

## LEARNING NOTE

## Digital Skills Adoption Amongst Rural Women: A Journey of Women Silk Producers

February 2025



### Background and Motivation

Silk production value-chain in India is a labor-intensive industry employing over 7.6 million people. About 60% of those involved in the production of silk are women. Interestingly, India is also the largest consumer of silk in the world and 80% of the consumers are also women<sup>1</sup>. Despite the large employment potential and continued high demand in the industry, improvements in the income level and social status of women workers in the industry have yet to be realised fully.

In an era where digital platforms are reshaping economic landscapes, the empowerment of women through digital literacy has emerged as a crucial factor in enhancing livelihoods & promoting entrepreneurship. This research project is aimed at testing the following hypothesis – **‘Making women yarn producers & weavers digitally literate and enabling them to join existing digital marketplace helps them in earning higher profit margins by bypassing the intermediaries who take away a major chunk of the profit’**.

It aims to contribute valuable insights by unpacking the complex interplay between gender and technology within the silk-producing communities of Chhattisgarh, Assam and Meghalaya. It seeks to understand the gendered experiences of the digital ecosystem that women engage with and the context for those who do not participate. It also explores pathways to enable women producers to engage with online marketplaces and their learning preferences, and designs and tests targeted interventions to improve digital literacy. By aligning training with women's personal and professional growth goals, the project aims to improve their engagement with the digital economy, thereby increasing profit margins and fostering financial independence.

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<sup>1</sup> Bukhari, R., Kour, H., Aziz, A. (2019) Women & the Indian Sericulture Industry, *International Journal of Current Microbiology and Applied Sciences*. ISSN: 2319-7706 Volume 8 Number 05 <https://doi.org/10.20546/ijcmas.2019.805.101>

Supply ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← Demand

## Approach

The research project has already completed Phase 1, which focussed on women reelers and spinners, and is currently in its second phase, where the emphasis is on women weavers in Chhattisgarh, Assam and Meghalaya. The Phase 2 is being envisaged in three parts:

1. Baseline Research Study	2. Training for Digital Adoption	3. Endline Research Study
To understand ground realities and align interventions to the needs and aspirations of the women silk weavers. We aim to understand the barriers they face in using digital channels for procuring inputs and selling their products, as well as what they desire as digital skill sets worth having.	Training and hand-holding of the women weavers in adoption and use of digital skills for both personal and professional use, based on their current levels of understanding and competency in digital use.	To gauge the impact of the digital adoption interventions, stickiness of behavioural change of digital usage initiated and insight on digital empowerment of women weavers.

The insights from the research project will help design further interventions and improve digital offerings for women producers, thus unlocking high non-farm employment potential for rural women. Some of the learnings from Phase 1 have been incorporated into the Phase 2 approach:

- **Digital literacy training** is being conducted with an emphasis on using digital tools for business activities like Gram Sootra. This has shown improvement in the ability of the participants to use the digital marketplace for transactions and business purposes. The trainings are being conducted keeping in mind the following important aspects:
  - a) Training according to the competency level of participants.
  - b) Safety and security against potential digital fraud.
  - c) Emphasising digital literacy interventions that can be standardised and scaled up meaningfully.
  - d) Relevancy of the available tools and information.
- In Phase 1, technology-savvy young people from the rural communities were employed as '**Reshamdoots**', for hand-holding the women reelers and spinners through their digital journey. Frequent interactions with the Reshamdoots have reportedly improved trust in digital marketplaces and increased propensity to use the platforms more

frequently. Phase 2 continues to expand on these interventions to understand the comparative impact of the model on the women weavers. Typically, the journey needs at least three to six months of handholding and practice.

- Faster and more reliable response from the market side can be an effective incentive that can help to increase engagement of the women producers with the digital platforms. For this reason, Resham Sutra plans to focus on bringing more women weavers, who are the direct customers for the women yarn producers, on the platform. Ensuring market access through digital market connections will expand their horizons as local markets for silk products are limited. Resham Sutra is working with **ONDC execution agencies** to onboard the women weavers on the digital marketplace network.
- The Central and State Government bodies, like the Central Silk Board, a part of the Ministry of Textiles, Government of India, offer various schemes and incentives to support rural silk producers. Digital delivery of such schemes through the marketplace platform, in association with Government agencies, can substantially improve access for the neediest.

## Emerging Insights and Recommendations

In the larger scheme of things, Resham Sutra's efforts are focussed on expanding the financial independence and security for the women silk producers. Digital literacy and skill adoption is an enabler for women in the silk value chain. The research provides for better insights into barriers to those key goals as well as possible solutions that can be implemented to reach a certain scale in the geographies that are difficult to reach. Thus, beyond this research project, there are emerging possibilities for scaling up the impact through local partnerships and contextual adaptations that go beyond digital skills.

As the Baseline research project in Phase 2 is still underway, some of the insights & recommendations from Phase 1 are as follows:

### 1. Importance of Silk Production as a Livelihood

Phase 1 data indicates that in the chosen regions, *silk production forms an important source of secondary income*, especially for women. Silkworm rearing, reeling and spinning of yarn as well as weaving have been traditional household activities passed through generations, and are an important cultural element in rural families. Adding fair and equitable economic value to the disguised labour will be beneficial for the *empowerment of the women producers*. Evidence from the geographies shows that leveraging silk production and mechanisation of spinning through the innovative

machines made by Resham Sutra have gone hand in hand to improve the livelihoods of rural women.

