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AAJEEVIKA

LEAD LEVERAGING EVIDENCE FOR ACCESS AND DEVELOPMENT
KREA UNIVERSITY

Capacity Building on-the-go: Insights from a Digital Learning Initiative for Rural Women Entrepreneurs

Report
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Foreword

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM), is the flagship programme of the Ministry of Rural Development, Government of India. The programme focuses on improving the social status and economic capabilities of rural women through the formation of collectives, intensifying and expanding their existing livelihoods, identifying alternative economic opportunities, and improving access and linkages to markets through their collectives. Since its inception, the programme has made significant progress in mobilising rural poor and vulnerable women into their institutions at various tiers. DAY-NRLM interventions have also supported Self Help Group (SHG) members in taking up small businesses over the years by providing Revolving Funds (RF) and Community Investment Funds (CIF) with additional credit needs being arranged through Bank linkages.

Since 2019, LEAD at Krea University, under its Solutions for Transformative Rural Enterprises and Empowerment (STREE) programme, has assisted NRLM in testing digital solutions for growth-oriented enterprises under the National Rural Economic Transformation Project (NRETP). In the Capacity building on-the-go pilot, STREE developed a phone-based interactive course as a Massive Online Open Course (MOOC) on record-keeping, intended for both the entrepreneurs and the business development service providers under NRETP. This report presents learnings from the experiences and outcomes of implementing the MOOC pilot. The project is a welcome step towards enhancing digital financial literacy among rural women entrepreneurs.

In the digital age, the ability to understand and leverage simple and efficient digital financial tools becomes increasingly vital. For rural women entrepreneurs, this knowledge can enhance business efficiency and facilitate market access, among other benefits. I appreciate the technical assistance provided by the LEAD team to DAY-NRLM under the programme and hope that the learnings from the project will inform future efforts to connect women entrepreneurs with the digital economy.

(Charanjit Singh)

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ACRONYMS

BDSP	Business Development Service Provider
CEF	Community Enterprise Fund
DAY-NRLM	Deendayal Antyodaya Yojana-National Rural Livelihoods Mission
DiD	Difference-in-Difference Method
DPE	Design-Play-Experience
ICT	Information Communication Technology
LEAD	Leveraging Evidence for Access and Development
LMS	Learning Management System
MOOC	Massive Online Open Course
NFHS	National Family Health Survey
NRETP	National Rural Economic Transformation Project
OSF	One Stop Facility
PT	Performance Tracking Sheet
SCORM	Sharable Content Object Reference Model
SHG	Self-Help Group
STREE	Solutions for Transformative Rural Enterprises and Empowerment

Key Insights

Photo Credit: Mansi Midha/Getty Images/Images of Empowerment

01

About the Pilot

Empowering rural women entrepreneurs through business training is instrumental in imparting crucial skills, including sound financial management, marketing, and strategic planning. Specialised training programs become essential since many women entrepreneurs in rural areas may have limited familiarity with business and financial management concepts. By providing practical knowledge, such programs empower women entrepreneurs to make informed decisions and enhance the effective management of their enterprises. In-person training programmes are often time and cost-intensive. On the other hand, digital learning platforms can provide a cost-effective and accessible means of reaching entrepreneurs, overcoming geographical barriers and limited infrastructure, and allowing ease of multitasking, networking and cost-effectiveness. However, a lack of familiarity with digital platforms also needs to be considered and managed by building user-friendly interfaces and features, and allowing easy discovery of relevant content. **To build entrepreneurs' capacity for managing business operations more effectively, there is a need for a user-friendly Learning Management System (LMS) that is interactive and open to all learner-paced features.**

The Deendayal Antyodaya Yojana - National Rural Livelihood Mission's (DAY-NRLM) National Rural Economic Transformation Project (NRETP) aims to create an inclusive entrepreneurship ecosystem for women in rural areas. **Under the project, early-stage and experienced rural enterprises run by Self-Help Group members are provided a range of critical services, such as business development support, mentoring, finance, as well as access to the banking system along with guidance for convergence and integration with other government schemes.** A specialised set of community cadres, Business Development Service Providers (BDSPs), receive intensive training for 105 days as part of the programme initiation. They, in turn, support first-generation entrepreneurs belonging to Self-Help Groups to learn business management skills and scale up their enterprises. Many BDSPs and entrepreneurs do not have prior business experience and rely heavily on rote learning rather than experience. Frequent facilitator-led refresher sessions are infeasible as they are costly and time-intensive.

To address this gap, LEAD at Krea University piloted a phone-based interactive learning platform for women entrepreneurs, as part of its Solutions for Transformative Rural Enterprises and Empowerment (STREE) programme. **STREE provides technical assistance to the DAY-NRLM in implementing capacity-building interventions for women entrepreneurs. The training was designed as a Massive Open Online Course (MOOC) for BDSPs and women entrepreneurs, covering different topics under record-keeping.** Between the training of BDSPs and their work on the ground, critical knowledge gaps in business management require continuous handholding for BDSPs and entrepreneurs. To bridge this gap, LEAD developed an interactive, learner-paced, online training solution with in-built games to facilitate learning. MOOC uses the same content as the NRETP foundational modules, used in the initial training of new BDSPs, while tweaking the pedagogy to suit a self-paced style of learning. An in-person training was conducted for the BDSPs to orient them on the purpose of the MOOC intervention. A step-by-step guide was shared with the BDSPs on the process of downloading, onboarding and navigating the application. BDSPs performed the function of a feet-on-street team to mobilise entrepreneurs, and support them in downloading and accessing the learning application on their phones. The technical partner, Enabling Dimension, also trained the entrepreneurs on using the application and navigating the course.

Entrepreneur and Enterprise Profile, Skills, Digital Readiness

The study included 341 entrepreneurs across two states - Rajasthan and Chhattisgarh.

85 per cent of the entrepreneurs in the study are female; with **22 per cent completing education up to the 12th grade.** The average age of the entrepreneurs in the sample was 36 years.

Agriculture (60 per cent) remains the primary source of income for the respondents across both the States. The median monthly household income: **Rs. 22,000.**

Trading enterprises, comprising **61 per cent**, hold dominance as a result of distance gaps between the villages and the market area. The median age of the enterprises is six years, and **35** per cent of enterprises have been operating for **2-5 years**.

91 per cent of enterprises are family-run sole proprietorships, with minimal external hiring. 87 per cent of enterprises were started by first-generation entrepreneurs.

96 per cent prefer obtaining loans from Self-Help Groups and federations. The primary source of income for 82 per cent of entrepreneurs is their enterprise.

85 per cent of entrepreneurs have smartphones, and use them for both personal and business purposes. 81 per cent reported having year-round internet connectivity on their phone.

Only 26 per cent of the entrepreneurs have engaged in an online medium of learning in the past; among them, YouTube is the most used application when it comes to learning new things, upgrading their skills, understanding the latest trends in the market and finding their raw material suppliers.

Entrepreneurs recognise the significance of financial management skills (86 per cent)

for operating businesses. The largest gap in business skill is observed for marketing management (while 74 per cent of entrepreneurs perceived this as important, only 35 per cent reported having the skill). 63 per cent of the entrepreneurs who registered for the MOOC course expressed their interest in learning marketing management through MOOC.

Only 4 per cent of entrepreneurs use digital tools for bookkeeping.

89 per cent of entrepreneurs maintain simple recordkeeping practices by storing the bills, receipts or writing down their records in a simple notebook. Entrepreneurs reported using record-keeping practices to summarise expenses (82 per cent), summarise revenue (80 per cent), and calculate the profit or loss (89 per cent).

MOOC User Experience, Challenges and Benefits

Among **190 entrepreneurs** targeted for the MOOC pilot, **137 participated** in the intervention and among them, **117 completed** the course at least once (intervention vs control split).

70 per cent of the participants accessed MOOC with the help of BDSPs. 24 per cent of participants accessed the course on their own, while six per cent of the participants accessed the course with the support of their children or spouse.

36 per cent of mobilised entrepreneurs who received support from BDSPs viewed the course with their family members. On average, participants watched the course twice within one month.

For 78 per cent of the entrepreneurs who completed the course, case study examples in the course design helped them better understand record-keeping.

Entrepreneurs highlighted design, visual appeal, characters (45 per cent), gamified modules (35 per cent) and the overall concept of the course (33 per cent) as differentiating factors compared to other forms of online learning courses that they have previously accessed, like YouTube and pre-recorded videos.

Entrepeneurs reported flexibility (81 per cent) and the ability to multitask (58 per cent) as key benefits of the online learning medium.

Long sessions and modules (31 per cent) and difficulties in understanding game guidelines and navigation (26 per cent) were the major challenges reported by the entrepreneurs. Entrepreneurs suggested including shorter modules (36 per cent) and providing regular support in understanding the course (36 per cent) as features to consider in future iterations of the course.

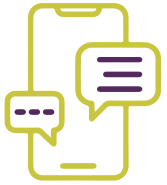
70 entrepreneurs (60 per cent) from the intervention group 3, who completed the MOOC module, answered two and more questions correctly. Results indicate a marginal improvement in the knowledge of the accounting practices by the entrepreneurs who had completed the MOOC.

BDSP Profile and Their MOOC Implementation Experience

All 43 BDSPs are women, with an average age of 30 years. All the BDSPs have completed their matriculation, with 56 per cent having completed education up to class 12.

95 per cent of the BDSPs own a smartphone; 98 per cent of BDSPs reported having year-round internet connections on their mobile phones.

98 per cent of service providers use their phone for accessing social media applications. 91 per cent of service providers use their phones for contacting family, friends, customers, and suppliers, 81 per cent for making calculations on mobile phones, and 72 per cent for digital payments.



Additionally, 81 per cent of BDSPs use mobile phones to conduct surveys, prepare business plans (74 per cent), and train and build capacity (67 per cent). Only 23 per cent of BDSPs use it for market assessment.

Service cadres reported long commute times and distances to be covered as key challenges in administering the training and support to entrepreneurs. BDSPs also highlighted that the lack of round-the-clock access to mobile phones among entrepreneurs was another roadblock.

BDSPs reported a behavioural change amongst the entrepreneurs from their visits. 38 per cent observed 'somewhat' changes in the entrepreneurs' record-keeping behaviour. 60 per cent responded that the entrepreneurs at least started inquiring about record-keeping practices, and 20 per cent reported that the entrepreneurs started maintaining the day-book.

> ***Findings from the pilot study indicate that utilising a smartphone-based learning platform gives women entrepreneurs increased flexibility to grasp business concepts at their convenience, avoiding potential conflicts with caregiving and other responsibilites. Despite the widespread use of smartphones and familiarity with basic applications among most entrepreneurs, we find that there is a significant opportunity to enhance their understanding of advanced features such as digital record-keeping, online banking, mobile wallets, and UPI. Moreover, although the entrepreneurs appreciated the gamified learning approach of the course, they encountered challenges in navigating the application.***

These findings underscore the importance of regular handholding while learning a new digital tool and additional support for troubleshooting. Leveraging regular Self-Help Group (SHG) meetings can serve as a valuable platform to bolster entrepreneurs' digital readiness and encourage peer learning. Additionally, organising refresher training sessions for Business Development Service Providers (BDSPs) can enhance their capability to address entrepreneurs' concerns, especially pertaining to financial and marketing aspects.

