

## **Beyond the Gender Digital Divide: Utilizing Research to Transform the Impact of Digital Technology for Women<sup>1</sup>**

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*Who isn't using or benefitting from your digital development application? Under what local conditions would women and girls be allowed to use information and communications technology (ICT)? What new social norms can we create for women and technology?*

These questions, among many, underlie research about the gender digital divide, a growing phenomenon at a time when technology and connectivity seem increasingly ubiquitous.<sup>2</sup> However, this ubiquity does not hold for millions of women on the wrong side of this divide.

Consider economic livelihoods. One of the reasons women bear such a disproportionate burden of poverty is their lack of access to the very information that could help them mitigate or manage these circumstances. Women's lack of access to information remains a huge barrier to their advancement, despite the billions of dollars that are spent on ICT to promote access to information and close the gender digital divide. In fact, the gender and technology gap continues to widen each year. This is especially critical as more development sectors move to digital programming—and thus inadvertently and negatively affect uptake by the very women who would benefit most. Digital technology and women's empowerment often work against each other to create an unbalanced equation.

ICTs have the potential to positively affect women's lives but also can amplify the existing gender divides in communities. Research has shown that ignoring gender differences—i.e., being *gender-blind*—in the creation of ICT programs and policies can further exclude women from the benefits of technical advances. This has been well-studied and yet, the gender digital divide continues to routinely be positioned as side conversations in both the development and technology arenas. Meanwhile, women in developing countries are 50 percent less likely to use the internet than men, and over 1.7 billion females in low- and middle-income countries do not own mobile phones—all while development sectors continue to push for smartphone and internet-based solutions to achieve reach and scale.

While ICTs can help women leapfrog the very societal structures that hold them in systemic poverty and lack of empowerment, this potential is rarely realized due to poor contextual understanding when crafting implementation strategies. While cost, relevance, privacy/safety, and low technology literacy are often cited as the largest barriers to women's ICT access and use, social norms remain the most intractable reason for low adoption. There are several reasons for this, but most stem from the following research “blind spots”:

- The literature on gender, technology, and development remains absent from discussion. Those who work in digital development are not aware that there are distinctly gendered aspects to ICT, let alone those who work in other development research domains. Not only is the field poorly known, the naming convention itself (ICT, ICT and Development, ICT4D, ICTD, gender digital divide, digital inclusion, digital development, tech for development, and so on) is confusing

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<sup>2</sup> Research cited for this position paper, along with current international gender digital divide research, can be found at <http://www.actionableICTD.com/resources.html>.

and nonstandard, thus hard to search across scholarly and gray literature. Neither is there federal standard—unlike other gender indicators—specific to the gender digital divide, which would be a clear driving force for awardees and grantees.

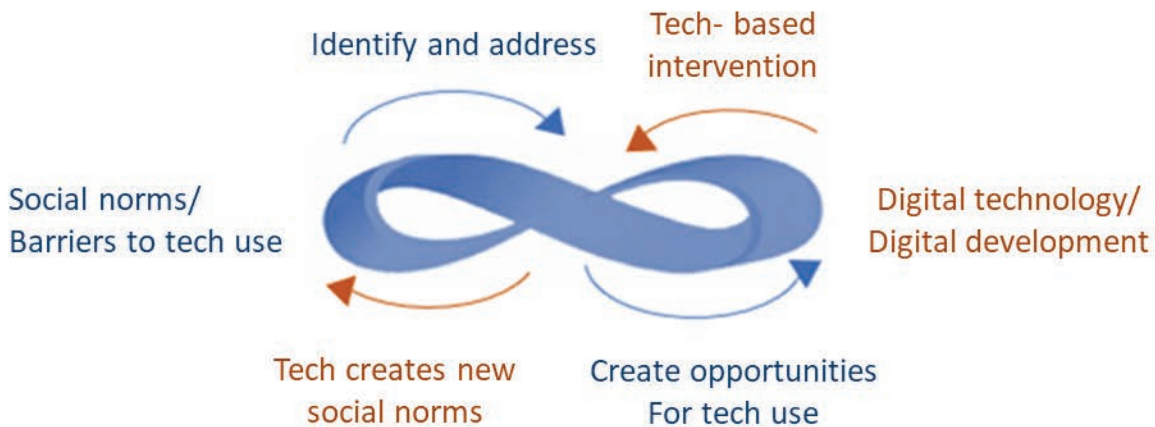
- There is very little new literature on the gender digital divide since the seminal research was published in the early 2000s by Hakfin, Huyer, Primo, Gilwald, Buskens, and others. This has made the issue from the outside appear less important—or worse, solved—when it is more critical now than ever as traditional development sectors add digital components to their programming.
- Technology as an industry has its set of distinct gender issues, based on the flawed ethos that that technology is gender-neutral and experienced the same by all. Technologists would do well to remember Conway’s Law from 1967: any engineering product is inherently shaped by the values of the creator(s). Gender digital divide interventions are, as is most development, designed by those who have little idea how to identify, understand, and respond to detrimental social norms.
- Funders, namely high technology companies with a vested interest in technology adoption, have done a dismal job at making ICT compelling and relevant for women. For a time, they favored coding camps and ICT training programs in places where there are no jobs or opportunities to use skills, which can barely be taught in the short timeframes allotted. To that end, funding has all but disappeared since the heyday between 2007–2012 because funders have seen no “return on investment,” due to focusing on topics and skills not suited or appropriate to the female participants.

