Creating a Digitally Enabled Social Knowledge Management Platform for Rural SC Community to Bridge Rural-Urban Knowledge, Information and Market Divide

PROGRESS REPORT
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Technology Bhavan,
New Mehrauli Road
New Delhi - 110 016

Submitted By

Social Informatics Research Group
Indian Institute of Management Calcutta
Joka, Kolkata – 700104

Principal Investigator:
Dr. SomprakashBandyopadhyay,
Professor, Management Information System Group,
Indian Institute of Management Calcutta
somprakash@iimcal.ac.in; (m): 92316-83443

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Executive Summary

The Problem

One of the key deficiencies in many rural communities especially in SC community is the lack of linkage to local as well as the larger metropolitan area opportunity structure, including financial, technical, social and political resources. Right kinds of physical and/or virtual connectivity that are required to increase both bridging (external) and bonding (local) social capital of rural communities are grossly missing. Social capital refers to the network of social relations that may provide individuals and groups with access to resources and supports. Since rural communities are disconnected both physically and digitally from local as well as urban opportunity structures, they have (i) less access to quality educational support, training, advisory services (ii) less knowledge about the available local opportunities (community assets, sharable resources) (iii) less access to market links (buyer, seller, micro-credit etc.) and (iv) less access to any forum to discuss their problems with relevant agencies.

While the poor networking ties coupled with information, knowledge and market divide of rural Indian artisans are a known fact, the situations have **further worsened due to the ongoing pandemic scenario, which marks the urgency of our research intervention in the context of overcoming extant rural marginalization.** Due to the COVID 19 pandemic, physical sales of handicraft goods have come to a halt. Not only that, the 'new normal' has attempted in drastically changing the way socio-economic operations were performed in modern society. Lack of opportunities towards spontaneous face-to-face physical interactions have further pronounced the effectiveness of the virtual medium, where daily affairs in the changed times are increasingly getting dependent on digital channels for successful execution. Amidst such a scenario, if the rural artisans are not taught to optimally use the digital medium to attract socio-economic benefits, then the nature of their marginalization will further become more acute and the rural members will remain incapacitated in coping up with the changing socio-economic setting. **Our research intervention keeps in mind the potentials contemporary digital technologies are endowed with and wishes to use the same as a tool to usher holistic rural empowerment along socio-economic axis.**

Our Objective

The objective of this project is to demonstrate how the current internet-based social technologies[1] has the potential of building (business) knowledge capabilities and enhancing the entrepreneurial competencies of rural producers by bridging rural-urban knowledge & information divide through the creation of a *social knowledge management framework*. The project ultimately aims at creating rural business transformation using social technologies in order to eradicate sharp economic, social, and cultural difference between rural and urban producers. Rural transformation is only possible when there is livelihood enhancement and holistic development of the rural community using social technologies.

Considering the current pandemic situation and the "new normal" lifestyle that would follow the pandemic situation, we have reoriented our intervention plan using a "distributed intervention strategy" instead of a centralized intervention strategy. In this strategy, we do not need to use / install any capital equipment to create centrally-located facilities *but rely on the availability of smartphones with target user-groups.* We had an initial plan of creating three centralized internet kiosks and mobile internet kiosks and our assumptions were (i) the target participants would come to these centralized facilities physically (in case of centralized internet kiosks), or, (ii) our project personnel will go to the target participants physically (in case of mobile internet kiosks). Since this is not possible during this pandemic situation, we are now trying

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[1] *social technology* is an umbrella term used to capture a wide variety of terminologies depicting internet-enabled communications, platforms and tools, e.g. web 2.0, mobile 2.0, social media, social software, etc., which has the potential to establish *collaborative connectivity* among billions of individuals over the globe.

to implement a "distributed intervention" strategy, where everything is done remotely in an online, virtual mode using online messaging tools (e.g. WhatsApp) and video conferencing tools (e.g. Zoom) and **we are approaching our rural target group using smart-phone enabled tools and platforms,** as will be illustrated below.

Target Beneficiaries

Rural artisans from all over Birbhum District of West Bengal, pursuing different art forms like kantha stitch, batik, leather, khesh work, woodcraft, handpainting, dokra work, appliqué work, terracotta, bamboo craft, jute craft and jewellery making, are our potential target beneficiaries. A special emphasis has been given in our project to select a considerable number of artisans belonging to the Scheduled Caste background. Ensuring a significant portion of SC artisans among our target group, our project attempts to create holistic impact for the most disadvantageous within the community of artisans residing in Birbhum. We have collaborated with **District Industries Center (DIC), Birbhum and DC Handicrafts, Bardhaman** of West Bengal for this purpose. A description of target beneficiaries is provided in Chapter 3 of this report.

Architecting a Social Technology Driven Social Knowledge Management Framework

In this project, our objective is to utilize the potential of social technologies and socially enabled applications in addressing problems related to marginalization and social exclusion of rural communities. We have conceptualized a *social knowledge management framework* and developed a *platform* that empowers rural communities by connecting them with urban markets, government agents, trainers, investors etc. Social knowledge management in our context is a framework for rural empowerment using knowledge creation, assimilation and dissemination through digital connections and social collaboration, enhanced by social technologies. The suggested framework aims to digitally bridge rural-urban knowledge, information and market divide, by connecting rural community members with relevant agents and opportunities online. We propose to study the connection and collaboration among various entities that enables formation of virtual communities to bridge knowledge, information and market divide of rural community. Formation of these virtual communities has the most positive effect on social capital when they can increase network density and facilitate the spread of knowledge and information.

Design Methodology: Our design methodology is motivated by Action Design Research (ADR) approach and uses the following four interwoven activities:

- *Problem Formulation:* problem perceived in practice or anticipated by researchers.
- *Building, Intervention, and Evaluation (BIE):* Testing the initial design of the IT artifact in the context of its usage. This phase "interweaves the building of the IT artifact, intervention in the organization, and evaluation".
- *Reflection and Learning:* This is an iterative process to build and refine a solution to make it applicable to a broader class of problems.
- *Formalization of Learning:* Finalizing a solution that addresses the problem

This design methodology has been discussed in details in **Chapter 5**. Our social technology driven social knowledge management framework is an outcome of our design methods discussed above and based on the premise that just providing access to technology through computer and internet are not enough to empower rural producers as active agents. Following the ADR approach, in the initial stage of our project intervention, we have attempted in delving deeper into the problems faced by our target group. In order to have a grass-root level idea, members of our Research Organization (RO) interviewed 70 artisans from Birbhum, pursuing different art forms like kantha stitch, batik, leather, khesh work, woodcraft, hand-painting, dokra work, appliqué work, terracotta, bamboo craft, jute craft and jewellery (Appendix II). In our project, we have randomly selected artisans from different blocks all over Birbhum, namely Bolpur, Mohammad Bazar, Nanoor, Rampurhaat, Labpur, Suri and Sainthia. A special emphasis has been given in our project to select a

considerable number of artisans belonging to the Scheduled Caste background. Ensuring a significant portion of SC artisans among our target group, our project attempts to create holistic impact for the most disadvantageous within the community of artisans residing in Birbhum.