Background

02

Photo Credit: Mansi Midha/Getty Images/Images of Empowerment

Business training can equip rural women entrepreneurs with essential skills such as financial management, marketing, and strategic planning. These skills are fundamental for effective business operations and sustainable growth. Often, women entrepreneurs may have limited exposure to business and financial management concepts. Tailored training programmes can provide them hands-on knowledge in areas such as financial management, marketing strategies, and business planning, empowering them to make informed decisions and manage their enterprises more effectively. Different forms of learning pedagogies have emerged since the advent of digitisation in both urban and rural areas of India. **Online learning methods have been adopted rapidly, allowing ease of multitasking, networking and cost-effectiveness. Mobile phones provide a cost-effective and accessible means of reaching women entrepreneurs in rural areas, and overcoming geographical and infrastructural barriers. However, designing effective training programs for rural women in India requires a holistic approach, considering the unique challenges and opportunities in rural settings.** Moreover, access to any Learning Management System (LMS) platform entails access to the internet in the form of smartphone access or ownership.

The National Family Health Survey (NFHS-5, 2019-21) highlights the gap in access to mobile phones amongst rural and urban women. Mobile phone access is significantly more prevalent among urban women, with 69.4 per cent having access, in contrast to their rural counterparts, where only 46.6 per cent have access to mobile phones. In terms of access to the internet, as per the Mobile Gender Gap Report 2023 (GSMA), rural women in India are less likely to use mobile internet than rural men, urban men, or urban women. Further, in India, mobile internet is used by 67 per cent of urban men, 45 per cent of urban women, 44 per cent of rural men, but only 24 per cent of rural women.

For women entrepreneurs, the constraints around time and access to smartphones need to be addressed while building training pedagogy. Unfamiliarity with digital platforms also needs to be managed by user interface features, allowing easy discovery of relevant content. For capacity building of entrepreneurs on business management, there is a need for an LMS tool that showcases a user-friendly interface, is interactive, and is open to all learner-paced features. MOOC here serves as a particular form of online learning for rural women entrepreneurs. **A MOOC has three key characteristics: Openness, participation, and distribution structure.** It is open to all. There is no selection process. Anyone with access to the internet can take the course. Participation, while voluntary, is how learning is possible in a MOOC. Contributing and sharing those contributions with others are intrinsic to the learning process in a MOOC. The distribution structure is the social environment built into the MOOC, through which learners can interact with one another as well as the materials (Baturay, 2015). MOOCs are different from other online learning opportunities because they function on a large scale (Kalz et al., 2013).

The non-farm livelihood interventions anchored by the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) focus on addressing the intersectional missing ecosystems for knowledge, incubation, and financial services. Under the National Rural Economic Transformation Project (NRETP), a specialised set of community caders, Business Development Service Providers (BDSPs), are trained on the basic concepts of business management over 105 days through a blend of classroom-based, instructor-led training sessions and market studies. These trained BDSPs offer hyper-customised, unstructured consultancy through informal interactions with women entrepreneurs affiliated with DAY-NRLM, from financial to market-based linkages. Many BDSPs and entrepreneurs have no prior business experience and rely heavily on rote learning rather than experience. Frequent facilitator-led refresher trainings are infeasible

as they have significant financial and time costs for both the state rural livelihoods missions (SRLM) and the participants.

NRETP relies on the BDSP cadre at the block levels to provide consultancy services to rural entrepreneurs affiliated with the DAY-NRLM federations. The NRETP design establishes one-stop facilities (OSFs) for two to four contiguous blocks across 13 states in the country. Five to 10 BDSPs serve each block within the OSF, with the OSF being their headquarters. The number of blocks under a single OSF varies as per the district's context. In each block, at least 150 growth-potential enterprises are selected for support under NRETP in consultation with the managing committee of the OSF. In between the training of BDSPs and their working on the ground, there are critical knowledge gaps in business management that require continuous handholding for BDSPs and entrepreneurs.

LEAD at Krea University, under its Solutions for Transformative Rural Enterprises and Empowerment (STREE), has been providing technical assistance to the DAY-NRLM in piloting digital interventions for rural enterprises. To bridge the capacity gap, LEAD piloted a phone-based interactive, online training solution on business management with in-built games to support the BDSPs and entrepreneurs. The course is designed as a Massive Open Online Course (MOOC) with the intention of scaling it up across geographies. MOOC uses the same content that the NRETP foundational modules used in the initial training of new BDSPs, while tweaking the pedagogy to suit a self-paced style of learning.

The pilot intended to achieve the following objectives:

- Develop complementary training modules on MOOC on business management that can be used by entrepreneurs and BDSPs to facilitate continuous learning.
- Test user acceptability and effectiveness (in terms of improved sharing of key concepts with end-users, and recall of content) of the digital, gamified pedagogy, and explore its scalability.

The research questions, drawn from the above objectives are:

- **Digital readiness of women entrepreneurs:** Is there sufficient agency and access to smartphones among rural women entrepreneurs to enable digital learning techniques?
- **Recruiting target users:** What is the ideal process of user acquisition for a digital learning course with a defined inclusion criterion?
- **Tweaking for customised self-learning through a digital medium:** When adapting standard training modules from an instructor-led pedagogy to a self-paced pedagogy, what contextual changes need to be made to improve knowledge retention among BDSPs and de-jargon the discussion for the entrepreneurs?
- **Impact of learning through MOOC on business outcomes:** How relevant and effective is the phone-based MOOC approach for direct delivery to entrepreneurs to aid in improving relevant business outcomes?

Introducing the Financial Management Course

03

The programme team drew from the NRETP foundation module to design the MOOC. The course primarily focuses on the financial management of an enterprise. Fictitious case studies of three women entrepreneurs running a production, trading, and service unit are the teaching instrument, with interactive features such as quizzes, match the following, rewards, etc. built into the design.

The two modules on business management are:

- **Record-keeping for business: Entrepreneurs and BDSPs (60 minutes)**
- **Financial Statement: BDSP (30 minutes)**

The record-keeping course is designed for both entrepreneurs and BDSPs. It is a 60-minute module divided into three sub-modules of 20 minutes for case studies of three women entrepreneurs engaged in trading, service and production units. The modules reflect on the importance of record-keeping, basic terminologies and processes. Financial Statement is a 30-minute module designed for BDSPs. The module focuses on the importance of preparing financial statements through the lens of an entrepreneur and practical guidance.

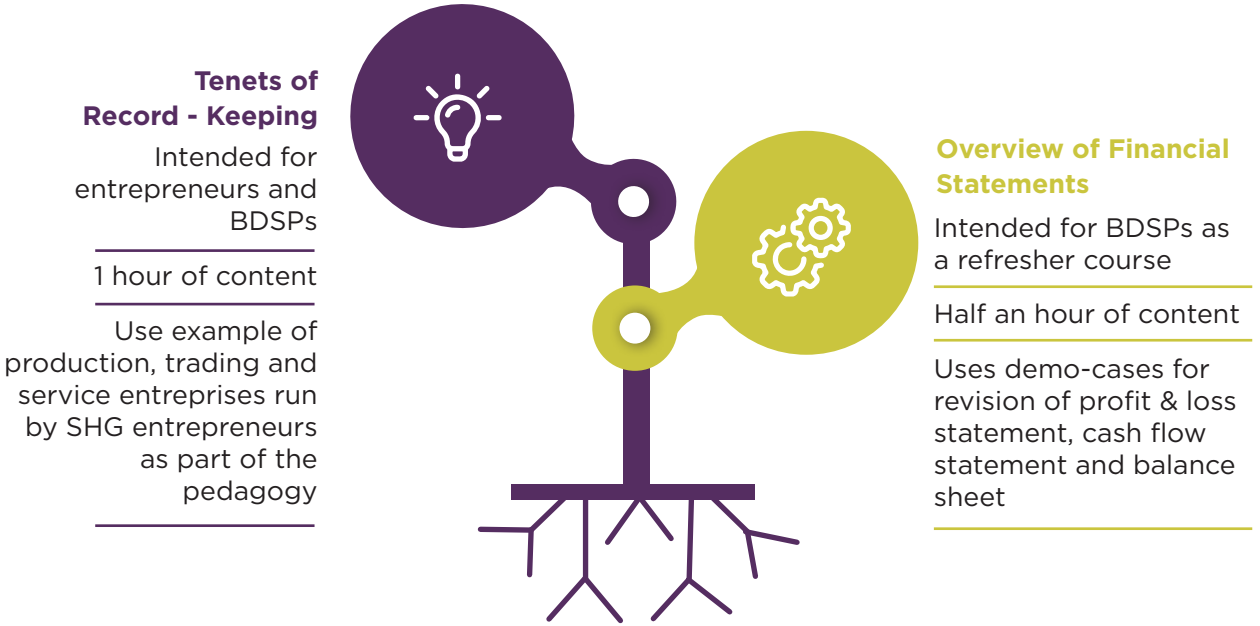


Figure 1: **Two Modules of MOOC and their Features**

A theory of change (TOC) for the MOOC pilot and its impact on women entrepreneurs is given below.

