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Towards Inclusive Digital Public Services: Policy Directions for Digital Inclusion of the Elderly in Klaten Regency

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ABSTRACT

The digital transformation of public services in Indonesia has significantly progressed, yet it remains inadequately inclusive particularly for older adults who face a heightened risk of digital exclusion. This study investigates the direction of digital inclusion policy for the elderly in Klaten Regency, where the aging population continues to rise. Employing a qualitative approach with an exploratory case study design, data were collected through document analysis, in-depth interviews with key stakeholders, and participatory observation in five digital-oriented villages. Findings reveal that although digital service infrastructure has been developed, no explicit affirmative policy currently addresses elderly participation in digital public services. Most older adults encounter barriers related to digital access, literacy, and limited social support. The analysis is framed using inclusive policy strategy, policy ecology, and digital inclusion theory. The study concludes that digital policy in Klaten remains technocratic and insufficiently responsive to the needs of vulnerable groups. To realize genuinely inclusive digital public services, the study recommends cross-sectoral collaboration, the formulation of affirmative policies, and the development of community-based digital literacy programs tailored for the elderly.

Keywords: *Digital Inclusion, Elderly, Digital Public Services, Inclusive Policy, Klaten Regency*

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INTRODUCTION

The advancement of information and communication technology (ICT) has spurred digital transformation across various sectors of life, including public service delivery. This transformation has brought numerous benefits, including increased efficiency, transparency, and enhanced service accessibility. However, it has also introduced new forms of social exclusion, particularly for older adults, who are at risk of being marginalized amid the dominance of application- and internet-based digital services.

In Indonesia, the digital transformation of public administration is primarily guided by the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE), as mandated by Presidential Regulation No. 95 of 2018. SPBE aims to create effective, efficient, accountable, and transparent governance through the integrated

use of ICT. This framework is part of Indonesia's broader vision toward "Digital Indonesia 2045," which aspires to develop a digitally inclusive and competitive society. However, the implementation of SPBE and other national digital strategies often lacks a focus on vulnerable populations, such as the elderly, who face multidimensional barriers to accessing and using digital services.

Indonesia's national digital transformation is an integral component of the grand vision of "Digital Indonesia 2045," which aspires to build an inclusive, competitive, and technology-based digital society. One of the cornerstones of this transformation is the implementation of the Electronic-Based Government System (SPBE), as mandated by Presidential Regulation No. 95 of 2018. SPBE aims to establish clean, effective, efficient, transparent, and accountable governance through the integrated and sustainable use of ICT. Integrated digital public services are a key indicator of SPBE success, where access and inclusivity become non-negotiable principles.

According to data from Statistics Indonesia (BPS, 2023), the proportion of elderly individuals in Indonesia reached 11.75% in 2023, equivalent to nearly 29 million people, an increase from approximately 10% to 10.5% in 2022. This trend indicates that population aging is not only a global or regional phenomenon but also a critical national policy challenge in ensuring inclusive and responsive public services for the elderly.

This demographic shift is particularly evident at the local level, including in Klaten Regency. In 2023, the proportion of elderly residents in Klaten reached 15.77% of the total population, reflecting a significant aging trend. Data from the Klaten Regency Statistics Office show a steady increase in the elderly population: 191,036 people (15.07%) in 2021, rising to 199,719 (15.65%) in 2022, and reaching 202,591 (15.77%) in 2023.

This increase presents new challenges, including the risk of marginalization in the ongoing digital transformation of public services. While national policies such as SPBE and public service digitalization programs have progressed, the 2024 Indonesian Digital Society Index (IMDI) notes that, despite national increases in ICT adoption, digital empowerment and the use of technology to support elderly well-being remain low. IMDI also warns of the risk of weakened social cohesion if digital transformation is not accompanied by affirmative policies targeting vulnerable groups, including the elderly.

Klaten Regency has made notable progress in developing digital public services through various channels, including official websites, mobile apps from local government agencies (OPDs), and online population administration systems. However, there is still no local policy instrument explicitly targeting digital inclusion for the elderly, despite the growing proportion of elderly residents.

Given these dynamics, it is essential to examine the extent to which local digital policies—such as those implemented in Klaten—can ensure equitable and inclusive access for all citizens, particularly older adults. This study contributes to the underexplored field of age-based digital policy in Southeast Asia, offering empirical insights into local governance practices for digital inclusion of older adults. By situating the analysis within the frameworks of inclusive policy design, policy ecology, and digital inclusion theory, this research offers a

critical lens for evaluating policy responsiveness toward vulnerable populations in the Global South.

