

Research Article

Women-Led Development through Digital Education: Inquiry-Based Learning as a Tool for Empowerment

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Abstract: The realm of education emerges as a catalyst for transformative change, where a considerable section of the rural population is undereducated or illiterate. Many girls and women aged 15 and older in rural, semi-urban, and urban areas are at varying educational levels. Some struggle with basic literacy, while others, unable to complete schooling, have no means to learn, acquire skills, or work. In such a landscape, women's education is a driving force behind development and progress. The discourse on women-led development becomes significant for inclusive growth and equity. It represents a shift in perspective, from a notion that women are passive recipients of welfare to recognizing them as active agents of social change. Digital access in rural areas is uneven but has a wider reach, is cost-effective, and is infrastructure-neutral, making it a critical tool for empowerment. Within this framework, women's education, structured through inquiry-oriented education led by women and delivered through digital classrooms, is a means of expanding agency and dismantling socio-cultural barriers. This paper examines how women's education fosters empowerment through digital literacy and technology. It highlights that inquiry-oriented education, facilitated by women, enables them to question, reflect upon, and transform the conditions of their existence.

Keywords: Women in education; digital literacy; empowerment through technology; inquiry-oriented education

Introduction

Google Meet has about 25 participants. Most of the cameras are off. We can see a few faces peering into the screen. Another one is focused on a fan dangling from a tin ceiling. One of them has a screen showing a bright blue sky with occasional clouds. The name on the screen is Shalu. Shalu's face is not visible. Her hands are full, weeding the irritants out of the black fertile soil, making it ready to sow before the monsoon arrives. Her mike is muted, but she can hear the teacher's voice explaining food preservation on the screen. The teacher keeps checking whether everyone understands what she is saying and whether they have any doubts or questions. When the teacher asks them to read something on the screen or from their books, Shalu stops reading, takes the phone, and raises a virtual hand. The teacher asks her to read next. Shalu is 56; she has borrowed her son's phone this morning to join online classes, and wants to give her grade 10 exam in 4 months.

In September this year, an Indian organization won an award which carries a lot of prestige as well as some funds, for their "groundbreaking work in addressing gender injustice in education in India's most rural and remote areas", which "creates a ripple effect that uplifts families, communities, and entire societies." (Bhattacharjee, 2025) Many such organizations are working in the field of education today, in India as well as the rest of the world, trying to bridge the gap that, in fact, should not exist, as education is a fundamental right. While considering data that is limited to women, it is undoubtedly a fact that a very large number of girls and women in India continue to remain on the periphery of the social and intellectual world, as they have no or very limited access to education. Historically, women's access to education in India has been shaped by entrenched patriarchal norms, caste hierarchies, and economic inequities. (Kambhammettu and Chatterjee, 2025). Many girls and women either do not go to school or drop out early, around middle school, due to reasons such as early marriage, an impoverished family, a distressed family support system, chores, or the expense involved in educating them. Most girls and women aged 15 and older in rural, semi-urban, and urban areas are at varying educational levels. Some struggle with basic literacy and numeracy; some remain literate at the word and sentence levels; and others who are unable to complete schooling have no means to further their education, acquire skills, or access employment. An intersectional perspective helps us to understand how overlapping forms of oppression interfere with access to education and shape the opportunities and difficulties of these women. (Crenshaw, 1989)

This study contributes to existing scholarship by examining the intersection of women-led development, inquiry-oriented pedagogy, and digital learning environments as a combined framework for re-engaging women in education. Unlike existing studies that focus primarily on access or policy, this research foregrounds lived experiences and micro-level transformations. The purpose of this article is to analyse how such learning models enable women to re-enter education, reconstruct agency, and participate in broader processes of social transformation.