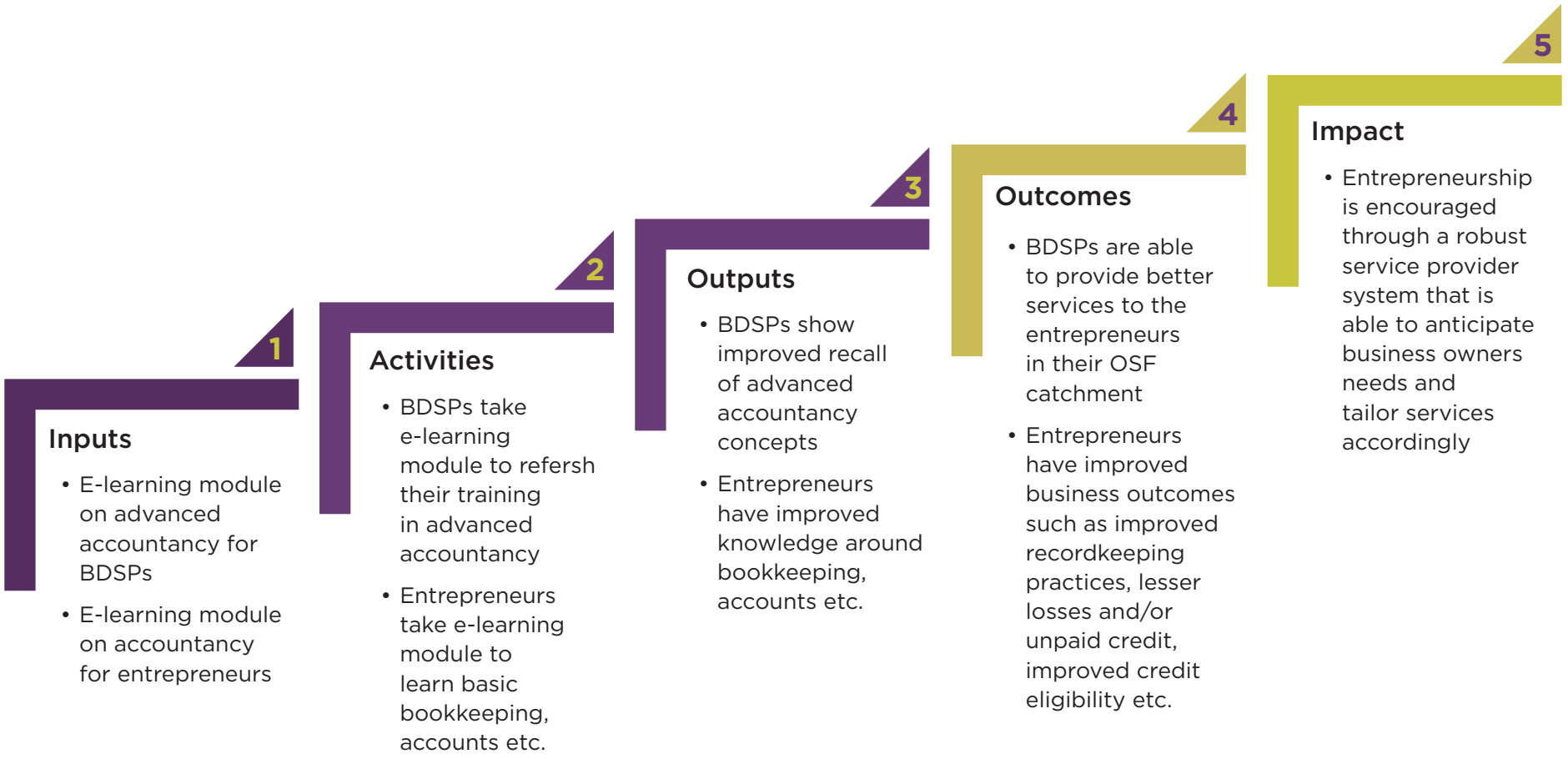


Figure 2: **Theory of Change (TOC) for the MOOC Pilot and its Impact on Women Entrepreneurs**

Study Site and Pilot Design

04

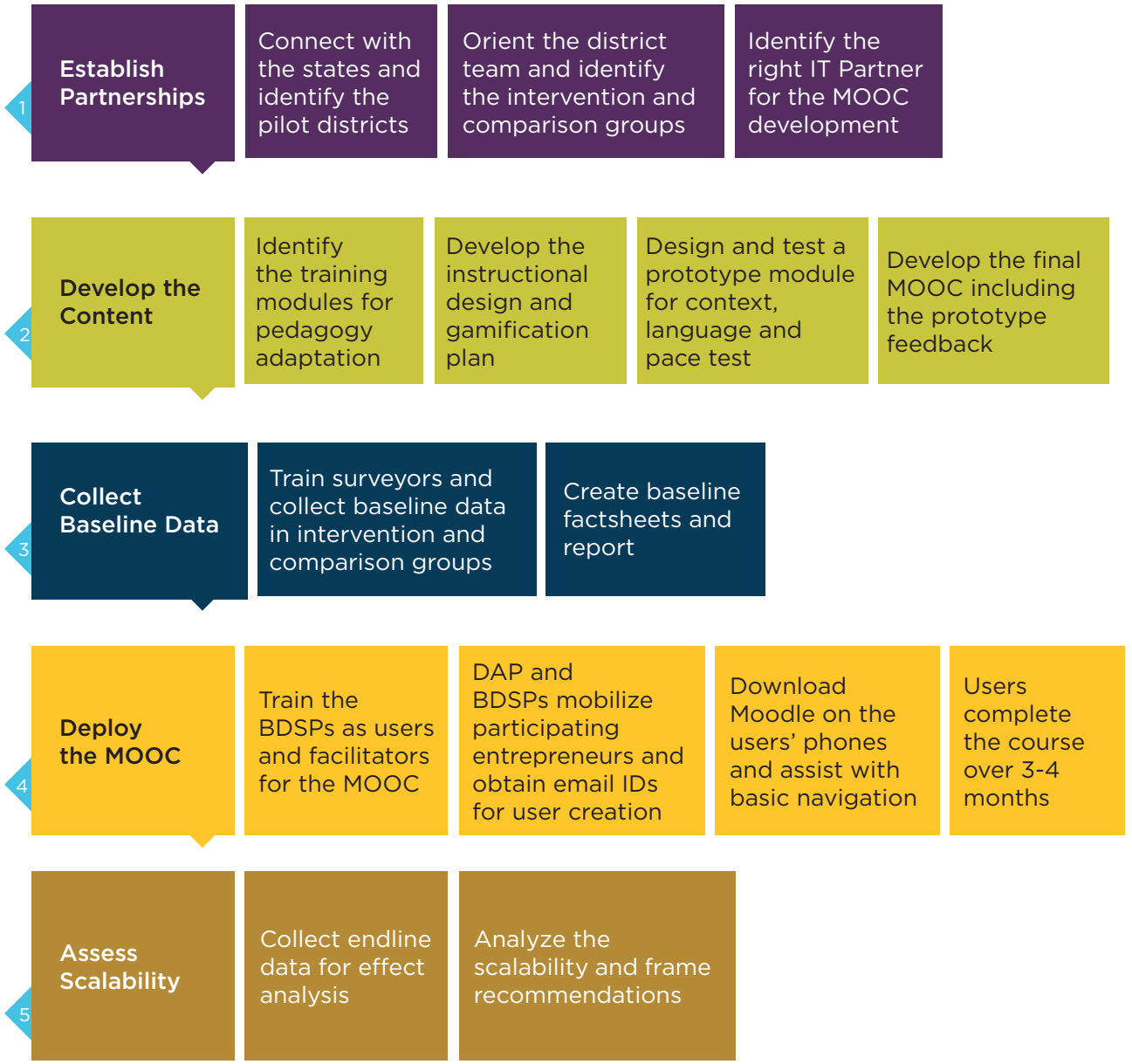
The states of Rajasthan and Chhattisgarh were selected for the pilot by DAY-NRLM based on the following assumptions:

1. Availability of a dedicated and fully staffed cadre working exclusively on non-farm livelihoods promotion under NRETP, viz., the BDSPs; we assumed that each BDSP caters to roughly 10-15 entrepreneurs.

2. High entrepreneur density per village, leading to a regular frequency of contact and familiarity (weekly/ bi-weekly) between BDSPs and entrepreneurs, ranging between 2 to 4 visits per month per entrepreneur.

3. Availability of smartphones with a critical mass of women entrepreneurs affiliated with NRETP.

The pilot was originally designed as a **multi-layered** intervention to strengthen BDSPs' outreach to entrepreneurs.



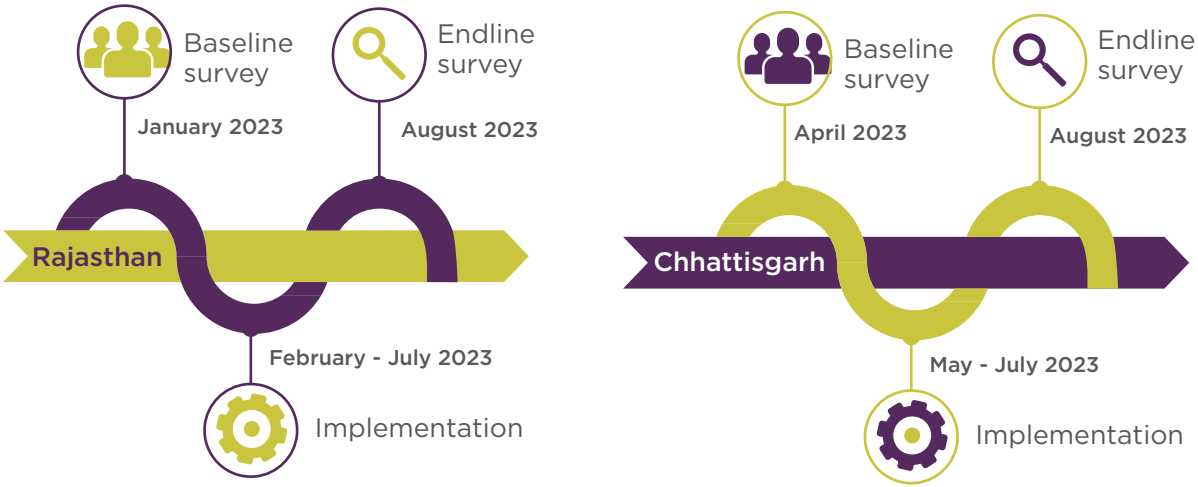


Figure 3: **Implementation of MOOC Pilot (Timeline)**

Pilot Implementation

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05

The BDSPs played an important role in mobilising entrepreneurs for the pilot. The following support structure was created to assist them in maintaining regular contact with the entrepreneurs on matters of downloading the MOOC and running through the course:

- Placing a District Anchor Person (DAP) for on-ground handholding, field planning and supporting entrepreneurs and BDSPs in running the course
- Organising dedicated training sessions by the LEAD team at the Intervention OSFs with the BDSPs
- Support the BDSPs in mobilising entrepreneurs, creating their login credentials, and onboarding them on Moodle
- Regular monitoring visits by the team on the ground for app navigation support and refreshers
- Placing a dedicated resource to extensively visit entrepreneurs and BDSPs in downloading and running the course

The following are the three key components of the MOOC pilot implementation phase:

i. BDSP Training

The pilot started with the orientation and training of BDSPs on MOOC. BDSPs from the Intervention block underwent a two-day in-person training on MOOC conducted by the LEAD team. The training covered the following key components:

- Orienting the BDSPs on the MOOC pilot and highlighting the need for such an intervention.
- Providing detailed explanations and expanding on concepts of financial management to the BDSPs.
- Understanding the bookkeeping behaviour of their entrepreneurs, learnings, challenges and scope of providing consultancy through LMS.
- Training BDSPs on MOOC. A step-by-step guide was given on the process of downloading, logging in and navigating MOOC on the phone.

In Rajasthan, the initial training session was conducted by the technical partner organisation (Enabling Dimensions) and the LEAD team, and by the LEAD team in Chhattisgarh. The LMS ws developed by Enabling Dimensions. The training focused on supporting BDSPs in using the course personally and assisting entrepreneurs in accessing it. Subsequently, refresher training was offered to BDSPs after creating entrepreneurs' login credentials to facilitate their onboarding onto the application.