METHOD

This study employs a qualitative approach, utilizing an exploratory case study design. This approach enables an in-depth investigation into the dynamics of digital inclusion policies for the elderly within the local context of Klaten Regency. It allows the researcher to explore policy actors, processes, and both the barriers and opportunities at the implementation level.

The case study method is appropriate for addressing complex, context-specific research questions (Yin, 2018), especially when the boundaries between the phenomenon and its context are not clearly defined. Moreover, this study is exploratory, aiming to reveal policy aspects that have been relatively underexplored in the previous literature, particularly regarding elderly populations and digital transformation in Indonesia's public service landscape.

The research was conducted in Klaten Regency, Central Java Province—one of the districts actively engaged in digitalizing public services through the implementation of the Electronic-Based Government System (SPBE). Despite this progress, Klaten still faces significant challenges in reaching elderly populations inclusively within its digital transformation agenda.

Three primary data collection methods were employed:

1. Document Study
   The researcher reviewed key national and local policy documents, including:
   a. Presidential Regulation No. 95 of 2018 on SPBE,
   b. National Medium-Term Development Plan (RPJMN) 2020–2024,
   c. Technical documents on SPBE implementation in Klaten,
   d. The 2024 Indonesian Digital Society Index (IMDI),
   e. Statistics from BPS (Statistics Indonesia) regarding elderly access to digital services.

2. In-depth Interviews
   A total of 15 key informants were interviewed, including:
   a. Officials from the Communication and Information Office and the Social Services Office of Klaten,
   b. Village officials and community service facilitators,
   c. Elderly individuals, both users and non-users of digital services,
   d. Academics and digital community activists.

   Informants were selected using purposive sampling and expanded using snowball sampling techniques to capture diverse perspectives. Informants were chosen based on their direct involvement in policy implementation or their experiences as elderly users of digital public services.

3. Participatory Observation

Observations were conducted in five designated digital villages to observe the real-time implementation of digital public services and the level of elderly involvement. The researcher noted patterns of interaction, technical challenges, and the forms of community support available to elderly individuals. The collected data were analyzed using thematic analysis with the following steps:

1. Transcription and deep reading of interview and observation data,
2. Open coding to identify meaningful units,
3. Thematic categorization based on key themes such as: access barriers, community roles, policy design, and service responsiveness,
4. Interpretation by linking field findings with theoretical frameworks (inclusive policy, policy ecology, digital inclusion).

Data validity was ensured through triangulation of sources and methods, as well as member checking with informants to verify the accuracy of interpretations.

FINDING AND DISCUSSION

RESEARCH RESULT

Barriers to Digital Access and Literacy Among the Elderly

Interviews with elderly participants aged 60–70 revealed that most used smartphones only for basic communication, such as phone calls and text messaging. Their awareness of digital public services in Klaten Regency was limited; most were unfamiliar with applications or systems such as SAKURA, OSS, or online civil registration services. When accessing government services, most preferred visiting offices in person or seeking assistance from family members.

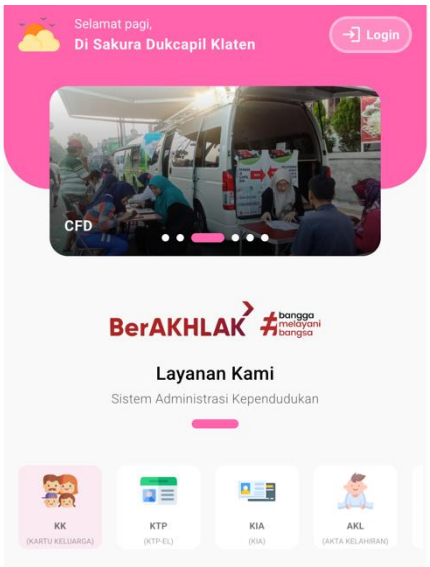

Figure 1. Sakura for Population Digital Service in Klaten
Source: Researcher documentary, 2025

The use of the Sakura Dukcapil Klaten application can be challenging for older citizens who have limited understanding of digital technology. In general, elderly users face obstacles from the very beginning of the process, starting with downloading and installing the application, creating an account, and logging in—steps that require remembering passwords and understanding security notifications. The interface, which contains various icons, sliding image banners, and service abbreviations such as KK, KTP, KIA, and AKL, demands a relatively high level of digital and reading literacy. For users unfamiliar with smartphones, the combination of bright colors, small font sizes, and many visual elements on a single screen can easily cause confusion and visual fatigue.

