

Women, Technology, and Social Inclusion: A Social Work Perspective

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Abstract

We live in a digital age where access to technology can determine whether someone can find a job, get an education, stay connected to support networks, or even access healthcare. Yet these opportunities are not equally available to everyone. Women, especially those in poor or rural communities, are often left out. This paper looks at the connection between women, technology, and social inclusion through the lens of social work. The argument here is that digital exclusion is not just a technical issue – it is a matter of social justice that social workers need to take seriously. Drawing on recent data about the digital gender divide, feminist critiques of technology, and real-world examples of programs that have tried to close the gap, this paper explores how social workers can help women participate more fully in the digital world. The analysis shows that technology can both empower women and reinforce the same old inequalities, including new forms of violence that play out online. The paper offers a practical framework for social work practice at three levels – individual, community, and policy –and argues that digital inclusion must become part of everyday social justice work. It ends with concrete recommendations for how to train social workers, advocate for better policies, and practice in ways that put gender equity and intersectional thinking at the center.

Keywords: Women; digital inclusion; social work; gender digital divide; social justice; technology-facilitated violence; empowerment

1. Introduction

Technology has changed almost everything about how we live, work, and relate to one another. The COVID-19 pandemic only accelerated this shift – suddenly, schooling moved online, doctors' appointments became video calls, and social services shifted to digital platforms. Being connected to the internet stopped being a convenience and started being a necessity for full participation in society. But here is the problem: as the world rushes online, women – especially those in low-income settings, rural areas, and already marginalised communities – are being systematically left behind. This paper asks what that means for social work and what the profession can do about it.

The numbers are striking. According to the International Telecommunication Union (ITU), in 2025 about 77% of men were using the internet compared to only 71% of women. That gap has barely budged since 2019. A major study in the *Proceedings of the National Academy of Sciences* found that in low- and middle-income countries, women are about 19% less likely than

men to use the internet and 8% less likely to own a mobile phone. To put that in human terms, that means roughly 320 million fewer women online and 190 million fewer women with mobile phones. And these gaps are not the same everywhere – in some countries, the difference between the most connected and least connected regions is more than 30 percentage points. In the poorest countries, only 18% of women are online compared to 29% of men.

These numbers matter because the consequences go far beyond who has a data plan. As the ITU points out, when women cannot get online, they lose the ability to learn, earn an income, and make their voices heard. This undermines progress toward the United Nations Sustainable Development Goal 5 – achieving gender equality and empowering all women and girls. For social workers, who are trained to care about social justice, human rights, and empowerment, digital exclusion is not some niche technical problem. It is a structural barrier to well-being that demands a professional response.

This paper is organised into five parts. First, I review what we know about the digital gender divide and how it connects to social inclusion. Second, I lay out a theoretical framework that brings together feminist technology studies and social work principles. Third, I look at the double-edged nature of technology – how it can both empower women and expose them to new forms of violence. Fourth, I examine case studies of digital inclusion programs for women in the Global South. Finally, I propose a multi-level framework for social work practice and offer recommendations for education, policy, and everyday practice.

2. The Digital Gender Divide and Social Inclusion

2.1 What Do We Mean by Digital Exclusion?

Digital exclusion is about more than not having a laptop or a data connection. Hartman-van der Laan and colleagues, in a thorough review of the social work literature on digital inclusion, used something called ‘Resources and Appropriation Theory’ to break digital access down into four stages: motivation, access, skills, and actual use. A person can fall off the path at any of these stages. And social workers see this happening all the time. Another review of digital public services for marginalised communities found that technology often widens the gap instead of closing it – online and offline services don’t connect well, and nobody is really looking at how community conditions shape individual access.

For women, the barriers are multiple and overlapping. In poorer parts of the world, affordability and basic literacy are the two biggest obstacles to owning a phone or using the internet. Research from the GSMA shows that in low- and middle-income countries, 235 million fewer women use mobile internet than men. In Sub-Saharan Africa, the gap is 37%. Beyond cost and literacy, studies have identified cultural norms, safety fears, a lack of relevant content, and low digital confidence as major gendered barriers.

2.2 Technology and Structural Inequality

Here is the paradox: technology can lift people up, but it can also push them down. Digital tools have enormous potential to give marginalised communities access to information, education, healthcare, and economic opportunities. But at the same time, they tend to reinforce existing inequalities because of things like digital illiteracy, poor infrastructure, and plain old economic

exclusion. Rajadurai and Vasudevan (2025) argue that while mobile banking and e-governance platforms have made services more accessible to some rural users, divides persist due to language barriers, cost, and lack of skills.

For social workers, this is a difficult reality to sit with. We are trained to address the social determinants of health and well-being – things like housing, income, and education. But the digital dimension of those determinants has not gotten nearly enough attention in either practice or education. Hartman-van der Laan and colleagues found that social workers do offer direct help to clients and organise peer support and training. But they also found that digital inclusion is not consistently or thoughtfully integrated into social work practice.