### Narita Basumatary's Story

Marginal farmer in Assam's Baksa district, Narita Basumatary struggled to support her family on an annual income of INR 42,000. To make ends meet, she used to sell vegetables and reared livestock. *In 2022, she discovered Resham Sutra's solar-powered "Abha" spinning machine through Sanjog-implementation partner.*



Traditionally, women in her village sold Eri silk cocoons to traders, but Narita learned to spin silk herself—tripling her income from INR 1,000 to INR 4,000 per month. Determined to uplift others, she trained 200+ tribal women, forming a cooperative to strengthen market access. With the help of Gram Sootra app, helping women sell silk products online despite challenges like smartphone access and language barriers.

## 2. Strengthening Ecosystems for Digital Inclusion

Organisations that work with women in the local contexts have a role in propagating and continuing the processes of digital adoption and usage, and influencing digital behaviour. Several local organisations exist in the chosen geographies but are found to be working in different silos. There is a *need to bring together the organisations that enable funding, credit system, digital skills, etc to create unison in offerings*. Digital technologies could funnel the different resources to be unified and made accessible. Partnerships with government entities, market makers and educational/training institutes will further strengthen the intervention. In 2024, more than 50 spinners trained under this initiative were able to procure spinning machines with the help of some of the other stakeholders in the ecosystem. Samunnati and Rang Dey, local organisations that work on livelihoods, provided financial linkages. Selco, a rural energy service company providing last mile sustainable energy solutions, aided the



spinners with subsidies on solar technology of the machines. Small Industries Development Bank of India (SIDBI) handled the training cost of the spinners as well as helping set up the Rural Experience Centre (REC). In this manner, Resham Sutra was able to leverage the strengths and goals of the other organisations to help bring together a supportive ecosystem of local organisations for the silk producers.

### Jacinta Maslai's Journey

A farmer from Warmasaw, Meghalaya, Jacinta Maslai struggled to earn from traditional Eri silk spinning. Farming and selling produce barely sustained her family. When “Abha” spinning machines arrived, she increased yarn production fourfold, boosting her income enough to fund her children's education.

*Jacinta became a master trainer, setting up a home-based training center with five machines, offering affordable training for local women and now teaches digital literacy to women spinners.*



These women are also linked to financial Institutions such as Meghalaya Rural Bank and Village Organisations (VOs) for loans. to Meghalaya Rural Bank and Village Organizations (VOs), women now earn INR 7,000 per month, turning silk spinning into a sustainable livelihood. Inspired by this success, three new training centers have been established in Ri-Bhoi, empowering more women.

### 3. Tailored Digital Training for Women

*Curated digital literacy training* focused on current competency levels and priority areas for the women producers to help them move up in their digital journey. With training and handholding support, the women were able to list products on Gram Sootra, handle day-to-day transactions, and even start to leverage social media for selling. In Phase 1, 70% of women have expressed the desire to learn to use e-commerce and digital payments. Parts of Phase 2 data also indicate rising interest in learning marketing skills on social media and design upskilling. It is pertinent for digital skill adoption that the information, training and future usage should be enabled in the language the women producers are comfortable in. *Low levels of education and/or English proficiency combined with a lack of local language digital content and resources result in low adoption.* Thus, alternative digital skills need to be highlighted to be able to overcome some of the language barriers. Regional language keyboards on smartphones, tutorial videos in regional languages, audio features in messaging apps and internet searches are some possible solutions.

#### 4. Building Awareness

Digital skill adoption is shaped by deep-rooted social norms influencing trust, financial control, and household dynamics. In the Northeast, the preference for face-to-face buyer relationships and cash transactions stems from cultural trust in personal dealings, creating resistance to digital payments. In Chhattisgarh, some women fear that digital upskilling could disrupt household power dynamics, challenging traditional gender roles. Awareness-building efforts must go beyond technical training to address these socio-cultural concerns. Framing digital skills as tools for strengthening financial security, maintaining trusted relationships, and fostering shared decision-making can ease resistance. Engaging families, peer networks, and local influencers can help shift perceptions and enable more inclusive digital adoption.

##### Kong Laishah's Story

A schoolteacher and generational weaver, Kong laishah turned Eri silk weaving into a sustainable livelihood for women in Kdonghulu village, Meghalaya. Through Eri Weave, she trained and organized 100 women into a cooperative, introducing Resham Sutra machines in 2020 to scale production with 15 spinning machines at the Eri Weave campus.

*Initially working B2B, Eri Weave expanded to B2C under the BMGF project, selling on Gram Sootra, Amazon, and social media. Kong's daughter, Lebani, trained under the program and now teaches digital skills to local women.*



Now a state-empanelled training center, Eri Weave offers courses in spinning, weaving, and organic dyeing, while collaborating on a Rural Experience Centre and certification lab. Recognized as a Top 25 Entrepreneur in Meghalaya (2021) and winner of the HDFC Parivartan Sustainability Award (2024), Eri Weave was also incubated at IIM Kolkata, proving Eri silk's potential as a scalable, profitable livelihood for women entrepreneurs.

*This note was authored by Resham Sutra and developed in collaboration with GxD Hub (IFMR).*



## About Resham Sutra

Resham Sutra is a social enterprise, working to improve the lives of rural textile producers. It is focused on rural silk producers and handloom weavers and is working on developing production equipment and processes, business solutions and financial linkages for the rural producers. Resham Sutra has introduced 14 innovative solar-powered machines to contribute to income and productivity improvements for rural producers. Creating integrated farm-to-fabric value chains that impact producers and artisans at all stages from cocoon farming to spinning and weaving. It has also introduced “Gram Sootra” - a digital marketplace connecting all stakeholders in the silk value chain. Learn more: [reshamsutra.com](http://reshamsutra.com)