Framing the Inquiry

How do women-led, inquiry-oriented digital learning environments enable women—particularly those who have dropped out of formal education—to re-enter learning, expand their capabilities, and exercise agency within socio-cultural constraints? This question is significant because it addresses a critical gap between access to education and meaningful participation in learning among women who have historically been excluded. It foregrounds not only access but also *the mode of learning—specifically, inquiry-oriented, digitally mediated education*—as a transformative tool. By focusing on women-led initiatives, the question also shifts attention from women as beneficiaries to women as agents of change, thereby contributing to debates on gender justice, capability expansion, and inclusive development.

Conceptual Groundings

This study is grounded in the capability approach developed by Amartya Sen (1993, 1999) and further elaborated by Martha Nussbaum (Sen & Nussbaum, 1993). The capability approach conceptualizes education not merely as a means of acquiring skills for economic productivity, but as a foundational freedom that enables individuals to lead lives they value. It shifts the focus from resources to real opportunities—what individuals are actually able to do and to be. This framework is complemented by intersectionality (Kimberlé Crenshaw, 1989), which highlights how gender, caste, class, and other social markers intersect to produce layered forms of marginalization and shape women’s access to education. The study also draws on inquiry-oriented education (Mohanani, 2018), which emphasizes questioning, reasoning, and learner-led knowledge construction. In contrast to traditional knowledge-transmission models, inquiry-oriented pedagogy encourages learners to construct knowledge actively, thereby fostering critical thinking and self-reflection.

Locating the Conversation

Existing scholarship demonstrates that women’s educational exclusion in India is shaped by structural inequalities, including patriarchy, caste, and economic deprivation (Kambhammettu & Chatterjee, 2025). While policy interventions have improved enrolment, meaningful participation and retention remain challenges. The capability approach reframes education as a foundational freedom that enhances individuals’ ability to lead lives they value (Sen, 1993; Sen, 1999). Intersectionality (Crenshaw, 1989) provides a framework for understanding how multiple forms of marginality intersect to shape women’s educational trajectories. Inquiry-oriented pedagogy (Mohanani, 2018) shifts learning from passive reception to active engagement, making it particularly relevant for adult learners. Emerging research on digital education suggests that technology can expand access; however, there is limited focus on women as facilitators and leaders within these systems. This study addresses that gap.

Approach and Orientation

This study adopts a qualitative, interpretive approach grounded in narrative and case-based analysis. The data consist of observational accounts, participant experiences,

and illustrative cases drawn from rural and semi-urban learning environments in which women engage with digital classrooms and inquiry-oriented education. Rather than relying on large-scale quantitative data, the study prioritizes depth and contextual understanding, focusing on lived experiences to understand how educational practices are embedded in everyday life. The cases are analyzed through the lens of the capability approach and intersectionality, allowing for an examination of how structural constraints and individual agency interact. The narrative form is central to this methodology, as it captures the complexity, texture, and situated nature of learning in everyday contexts.

Education as Becoming

The discourse on women-led development becomes significant when a nation envisions inclusive growth and equity. Despite the challenges, education emerges as a catalyst for transformative change, advancing social equity and economic empowerment. Education fosters a better understanding of the socio-cultural and economic milieu and correlates with personal agency. When owned and led by women, it spurs systemic shifts across families, communities, and institutions. Women-led education initiatives, supported by digital literacy and technological access, then become vehicles of change. Women would have agency in designing, implementing, and managing educational interventions, while digital classrooms will expand access to learning. Even though digital access in rural areas remains uneven, it certainly has a wider reach, is cost-effective and infrastructure-neutral, and is an equally critical tool of empowerment.

When it comes to girls or women who have dropped out, one of the main challenges is not a return to school, but to get them to return to learning itself – the mental habit of engaging with knowledge, processing information, and participating in assessments. Many women alienated from education have either lost confidence or the need to get a degree after becoming ensconced in a quotidian world of children, cooking, family matters, and domestic chores. However, when they are made aware of the various reasons why they should learn to read and write, or complete their education, either to support their children, to earn a living, or merely for their own sake, the first moment of hesitation is encountering the idea of “school” as a structure. Even if there are alternate classrooms set up in a village, older women often have to break their own conditioning about why education is relevant to them. Others encounter resistance from families and communities, requiring them to justify their desire to study. Since most decisions for these women are made by their families or the community, education is a choice they make, either collectively or as a silent rebellion. It is easier for younger girls to return to learning than for women who left school many years ago.