The training was attended by 24 BDSPs from the Intervention blocks of Rajasthan and Chhattisgarh.

ii. Mobilisation - Course Download Process

- BDSPs first performed the feet-on-street function of mobilising entrepreneurs, to obtain their mail IDs.
- User credentials were created after collecting e-mail IDs from every entrepreneur.
- BDSPs revisited entrepreneurs and assisted them in downloading and running the MOOC on their mobile phones once the login credentials were generated.

iii. Course Onboarding Process

BDSPs visited the entrepreneurs within their assigned panchayats (village councils). NRETP entrepreneurs supported by the OSF are

sparsely located across villages with an average density of one to two enterprises per village. They worked with the DAP to support entrepreneurs in downloading and accessing the MOOC on their mobile phones. The onboarding status of the entrepreneurs is reflected on the STREE LMS dashboard. Moodle allows tracking the progress of its participants at different levels, from logging into the course to engaging in its activities and its completion. Certificates are automatically generated at the end for the BDSPs and entrepreneurs who completed the entire course. This indicates the completion status of the participants who have enrolled in the system.

Expedited MOOC Testing in West Bengal

A week-long rapid testing was conducted in the Darjeeling district of West Bengal to test whether a pedagogy like MOOC can be helpful for this segment. BDSPs from the Kalimpong and Darjeeling block were undergoing the last phase of NRETP training along with the revision of the concepts of financial management. On day one, all 24 BDSPs from both the blocks were oriented on the MOOC. User credentials were created and they were onboarded on the application. A pre-course test was conducted with all the BDSPs based on the basic questions that they learned during their NRETP training. BDSPs were then asked to run through both modules (Bookkeeping and Financial management) during the course of three days. A post-course test was conducted with the same BDSPs on the fifth day. The test had questions from the MOOC, and overall feedback was collected from the participants. For the 24 BDSPs who were onboarded on the course, 20 BDSPs had started with the course and 12 completed the entire course. BDSPs reported the course to be interesting and an advanced way of learning.

A week-long rapid testing was conducted in the Darjeeling district of West Bengal to test whether a pedagogy like MOOC can be helpful for this segment. Following orientation and onboarding, BDSPs from the Kalimpong and Darjeeling block underwent a pre-course test. Subsequently, they were instructed to run through both modules (Bookkeeping and Financial Management) over three days. On the fifth day, a post-course test was administered to the group. The BDSPs expressed that they found the course interesting and viewed it as an advanced way of learning.

Evaluation of the MOOC Pilot

06

Photo Credit: Mansi Midha/Getty Images/Images of Empowerment

Evaluation Design

To assess the impact of the MOOC intervention and its scalability, a quasi-experimental design was used. Within the states of Rajasthan and Chhattisgarh, the SRLM selected the intervention district such that each district adhered to the state-level selection criteria and had at least two comparable OSFs having similar socio-economic background, level of urbanisation, etc. The two comparable OSFs were assigned as intervention and comparison groups in consultation with the district administration.

Table 1: **Intervention and comparison groups for the "Capacity Building on-the-go" (MOOC) pilot**

	Rajasthan	Chhattisgarh
District	Rajsamand	Bastar
Intervention Group(s)	Devgarh and Bhim	Bastar
Comparison Group(s)	Khamnor and Kumbalgarh	Bakawand

To assess the impact of the intervention, data were collected before (baseline) and after the intervention (endline) from entrepreneurs and BDSPs from the intervention and comparison blocks. A difference-in-difference (DiD) method was used to estimate the intervention effect. The DiD method estimates the effect of a specific intervention by comparing the changes in outcome over time between a population that is enrolled in the programme (intervention group) and a population that isn't (comparison group).

Sampling Strategy

The intervention was planned for NRETP entrepreneurs, i.e., SHG entrepreneurs who've sought some degree of formalisation for their businesses. Therefore, the sampling frame comprises enterprises that have been identified for support under NRETP. For this purpose, we have used the NRETP enterprise listing data sourced from the district mission management units. Using the enterprise listing data from NRETP, the proportion of production, services and trading units in the block is estimated. The sampled enterprises were proportionally allocated to three types of enterprises.

Data Collection Methodology

A mixed-approach was used for data collection.

Quantitative Inquiry

Short surveys were conducted to assess the effectiveness of the MOOC designed in this pilot. The baseline assessment covered the socio-economic characteristics of the intervention recipients, phone usage dynamics (particularly smartphones), past experience with online learning, current record-keeping practices, and knowledge of basic financial management. At the endline stage, questions on the user interface, user experiences (UI/UX) and implementation experience of navigating gamified modules were added to the questionnaire.

Qualitative Inquiry

The objective of the qualitative inquiry at the baseline was to obtain deep insights on the current record-keeping practices, and training requirements by the intended users for the MOOC. In the endline, we tried to capture the aspects of the intervention, the overall user experience, and existing gaps/challenges that could affect the scalability of the pilot. The comparison group in both states was tested on knowledge and attitudes around advanced accountancy to help compare the outcomes with their counterparts in the intervention group. For the qualitative component, we conducted

Focus Group Discussions (FGD) with women entrepreneurs and BDSPs in the intervention and comparison groups. Each group comprised between eight to 15 respondents. The sample distribution is summarised in Table 2.

Table 2: **Sample Description for MOOC Pilot Study: Endline Survey**

		Qualitative (FGD/KII)		Quantitative Surveys	
State and Block		**BDSPs**	**Women Entrepreneurs**	**BDSPs**	**Entrepreneurs**
Chhattisgarh	Bastar	2	1	8	90
	Bakawad	2	1	8	90
Rajasthan	Devgarh	1	1	4	50
	Bhim			6	50
	Khamnore	1	1	13	41
	Kumbalgarh			4	20
Endline Total		6	4	43	341

The intervention was planned for NRETP entrepreneurs, i.e., SHG entrepreneurs who've sought some degree of formalisation for their businesses. Therefore, the sampling frame comprises enterprises that have been identified for support under NRETP. Using the enterprise listing data from NRETP, the proportion of production, services and trading units in the block is estimated. The sampled enterprises were proportionally allocated to three types of enterprises.

Key Findings

07

Entrepreneur Profile Summary

85 per cent of the entrepreneurs in the sample are female. Nearly 80 per cent of the enterprises are operated at the household level. The average age of the entrepreneur is 36 years (minimum age is 19 and maximum is 80). Among the respondents, 22 per cent have completed their education up to the 12th grade. The average monthly household income is Rs. 32,145, while the average monthly income from the enterprise is Rs. 17,220. The average family size is five, with at least two working members in each family. The household income calculation considers the earnings of family members working outside their resident village or as migrant workers. Notably, 60 per cent of the respondents in both Rajasthan and Chhattisgarh identify agriculture as the primary source of household income.

Enterprise Profile Summary

The spatial distance among villages, main roads, and the nearest urban market remains substantial, and this significant gap persists consistently across all the villages covered in the districts of Rajasthan and Chhattisgarh. Due to these factors, there is always demand for shops serving local needs like groceries, packed food items, stationery, kids' stores, etc. Hence, trading contributes to the highest number of enterprises across all the blocks.

Table 3: **Types of Enterprises in the Sample and their Distribution**

Enterprise Typology	% of Total 341 Enterprises	Predominant Enterprise Type
Trading	61%	1. Kirana/General/grocery store (57%) 2. Fancy store (16%) 3. Readymade garment shop (9%)
Service	22%	1. Hotel (29%) 2. Salon/beauty parlour (16%) 3. CSC (9%)
Production	17%	1. Tailoring (43%) 2. Flour mill (10%) 3. Pottery (8%)

The median age of the enterprises stands at six years, with 35 per cent having operated for two to five years. Notably, 87 per cent of enterprises are started by first-generation entrepreneurs, primarily SHG members or their households who joined the SHG network. Additionally, 38 per cent of these entrepreneurs have prior experience in running a business.

The SRLMs organise regular skill training sessions for SHG women and their households in various non-farm sectors. Many entrepreneurs attribute their motivation to start an enterprise to the support received through the SHG network and specific skill training. For 82 per cent of entrepreneurs, earnings from their enterprises constitute their main source of income, and for 11 per cent of them, it is the sole source of income for their households among the 341 surveyed.

96 per cent of respondents preferred Self-Help Group and its federations (Village organisation, Cluster Level Federation) as a major formal source of obtaining loans for their business, the network being the single largest channel. Formal loans from banks and financial institutes are suitable only when the loan size is large, and the repayment duration is longer than a year.

Sole proprietorship characterises 91 per cent of the enterprises, which are typically family-run entities, with household members actively participating in procuring raw materials, production, marketing, and financial management. The scale of operation and the support within the household often preclude the hiring of external human resources. In most cases, entrepreneurs receive assistance from their spouses (46 per cent) and children (31 per cent) in running the enterprises. Approximately 48 per cent of respondents mentioned that their enterprises are located outside their households, typically in the main market with a fixed premise. In comparison, 31 per cent are scattered within the small village lanes.

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Table 4: **Entrepreneur and Enterprise Profile: MOOC Pilot Endline Survey**

		Intervention	Comparison	Overall
Sample Size				
	Overall	**190**	**151**	**341**
	Rajasthan	100	61	161
	Chhattisgarh	90	90	180
Entrepreneur Profile				
Gender	Female	88%	81%	85%
	Male	12%	19%	15%
Education	Graduate and above	13%	9%	11%
	Up to 12th pass	24%	19%	22%
	Up to 10th pass	15%	15%	15%
	Up to 8th pass	18%	19%	18%
	Up to 5th pass	13%	21%	16%
	Never attended school	17%	18%	17%
Income features	Average household monthly income	Rs.37,055	Rs. 25,967	Rs. 32,145
	Median household monthly income	Rs. 25,000	Rs. 20,000	Rs. 22,000
	Average monthly revenue from enterprise	Rs. 18,810	Rs. 15,185	Rs. 17,220
	Median monthly revenue from enterprise	Rs. 10,000	Rs. 10,000	Rs. 10,000
	Average no of family members	6	5	5
	Average no of earning family members	2	2	2

		Intervention	Comparison	Overall
Household Features	Household income sources:			
	Salary/ wage for self	22%	5%	15%
	Salary/ wage for other family members	56%	40%	49%
	Rental income	5%	4%	5%
	Agriculture	58%	62%	60%
	Pension	22%	17%	19%
	Direct benefit transfer by Govt	27%	15%	22%
	Operating another small business	13%	4%	9%
Enterprise Importance	Sole source of income for the entrepreneur	9%	13%	10%
	Additional source of income for the entrepreneur	3%	5%	4%
Enterprise Profile				
Type of Enterprise	Production	16%	19%	17%
	Services	20%	24%	22%
	Trading	64%	58%	61%
Ownership Type	Solopreneur	90%	93%	91%
	Family partnership firm	9%	4%	7%
	SHG partnership	1%	3%	2%
Credit	Availed/planned to avail any loan for business during the past three years			
	Source of loan[1]			
	SHG	95%	96%	76%
	Bank	8%	13%	11%
	Other formal financial institutions	7%	5%	8%
	Informal sources (Family, friends, money lenders)	1%	1%	1%

[1] Loan taken from multiple sources; therefore the per centage exceeds 100.