The multifaceted hindrances faced by the artisans, as evident from our qualitative interactions, can be categorized broadly into information, knowledge and market divide and poor social capital. Lack of information regarding government schemes, can be categorized as information divide or lack of purely factual data. Poor social capital of artisans gets reflected in the networking issues they face. Poor communication channels with local as well as global buyers and sellers put the rural artisans in disadvantageous positions. Knowledge divide, comprising of information divide coupled with lack in skill, experience and attitude, gets reflected in the artisans' ignorance regarding innovating new business prospects, innovating new product and design ideas and related things. Innovating business prospects and newer product and design ideas will not be possible if artisans have adequate information regarding business prospects and product and design ideas. It is only when along with adequate information, artisans develop their skills, experiences and attitudes, then only materialization in the form of concrete innovation can take place. Finally, ignorance regarding emerging selling channels and bondage to middlemen, curbing direct market access of artisans, ignorance regarding the market prospects that digital channels can offer can be categorized as market divide.

If the entire artisan community of Birbhum is to be considered as our potential beneficiary, then a group of 70 can only be understood as the subset of the whole group. However, the findings of requirement analysis, attained after conducting interviews with our initial group of 70 artisans, can be taken as a benchmark, against which our intervention can be designed. The findings as discussed above indicate that artisans of Birbhum face hindrances majorly along four-fold axes, namely, information, knowledge and market divide and poor social capital, addressing which will be the concern of our project intervention. We have designed our social knowledge management framework as a response to address the hindrances faced by our target group along the four-fold axes. The motive behind our social technology driven social knowledge management framework is to empower rural artisans and improve their socio-economic prospects by overcoming their information, knowledge and market divide and improving their social capital. And this we wish to achieve through the formation of purposive virtual communities, namely community of practice and community of purpose among rural artisans and across rural-urban entities.

This design methodology has been discussed in details in **Chapter 5**.

Technology Development: Developing a Social Knowledge Management Platform (NCoRe)

We have designed our social knowledge management framework in a way so that it can be effective in ushering holistic rural empowerment by improving social capital and mitigating information, knowledge and market divide faced by rural artisans. In order to address the four fold hindrances stated above, we have architected our social knowledge management framework by segmenting the framework into three concrete components. In **chapter 6**, we have explained our technology development initiatives and narrate the design and development of a *Community Driven Social Knowledge Management Platform to bridge Knowledge Asymmetry using Social technologies (NCoRe).* In **Chapter 7**, we will show how the use of social media can supplement our SKM Framework. We will explain how we have cultivated Community of Practice through *WhatsApp*, enabling intra-and inter-community knowledge exchange; and, how we have cultivated Community of Purpose through *Facebook* to promote market linkage for artisans.

A Community Driven Social Knowledge Management Platform to bridge Knowledge Asymmetry using Social technologies (NCoRe): Our social knowledge management framework comes with a digital platform, NCoRe. NCoRe is designed to facilitate the formation of both community of practice and purpose among rural members and across rural urban entities. This has been discussed in details in **Chapter 6.**

The platform's offering is divided into three segments:-

- Firstly, the platform offers the opportunity to urban consumers to co-create handicraft and handloom goods by collaborating with a range of rural producers.
- Secondly, the platform acts as a classic exhibiting site for a range of products (garments, bags, jewelleries, home décor items, etc.) created by artisans of Birbhum. The products are displayed in the platform, along with the stories of their respective creators. NCoRe houses online shops of a vast range of artisans from Birbhum, where stories of each artisan along with their videos and product photos are displayed.
- Thirdly, NCoRe offers both rural and urban entities unhindered opportunity to avail for skill upgradation prospects. The synchronous training facilities integrated in the platform while allows rural artisans to upgrade their skill by virtually connecting with domain experts on one hand, on the other hand, NCoRe also allows urban entities to get training from rural producers on indigenous art and craft.

Additionally, we have developed an "Artisan Profiling App" for collecting artisans' profile in multi-media, so that we can easily create digital shops for all the artisans in our NCoRe Paltform.

Use of Social Media: Cultivating Communities of Practice and Communities of Purpose

Creating Community of Practice through Whatsapp community chat: Triggering interactions between rural artisans and across rural-urban entities by forming whatsap groups happens to be one component of our social knowledge management framework. Through whatsapp, we have attempted in enhancing both bridging and bonding social capital of rural artisans residing in Birbhum. We have created groups in whatsapp, where rural artisans all across Birbhum have been incorporated and they get a chance to engage in purposive knowledge exchange both within and across their community. It is through whatsapp, members of our RO send rural artisans asynchronous videos to boost up their production capacity. This implies the importance of whatsapp as a tool in our research intervention to facilitate cultivation of community of practice among our selected target group. This has been discussed in details in **Chapter 7**.

Creating Community of Purpose through Facebook: One of the mottos of our social knowledge management framework is to familiarize rural artisans of Birbhum with social media sites like Facebook and Instagram and help them in using the same to derive business benefits. While through whatsapp, we have attempted in cultivating community of practice among and across rural urban entities, through social media sites like Facebook and Instagram, we have tried to transcend beyond triggering practice-oriented communication to purposive communication culminating to economic exchange. It is the cultivation of community of purpose leading to concrete business benefits that we have attempted to facilitate by taking resort to social media sites. Members of the RO have opened Facebook and Instagram accounts of individual members of the target group, where the products created by individual member artisans are exhibited, along with their stories and journeys to a range of social media users. The intention is to connect these artisans and their creations with the global pool of consumers, where purposive collaboration between the two is expected to attract concrete socio-economic benefits for the artisans. Cultivation of community of purpose via social media channels will not only improve social capital of rural members, but will also make a significant contribution in addressing their market divide. This has also been discussed in details in **Chapter 7**.

Workshops and Trainings

As a part of our pre-pilot studies, we have conducted several awareness workshops for artisans with DIC, Birbhum on (i) what is online business and how to do it (ii) digital photography and videography, (iii) innovative product design and marketing using digital channels, etc. (discussed in details in **Chapter 8**).