3. Theoretical Framework: Feminist Technology Studies and Social Work

To understand why digital exclusion is so deeply gendered, this paper draws on feminist technology studies (FTS). This field of inquiry asks how technology is shaped by gender relations and how it, in turn, reproduces them. A recent development in this field, called MetaTech Feminism, pulls together 14 different feminist approaches to technology into one framework built around five core ideas: inclusivity and intersectionality, ethical responsibility, sustainability and environmental justice, social and economic equity, and adaptability. This framework is useful because it takes feminist theory out of the abstract and makes it practical for designing technology that aligns with social justice values.

But feminist critics of technology warn us against easy stories about empowerment. Shokooh Valle (2025) argues that the push to include women in the Global South as users, producers, and developers of technology has created an idealised female figure – one who is tech-savvy yet still caring and selfless – while ignoring the real barriers that create inequality and the ways technology can actually harm women. This critique fits well with social work's commitment to looking at the whole person in their environment. We reject purely individual explanations of exclusion and insist on looking at the broader social, economic, and political contexts that shape people's lives.

Intersectionality matters here too. Yang (2023) uses an intersectional feminist lens to look at how Chinese women experience digital exclusion and gender oppression at the crossroads of gender, class, and where they live. She points to gendered technology design, digital censorship, and AI surveillance as mechanisms of oppression. She calls for social work practices in digital feminism at the micro, mezzo, and macro levels – promoting gender equality in training and design, leading feminist initiatives, and pushing for digital accessibility and data protection.

4. The Dual Nature of Technology: Empowerment and Violence

4.1 Technology as a Tool for Women's Empowerment

Despite all the barriers, there is solid evidence that well-designed digital inclusion programs can genuinely empower women. Take the UNESCO-backed Digital Access for Rural Empowerment (DARE) Programme in Ghana. It combines digital skills training, vocational training, and targeted support for young mothers and marginalised groups. More than 20 refurbished ICT centres now serve as community innovation hubs. In Nigeria, the World Bank's 'Gina Mata, Gina Al-Umma' programme has trained nearly 1,300 young women across six states in content

marketing, social media marketing, online safety, financial literacy, and freelancing. A midline report found that 27% of participants increased their income by using social media marketing in their businesses.

Mobile phones have been especially transformative. A randomised controlled trial in Malawi gave 1,500 married women who did not own phones smartphones and individual training. The results were striking: women's digital capabilities and mobile money use improved substantially, and intra-household gender gaps narrowed compared to giving cash or training couples together. In rural Bangladesh, an Interactive Voice Response (IVR)-based distance learning program designed to help children with schoolwork ended up empowering mothers in unexpected ways. Four years later, treated mothers showed a 0.44 standard deviation improvement in digital connectivity and a 0.11 standard deviation increase in decision-making power. The study found that connectivity gains explained about 10-12% of the total improvement in women's empowerment and agency.

4.2 Technology-Facilitated Violence Against Women

At the same time, technology has become a weapon in domestic and gender-based violence. Technology-facilitated violence against women and girls (TF VAWG) includes any act committed or amplified through digital means that causes physical, sexual, psychological, economic, or social harm. Rooted in power imbalances, patriarchy, and misogyny, TF VAWG not only makes existing forms of violence like harassment and intimate partner violence worse but has also created entirely new forms of abuse. These include cyberstalking, online harassment, image-based abuse, deepfake exploitation, hate speech, and digitally enabled coercive control.

Woodlock and colleagues (2020) introduced the concept of 'Digital Coercive Control' (DCC) to describe how technology is used in domestic violence contexts. They found that domestic violence practitioners believe perpetrators use technology extensively and that this has serious impacts on client safety. One of the biggest dilemmas for practitioners is how to help clients use technology safely while also staying connected to family, friends, and community. Studies suggest that between 16% and 58% of women worldwide have experienced some form of digital violence, and the problem is getting worse.

For social workers, this dual nature of technology creates a real challenge. We cannot pursue digital inclusion uncritically. Any intervention has to deal with the risks of technology-facilitated violence at the same time that it works to make sure women are not shut out of the benefits of digital participation. This requires integrated approaches that combine digital literacy training with awareness of online safety, legal protections, and support services for survivors.

5. Social Work Practice in the Digital Age: A Multi-Level Framework

5.1 Micro-Level Practice

At the individual and family level, social workers can build digital inclusion assessments into their routine work. This means asking clients about their access to devices, connectivity, digital skills, and online safety concerns. The Digital Agency Measurement Framework developed by CARE and Trickle Up is a practical tool that moves beyond simple yes/no questions about access

to assess whether women have the autonomy, confidence, and power to use digital tools to reach their goals. Social workers can use frameworks like this to tailor interventions that build digital confidence while addressing safety.

Direct support might include helping clients get devices, connecting them to subsidised connectivity programs, offering basic digital skills training, and developing safety plans that address technology-facilitated abuse. As Woodlock and colleagues note, practitioners have to balance promoting digital access with ensuring safety, helping clients navigate the tension between being connected and being safe.

