Digital innovation in Yogyakarta City: Between Jogja smart service and youth participation opportunities

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Abstract

Jogja Smart Service (JSS) is a digital innovation by the Yogyakarta City Government that aims to provide integrated public services in a single application. The purpose of this study is to analyze the implementation of JSS as a digital innovation in public services in Yogyakarta City, particularly in opening up participation opportunities for young people. This study uses a qualitative descriptive approach to deeply understand the implementation of the JSS digital innovation and youth involvement in its use. Data collection techniques were conducted through desk research, analysis of official government documents, and a review of scientific literature and online news related to JSS policies. Although JSS has experienced significant technological progress and plays a role in facilitating access to public services, the elderly group, which comprises approximately 15% of the Yogyakarta City population, still faces significant challenges in its use. Some vulnerable communities still experience various obstacles in utilizing it. Low levels of digital literacy are a major factor that makes it difficult for them to operate the application independently. Furthermore, the interface design that is not fully user-friendly for elderly users further limits their ability to access digital services effectively. The results of this study indicate the need for youth participation in resolving this problem. Sahabat Jogja Smart Service (SAJOSS) is expected to be a solution to make it easier for the people of Yogyakarta City, especially the elderly, to access public services such as complaints, population administration, health and social services in the JSS digital innovation.)

Keywords: Jogja Smart Service, Digital Government, Public Service Innovation

1. Introduction

In recent years, digitalization in Indonesia has rapidly developed by integrating existing services so that people can independently access administrative, educational, healthcare, and financial needs. Previously time-consuming and costly, this process can now be completed quickly without having to go directly to a government office (Nurlaila et al., 2024) . In the area of public administration, this dynamic is called public service innovation. Public service innovation is a strategic effort to improve the quality of service to the community thru the effective and efficient implementation of new ideas (Akbar Rijalul Fikri et al. 2025) In the last 20 years, public service innovation in the form of service digitalization has indeed developed rapidly, in line with technological advancements. Even in more developed countries, the concept of a smart city is present. Smart City is a smart city concept designed to make it easier for people to access various service amenities by utilizing technology and information (Febriansah Freddy et al., 2025) Still from the same source, according to the smart city theory developed by Giffinger, there are six dimensions of a smart city, including Smart Environment (protection of environmental resources), Smart Mobility (provision of information and transportation services), Smart Economy (innovation, branding, and entrepreneurship), Smart Government (political participation, public services, and administrative functions), Smart Living (health, housing, and tourism), and Smart People (openness to the outside world and the quality of social interaction) (Larasati in Kusuma 2025).

The development of Smart City in Yogyakarta is not the same as the development of Smart City in other cities. Smart City in Yogyakarta is developed under the umbrella of Smart Culture, which consists of Smart Education and Smart Tourism (Faidat et al., 2018). One of the developments is Jogja Smart Service (JSS), which is an innovation in the concept of integrated public services that makes things easier for the community.

Presidential Regulation of the Republic of Indonesia Number 95 of 2018 concerning SPBE aims to realize clean, effective, high-quality, and accountable government governance. In Yogyakarta City, this policy is implemented in the Mayor's regulation, namely Yogyakarta Mayor's Regulation Number

15 of 2015, which regulates fund allocation, strengthening IT infrastructure, JSS institutions, user targets, socialization, and integration of digital services.

According to the Communication, Information, and Encryption Service of Yogykarta, JSS has 235 services with 124,938 out-of-town users and 122,579 in-town users. JSS is an important innovation in the digitalization of public services in Yogyakarta City, aiming to improve service quality, efficiency, and community involvement, particularly among youth, in the development of a sustainable smart city (Indriyani et al., 2022)

The role of JSS in empowering tech-savvy youth by facilitating their active participation in city development. Thru this application, young people can easily and efficiently convey their aspirations, submit complaints, and actively participate in various government programs (Qosdul Bed et al., 2025)

The development of JSS is supported by the government, academics, and the digital community. JSS is continuously updated based on user feedback, making it a model for public service innovation that can be adopted by other regions to accelerate the digitalization of public services. (Gultom et al., 2024)

Thus, JSS is not merely a public service application, but a tangible form of digital transformation that encourages active community participation, especially among youth, in building an inclusive and sustainable Yogyakarta City. Based on this background, the research question in this study is how can youth contribute to ensuring that these digital services are inclusive for all members of society?

