



RESEARCH ARTICLE

Who Benefits from Digital Village Services? A Mixed-Methods Study of Access, Trust, and Administrative Inclusion

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ENGLISH

ABSTRACT

Digital village portals promise faster and more inclusive access to local administration, but service availability does not guarantee effective use. This fictional mixed-methods study examined 360 residents across six villages, combining a household survey, portal-use records, and 24 semi-structured interviews. Use was highest among younger residents, those with secondary education, and households with reliable mobile internet. Assisted access through village facilitators substantially reduced age and literacy gaps. Trust was shaped less by interface quality than by visible follow-up and the ability to speak with a responsible officer. The study argues that digital inclusion should be assessed as an institutional relationship rather than a connectivity outcome alone. All names, sites, records, and results are synthetic and included only to demonstrate the ZATARA journal format.

Keywords: digital inclusion; village governance; public services; trust; mixed methods

中文

摘要

数字乡村平台旨在提高地方行政服务的速度与包容性，但服务上线并不等于居民能够有效使用。本虚构混合方法研究覆盖六个村庄的三百六十名居民，并结合家庭调查、平台使用记录和二十四次半结构访谈。年轻居民、受过中等教育者以及拥有稳定移动网络的家庭使用率更高。由村级协助员提供的帮助明显缩小了年龄和识字差距。居民信任主要取决于后续处理是否可见，以及能否与负责人员沟通，而不只是界面质量。所有姓名、地点、记录和结果均为合成数据，仅用于展示 ZATARA 期刊格式。

关键词: 数字包容；乡村治理；公共服务；信任；混合方法

BAHASA INDONESIA

ABSTRAK

Portal desa digital menjanjikan akses administrasi lokal yang lebih cepat dan inklusif, tetapi ketersediaan layanan tidak otomatis menjamin penggunaannya. Studi mixed-methods fiktif ini melibatkan 360 warga di enam desa melalui survei rumah tangga, catatan penggunaan portal, dan 24 wawancara semi-terstruktur. Penggunaan lebih tinggi pada warga yang lebih muda, berpendidikan menengah, dan memiliki internet seluler yang andal. Akses berbantuan melalui fasilitator desa secara nyata mengurangi kesenjangan usia dan literasi. Kepercayaan lebih banyak ditentukan oleh tindak lanjut yang terlihat dan kesempatan berbicara dengan petugas dibandingkan mutu antarmuka semata. Semua nama, lokasi, catatan, dan hasil bersifat sintesis dan digunakan hanya untuk mendemonstrasikan format jurnal ZATARA.

Kata kunci: inklusi digital; tata kelola desa; layanan publik; kepercayaan; mixed methods

1. Introduction

Digital public services are often evaluated through platform availability, transaction volume, and connection speed. These measures matter, but they reveal little about who can complete a transaction, obtain a response, or challenge an incorrect decision. A development perspective therefore requires attention to capabilities, institutions, and unequal starting conditions (Sen, 1999; United Nations Development Programme [UNDP], 2024).

This study investigated three questions: who used village portals, which forms of assistance reduced access gaps, and how service encounters influenced institutional trust. We expected connectivity to predict initial use, but anticipated that human assistance and administrative follow-up would shape successful completion.

2. Literature Review and Conceptual Framework

Digital inclusion combines material access, skills, confidence, and meaningful outcomes. Treating these as separate layers avoids assuming that possession of a smartphone translates directly into administrative capability. The study used a capability-oriented framework in which residents require both resources and conversion support to realise a service outcome.

Trust was conceptualised as a judgement formed through repeated encounters. Residents may value convenience while remaining sceptical if applications disappear into an opaque workflow. The analytical model therefore linked access conditions, assisted use, completion, and perceived responsiveness.

3. Methods

The fictional study used a convergent mixed-methods design across six purposively selected villages. Sixty adult residents were surveyed in each village, producing 360 observations. Sampling quotas balanced gender and three age groups. Portal logs were aggregated at village level and contained no personal identifiers.

Twenty-four participants were selected for interviews to capture successful, abandoned, and assisted transactions. Interviews explored first contact with the portal, help-seeking, perceived fairness, and response quality. Quantitative data were summarised descriptively and modelled using logistic regression. Interview notes were coded thematically, then compared with survey patterns.

Participants received an information sheet and provided consent. The fictional protocol assumes approval by a demonstration ethics committee. No real human participants were involved.

4. Results

Overall, 58% of respondents had attempted to use the portal during the preceding year, but only 43% completed a transaction without assistance. Independent completion declined sharply with age. Assisted service points narrowed this gap: among residents aged 55 years or older, completion increased from 24% without assistance to 61% when a facilitator was available.

Reliable mobile internet and secondary education were positively associated with use. However, the strongest correlate of trust was confirmed follow-up within five working days. Interviews described the facilitator as an interpreter of administrative language, not merely a technical helper.