Gap Between Current Business Skills and Skills Perceived as Important by Entrepreneurs

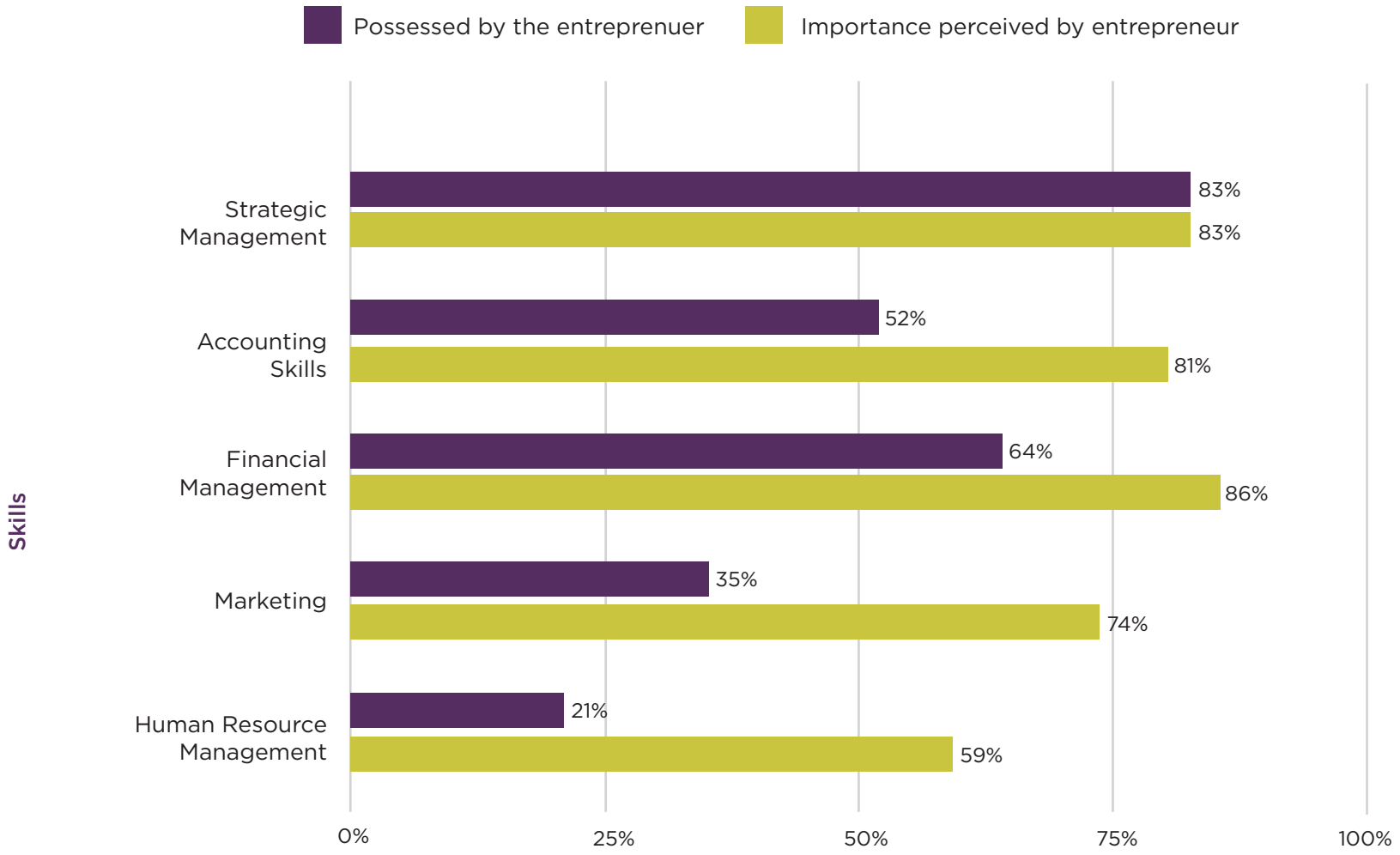

Figure 4: **Business Skill Gap Among Entrepreneurs Survey**

It is observed that several entrepreneurs do not acquire certain business skills despite considering them important for their business. Strategic Management (cordial relationship with customers and suppliers, credit facility, decision making, time management and leadership skills) was the most prominent skill possessed by them, followed by Financial Management (working capital budgeting, preparing budgets, setting up prices and banking) and Accounting (bookkeeping, record-keeping, preparing ledgers) and tracking inventory. Only one-third of the entrepreneurs reported possessing marketing skills (promoting products and services, setting up stalls, and publicity).

Entrepreneurs' perception of considering a skill important was useful in broadly understanding the presence of skill gaps within the respondent cohort. Most entrepreneurs recognised the significance of Financial Management and Human Resources for their businesses. The MOOC pilot aimed to bridge the gap in financial management through a telephone-based learning approach, providing advantages for both the trainer (BDSP) and the learner (entrepreneurs).

A significant gap exists in Marketing skills, highlighting the need to establish supportive mechanisms for nano-entrepreneurs to enhance their marketing and branding capabilities for both offline and online strategies. Out of 137 entrepreneurs who had used the MOOC platform, 63 per cent expressed their interest in learning marketing management through MOOC.

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Digital Readiness of the Entrepreneurs

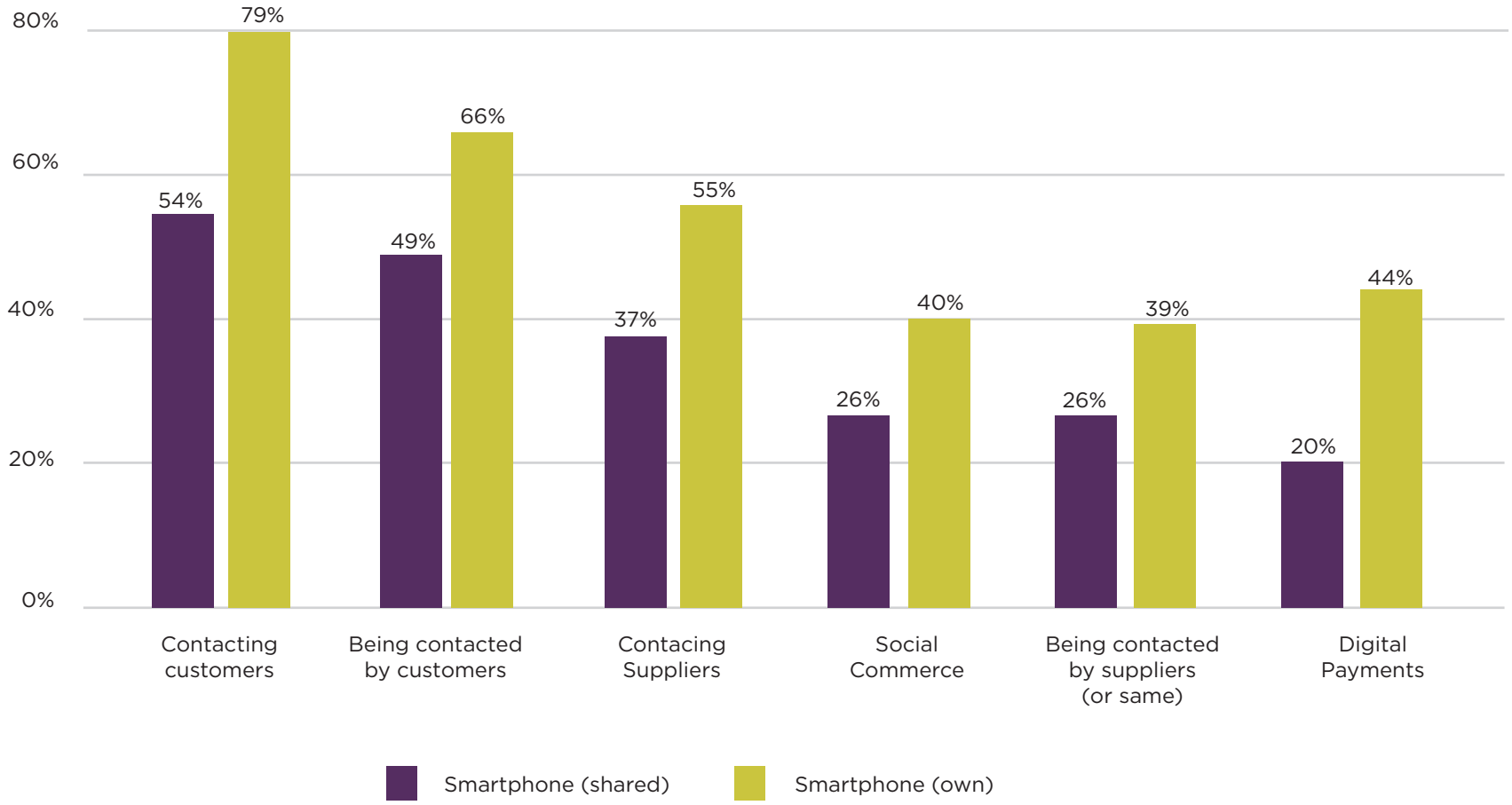

Figure 5: **Usage of Smartphone for Business Activities**

Almost all households have at least one mobile phone used by family members. 85 per cent of the entrepreneurs have access to smartphones, with 75 per cent owning a smartphone. In most cases, entrepreneurs share their smartphones with their spouses and the male child in the household. **During the qualitative interaction, female respondents mentioned that even though they owned smartphones, they had to share them with their children, especially during and after COVID when many educational classes were conducted through online mediums.**

While more than 90 per cent of entrepreneurs use their smartphones for personal uses such as contacting their family and friends, their usage for enterprise-related activities goes down if it is a shared smartphone, as evident in Figure 5. However, 73 per cent of entrepreneurs have reported using phones to contact their customers. Entrepreneurs have also reported high usage of social media applications like WhatsApp, Facebook, Snapchat, etc at 61 per cent and being contacted by their customers (60 per cent). **During the Focused Group Discussions (FGDs), entrepreneurs mentioned that YouTube is the most used application when it comes to learning new things, upgrading their skills, understanding the latest trends in the market, and finding their raw material suppliers.**

15 per cent entrepreneurs used mobile phones for internet banking and 37 per cent for making digital payments. The usage is both for personal and business purposes. More than 81 per cent of smartphone holders have a year-round internet connection on their mobile phones. 26 per cent of the entrepreneurs have engaged in an online medium of learning either for business management training through SHG or for self-training purposes. Pre-recorded classes with self-paced learning came in next at 77 per cent, followed by live sessions through Zoom, and Google Meet at 49 per cent.