Stories from the Field

The first conversations about returning to school begin when a woman leader from a self-help group addresses the mothers in the village, offering support while ensuring they participate in their children's education. Many of them are young

mothers who are just about literate, have dropped out of school, or have no qualifying educational certificate. They are hesitant at first, but when they realize that they are one among many, they are willing to restart their educational journey.

Digital classrooms offer an alternative to traditional classrooms. They allow the learners to participate without being intimidated by formal structures or without feeling out of place. In one instance, a group of women gathers under a neem tree with a shared tablet computer belonging to the facilitator. They learn to read, to use the Internet, and to ask questions. A woman asks why daughters stop studying after the eighth standard, while sons continue. The question sparks a discussion and collective reflection that goes beyond the session.

In another setting, a women's learning group in a semi-urban setting discusses a real problem they face, whether it is access to clean water or the rising costs of seeds. They read about Saalumarada Thimmakka, noted for her work in planting and tending to 385 banyan trees. What starts as a comprehension exercise evolves into a discussion on climate change and local action. Together, they research, deliberate, and test possible solutions using mobile phones and community networks. Through this process, they begin to see that learning is not confined to a classroom; it is something they can create and lead themselves. The group itself becomes a living classroom where everyone contributes knowledge. Over time, this collective inquiry leads to visible shifts: more girls staying in school, women participating in village meetings, and new community projects emerging from shared ideas.

These stories represent a quiet but powerful change. One element that shapes such interaction between the remote facilitator and the learners is questioning. Guided by curiosity and inquiry, this pedagogy of empowerment offers much more than literacy; it kindles a fundamental change in attitude and perspective. Inquiry-oriented pedagogy plays a crucial role in expanding agency and questioning socio-cultural barriers. It empowers women not simply by transmitting knowledge but by enabling them to question, reflect upon, and transform the conditions of their existence. "In this paradigm, learners are nudged to arrive at answers through their own observation, thinking, reasoning, and judgment. Inquiry is the investigation of questions whose answers we seek. Moreover, learning to inquire is learning to find ways of arriving at satisfactory answers to those questions." (Mohan, 2018) This approach enables women to connect knowledge with lived realities and helps them gain skills, confidence, voice, and agency.

If we look at education through the lens of the capability approach, it allows individuals to experience overall freedom to lead the lives they value, develop particular capabilities, and do what they want, rather than remain a means of economic gain. (Sen, 1993) A digital device offers them greater mobility, and an inquiry-oriented approach helps them gain decision-making power. Women-led digital classrooms not only fracture the traditional perception of education but also, through an inquiry-oriented approach, provide the radical shift we have been waiting for decades. It replaces memorization with curiosity. The learners achieve meta-cognitive understanding of

what they are engaging with and why. For women in rural India, this method does more than teach new skills; it encourages them to look at their own lives differently.

Looking at education through the lens of the capability approach, we see that individuals are valuable in their own right, not merely as contributors to economic productivity, and therefore gain from education. Given the varied circumstances, identities, and needs of different people, we encounter deep social inequalities. We also understand the importance of human agency in shaping one's own opportunities and choices. Education, then, does not remain simply a way to acquire skills for the market. Instead, it becomes a foundational capability—a freedom that expands many others. Education enhances a person's ability to choose the life they value, not just acquire the job they aspire to. It increases a person's ability to think, reason, imagine, communicate, and participate in society. Learning equips individuals to form their own beliefs, make informed decisions, and engage meaningfully in public life. For women, especially those in marginalized communities, education becomes a pathway to challenge restrictive norms and exercise voice in personal and collective spaces. In rural learning circles where women decide what questions matter, education becomes an exercise in agency. (Rajapakse, 2016)

