DIGITAL EXCLUSION

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Definition

Digital exclusion describes a self-reinforcing cycle in which pre-existing social disadvantages —related to age, income, education, gender, or disability—restrict meaningful engagement with digital technologies, which in turn deepens marginalization across economic, civic, and social domains. While the digital divide refers to the gap between those who have and do not have access to digital technologies (van Dijk 2006), and digital inequality captures the more graduated differences in skills and usage among those already connected (DiMaggio and Hargittai 2002), digital exclusion specifically names the social consequence: being effectively shut out from full participation in society. The main indicators used to measure digital exclusion are binary access metrics (whether someone has used the internet recently), frequency-of-use measures, demographic predictors of exclusion, and barriers faced by "limited users" such as data poverty, device constraints, low skills, and reliance on others (Hernandez and Faith 2022).

Context

As Ragnedda et al. (2022) demonstrate, those already socially or economically marginalized have limited chances to use the Internet as a tool of social inclusion, thus becoming further marginalized—an inequality loop in which digital and social exclusion continuously reinforce one another. Logically, digital inclusion depends not only on devices and skills but also on people's ability to convert digital engagement into meaningful social, economic, and civic outcomes.

The analysis identifies three groups: an advanced inclusion cluster (28.9%), an intermediate cluster (43.8%), and a group on the edge of digital exclusion (27.3%). Age and education emerge as the strongest predictors of cluster membership, with income becoming particularly relevant for advanced inclusion. Older, less educated, and economically disadvantaged individuals are less able to transform access into skills and skills into benefits. This study reinforces a key insight: digital and social exclusion form a self-reinforcing loop. As a result, policies that focus narrowly on access or short-term training risk leaving underlying inequalities intact.

This interaction between social position and digital disadvantage is further illustrated by a study conducted in a borough in North East England which identifies 12.3% of respondents as digitally excluded (Wilson-Menzfeld et al. 2025). Digital exclusion is associated with older age, lower education and income, disability (personal or within the household), unemployment, renting rather than owning, and residence in specific micro-geographical areas. Gender differences are also evident, with women more likely than men to be digitally excluded. Notably, area-level deprivation does not consistently predict exclusion. Attitudinal factors—such as willingness to use digital tools and privacy or security concerns—also shape digital inclusion, while participation in digital skills classes alone shows limited impact.

The pandemic intensified reliance on digital technologies for accessing public services, education, healthcare, employment, and social support, thereby magnifying existing inequalities (Ji and She 2025). Women, low-income households, migrants, and other marginalized groups were disproportionately affected, while new forms of exclusion emerged in areas such as online job seeking, leisure, and religious participation. Importantly, digital disadvantage closely mirrors broader social inequalities and can lead to "compound marginalization" in times of crisis. In this sense, the pandemic did not create digital exclusion but made its mechanisms more visible and consequential.

Several reviews then deepen this analysis by focusing on specific populations particularly vulnerable to digital exclusion. A scoping review on older adults shows that digital exclusion in later life is multidimensional, encompassing resource exclusion (lack of devices, access, or affordability), skills exclusion (limited digital knowledge or competence), and motivational exclusion (low confidence, fear, or lack of interest) (Ge et al. 2025). These dimensions are shaped by sociodemographic factors (age, education, income, gender, living situation), physiological conditions (disability, sensory loss, frailty), and psychological states (anxiety, low confidence, limited social support). Importantly, the review highlights how digital exclusion can lead to social isolation and technology anxiety, which in turn reinforce exclusion over time—illustrating again the cyclical nature of the problem.

Similarly, a systematic review on women's digital exclusion identifies lack of education as a root cause underpinning multiple barriers (Gupta and Kiran 2023). Low educational attainment leads to weak digital skills, unemployment, and financial dependence on men. It restricts access to devices and services, undermines confidence, and increases fear of using digital tools. These barriers are intensified by patriarchal norms, household responsibilities, mobility restrictions, and infrastructural inequalities, particularly in rural areas. The review concludes that improving women's education—especially beyond the primary level—is essential to breaking the cycle of digital exclusion.

The multidimensional nature of digital exclusion is also evident in higher education contexts. A systematic review of studies from developed and developing countries shows that socially disadvantaged students (i.e., low income, low education, low motivation, information and communications technology [ICT] avoidance, and disability) are more likely to be digitally excluded (i.e., limited access to devices and internet services) (Khalid and Pedersen 2016). Income and parental education strongly predict access to computers and home internet. Rural residence further limits access due to weak infrastructure and higher costs. Overall, the findings show a reinforcing cycle in which low education and income restrict access to ICT and the development of related skills, which in turn restrict participation in higher education.

Another review on eHealth use among elderly people, migrants, and individuals with low socioeconomic position exposes key paradoxes in digital inclusion research (Coetzer et al. 2024). While eHealth is often framed as a simple solution to complex health challenges, barriers are frequently attributed to individual deficits, including low digital literacy, language difficulties, and lack of motivation, even though proposed solutions remain vaguely systemic. Responsibility is shifted onto patients, informal caregivers, and healthcare workers, while marginalized groups are treated as homogeneous and rarely involved in co-creation. Overall, eHealth research under-specifies systemic action, overemphasizes individual responsibility, and risks reinforcing health inequities.

Digital exclusion is also a fundamental threat to democratic citizenship. As digital tools become the primary infrastructure through which people access public services, obtain political information, and interact with institutions, exclusion from these channels increasingly means exclusion from democratic life itself. The OECD Digital Government Index (OECD 2025) illustrates this shift by mapping six dimensions along which governments are rapidly moving online. “Digital by design” captures the move toward policies and services conceived from the outset to be delivered digitally. “Data-driven” government reflects the growing reliance on data-sharing systems that allow public bodies to coordinate decisions and services. “Government as a platform” refers to the deployment of shared digital building blocks—such as identity systems, common software, and reusable tools—that standardize and accelerate digital transformation across the state. “Open by default” expands openness beyond open data to include digital mechanisms for transparency, communication, and engagement with civil society. “User-driven” approaches measure governments’ capacity to design services around the needs, constraints, and experiences of real users. Finally, “proactiveness” assesses the ability of governments to anticipate needs and deliver services automatically or with minimal user initiation.

Across all six dimensions, the underlying assumption is universal digital participation—yet digital exclusion structurally undermines this premise. Citizens who cannot navigate digital tools are effectively shut out of online consultations, participatory platforms, digital petitions,

party programs, and increasingly digital-only administrative services such as tax filing, healthcare access, and social benefits. In this context, digital exclusion becomes democratic exclusion.

Related Concepts

Civic participation; Digital divide; Digital engagement; Digital inclusion; Digital inequality; Digital literacy; e-democracy; e-government; Rhetorical Citizenship

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