2. Method

This study uses a descriptive qualitative approach to understand the implementation of the Jogja Smart Service (JSS) digital innovation and youth involvement in it. Data was collected thru literature studies, analysis of official government documents, review of scientific literature, and online news related to the JSS policy. The collected data was analyzed descriptively to systematically illustrate the phenomenon of JSS usage and the role of youth within it. This method allows for a deeper understanding of the effectiveness of digital technology in public services thru the JSS program and the role of youth as agents of societal change in public services. This study is expected to help the government design digital services that are more inclusive, responsive, and easily accessible to the elderly with the assistance of youth.

3. Results and Discussion

3.1. JSS: Inclusive Digital Innovation for the Community of Yogyakarta City

In recent years, digitalization has been aggressively implemented in various regions of Indonesia, including Yogyakarta City. Yogyakarta City has launched various Information and Communication Technology (ICT)-based services, one of which is Jogja Smart Service (JSS).

JSS is a digital innovation developed by the Yogyakarta City Government to unite various public services into a single, easily accessible, and efficient platform (Gumilar, 2020) . Based on Mayor Regulation Number 15 of 2015, JSS is the implementation of the Yogyakarta City e-government roadmap, which aims to support the city's transformation into a smart city thru responsive and transparent public services.

JSS has key features including emergency services, public procurement, and general services. Despite JSS successfully integrating services and attracting many users, accessibility challenges remain a major obstacle, especially for vulnerable groups like the elderly. As of today, JSS has been downloaded over 100,000 times on the Play Store. According to information from the Yogyakarta City Communication, Information, and Encryption Service (DISKOMINFOSAN), there are 124,938 users from outside Yogyakarta City and 122,574 users within Yogyakarta City. From January to August 2023, 2,992 complaints were received thru JSS. This indicates active public participation in conveying aspirations and input to the government. Despite having nearly 200,000 users, the elderly, as a vulnerable group, still face difficulties accessing these digital services. (Murtadho et al., 2023)

3.2. Accessibility Challenges for Vulnerable Groups (Elderly)

According to data from the Yogyakarta City Population and Civil Registration Office, the population of Yogyakarta City (2024) reached 414,700 people, making it the district/city with the lowest population in DIY. In 2024, the number of young people or the productive age group will be

the majority, around 65%-70%, and the number of elderly people (aged 60 and over) will range from 60,000 to 64,267 people, or about 15.5% to 16.8%.
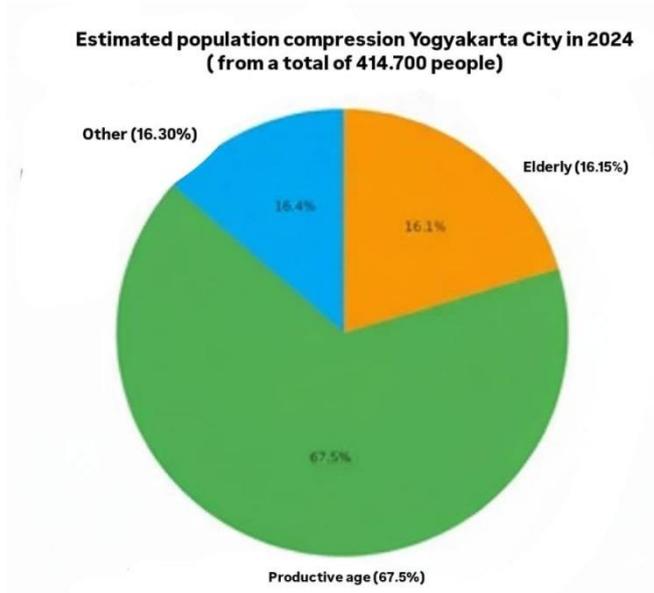

Figure 1. Estimated Population of Yogyakarta City (2024)

The elderly are considered a vulnerable group because they are at higher risk of experiencing difficulties, losses, or harm compared to other age groups. In utilizing JSS, the elderly face significant challenges due to difficulties accessing digital services caused by age, limited devices, and low levels of digitalization. Additionally, the JSS interface is not fully user-friendly for seniors to use independently.

