-district levels. Improvisation in JSS must also adapt to the needs and interests of citizens and business people as JSS users so that the adoption and acceleration of technology use is optimal. The concept

of stakeholder engagement in JSS in the findings of this study is interesting considering that digitalization of public services will not be successfully implemented without public support. As the informant explained, even though public services are undergoing a transformation into the online realm, an offline approach is still needed as a method for involving stakeholders in the digitalization of public services, in addition to communication facilities in the online realm. Socialization is carried out, among other things, through consultations at the RT or RW level, hotlines or online conversations. These channels provide opportunities for stakeholders to learn about digitalization services as well as provide feedback. As explained by the informant below,

> *The government can't rely on its own strength. So private sectors have tobe involved* (Source: Sulhan, 2023)

> *This is as a guide for the community or we also invite traditional face-to- face socialization, we invite representatives from the RT/RW or from the village or community.* (Source: Fajar, 2023)

> *It is a must, because for 24 hours it has to be answered, whoever doesn't answer it will be reported tomorrow. At least a note from the mayor, the mayor would have to report to the governor every three months. So the performance of the app is sure that the digital trail won't disappear.* (Source: Wiryono, 2023)

Stakeholder engagement is a manifestation of collaborative, open, and citizen-centred governance. The emergence of social media, mobile connectivity, and big data as well as information transparency(Sarvianto, 2020) have prompted governments to create a government vision of adopting information and communication technologies that are more open, collaborative, andresponsive to the needs and interests of citizens. Innovation in ICT not only affects how governments operate, distribute services, and solve public problems in relation to citizens, butalso addresses social impact and empowers citizens (Priyatna et al., 2020).

Co-creation emphasizes the importance of communication and coordination both top-down and bottom-up, thereby encouraging collaboration and decision-making involving stakeholders at various stages of the policy cycle (Scupola & Mergel, 2022) which represents collaboration in value creation (Trischler & Westman Trischler, 2022). When organizations interact and exchange information with stakeholder interests in order to improve the quality of public service, it will increase accountability through the decision-making process so as to potentially create shared value (Kuoppakangas et al., 2023) and improve the sustainability of public services.

The Outcome spaces

Tabel 6. Outcome space of public service digitalization

Referential aspects	Structural aspects		
Conception's variations	New skill needed	Implications of adoption	Co-production and shared values
A. The emergence of media	A		
B. Benefit		B	
C. Barriers		C	
D. Stakeholder engagement			D

Source: data processed by researchers, 2023

The phenomenographic approach describes collective intellectuals in the form of outcome space, which is an empirical map of experiences, conceptualizations, feelings and understanding of the phenomena in the world around informants in different ways (Barnard et al., 1999). Based on the outcome space table above, this study shows that at the referential aspect level (what), the presence of the media used in the digitalization of public services raises the structural aspect (how), i.e. the need for new skills that underpin the transformation of the public service governance. These skills must be able to meet the needs of digitalization. Citizens who enter digitalization must have the skills to operate digital media. The ability to participate in society through the Internet is known as "digital citizenship." T. H. Marshall defined citizenship as the granting of civil, political and social rights to all people who participate in political communities, including the right to participate fully in social life. People called digital citizens use technology routinely; they use it to gather political information to fulfil their obligations as citizens; and they use technology for economic purposes in their workplaces (Third et al., 2019). Research shows that access to the Internet is very beneficial to economic well-being and democratic participation. Some studies show that access to the Internet enhances public choice and involvement.

The introduction of information and communications technology (ICT) or digital into public administration has resulted in major changes in the way public services work. Citizens' need for fast and real-time access to services can no longer be avoided by the demands and dynamics of globalization. Digitalization is then the answer to the government's obligations to interact with the public, provide services and fulfil its previously set tasks. Digitization is also the most effective way to change the behavior of governments and citizens in solving problems related to economics, politics, culture and society. Furthermore, the conception of benefits and barriers structurally related to the implications of the adoption of information and communication technology, both positively and

negatively. The digital media used in public governance is understood not only to provide benefits but also to have technical and social constraints. JSS is an innovation and integration of public service governance that has not yet been matched with the preparedness of human resources and citizens. In the context of sustainability and development of JSS, this research finds stakeholder engagement carried out to build co-production and shared values so that both governments as well as citizens in various layers have the same perception about the use of the JSS in public service.

Conclusion

Based on the above arguments, the study found that public service transformation is divided into four concepts and each has sub-concepts relevant to the experience of the informant. The concept suggests that the experience and understanding of informants consisting of heads of government, users, academics and businessmen vary but have the same emphasis on the transformation of digitized public services. The first concept suggested that digitised public services are understood as the presence of conservative or manual service shifting media that requires physical and face-to-face interaction. In this context, the media is presented as an important instrument in the digitization of public service.

The next concept of informants relates to the benefits obtained in digital-based public service governance. This concept is closely linked to the character of the digital media used in public services, thus supporting the performance of governments to provide services that are fast, transparent, massively efficient, integrated and credible. JSS as an innovation in the transformation of public services, on the one hand provides benefits as shown above but has obstacles anyway. The sub-concepts in the barriers are classic in developing countries, namely the ability of users or communities to access digital services on one side. On the other hand, the leaders of the field in the government also stated the obstacles associated with the unprecedented systems and digital human resources capabilities. Variation of experience forms an informant's understanding, which is very substantial in the adoption of technology. The sub-concepts found in the research explain more specifically about the picture of each individual's experience. The concept of public digitization benefits has the most sub-concepts, suggesting that informants have positive experiences related to the adoption and implementation of information and communication technologies. This study suggests that a common understanding of the importance of digital transformation in public service will stimulate the birth of co-production in formulating shared values on public service. Even if the number of informants is only eight, but according to the principle of qualitative data collection, this study has achieved saturated data.

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