Coming back to social norms, we need to remember that there are simply millions of people around the world who know that women’s access to information—and the potential of increased empowerment—is a threat to the status quo. Whole regions in developing countries have banned women’s cell phone use, from *panchayat* decrees to *fatwas*. Applications like WhatsApp and other Voice over Internet Protocol programs have been routinely prohibited for use by women, and headlines report women being killed for daring to defy these rules. Emerging research delves into the concept of “digital *pardah*”—how social media perpetuates gender segregation. We have been through this with women’s and girls’ access to education, female genital mutilation (FGM), gender-based violence (GBV), and other “gendered” issues; strictures around ICT access and use is simply another manifestation of this control over women. However, this very fact seems to be forgotten due to the hype and promise of digital development. We must address the underlying social norms that have always been present in gender and development discussions but are foreign to those who approach development from a technology-centric context.

It is worth noting that there is an inter-connectedness between ICT interventions and social norms—norms **about** technology can be addressed **by** technologies that help create use cases that lead to women’s opportunities for empowerment:

The opportunity to advance research utilization in this context, through creating and testing compelling use cases for women’s ICT use—as approved of by those in power. This is no easy task, but it is required if we want our ICT-based interventions in any development sector to work (especially given high failure rate of ICT for development projects overall, at a conservative 80 percent). We must target existing social norms and create new ones. This approach is represented in the graphic below.

**Figure 1: Dynamics of Social Norms and Technology Intervention**



This contextual research and translation is a where the USAID WomenConnect Challenge offers valuable strategies. Nine programs in 12 countries are working with those in power—men, mothers-in-law, clerics, employers, and politicians—to develop use cases for women that benefit the family and community. These individuals and organizations can identify the conditions under which women can use technology and then create opportunities for access and use. Impact assessments will be conducted in summer 2020; early findings have shown success rate with some of the research topics listed in the below section. Working with this hyperlocal expertise facilitates the translation of social norms into user requirements that can then inform program and application design.

Computing at the margins of society means pushing the margins of computer science: we are working with the most under-resourced population in the world. From the WomenConnect program, which is based on existing research conducted by both the author and others, there are several research areas that should demand attention from researchers, practitioners, and funders:

- Working with those in power is required to pave the way for women’s ICT access and use.
- Advances in voice, gesture, and other text-free user interfaces is necessary to engage women and increase technology uptake, due to low levels of literacy and digital literacy. This also requires thoughtful innovation and the time and budget for extensive usability testing.
- Addressing low confidence is needed before putting a device in front of someone who believes they are too stupid to use it. Interactive voice recording platforms are showing success addressing this need.
- Offering offline internet services, rent-to-own models, and other ICT onramps that fit women’s lives and development goals must be moved to top-level requirements.
- Avoiding online harassment, scams, and fake news needs to be taught at the user level but also must be incorporated into software, hardware, and policy. This can be done through reputation management systems, using artificial intelligence (AI) to identify “fake news,” and integrating security training into all digital development programming, even if seemingly unrelated.

There is a huge research agenda that we need to bring to support closing the gender digital divide, starting with this incomplete list; but first, we need to make people aware of the gender digital divide so that they can truly advocate for women’s empowerment online as well as off.