Furthermore, the service flow within the application generally requires users to complete several steps: selecting a service type, filling out electronic forms, uploading documents, and tracking the status of their application. For elderly users who are not familiar with concepts such as scrolling, swiping, or tapping specific buttons, these steps can lead to input errors, repeated tries, or even failed submissions. This often causes anxiety, fear of making mistakes, and dependence on younger family members for help. As a result, although the app is designed to improve access to population administration services, it can unintentionally create a new kind of exclusion for older adults with limited technological skills, leaving them behind in using digital public services and still feeling forced to visit service offices in person for face-to-face help. Field observations supported these findings, showing that elderly individuals were generally unfamiliar with digital devices and lacked confidence in using them for administrative tasks. This highlights the existence of an age-based digital divide, as described by van Dijk (2020) and Helsper (2021), where elderly populations face significant barriers not only in access but also in digital literacy.

Absence of Inclusive Policy Design

Document analysis and interviews with officials from the Communication and Information Office (Diskominfo) and the Social Services Office (Dinsos) of Klaten revealed that there is currently no specific policy targeting digital inclusion for the elderly. Diskominfo has prioritized the development of the official website (klaten.go.id) and OPD-based digital applications such as SAKURA (civil registry), SIKENDI (employment), and PASTI (licensing services), but has not incorporated age-based inclusivity in their design or implementation.

Meanwhile, Dinsos Klaten continues to implement conventional programs for the elderly, including cash assistance and health-related services such as elderly exercise programs. However, there are no digital initiatives aimed at empowering the elderly. Following the disbandment of the Elderly Commission in 2002 due to national regulatory changes, the office no longer provides institutional support or grant funding for elderly-focused groups.

Although Indonesia established the Elderly Commission in 2002 in response to national regulations guaranteeing the rights and welfare of older persons, translating this mandate into local digital service reform remains weak in Klaten. In principle, the existence of the Commission obliges local governments to ensure that every public service—including civil registration—is accessible, age-friendly, and does not discriminate against citizens with

limited digital skills. However, the design and implementation of the Sakura Dukcapil Klaten application show that these normative commitments have not yet been fully operationalized. The interface is visually dense, uses technical abbreviations, and depends on multi-step digital procedures (download, registration, login, uploading documents) that are difficult for many older people to understand and navigate without assistance.

As a result, there is a clear gap between the protective framework envisioned when the Elderly Commission was formed and the everyday experience of older residents in Klaten who need population administration services. Instead of expanding access, the digitalization of services can unintentionally deepen the digital divide, creating new forms of exclusion for those least familiar with smartphones and internet use. Many elderly citizens still feel compelled to visit the Dukcapil office or rely heavily on younger family members, which undermines the principle of independent, dignified access to public services that underpins the 2002 elderly policy framework. This mismatch between national regulatory intent and local implementation constitutes a key governance problem that needs to be addressed in the further development of the Sakura Dukcapil Klaten system.

These findings highlight a disconnect between national policy directions—such as SPBE and the 2020–2024 RPJMN—that emphasize inclusive digital transformation and the localized policy practices in Klaten, which remain sectoral and unresponsive to the needs of vulnerable elderly groups.

Service Responsiveness and the Role of Village Governance

Interviews with village officials indicated that most villages in Klaten can now deliver basic digital services, such as processing ID cards, family cards, and birth certificates, without requiring physical visits to government offices. However, elderly participation in these digital processes remains minimal. Village-level services are not yet designed to reach elderly users proactively, and village governments do not provide specific digital literacy training or mentoring programs.

Interviews with elderly residents and their families further revealed that older people tend to see themselves as “followers” in the digital service process rather than as primary users. Many depend on adult children, grandchildren, or neighbors to operate smartphones, complete online forms, and upload required documents for them. While these informal helpers ensure administrative tasks are eventually finished, they also reinforce dependence and limit opportunities for elderly individuals to develop their own digital skills. In several cases, delays in service delivery occurred simply because family members were busy or lived outside the village, showing how reliance on informal support networks can indirectly restrict elderly access to time-sensitive population administrative services.

The research also found that village governments generally view digital transformation as a technical issue—focused on obtaining equipment and installing applications—rather than as a broader inclusion effort that must consider age, education, and socio-economic differences among residents. As a result, there are no clear systems to identify elderly users who are digitally excluded, nor are there targeted efforts like

simplified user pathways, assisted-service counters, or regular outreach sessions at community gathering points (posyandu lansia, pengajian, or neighborhood meetings). This situation is problematic given the national regulatory commitment embodied in the Elderly Commission, which mandates equal and non-discriminatory access to public services. In Klaten, the lack of age-sensitive design and structured support at the village level means that the potential benefits of digital civil registration remain unevenly distributed, with elderly citizens still facing barriers despite the official availability of online services.