Subsequently, we have planned to provide a systematic training to 700-800 artisans from Birbhum over a period of one year in a batch of 15 to 20, where each batch will receive training for a period of eight weeks. The training program is divided into three components:

(i) Online, live training sessions for 6 hours using Zoom Platform: These live training sessions (synchronous) will be for two hours each day on Monday, Wednesday and Friday (total six hours). Our weekly online training intervention operates along three major axes: *Digital Competency Training, Training on Photography & Videography,* and, *Innovative, Market-Oriented Product Development Training* (discussed in details in **Chapter 8)**.

(ii) Following the online training, we will help each individual artisan to create their digital shops in our online platform and Facebook and also form a WhatsApp group to enable intra-and inter-community knowledge and information exchange.

(iii) Additionally, we will periodically distribute small video tutorials in Bengali on topics related to digital marketing and entrepreneurship development. The duration of each video tutorial is 7 to 10 minutes. In a span of eight weeks, we plan to send around 60 video tutorials (one to tow tutorials per day).

Please see **Chapter 8** for details of the training program. To enable artisans to attend this 6-hours weekly online training on ZOOM, we are recharging their smartphones with data vouchers from their respective service providers, which would be sufficient to cover the internet cost for this 6 hours online training.

Expected Outcome of our SKM programme intervention (Figure 1)

The SKM framework helps the rural artisans to know the following:

- to know opportunities in local market and the dynamics of local production [through Whatsapp virtual community formation]
- to know opportunities in non-local market [by giving information of boutique owners or other non-local customers through SKM platform (NCore) and other e-commerce (e.g. Amazon) / social networking websites (e.g. Facebook)]
- to know customers' tastes and preferences through direct interactions with customers [using phone / chat] and indirect information from e-commerce / social networking sites
- to know sources of finance and related welfare schemes from Govt agencies [through advisory service]

The SKM framework also helps the rural artisans in learning the following:

- to learn use of internet to search product / market related information
- to learn about how to click attractive photos of my products and make it exhibitable on online selling channels
- to learn about new online selling channels and how to register and perform business successfully in e-commerce sites
- to learn about how to use different social networking sites (FB, Instagram) to attain business benefits
- to learn about new designs and get insights on product innovation from domain experts

This smart-phone based intervention plan will help the rural artisans to use their mobile devices in fruitful ways. Moreover, training the artisans to enhance their business prospects through smart phones will help them in the long run to stay connected with online customers and acquire knowledge regarding market operations easily. Optimal usage of smartphones for business related purposes will make our intervention sustainable, where the artisans will be able to use the digital medium from their mobile devices only, without depending on centrally-installed facilities by external entities.
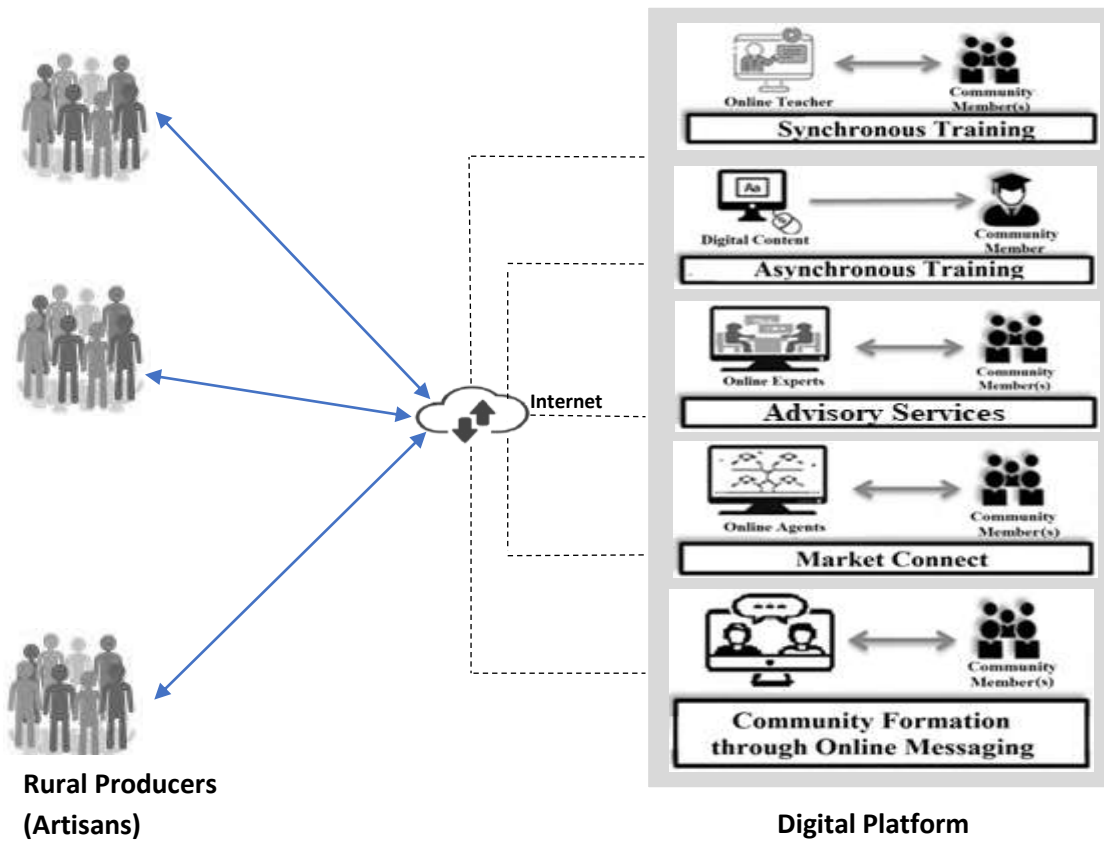
Figure 1. Functional Description of SKM Program Intervention