5.2 Mezzo-Level Practice

At the community and organisational level, social workers can push for digital inclusion to be integrated into the services offered by community centres, NGOs, and public institutions. Hartman-van der Laan and colleagues found that social workers support digital inclusion not only through direct work but also by organising peer support, training, and pushing their organisations to make access easier. Social workers can set up digital literacy programs tailored to women's needs, create safe digital spaces for peer learning and support, and partner with technology providers to deliver culturally appropriate training.

The concept of 'phygital service inclusion' – deliberately combining physical and digital service elements to create experiences that are inclusive, accessible, and equitable – offers a useful framework here. This approach is built on the principle of 'Physically Informed – Digitally Enhanced,' meaning that digital innovations are always grounded in the physical realities of people who are vulnerable.

5.3 Macro-Level Practice

At the policy and structural level, social workers have an ethical responsibility to advocate for digital inclusion as a basic human right. The International Federation of Social Workers (IFSW) recognises that access to technology is increasingly essential for realising economic, social, and cultural rights. Social workers can get involved in policy advocacy for affordable connectivity, strong data protection and privacy laws, gender-responsive technology governance, and funding for digital inclusion programs that target marginalised women.

Yang (2023) calls for social workers to lead feminist initiatives that promote gender equality in technology training and design, digital accessibility, and data protection. This includes advocating for women – especially those from marginalised communities – to be included in technology design and governance processes so that digital systems respond to diverse needs and do not perpetuate discrimination.

6. Measuring Meaningful Digital Inclusion

A persistent problem in digital inclusion work is the tendency to focus on simple access metrics who has a phone, who can get online – rather than on whether people are actually using technology in meaningful ways and whether it is empowering them. The Digital Agency Measurement Framework from CARE and Trickle Up addresses this by conceptualising digital empowerment as a progression. It starts with access and connectivity, moves to digital skills, confidence, and control, and ends with the ability to use technology to improve lives and

livelihoods. The framework will be piloted across programs in South Asia, Latin America, and Africa starting in 2026.

Evaluations of digital inclusion initiatives are increasingly using feminist and empowerment frameworks. One study of a women's digital storytelling project in Zimbabwe used WhatsApp as a platform for online workshops. The researchers found that beyond building digital skills, remote storytelling helped participants build relationships and solidarity with each other. They argue that feminist frameworks can be used more widely as tools for both co-designing and evaluating digital inclusion initiatives to maximise empowerment gains.

Longitudinal evidence is also starting to emerge. A study tracking the long-term impact of digital job training for underprivileged women in Bangladesh five years after the intervention will provide some of the first long-term data on digital employment training for women in South Asia. It will look at sustained impacts on employment, earnings, decision-making power, and well-being – the kind of evidence that is critical for designing scalable policies.

7. Recommendations for Social Work Education, Practice, and Policy

For Social Work Education: Curricula need to include digital inclusion as a core competency. Wilkerson (2025) describes a pedagogical approach to training graduate social work students in tech-health equity, emphasising technology access as a fundamental human right. Social work programs should prepare students to assess digital exclusion, help clients build digital skills, respond to technology-facilitated violence, and advocate for equitable digital policies.

For Social Work Practice: Practicing social workers should do routine digital inclusion assessments, develop protocols for responding to technology-facilitated abuse, partner with technology providers and community organisations to deliver inclusive digital literacy programs, and adopt frameworks like the Digital Agency Measurement Framework to evaluate meaningful outcomes beyond just access.

For Policy Advocacy: Social work organisations should advocate for universal affordable connectivity as a public good, data protection laws that prioritise marginalised users, gender-responsive AI governance, and sustained funding for community-based digital inclusion programs that centre women's needs and voices.

For Research: We need more research on intersectional digital exclusion, the long-term impacts of digital inclusion interventions, effective responses to technology-facilitated violence, and how to integrate digital competencies into social work practice models.

8. Conclusion

The digital gender divide is not some niche concern for social work. It is a central social justice issue of our time. As technology increasingly determines who can access education, employment, healthcare, social support, and civic participation, excluding women from the digital sphere becomes a fundamental barrier to equality and well-being. This paper has argued that social workers have both the ethical responsibility and the professional capacity to address this divide through interventions at multiple levels – structural, community, and individual.

But we have to do this work with our eyes open. Technology is not neutral. It is shaped by gender inequalities and can reinforce them. Digital inclusion without attention to safety can expose women to new forms of violence. Empowerment narratives that ignore structural barriers risk making the very inequalities they claim to address even worse. For social work, the challenge is to embrace the transformative potential of technology while maintaining a critical, intersectional, rights-based perspective that centres the lived experiences of marginalised women. The evidence reviewed here shows that carefully designed digital inclusion interventions can genuinely empower women – improving digital skills, economic participation, decision-making power, and even challenging rigid gender norms. But scaling these successes requires sustained investment, policy commitment, and professional engagement. As the world becomes more digitised, social work must evolve to ensure that no woman is left behind. Digital inclusion is social justice, and social justice is what social work is all about.

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