Accounting Practices

BDSPs support NRETP entrepreneurs in scaling up their enterprises through various interventions. One such intervention is initiating the habit of writing everyday business transactions by maintaining a day-book. At the end of every month, BDSPs calculate the overall performance by preparing financial statements for the entrepreneurs. **Significantly, over 56 per cent of entrepreneurs reported that they do not maintain separate registers for record-keeping practices like Inventory book, Month Book, Credit- Sales register, Asset, Liabilities and Deposit register, etc.** Instead, 89 per cent mentioned that they maintain simple record-keeping practices by storing the bills, and receipts or writing down their records in a simple notebook without using any particular format. 4 per cent of entrepreneurs also reported using digital tools for bookkeeping.

More than 80 per cent of entrepreneurs use their record-keeping information to calculate the profit or loss incurred by the business and to summarise the revenue coming in and the expenses incurred by the business. **Entrepreneurs, in most cases, are unaware that they can use the record-keeping information to seek loans, apply for ongoing schemes or track the long-term progress of their business.** Entrepreneurs are majorly supported by their spouses and children at 43 per cent and 25 per cent, respectively, in maintaining their everyday business transactions. 68 per cent of entrepreneurs maintain their records within a day of the transaction. Additionally, 14 per cent of entrepreneurs also mentioned the habit of maintaining it once a week.

According to the qualitative insights, across the intervention blocks, both the entrepreneurs and the BDSPs reported that small-scale entrepreneurs who lack access to education and to technology, were apprehensive of formalised practices of maintaining their business

records, and would instead manage the finance of their businesses by using traditional methods for profit estimation and calculations of the inflow and outflow of their business. Some respondents from among the entrepreneurs reported that they used to maintain a simple diary in which they would note down their income and expenses, and practised storing the bills and receipts of their transactions.

Feedback on MOOC User Experience

During the implementation of the MOOC pilot, not all 190 entrepreneurs targeted for the pilot participated in the pilot. Among 190 entrepreneurs from the intervention blocks, about 62 per cent completed the MOOC pilot. Amongst the remaining entrepreneurs, some did not participate in the pilot, while a small proportion of those that started the course, did not complete it. The course completion status is reflected on the LMS, from onboarding to in-built games completion, to the completion of the entire course. LMS generates certificates for the users who have the course, and based on that we derived the distribution of the intervention group. The distribution of the intervention group across three subgroups is given in Table 5.

Table 5: **Distribution of the Intervention Group Across Subgroups According to their Participation Level in the MOOC Pilot**

Group	Subgroups Within the Intervention Group	Count
I1	People in the Intervention block(s) who were mobilised but did not participate in the MOOC pilot	53
I2	People in the Intervention block(s) who were mobilised and oriented by the BDSPs, started with the MOOC course but did not complete the course	20
I3	People in the Intervention block(s) who completed the MOOC course	117

Following the implementation, the entrepreneurs' engagement with MOOC was monitored through the Moodle platform. Of all the 153 entrepreneurs who were onboarded on the course, 70 per cent of the entrepreneurs accessed the course through the help of BDSPs whereas 24 per cent accessed the course by themselves. 6 per cent of the participants accessed the course with the support of their children or other family members.

On average, entrepreneurs who completed the course (117) mentioned watching the course twice; it was their first engagement in such a type of course. Of the 135 users that were onboarded and started watching the course, 73 per cent of the users found it easy to navigate between different pages and features within the course. To simplify and enhance understanding, the course starts with the case studies featuring three women entrepreneurs running a beauty parlour, kirana store and pickle production enterprise, respectively. Characters representing BDSPs and entrepreneurs in a village scenario are used. Across the modules, participants gain insights into the significance of record-keeping, various types of records, the timing for maintaining records, their practical applications, the process of effective record-keeping and preparing financial statements.

78 per cent of respondents reflected that the case study examples helped them better understand record-keeping. For 86 per cent of respondents, the content was delivered at the right pace, and 90 per cent of the users could relate to the course. 97 per cent of the participants found the design and the visuals of the course to be appealing. More than 73 per cent of the participants ranked moving between the sheets from easy to somewhat easy.

During the field visits, it was observed that entrepreneurs also accessed the course with their other family members and neighbours. 36 per cent of the entrepreneurs accessed the course along with their other family members, whereas seven per cent accessed it with

the SHG members and other entrepreneurs in the neighbourhood. Entrepreneurs with no or minimum education also navigated the course with the help of BDSPs or their neighbours. They could understand the content through the audio and visual elements, including characters and case studies integrated into the course. Although they could not participate in the in-built games, they could understand the broad message of the course. During the field visit and focused group discussion, entrepreneurs reflected on the excerpts from the course, highlighting that knowledge retention was notably facilitated through visual and game-based modules.

> *My mother is a 68 year old entrepreneur. She runs the enterprise herself looking after the day to day operations. However, my brother and the kids help her with the finances of the enterprise. Despite having no smartphone and no education, she was able to view the course with me and I helped her in the navigation. The case studies of the entrepreneur excited her and she understood the broad message.*
>
> *- Entrepreneur, Rajasthan*

Challenges and Benefits of MOOC

Based on insights from the interviews and FDGs, respondents who completed the course reported that the learnings provided through the app-based course reduced their efforts in managing the finances of their businesses. The online medium proved beneficial as it allowed them to gain knowledge in these crucial aspects without spending time commuting to a physical alternative source of learning.

Design, visual appeal, characters built in the course (45 per cent), gamified modules built in the course (35 per cent) and the overall concept/pedagogy of MOOC (33 per cent) were the differentiating factors for the entrepreneurs compared to other online learning models experienced by them. The app was different from other learning mediums like YouTube or other training modules that the entrepreneurs had previously used.

The flexibility of learning from anywhere and at any time is the most commonly cited benefit (81 per cent) of the online medium of learning, followed by the ability to multitask (58 per cent). 36 per cent of entrepreneurs mentioned online learning to be cost-effective where the travel cost is reduced, and they can manage the business operation and learn at the same time.

Many of the respondents who had finished the online course were also open to the idea of paying for advanced knowledge on financial management and bookkeeping practices as it would only help them ensure that their enterprises were on a growth track.

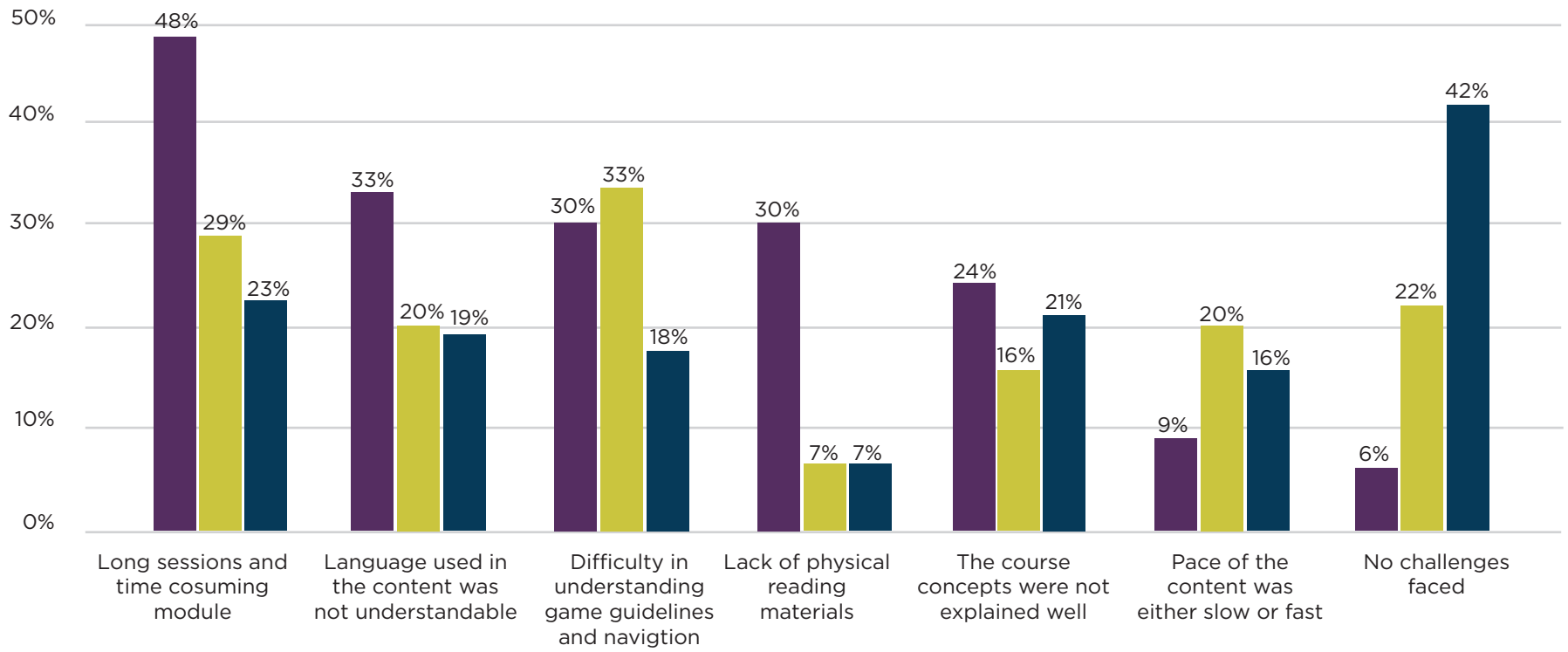

Figure 6: **Challenges Experienced by MOOC Pilot Participants Across their Education Qualification**

The challenges faced on the MOOC platform varied greatly across entrepreneurs with different education levels. 42 per cent of the entrepreneurs who had completed intermediate or college level of education did not face any challenges while using MOOC in comparison to six per cent of those with primary education. Long sessions, difficulty understanding language/game guidelines, and not understanding the language of the content were the major challenges experienced by entrepreneurs who had primary education. Entrepreneurs in this education group also found the absence of physical reading materials to hinder their usage of the MOOC platform; this was not evident among entrepreneurs with higher levels of education.

After the intervention, 74 per cent of the mobilised entrepreneurs expressed that the MOOC platform needed certain features to be added or revised. Both sets of entrepreneurs i.e. those who completed the MOOC and those who did not, had similar suggestions for new features such as having shorter modules (36 per cent), regular handholding support (36 per cent) and interaction with a trainer (33 per cent). However, those who completed the course also suggested adding a follow-up mechanism after completing the course and more examples and practice sessions.

According to the qualitative findings, some of the challenges reported by the entrepreneurs were lack of reading materials, no interaction with the tutor or any follow-up mechanism post the completion of the course . For the next step, this provides insight into the feasibility of implementing a pedagogy like MOOC.