This indicates that, despite the availability of digital service structures, responsiveness to the unique characteristics of elderly users remains low. As suggested by Thomas (2013), proper responsiveness involves more than just access; it also encompasses the ability to utilize and comprehend services effectively. In Klaten, elderly individuals are still not recognized as a priority demographic within the digital service ecosystem, reflecting the limited inclusiveness of existing systems.

DISCUSSION

The findings of this study reveal a significant policy gap in addressing digital inclusion for elderly populations in Klaten Regency. Although the region has made progress in digital infrastructure and service development, these initiatives have not been accompanied by inclusive policy frameworks that actively involve and empower older adults.

From a policy strategy perspective, Klaten's digital transformation appears to follow a technocratic trajectory, emphasizing system development and interdepartmental integration without tailoring services to meet the needs of vulnerable populations. The lack of affirmative policies—such as specialized training, accessible digital tools, and community-based support—underscores the elderly's marginal position within digital public service systems.

This condition supports argument that inclusive policy design requires not only the presence of services but also the structural integration of the needs of vulnerable groups into the policymaking process (Poblet, 2018). In Klaten, the absence of policies that involve the voices of the elderly and reflect their digital realities demonstrates a top-down policy culture that neglects grassroots participation.

In terms of policy ecology, the success of national digitalization policies such as SPBE depends heavily on local institutional capacity and political will. In Klaten, weak inter-sectoral coordination and the siloed nature of policy implementation impede the development of a coherent digital inclusion strategy. This confirms Ballamingie and (Johnson, 2011) claim that policy ecosystems shape the actual impact of interventions at the local level.

Furthermore, the findings illustrate a clear gap in service responsiveness. Truly responsive public service must be adaptable to citizens' varying capacities (Thomas, 2013). In Klaten, elderly citizens are still treated as peripheral actors in the digitalization process. Their exclusion is not merely technological but socio-political, stemming from a failure to recognize their rights and needs within the digital governance framework.

These issues underscore the multifaceted nature of digital exclusion among the elderly (Helsper, 2021; van Dijk, 2020). Addressing only infrastructure and access, without supporting digital skills, motivation, and social networks, will not be sufficient to close the digital divide.

CONCLUSION

This study concludes that while digital transformation in Klaten Regency has advanced in infrastructure and online service development, it lacks an inclusive policy framework specifically addressing the digital needs of the elderly. Neither the Communication and Information Office nor the Social Services Office has developed strategies, regulations, or programs to promote digital literacy or participation among older adults.

On the user side, most elderly individuals are unfamiliar with or unable to use digital public services. They continue to rely on family assistance or offline service channels. Without targeted interventions, they remain passive recipients rather than empowered participants in the digital public service ecosystem.

Based on theories of inclusive policy, policy ecology, and digital inclusion, the study finds that digital governance in Klaten remains predominantly technocratic, non-participatory, and unresponsive to the complexities of aging in a digital society. The lack of affirmative action, low digital literacy, and limited institutional responsiveness pose critical barriers to inclusive public service. These findings provide a conceptual basis for integrating aging perspectives into digital transformation policies, particularly for local governments in the Global South. Policy Recommendations

To address these issues, several strategic measures are recommended:

1. Formulate Affirmative Digital Policies for the Elderly. Local governments must develop regulations or action plans that explicitly prioritize digital inclusion for older adults as part of SPBE-based service development.
2. Integrate Social and Digital Services. Existing social welfare programs for the elderly—such as cash assistance and health programs—should be gradually digitized, with support systems in place.
3. Implement Community-Based Digital Literacy Programs. Villages, social facilitators, and local communities should be engaged in delivering contextual and participatory digital training tailored to the elderly's needs.
4. Design Age-Friendly Digital Services. Digital public services should feature user-friendly interfaces, simplified access, and alternative support options (e.g., tutorials, in-person help, or hotline assistance).
5. Strengthen Cross-Sectoral Collaboration. Effective inclusion requires collaboration among Diskominfo, Dinsos, village governments, private actors (CSR), and universities to build an inclusive digital ecosystem.
6. Develop Monitoring and Evaluation Tools for Digital Inclusion. Governments should establish age-based digital inclusion indicators to measure the extent to which digital public services are accessible to all segments of society.

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