A Pilot Study for Analysing the Impact of Intervention: Some Preliminary Observations
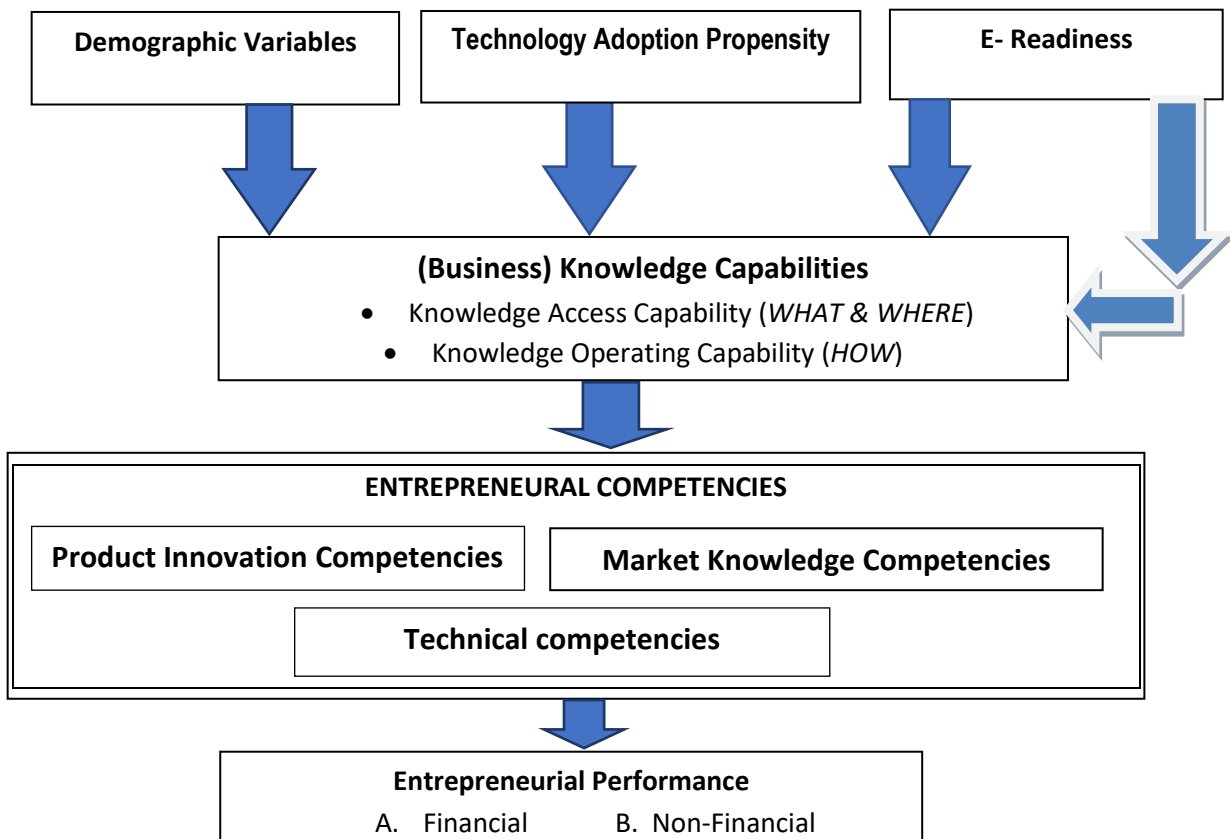
In a pre-intervention pilot study, we are able to successfully form active Whatsapp communities with a group of artisans and onboard them to use a digital storefront (ncore.co.in). Using survey instruments on this pilot sample, we first develop reliable scales for measuring the key constructs. The main takeaways are:

- There is no clear relationship between gender and any of our scale items. This indicates that a successful intervention that is able to raise capability, competency and/or performance measures is likely to have similar effects regardless of gender. A similar pattern holds for caste.
- For our e-readiness, capability and performance metrics, less experienced artisans have higher scores. For competency however, there is a U-shaped relationship with years of experience.
- E-readiness and capability metrics are positively correlated with education levels. However, the relationship is less stark for competency metrics. Hence, education level appears to play a smaller role in predicting competency.

Next, we model correlations across our scales to better understand how they might be related to each other. Linear regressions show that:

- E-readiness and capability are positively correlated
- Capability and competency are positively correlated
- Competency and performance are positively correlated

The goal of our intervention is to eventually demonstrate that enhancing capability and e-readiness can have a downstream effect on competency and performance. We conduct 2 preliminary mediation analyses to examine whether this hypothesis is plausible.[2]

- First, we examine **the effect of capability on performance**, using competency as the mediator. We find partial mediation (67%), which indicates that 67% of the effect of capability on performance is through its effect on competency.
- Next, we examine **the effect of e-readiness on performance**, using competency as the mediator. In this case, we do not find a direct effect of e-readiness on performance, and find full mediation (92%), indicating that e-readiness affects performance ONLY through its effect on competency.

This is discussed in details **in Chapter 9**. This suggests that any intervention targeted at enhancing capabilities can have positive trickle down effects.

Some Implementation Challenges and Next Step

Some implementation challenges have been discussed in details in **Chapter 10.** In **Chapter 11,** we have discussed our scope of work from 1st April, 2021 onwards. This includes our structured intervention for 50-weeks, which is now being deployed in the field following the stepped-wedge RCT as our impact assessment methodology. The cluster randomized trial is a firmly established study design particularly useful for pragmatic evaluations of interventions, such as changes to the way services are delivered, educational interventions or public health type interventions, to name but a few[3]. The stepped-wedge cluster randomized trial (SW-CRT) involves the sequential transition of clusters from control to intervention conditions in randomized order, until all clusters are exposed[4]. In our context, the SW-CRT provides a means to conduct a randomized evaluation which otherwise would not be possible. As "social intermediaries", we aim to facilitate re-tooling and community building, both of which can be self-sustaining and have the potential to bring concrete socio-economic benefits even after the intervention. In general, our findings can have large scale policy implications for bottom of pyramid (BOP) entrepreneurs by identifying mechanisms through which digital knowledge management tools can lead to greater entrepreneurial success in emerging markets.

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[2] https://en.wikipedia.org/wiki/Mediation_(statistics)
[3] Murray DM. Design and Analysis of Group Randomized Trials. New York, NY: Oxford University Press, 1998.
[4] Ellenberg SS. The stepped-wedge clinical trial: evaluation by rolling deployment. JAMA 2018;319:607–08.

Introduction

In this project, our objective is to utilize the potential of social technologies[5] and socially enabled applications in addressing problems related to marginalization and social exclusion of rural communities. We have conceptualized a social knowledge management framework that is designed to empower rural artisans by connecting them with urban markets, Government and non-Governments agencies, experts and other related entities, collaboration with whom is crucial in the process of boosting the production and market capacity of rural craft producers. The suggested framework aims to digitally bridge rural-urban knowledge, information and market divide, by connecting rural community members with relevant agents and opportunities online. We propose to study the connection and collaboration among various entities that enables formation of virtual communities to bridge knowledge, information and market divide of rural community and improve their social capital in the process. Formation of these virtual communities has the most positive effect on social capital when they can increase network density and facilitate the spread of knowledge and information.