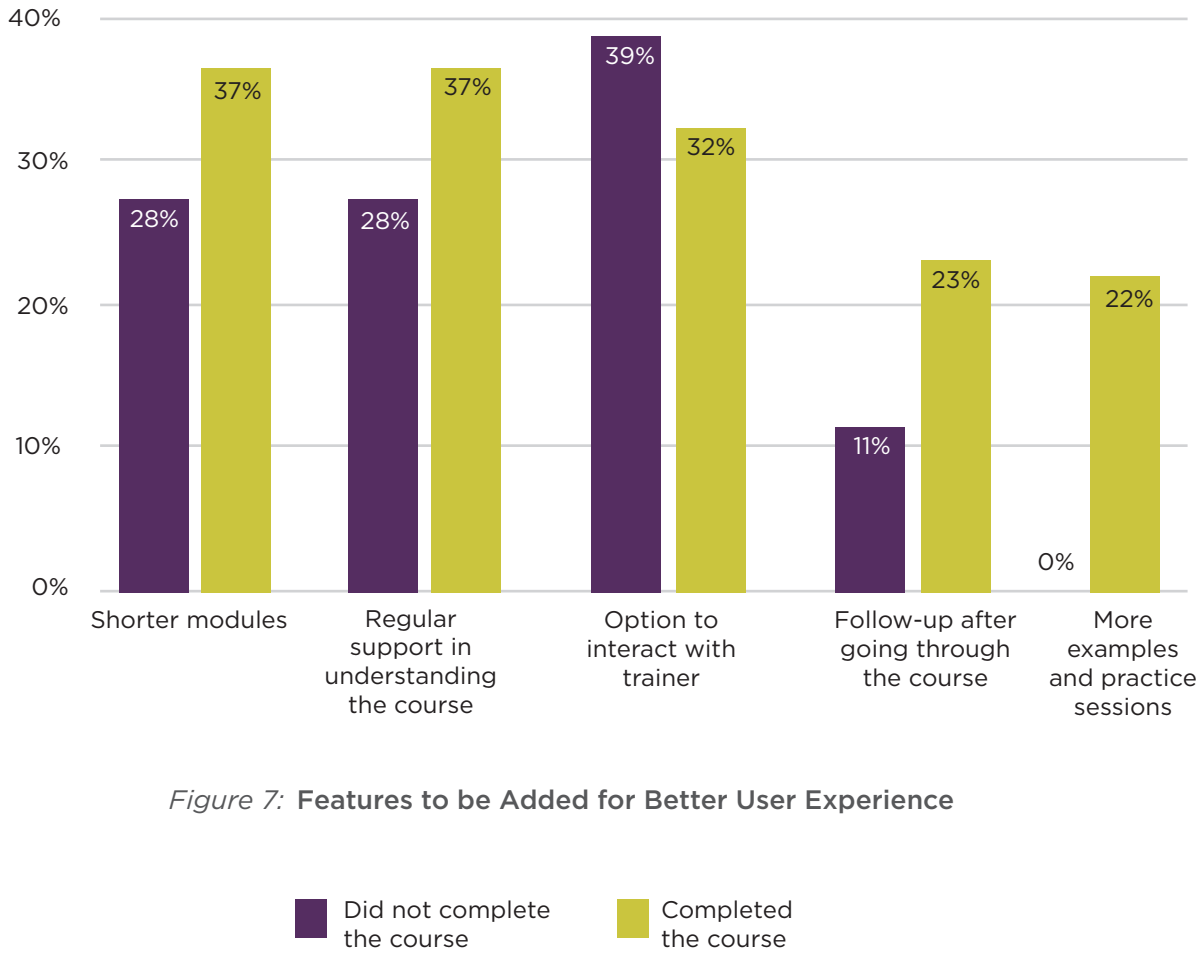

Figure 7: **Features to be Added for Better User Experience**

A dedicated follow-up mechanism needs to be introduced for users. This will ensure a smooth learning process that is cost-effective and that bulk users can learn in and at their own space and pace.

Knowledge of Basic Accounting Practices

Knowledge of basic accounting and their everyday practices showed an improvement amongst the intervention group entrepreneurs who completed the entire MOOC module compared to the comparison group who did not receive the MOOC intervention.

In the endline survey, a set of five questions on accounting and record-keeping practices were asked to all 341 entrepreneurs. These were basic questions that all entrepreneurs are expected to know. We wanted to understand whether there is any difference in knowledge between the intervention and the comparison group, as the questions were extensively covered in the MOOC modules.

An indicator of knowledge was calculated based on the correct answers opted by the respondents. We assumed that respondents answering two or more correct responses, out of five, are reasonably knowledgeable. 70 entrepreneurs (60 per cent) from the intervention group 3, which completed the MOOC module, answered two and more questions correctly compared to 53 per cent of comparison group respondents (Figure 8). Chi-squared association test did not reveal the finding to be statistically significant. In other words, results indicate a marginal improvement in the knowledge of the accounting practices by the entrepreneurs who had completed the MOOC, which requires further validation in a bigger sample and a dedicated implementation spread across a longer time span for a pedagogy like MOOC.

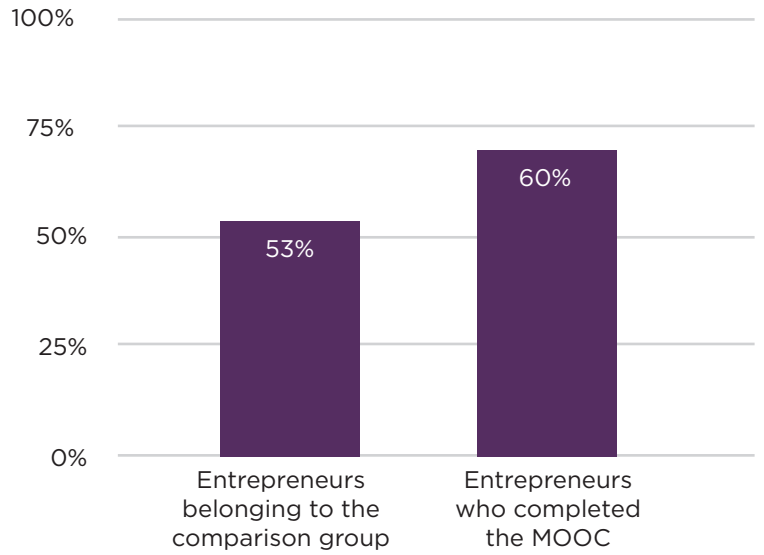

Figure 8 **Percentage of Enterpreneurs who Correctly Responded to Basic Accounting Questions**

BDSP Profile Summary

Business Development Service Providers (BDSPs) are barefoot business consultants who support NRETP entrepreneurs in scaling up their business operations. They are trained in business management by training agencies empanelled by NRLM (such as Amity University, Kudumbashree NRO, etc.) for 105 days spread across six months. Across both the pilot states, all the 43 BDSPs are women. The average age of the BDSPs is 30 years. All the BDSPs have completed their matriculation. Among them, 56 per cent have completed higher secondary education (passed 12th class board exam). About 28 per cent have a graduate degree or above. On average, BDSPs have been working on the ground for nine months.

Table 6: **Business Development Service Provider (BDSP) Profile Summary**

		Intervention	Comparison	Overall
Sample Size	Overall	18	25	43
	Rajasthan	10	17	27
	Chhattisgarh	8	8	16
Average Age	Rajasthan	32	29	30
	Chhattisgarh	35	27	31
Gender	Female	100%	100%	100%
	Male	0%	0%	0%
Education	Graduate and above	17%	36%	28%
	Up to 12th pass	61%	52%	56%
	Up to 10th pass	22%	12%	16%
Experience Details	Running their own enterprise	56%	20%	35%
	Currently engaged in another job other than BDSP	39%	80%	28%

The below section presents key insights from the BDSP survey. We do not distinguish between intervention and comparison groups since BDSPs from both groups have been similarly trained in NRETP modules and their functioning on the ground.

Digital Readiness of the BDSPs

95 per cent of the BDSPs own a smartphone. However, most of the BDSPs reported purchasing mobile phones for work purposes and providing better consultancy services to entrepreneurs. Almost all the BDSPs (98 per cent) use their phone for accessing social media and contacting their friends, family and customers along with other usages. The majority of BDSPs (72 per cent) have been using their mobile phones for making digital payments for both personal and business purposes. However, only a quarter of BDSPs used it for internet banking (26 per cent). In their everyday functioning, they handle large sums of financial transactions of SHG and the federation. They support the entrepreneurs in both the procurement and repayment of loans either through the SHG network or through other formal financial sources.

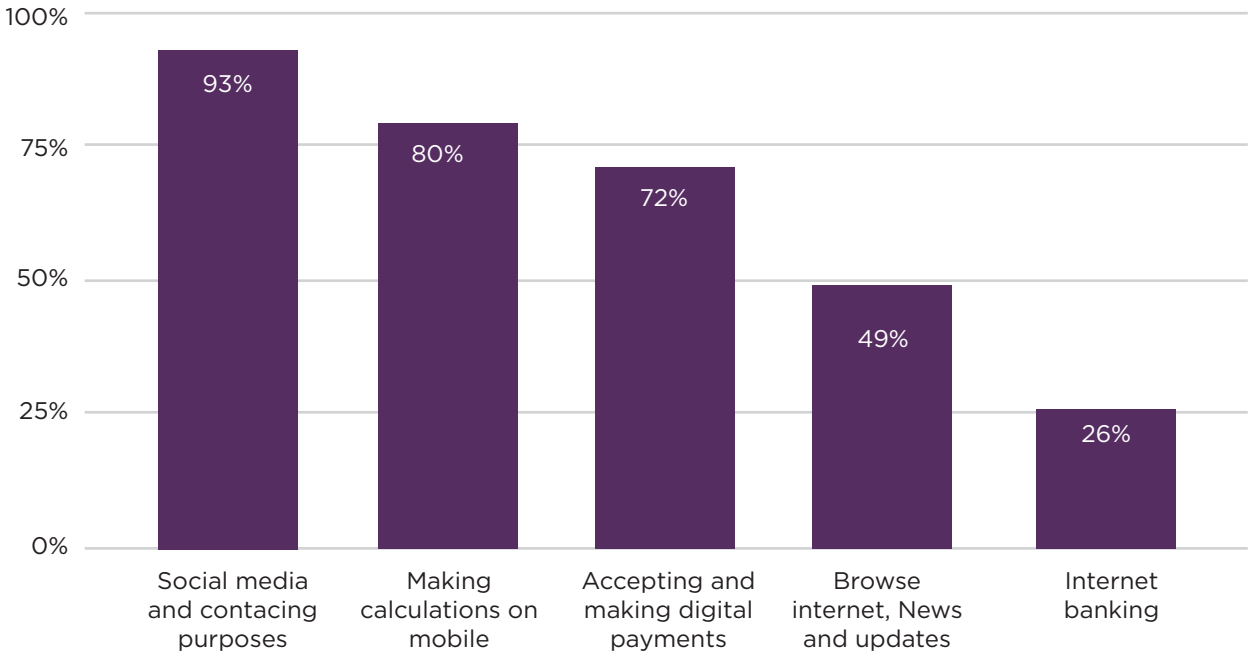

Figure 9: **BDSP Phone Usage for Business or Personal Reasons and for Providing Different Consultancy Services to the Entrepreneurs**