3.3. The Role of Youth in Bridging the Digital Divide

To overcome these obstacles, the role of the younger generation becomes very important in bridging the digital gap experienced by the elderly. In facing the accessibility challenges of JSS for vulnerable groups like the elderly, the role of youth becomes the golden key. The younger generation is familiar with technology, making them a significant potential force for change to drive the rapid digital development currently underway (Suryani & Ramdhon, 2021) . With digital knowledge and skills, young people can be a bridge between the elderly and various digital services within the JSS application.

JSS is a digital service that facilitates access for the people of Yogyakarta City to public services (Wahyudi et al., 2022). To help vulnerable groups like the elderly access this technology, a group of young people from the Karang Taruna and volunteers went directly into the community. With a friendly and patient approach, they guided the elderly in using the JSS application. As a form of social innovation, young people are also developing simple learning modules suitable for the needs of the elderly, making the accompaniment effective and sustainable.

This activity reflects the youth's concern for technology while also strengthening intergenerational bonds. According to the Ministry of Social Affairs (2024), youth participation plays an important role in bridging the digital divide, expanding access to technology, and improving the well-being of vulnerable groups toward an inclusive society.

3.4. SAJOSS: Real Youth Action for Digital Inclusion

The tangible contribution of youth in supporting inclusive digital services is reflected thru the SAJOSS initiative, a group of volunteers who consistently assist the elderly in accessing and using the JSS application. Thru direct training, the development of senior-friendly learning materials, and an empathetic approach, they play a role in opening up equal digital access for vulnerable groups. For

this movement to continue to grow and have a wide impact, active support from both the government and the community is needed. This initiative not only provides technical assistance to the elderly but also presents a new direction for public service transformation that is more inclusive, adaptive, and involves all elements of society. (Murtadho et al., 2023)

Using the participatory approach proposed by Lundy (2007), it can be analyzed that the role of SAJOSS in assisting vulnerable groups, particularly the elderly with JSS, reflects 4 components: space, voice, audience, and influence. Space is reflected in the formation of SAJOSS as an alternative space for youth to participate non-formally outside of government structures. Voice is seen thru the young people's courage to express empathy toward the digital gap faced by the elderly, and is realized thru concrete actions such as direct education and assistance in using the JSS application. The audience emerges as society begins to recognize the role of SAJOSS as a bridge between generations in digital reform. Influence is evident when the educational methods developed by SAJOSS (visual modules and an empathetic approach) are considered for application by other communities. Youth participation in SAJOSS is not only symbolic, but also fulfills the elements of participation formulated by Lundy. (Henze-Pedersen & Bengtsson, 2024)

Figure 2. JSS Training for the Elderly

4. Conclusion

Given the existing dynamics and roles, strategic steps are needed to support the sustainability of this digital innovation. JSS is a digital innovation by the Yogyakarta City Government that successfully combines various public services into a single application. The presence of JSS makes it easier for the public, including youth and vulnerable groups like the elderly, to access government services quickly, practically, and transparently. (Muliawaty & Hendryawan, 2020)

The implementation of JSS aligns with the development of smart cities and e-government in Yogyakarta City, while also reflecting a commitment to public service reform. SAJOSS plays a role in helping the elderly access the JSS application thru direct training and mentoring.

To strengthen the role of SAJOSS, local governments need to provide support in the form of sustainable technology training and the provision of elderly-friendly devices, and a Mayor's or Village Head's decree needs to be issued to recognize SAJOSS as an official partner in the digitalization program and smart city-based public services.

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