Although there is a significant amount of research dealing with different models of knowledge management in the context of business organization to enhance the organizational performance, there is no explicit proposal for knowledge management in the context of society at large where the objective is to manage knowledge for social development. Our innovation rests in bringing the concept of knowledge management outside formal organizational boundaries. Our project combines the aspects of social technologies and social development to derive a social knowledge management framework, addressing the challenges faced by contemporary societies to bridge the rural-urban knowledge and information divide and to ensure holistic development of society.

Social knowledge management in our context is a framework for rural empowerment using knowledge creation, assimilation and dissemination through digital connections and social collaboration, enhanced by social technologies. We will demonstrate the effectivity of social knowledge management framework by showing how its collaborative premise is conducive in cultivating different communities, both within rural members and across rural-urban members. We will show the effectivity of social knowledge management framework in terms of cultivating community of practice and community of purpose. Community of practice refers to a group of people who share a particular practice. Collaborations among the members of community of practice, or practitioners in other words, results in collective learning, which makes community of practice a collaborative learning space. Community of purpose is defined as a community of people, who are going through the same process, or are trying to achieve a similar objective. In our research framework, we will attempt to build both community of practice and purpose among rural-urban agencies to boost socio-economic prospects of rural producers. In rural context, participants not just lack access to market but also suffer from other ancillary factors, which in amalgamation contribute in sustaining their marginalization. It is through community formation, through relevant dialogue and collaboration, attempts can be undertaken to empower the rural marginalized on a holistic scale.

While the poor networking ties coupled with information, knowledge and market divide of rural Indian artisans are a known fact, scenario have further worsened due to the ongoing pandemic scenario, which marks the urgency of our research intervention in the context of overcoming extant rural marginalization. Due to the COVID 19 pandemic, physical sales of handicraft goods have come to a halt. Not only that, the

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[5] social technology is an umbrella term used to capture a wide variety of terminologies depicting internet-enabled communications, platforms and tools, e.g. web 2.0, mobile 2.0, social media, social software, etc., which has the potential to establish collaborative connectivity among billions of individuals over the globe.

'new normal' has attempted in drastically changing the way socio-economic operations were performed in modern society. The ongoing lockdown has further pronounced the effectiveness of the virtual medium, where daily affairs in the changed times are increasingly getting dependent on digital channels for successful execution. Amidst such a scenario, if the rural artisans are not taught to optimally use the digital medium to attract socio-economic benefits, then the nature of their marginalization will further become more acute and the rural members will remain incapacitated in coping up with the changing socio-economic setting. Our research intervention keeps in mind the potentials contemporary digital technologies are endowed with and wishes to use the same as a tool to usher holistic rural empowerment along socio-economic axis. The introduction to our project report is divided into two parts: Section 1.1 postulates the problem definition, while section 1.2 is reserved to narrate explicitly the objective of our study.

1.1. Problem Definition

With the advent and proliferation of industrialization and concentration of employment opportunities in urban areas, the Indian rural areas have started suffering from territorial disadvantages with respect to their urban counterparts. From a social point of view, the isolation of rural areas contributes in keeping rural communities ignorant of urban lifestyle and pattern of social exchange, while economic isolation negatively impacts their market performance. This results in a rural-urban divide, where urban areas are better equipped in terms of access to both physical and non-physical resources and the capability to utilize the same in generating opportunity prospects. The rural disadvantages are not just in terms of lack of access, but characterized by the inability of the rural communities to utilize extant resources in pursuit of nurturing individual capability. In the absence of the above-mentioned credentials, the rural communities often fall short in capitalizing on their individual capability to pronounce their opportunity scopes.

Extant rural disadvantages account to be much more than mere economic depravity of rural communities. Lack of access to resources and exposure to unfavorable environment make rural communities victims of social discrimination and exclusion, which subsequently contributes in making the community powerless along socio-economic axis. Amidst this backdrop, centralized developmental policies often fall short in addressing the issue at stake. By externally thrusting developmental aid, without analyzing whether the target group is equipped to utilize the given aid for benefit, the conventional developmental paradigms seldom take into concern empowerment of the intended beneficiaries. John Friedmann's alternative developmental model focusing on restoration of developmental aid to those in need offers a compelling way out from conventional developmental measures (Friedmann, 1992)[6]. He rightly identified empowering the marginalized as an alternative and effective developmental strategy. Empowering the marginalized refers to enhancing individual capacities of marginalized members in acquiring the means to meet their own needs. This includes possession of adequate agency among the target group which will develop their problem-solving skills by overcoming extant hindrances and possession of necessary social capital, skills, resources and opportunities to accomplish desired goals.

One of the key deficiencies in many rural communities especially in SC community is the lack of linkage to local as well as the larger metropolitan area opportunity structure, including financial, technical, social and political resources. Right kinds of physical and/or virtual connectivity that are required to increase both bridging (external) and bonding (local) social capital of rural communities are grossly missing. Social capital refers to the network of social relations that may provide individuals and groups with access to resources and supports. Since rural communities are disconnected both physically and digitally from local as well as urban opportunity structures, they have (i) less access to quality educational support, training, advisory services (ii) less knowledge about the available local opportunities (community assets, sharable resources) (iii) less

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[6] Friedman, John. (1992). *Empowerment: The Politics of Alternative Development*. Wiley-Blackwell.

access to market links (buyer, seller, micro-credit etc.) and (iv) less access to any forum to discuss their problems with relevant agencies.

Since majority of the rural population in India can be categorized as marginalized, due to the dearth of knowledge and lucrative opportunities, empowering them in holistic sense is the only way out in the process of addressing rural marginalization. In this context, we try to address the issue of rural empowerment using a *knowledge-theoretic approach*. Rural empowerment, the way we conceptualize it, can only be achieved by equipping rural communities with necessary knowledge and its operating capacities through which the target group will derive the capacity to take informed decisions. Possession of knowledge and its operating capacities will enable the rural communities to collaborate across territories and communities: an indispensable factor in cultivating and sustaining social capital (UNESCO, 2005)[7]. The resultant collaboration and the capacity to operate knowledge in generating benefits have the potential in enhancing opportunity scopes for members of rural community. With an enhanced social capital and opportunity prospects, the rural communities will be better equipped to take informed actions and decisions.