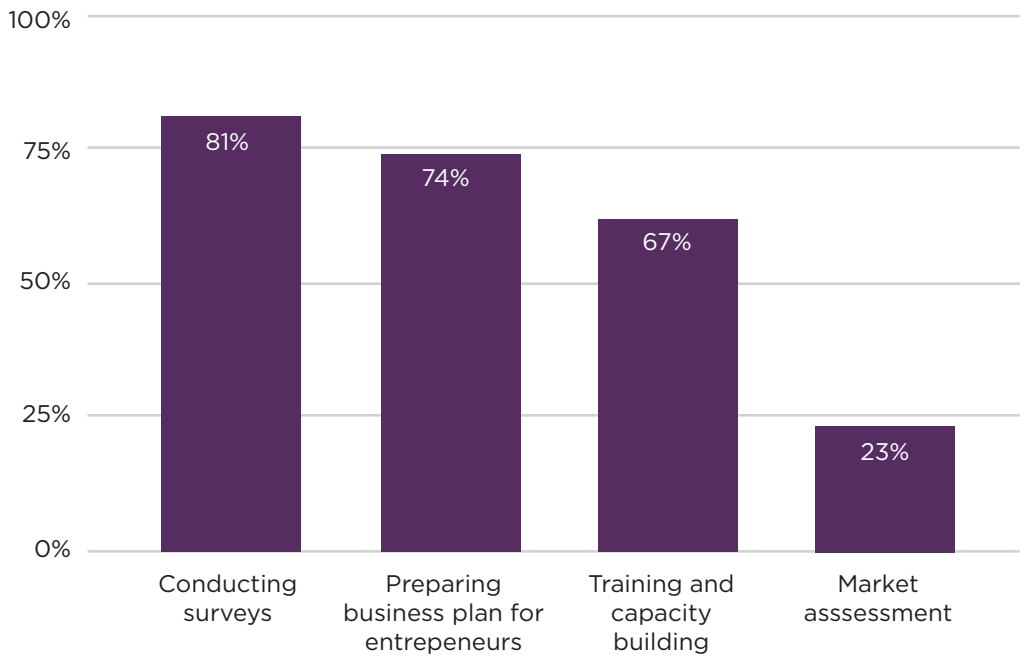

Figure 9: **BDSP Phone Usage for Business or Personal Reasons and for Providing Different Consultancy Services to the Entrepreneurs**

BDSPs support the SRLM and local administration in different types of surveys at individual, household and entrepreneurial levels. BDSPs are also equipped to conduct market assessments of enterprises. 81 per cent of BDSPS use mobile phones for conducting surveys. Whenever a new entrepreneur is onboarded under NRETP, BDSPs must first prepare their enterprise's business plan. This helps them understand further support required by the entrepreneurs. Making calculations on mobile phones (81 per cent), preparing business plans (74 per cent), for training and capacity building (67 per cent), and market assessment (23 per cent) also remain important areas of phone usage by the BDSPs.

98 per cent of BDSPs have year-round internet connections on their mobile phones. 70 per cent have engaged in online learning mediums. 63 per cent of BDSPs have engaged in live learning sessions through video conferencing (through ZOOM, Google Meet, etc), whereas 37 per cent have learnt through pre-recorded classes at their own pace. YouTube is also the most used platform for most of the BDSPs to learn new concepts.

MOOC Implementation Experience of BDSP

The pilot heavily relied on BDSPs as their backbone. They assisted in mobilising the entrepreneurs, collecting their email IDs for creating login credentials and then downloading the course to their respective entrepreneur's mobile phones. They also provided handholding support to the entrepreneurs in completing the course. Every BDSP, on average, supports a cohort of at least 15 entrepreneurs every month. They visit their entrepreneurs at least twice a month within their assigned Panchayats to calculate their financial statements at the end of the month and provide any other support that the entrepreneur requires. BDSPs have to travel far to support their entrepreneurs, who are sparsely located across villages, with an average density of one to two enterprises per village, in some cases more than 20 km apart. They either depend on public transport or personal vehicles for their travel. In a setup like this, BDSPs supported their entrepreneurs and other SHG members in implementing MOOC. On average BDSPs have visited their entrepreneurs at least two times to download the course and run through MOOC.

BDSPs have had a similar experience with MOOC usage to that of the entrepreneurs. BDSPs accessed the course with the help of a field facilitator and then navigated it themselves. Almost all the BDSPs have attended online training, either through live sessions or through pre-recorded classes while undergoing their NRETP training. Compared to the online trainings that they have previously participated in, MOOC is different for them in terms of the design, visual appearance and characters of the course (63 per cent), gamified modules built into the course (56 per cent) and the content of the course, which has a dedicated focus on Financial Management (50 per cent).

BDSPs are responsible for providing a range of services to women entrepreneurs who are members of SHGs, such as providing them with loans, mobilising new entrepreneurs and introducing new entrepreneurial ideas, and assisting them in smoothly running their business operations such as record keeping, establishing marketing channels etc. This requires extensive time in the field, at the OSF, to prepare business plans and attend to household chores at home. Hence, BDSPs highlighted that online training has the flexibility of being used at any point in time and from anywhere (67 per cent) and that they can manage multiple responsibilities while learning at the same time (33 per cent).

During the qualitative discussion, BDSPs reported long commute times and distance to be major challenges in administering the pilot. The BDSPs expressed that they faced a substantial degree of difficulty in administering the course to the entrepreneurs as many of them did not have round-the-clock access to personal smartphones or the internet, and did not even have email IDs. Another hurdle reported was the inertia faced by the larger entrepreneurs as they trusted the traditional know-how which had supported them in running their businesses. BDSPs also reported that the entrepreneurs faced a great paucity of time to access the course, as many of them were using smartphones owned by their family members and were also responsible for the household labour and care work towards their family.

However, BDSPs also reported a behavioural change amongst the entrepreneurs from their visits. 38 per cent of BDSPs observed 'some kinds of' changes in the entrepreneurs' record-keeping behaviour. 60 per cent responded that the entrepreneurs at least started inquiring about record-keeping practices. 20 per cent of BDSPs reported that the entrepreneurs started maintaining the day-book or enquiring about record-keeping practices. This serves as evidence of the behavioural changes observed within the entrepreneurs.

Implications and Recommendations

08

a. Long-Term Adaptability of MOOC

During the three to five months of the intervention window, behavioural changes regarding business management and record-keeping were observed among the entrepreneurs. A MOOC-based pedagogy offers a cost-effective medium of learning that complements traditional in-person training models. For users to adapt to MOOC, it will be beneficial to implement such an intervention for an extended period.

b. Need for Handholding Support

Although most entrepreneurs use a smartphone, they are not fully familiar with all its features, especially when it comes to online banking, mobile wallets and UPI. Although the entrepreneurs enjoyed gamified MOOC modules, they faced difficulty in navigating the application. Hence, additional support mechanisms through regular handholding visits can serve as a platform for the entrepreneurs to clear their doubts. Such support can also be introduced at SHG meetings for the entrepreneurs to become digitally ready. To enhance the BDSPs' ability to address entrepreneurs' concerns, particularly regarding financial and marketing aspects, a refresher training session on effectively utilising the MOOC application can be organised. This training aims to better equip BDSPs to navigate the application, tackle challenges, and troubleshoot issues effectively.

c. Suitability for Cost Effective Continuous Learning

To amplify the impact of the pilot, it is essential to establish a dedicated dissemination mechanism for the periodic implementation and tracking of the Learning Management System (LMS). This can be done by the existing grassroots cadres such as BDSP, CREP-EP, livelihoods cadres, bank sakhis or through dedicated resources. Both the learning and outreach through LMS can be an addition to the new method of providing consultative services to entrepreneurs by the BDSPs.

d. Immediate Rollout with a Gradual Transition

The MOOC application can be promptly introduced across all the OSF and SVEP blocks. The course can be used during either in-person training or for revision of concepts, or for both. Training can be given to the entrepreneurs on their mobile phones on various modules like business management, financial management and marketing. Implementation of MOOC through the SHG federation will motivate more entrepreneurs to adopt such a pedagogy.

e. Making Entrepreneurs E-Commerce Ready

Both entrepreneurs (62 per cent) and BDSPs (40 per cent) have reported that they are interested in learning marketing management through MOOC. A marketing module can be created to make the entrepreneur e-commerce-ready. Based on the learnings from the pilot, marketing modules in MOOC paired with a dedicated implementation team can be a way ahead for effective learning through LMS.

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About STREE at LEAD at Krea University

Solutions for Transformative Rural Enterprises and Empowerment (STREE) was conceived in December 2019 to support DAY-NRLM's vision of creating a robust enabling entrepreneurial ecosystem for women in rural India under NRETP. It is a technical assistance initiative spearheaded by LEAD at Krea University, which aims to drive women-led enterprise development, with research at the core of its work. The STREE initiative is supported by the Bill & Melinda Gates Foundation for scalable enterprises under the NRETP.

The primary aim of STREE is to ensure institutional support mechanisms are in place, to enable women to manage higher-order and more entrepreneurial ventures in the non-farm space. **STREE follows three pathways to progress:**

- **Implementation support for system strengthening through a dedicated technical assistance team deployed at the DAY-NRLM and the Madhya Pradesh SRLM.**
- **Design thinking that channelises BMGF's funding, and LEAD at Krea University's research base, partnerships, and implementation experience to develop, test, and recommend low-cost-high-impact scalable pilots to the NRLM.**
- **Adoption of rigorous monitoring & evaluation systems to monitor implementation efficacy and spur adaptive programming.**

> ***STREE completes 4 years of partnering with the NRLM in December 2023. During this period, the programme has supported the rollout of NRETP through enterprise listing across implementing blocks, designing guidelines for the interventions, monitoring programme implementation, and conducting low-cost, scalable, tech-enabled pilots.***

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About LEAD at Krea University

LEAD is an action-oriented research centre of IFMR Society that leverages the power of research, innovation and co-creation to solve complex and pressing challenges in development. LEAD has strategic oversight and brand support from Krea University (sponsored by IFMR Society) to enable synergies between academia and the research centre.

Since 2005, LEAD has been at the forefront of development research and programming in India, and has managed a portfolio of over 280 projects in collaboration with over 300 academics, governments, NGOs and private sector organisations from across the globe.

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