The case of Shalu illustrates how digital access disrupts conventional barriers to participation. Her simultaneous engagement in agricultural labor and online learning reflects the integration of education into lived realities rather than its separation as an institutional activity. This challenges the rigid structure of formal schooling and demonstrates how flexibility enables re-entry into education. Similarly, women gathering under a neem tree with shared devices demonstrate collective learning, which facilitates a shift from passive acceptance to critical inquiry. The semi-urban learning group's engagement with environmental issues reflects how inquiry-oriented pedagogy connects learning to lived concerns. These cases demonstrate that learning is situated, relational, and transformative.

What Emerges from These Practices

The study finds that:

1. Women-led digital classrooms significantly reduce barriers to re-entering education, particularly for adult learners.
2. Inquiry-oriented pedagogy enhances confidence, critical thinking, and learner participation.
3. Digital access enables flexible and context-sensitive learning environments.
4. Collective learning fosters solidarity and reduces stigma associated with returning to education.
5. Education expands women's capabilities, enabling them to question norms, participate in decision-making, and initiate change.

Reading These Transformations

With this approach in mind, one could consider well-being to be judged by what people are actually able to do, not just by the resources they possess. It is also imperative to guard against *adaptive preferences*, where harsh conditions lead individuals to lower their aspirations and claim satisfaction, masking real deprivation and limiting genuine freedom and opportunity. These adaptive preferences are tendencies that emerge when people live under severe or persistent hardship. Over time, they begin to scale down their desires to match their restricted circumstances. Eventually, they may even convince themselves that they are content because wanting more feels pointless or out of reach. (Sen, 1999) This is why expanding individuals' real opportunities and choices is essential for nurturing purpose and enabling them to flourish. (Sen and Nussbaum, 1993) Women-led development offers the freedom to live a life worth living. With the help of digital platforms that enable women to access knowledge and information freely, they can explore and nurture their own capabilities. By participating in the process and methodology of their education, women can interrogate hierarchies and overcome the barriers that have prevented them from learning. With a mobile phone in hand, women in rural areas with access to education can exercise the capacity to choose and act. When combined with inquiry-oriented education, it becomes an emancipatory process that leads to critical awareness. Inquiry-oriented education encourages women-led development, as the learners are co-creators of knowledge. Their stories show how education, when guided by curiosity and inquiry, becomes more than literacy; it becomes a process of empowerment.

The findings reinforce the argument that education must be understood not merely as access but as transformation. Through the lens of the capability approach, these learning environments expand women's freedoms by enabling them to think, question, and act. The presence of inquiry-oriented pedagogy is crucial in this process, as it shifts learners from passive recipients to active participants. The study also highlights the importance of women-led facilitation, which creates relatable and supportive learning environments. Digital platforms act as enablers but are most effective when embedded within social structures such as self-help groups and community networks.

Conclusion

Because literacy, critical thinking, and digital skills unlock access to other freedoms, such as health, mobility, participation in community discourse, or economic independence, education functions as a gateway to capability. Digital literacy can further strengthen these capabilities by expanding women's access to information, networks, and alternative possibilities. Keeping in mind the limitations of exclusively remote learning, one could approach these digital classrooms with a view to reaching the unreachable. Digital classrooms, coupled with inquiry-oriented education, will unlock these untapped passions, leading alums to become agents of change within their families and communities. Once kindled, the desire to learn, to participate in conversations about the welfare of the community, the hunger to support children – all of these bring women together. Women-led educational initiatives that bring together

capability development, curiosity, and digital access empower women as learners by starting with leadership. By shaping their own learning spaces, women open pathways of freedom, dignity, and opportunity for entire communities.

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