While knowledge-driven rural empowerment happens to be the focus of our research intervention, inter-connected spirit of contemporary digital technologies has served to be an implementing tool, which has made it possible for us to architect a holistic scheme for rural empowerment. Contemporary digital technologies have made today's world an integrated space. With the provision to connect easily and smoothly, the digital medium enables people to collaborate across territories and communities. With the advent of digital technologies and the proliferation of information age, attempt to include marginalized sectors within the mainstream was a major drive undertaken. Consequently, several efforts emerged, which attempted in mitigating rural-urban divide virtually by extending digital services to rural communities with an attempt to address their socio-economic marginalization (Lekoko, 2011)[8]. However, the sporadic nature of the schemes coupled with rural communities' inability to utilize digital technologies in pursuit of generating personal benefits, heavily contributed in making majority of the initiatives ineffective. As an alternative, we have attempted in deploying the inclusive spirit of digital technologies in cultivating rural empowerment on a holistic scale. Instead of simply providing digital access to the rural marginalized, we have attempted in empowering the target group to effectively use the medium in generating opportunity prospects. Our research endeavor uses contemporary digital technologies to usher rural empowerment, where the medium has been used to inculcate necessary knowledge and its processing abilities among rural target group.

1.2. Objective of the Study

Our research intervention attempts to further a prospective means to achieve holistic rural empowerment in the context of developing nations like India, by facilitating community formation among rural urban entities by using the connecting spirit of contemporary digital technologies. In this context, **the objective of this project** is to demonstrate how the current internet-based social technologies has the potential of building knowledge capabilities and enhancing the entrepreneurial competencies of rural producers by bridging rural-urban knowledge & information divide through the creation of a *social knowledge management framework*. The project ultimately aims at creating rural business transformation using social technologies in order to eradicate sharp economic, social, and cultural difference between rural and urban producers. Rural transformation is only possible when there is livelihood enhancement and holistic development of the rural community using social technologies.

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[7] United Nations Educational, Scientific and Cultural Organization (2005). Toward knowledge societies. UNESCO World Report. Conde-sur-Noireau, France: Imprimerie Corlet.
[8] Lekoko, R. N. and Semali, L.(2011). Cases on Developing Countries and ICT Integration: Rural Community Development‖, IGI Publication. September, 2011. ISBN13: 9781609601171

Our research intervention places knowledge possession and operating abilities to be the crucial prerequisite in the process of achieving holistic rural empowerment. Our research intervention attempts in expanding the notion of knowledge management to *social knowledge management*, referring to the aspect and effectivity of managing *social knowledge* for rural empowerment. Social knowledge management in our context is a framework for rural empowerment using knowledge creation, assimilation and dissemination through digital connections and social collaboration, enhanced by social technologies (Bandyopadhyay, 2016)[9]. Our aim is to architect as well as empirically validate a social knowledge management framework that would mobilize knowledge resources, bridging the gap between the urban-rural communities and creating and building social capital, leading to rural empowerment and, as a consequence, holistic development of the society.

Our research intervention advocates for a collaborative approach, to be realized by virtue of social technology-driven social knowledge management framework, which will usher rural empowerment by facilitating effective rural-urban information and knowledge exchange. The objective of the proposed framework rests in cultivating virtual communities, where empowerment will usher through easy and smooth knowledge exchange across rural-urban communities. This community formation is not simply derivative of giving access to digital services to rural non-users. It is only when rural members develop the ability to nurture individual capability through digital usage, incentives of self-prosper will evoke the need to collaborate, the prerequisite for voluntary community formation. This implies that possession of knowledge and knowledge operating capacities in amalgamation accredits rural members the ability to collaborate and subsequently form virtual communities. Knowledge exchange and effective collaboration, derivative of virtual community formation, not only bears the prospect of nurturing individual capability but also enables the rural members to capitalize on the same and generate prospective opportunity outcomes. While community formation has explicit socio-economic promises, it is only through effective collaboration derivative of community formation that has the prospects of mitigating rural-urban information, knowledge and market divide.

Our social knowledge management framework comprises of three parts: creating community of practice through WhatsApp chat, creating community of purpose through Facebook and other social networking sites and, finally, creating NCoRe : a community driven social knowledge management platform to bridge knowledge asymmetry using social technologies, which is endowed to facilitate formation of both community of practice and purpose. With the formation of purposive virtual communities, rural target group will derive the opportunity to engage in effective information, knowledge and resource exchange, thereby attaining socio-economic benefits for themselves in the process.

In this project, artisans from all over Birbhum District of West Bengal pursuing different art forms like kantha stitch, batik, leather, khesh work, woodcraft, handpainting, dokra work, appliqué work, terracotta, bamboo craft, jute craft and jewellery making are our potential target beneficiaries. A special emphasis has been given in our project to select a considerable number of artisans belonging to the Scheduled Caste background. Ensuring a significant portion of SC artisans among our target group, our project attempts to create holistic impact for the most disadvantageous within the community of artisans residing in Birbhum. We have collaborated with District Industries Center (DIC), Birbhum for this purpose.

Our research organization (RO) will be acting as an intermediary in the early years of community formation using digital platforms. The role of RO is expected to be negligible once the rural participants start engaging voluntarily to establish purposive virtual collaborations using digital platforms. During our RO's tenure as a social intermediary, we aim to enable our rural target group with the ability to know and learn certain things, which in the long-run bears the potential to bring concrete socio-economic benefits for the rural target group.

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[9] Bandyopadhyay, Somprakash, Sneha Bhattacharyya and Jayanta Basak (2020). Social Knowledge Management for Rural Empowerment: Bridging the Knowledge Divide Using Social Technologies. Routledge. ISBN-10: 0367334933

In summary, the objective of our *social knowledge management (SKM) framework* is to help the rural artisans of Birbhum:

- to know opportunities in local market and the dynamics of local production [through Whatsapp virtual community formation]
- to know opportunities in non-local market [by giving information of boutique owners or other non-local customers through SKM platform (NCore) and other e-commerce (e.g. Amazon) / social networking websites (e.g. Facebook)]
- to know customers' tastes and preferences through direct interactions with customers [using phone / chat] and indirect information from e-commerce / social networking sites
- to know sources of finance and related welfare schemes from Govt agencies [through advisory service]

The SKM framework will also help the rural artisans:

- to learn use of internet to search product / market related information
- to learn about how to click attractive photos of my products and make it exhibitable on online selling channels
- to learn about new online selling channels and how to register and perform business successfully in e-commerce sites
- to learn about how to use different social networking sites (FB, Instagram) to attain business benefits
- to learn about new designs and get insights on product innovation from domain experts

Digital Platform

This smart-phone based intervention plan will help the rural artisans to use their mobile devices in fruitful ways. Moreover, training the artisans to enhance their business prospects through smart phones will help them in the long run to stay connected with online customers and acquire knowledge regarding market operations easily. Optimal usage of smartphones for business related purposes will make our intervention sustainable, where the artisans will be able to use the digital medium from their mobile devices only, without depending on centrally-installed facilities by external entities.