Table 1

Survey sample and portal completion by age group (synthetic data).

Age group	Participants	Attempted use (%)	Independent completion (%)	Assisted completion (%)
18–34	120	76	68	82
35–54	120	61	47	74
55+	120	37	24	61

Age group	Participants	Attempted use (%)	Independent completion (%)	Assisted completion (%)
Total	360	58	43	72

Note. Values are synthetic and should not be cited as empirical evidence.

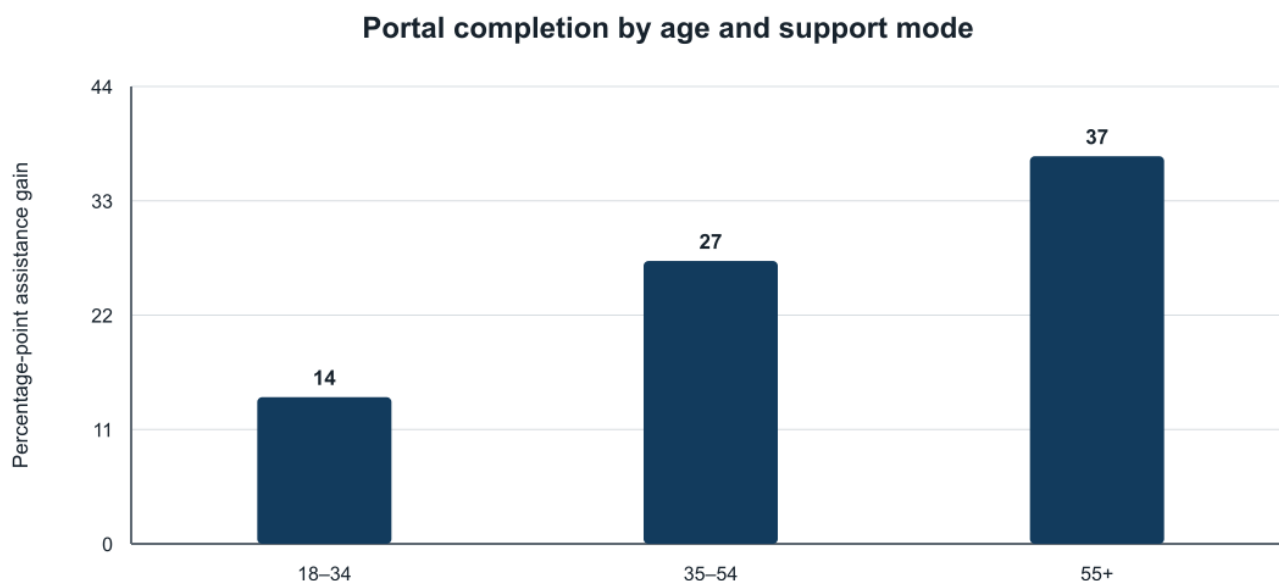


Figure 1. Increase in completion associated with facilitator support, expressed in percentage points. All values are synthetic.

5. Discussion

The findings indicate that portal availability is an incomplete measure of inclusion. Residents were more likely to regard the service as legitimate when digital and interpersonal channels were connected. Assisted access did not undermine digitisation; it converted infrastructure into practical capability.

The synthetic results also highlight a policy trade-off. Centralised portals can standardise forms, yet they may distance users from accountable officers. Hybrid service arrangements preserve efficiency while maintaining a visible route for explanation and correction.

6. Conclusion and Implications

Digital village services should be monitored through completion, responsiveness, and distributional outcomes, not registration counts alone. Investing in local facilitators, plain-language status updates, and accessible escalation routes can reduce exclusion while strengthening trust.

Practice and Policy Implications

- Track completion and response time by age, gender, disability, and location.
- Maintain a staffed assisted-access channel alongside the portal.
- Provide plain-language status updates and a visible escalation route.

Declarations

Data Availability Statement

The synthetic dataset used to populate the tables and figure is fully reproduced in this article. No external dataset or real participant record exists.

Ethics Approval

Not applicable. This is a fictional demonstration article and no human participant, animal, biological specimen, or identifiable record was involved.

Consent to Participate and Publish

Not applicable. All author names and affiliations are pseudonymous and all content was created for layout demonstration.

Author Contributions

J.A.D.: Conceptualisation, methodology, writing—original draft. M.S.R./S.K.R./D.N.R.: analysis, visualisation, writing—review and editing. L.M.T./M.C.L./A.P.V.: validation, interpretation, writing—review and editing.

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Conflict of Interest

The pseudonymous authors declare no competing interests.

Use of Artificial Intelligence

Generative AI was used to create synthetic demonstration prose, pseudonymous names, fictitious data, and layout content. No claim in this article should be interpreted as reporting a real study.

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