Rural Empowerment: A Knowledge Theoretic Approach

Rural sectors owe its potential partly to its immense capacity in employment creation, and partly because production of indigenous items fall under its purview, which subsequently account to be native heritage. The importance of the sector has urged various public, not- governmental, as well as private entities to undertake measures for re-boosting the sector. Yet, how far such attempts have been successful in uplifting the status of the rural community, who reside in the fringes, remain an aspect essential to investigate. If we do a quick survey across the world, we will see how productions of indigenous items are mostly located in the rural fringes of nations. In this project, we attempt at proposing mechanisms to empower the creative producers of rural economy, by equipping them with relevant information, knowledge and connection necessary for trade benefits.

Alsop (2005)[10] defines empowerment as "enhancing an individual/group's capacity to make choices and transform those choices into desired outcomes and actions". The capacity to make effective choices cannot be cultivated among rural marginalized population if the target group is not agential to undertake transformative action. And the ability to undertake transformative action is not only manifestation of individual/group agency, but an enhanced social capital and opportunity scope, which in alliance contribute in translating intended actions to desired outcomes. Hence, in our developmental framework, we have attempted in simultaneous cultivation of agency, opportunity structure (Alsop, 2005), and social capital (Grooteart, 2003)[11] of rural target group to achieve holistic rural empowerment. In context of rural economy, it is indeed true that several empowering schemes, public, private as well as NGOs, have been undertaken to broaden the opportunity scopes of the creative producers. However, partly because of the sporadic nature of most of these initiatives and lack of follow-up guidelines and partly due to the disadvantageous social position of the target group, attempts to broaden opportunity scopes have seldom translated themselves into an enhanced "opportunity structure". Cloward (1960)[12] defines *opportunity structure* as the opportunities available to people in a given society, which are shaped by respective social organization and structure of that entity. While the definition highlights the importance of social norms in framing opportunity structure, making the target group autonomous to bring self-induced changes negotiating with their restrictive social ambience, or in other words, pronouncing their agency becomes a mandatory prerequisite in the process of empowering them.

Agency, defined as an individual/group's capacity to make purposeful choices, is a necessary condition along with an enhanced opportunity structure to bring about empowerment of target group (Samman, 2009)[13]. It is only when the rural marginalized population is equipped with sufficient knowledge crucial for self-betterment, will they develop the agency to choose among options and decide their own socio- economic course of empowerment. An enhanced agency therefore will not only open up new prospects of development for the rural marginalized, but will also enable them to optimally utilize extant opportunity structure for self-betterment. In this context, social capital, which refers to strength of social ties and the norms governing

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[10] Alsop, R. (2005). Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators. World Bank Policy Research Working Paper 3510.
http://www.econ.worldbank.org/view.php?type=5&id=41307
[11] Grootaert, C. (2003). On the Relationship between Empowerment, Social Capital and Community-Driven Development. Washington D.C.: World Bank. http://documents.worldbank.org/curated/en/531651468780626484/On-the-relationship-between-empowerment- social-capital-and-community-driven-development.
[12] Cloward, R. A. and L. E. Ohlin. (1960). Delinquency and Opportunity : A Theory of Delinquent Gangs. New York: Free Press
[13] Samman, E. and Maria Emma Santos. (2009). Agency and Empowerment: A review of concepts, indicators and empirical evidence. Oxford: Oxford University Reserach Archive.

social interactions among people in society (Grooteart, 2003)[2], plays a crucial role in enhancing agency of rural participants. An enhanced social capital, referring to strengthening of social networking ties at both global and local level and removal of social barriers, enable individuals to take informed decisions through smooth and relevant exchange of knowledge.

While our definition of empowerment encompasses simultaneous cultivation of social capital, agency and opportunity structure of rural target groups, equipping the marginalized population with knowledge becomes crucial in this framework to come up with strategies of self-development and self-sustenance of rural development. It is by making the rural population *knowledge capable*, we wish to bring rural empowerment from within, which will not only make the target group knowledge literate, but also inculcate in them evaluative capacities to process acquired knowledge for practical benefits. Hence, our research endeavor conceptualizes *rural empowerment as a knowledge theoretic concept*, which treats bringing the rural marginalized population within the knowledge network as a necessary and sufficient condition to achieve holistic rural empowerment. Before we delve deeper into our conceptualization of rural empowerment, in the following section, we will talk about the contemporary initiatives undertaken for rural empowerment and how our research position is different from the extant conventional approaches to rural empowerment.

2.1 Contemporary Initiatives taken for Rural Empowerment

Conventional rural developmental paradigms have primarily targeted addressing the issue of rural empowerment through defined institutional structures and agencies created with such 'welfarist' mindset. However, though the rigor adopted to address the issue at stake deserves appreciation, we need to remember that institutional elitism inherently distances the schemes from the marginalized target group (Mansell, 2010)[14]. Instead of cultivating rural empowerment from within, the institutionally deployed schemes impose developmental parameters on the rural target group externally, without adequately considering the contextual specificities within which rural actors operate.

Various attempts have been undertaken across the world sporadically since a long time to empower rural sector. However, collaborative effort on a global level, to address the issue of region-wise development, can be traced to the unanimous effort undertaken by the United Nations, and its 191 member states in the year 2000. The subsequent formulation of Millennium Development Goals (MDGs) was done with an international commitment to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women (Millennium Development Goals, 2000)[15].

Apart from the formulated MDGs undertaken to address discrepancies in the above-mentioned sectors, other selected indicators of development, which are not related to specific targets, were also incorporated. These additional indicators include population, fertility rate, life expectancy at birth, adult literacy rate, gross national income per capita, where these relevant indicators were decided to be calculated at sub-national levels :- by rural and urban area (region-wise), by socio-economic group, and by age and gender. The explanation of the MDGs make it clear how the United Nations (UN) formulated developmental goals targeted rural development primarily along poverty eradication axis. While it is true that the primary attribute of global poverty is rural in nature, we must not forget that there are other, equally crucial aspects, apart from poverty, which need attention for sustainable growth of rural sector. Moreover, the MDGs had been formulated with a few stakeholders, without adequately involving developing countries. The standardized

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[14] Mansell, R. (2010). Power and interests in developing knowledge societies: exogenous and endogenous discourses in contention. *Journal of International Development*, *26*(1), 109-127. doi: 10.1002/jid.1805
[15] Millennium Development Goals. (2000).
Retrieved from www.who.int/topics/millennium_development_goals/about/en/

MDGs, not adapted to specific national needs, thus immensely fell short in specifying accountable parties, and thereby ended in reinforcing vertical interventions (Fehling, 2013)[16].

Gibbs (2015)[17] traces the failure of MDGs to the incapacitation of the measures to bring the entire world under its developmental purview. The fact that the success of the goals was not equally experienced across the globe becomes explicit if we take into consideration the Asian and African scenario. South East Asia could only exceed the goal of poverty reduction by 16%, South Asia by 12.5%, Northern Africa by 1.2% and Sub-Saharan Africa, witnessing the worst consequences, where the region was 12.5% away from the goal of extreme poverty reduction (Gibbs, 2015). The disappointing results highlight that while the MDGs made considerable development along the above-stated axes in context of developed parts of the world, the exclusion of the developing regions denied the measures to offer liberatory hopes to majority of the global marginalized. Gender inequality was a primary focus of the MDGs. However, the noble intention of mitigating the same could not practically translate to enhanced gender equality because the measures primarily relied on securing formal representational seats for women to address the inequality issue. Formal legal measures are not sufficient to bring a more just gendered distribution, where gender inequality persists in spite of added representation of women in formal civic, educational, economic and other related spheres. While MDGs response to address gender inequality primarily focused on formal education, the measures also remained mostly redundant in enhancing global literacy rate. In countries affected by conflict, the proportion of out-of-school children increased from 30% in 1999 to 36% in 2012 (Gibbs, 2015). It is primarily to address these loopholes; the United Nations attempted in reformulating MDGs to a more holistic Sustainable development Goals (SDGs) in the year 2015.

With a revisionary approach, the undertaken SDGs have a more holistic target of simultaneously addressing poverty reduction, inequality, sustainability and economic growth with job creation (Clarke, 2015)[18]. The SDGs include total seventeen targeted goals, and emerged as a bold commitment to provide sustainable solutions to the most pressing challenges faced by the world today (UN, 2018)[19].

In order to have a deeper penetration of undertaken measures in remotest sectors of the world, the SDGs attempted at using the inclusive potential of contemporary digital technologies and encouraged public private partnerships to bring development of marginalized sectors. Deploying technology for the purpose of social development has been incorporated as a primary resolution in the Rio+20 Agenda (Dehgan, 2012)[20], attempted to expand on United Nations Millennium Development Goals (MDGs). The new Sustainable Development Goals (SDGs) attempted to include a mechanism for international scientific cooperation and coordinated research to address the major sustainable developmental challenges (UN, 2018). In order to effectively functionalize the undertaken measures, the implementing agencies were directed to follow close interconnections and synergies between goals, trade-offs, indicators and target. Rooted in Human Rights, the framework of SDGs provides opportunities for civil society engagement by encouraging local action and partnership. The reformulated developmental model therefore encourages community participation, which is expected to increase stakeholders' involvement in their own decision-making process, thereby paving the path for a more democratic and responsive governance. Although the undertaken SDGs are embedded in a symbiotic provision, enabling close interconnection between policy-formulators and stakeholders, the

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[16] Fehling, M., Nelson, B., & Venkatapuram, S. (2013). Limitations of the Millennium Development Goals: A Literature Review. *Global Public Health, 8*(10), 1109–1122.

[17] Gibbs, D. (2015). MDGs Failure. *The Borgen Project*. Retrieved from https://borgenproject.org/mdg-failures/

[18] Clarke, J. (2015). Seven Reasons the SDGs will be better than the MDGs. *The Guardian.* Retrieved from https://www.theguardian.com/global-development-professionals-network/2015/sep/26/7-reasons-sdgs-will-be-better-than-the-mdgs

[19] United Nations. (2018). *Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development*. Retrieved from https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf

[20] Dehgan, A. (2012). Creating the New Development Ecosystem. *Science*, *336*(6087), 1397-1398. doi: 10.1126/science.1224530

primary reliance of the model on formal institutions to carry out the implementation, to a great extent restricts the measures to foster effective dialogue.

Denying the standardized institutional prescriptions, our alternative developmental paradigm shifts the focus to common mass, where each individual is considered to be equal stakeholder and thereby indispensable to the developmental process. By transforming crowd to stakeholders, the proposed empowering ecosystem considers one and all to be potential contributors in the collective knowledge pool. It is by giving the rural community the provision to share their own indigenous knowledge assets, along with gaining new from outside, the proposed empowering ecosystem targets rural development through cultivating individual and collective capacities of local members. Premising on cultivating strategies of self-sustenance and self-development among rural target group, our developmental framework identifies rural actors as potential agents bringing change, and thereby is in stark contrast to conventional developmental paradigms and their brand of institutionally-driven rural empowerment. While so far, we have demystified the difference our conceptual understanding of rural empowerment shares from conventional developmental paradigms, we have reserved the following segment to discuss about different facilitators of rural empowerment, which we think are endowed with the potential to usher holistic development.

2.2 Agency, Opportunity Structure and Social capital: Facilitating Empowerment

This section theoretically chalks out how agency, social capital and opportunity structure in amalgamation facilitates rural empowerment.

2.2.1 Empowerment and Agency

Empowerment and agency are relational concepts (Samman, 2009)[4]. The conceptual interdependence becomes further clear in Ibrahim (2007)[21], where he draws a directly proportional relation between the two, thereby conceptualizing empowerment as an outcome of enhanced agency. In the process of measuring empowerment, three aspect needs to be considered:

1. Existence of Choice
2. Use of Choice, and
3. Achievement of Choice

Agency, combining direct control and effective power, therefore accounts to be primary in enhancing individual/group's capacity to make purposeful choices and to successfully translate the choices to desired outcomes. The notion of cultivating agency, therefore, directly opposes the top down model of development. Instead of designing policies for specific groups, the development interventions need to be dedicated to attain empowerment from within, considers individuals to bring about change through individual/collective activity (Sen, 1999)[22]. Equipping the rural marginalized to bring about self-induced transformation not only facilitates empowerment from within, but is crucial in itself for sustaining socio- economic wellbeing of the marginalized community. Thus, agency in our rural developmental paradigm has been treated in terms of both its instrumental and intrinsic value; as a means to attain empowerment and also having value as an end in itself.

The impoverished knowledge base of the rural community features to be one of the major factors restricting the agency of the members in taking informed decisions, thereby sustaining marginalization of the rural

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[21] Ibrahim, S., & Alkire, S. (2007). Empowerment and agency: A proposal for internationally-comparable indicators. *Oxford Development Studies*, *35*(4), 379-403. doi: 10.1080/13600810701701897
[22] Sen, A. (1999). *Development as Free*dom. New York: Alfred A. Knopf.

sector (Ali, 2015)[23]. Our rural developmental framework premises on enhancing the knowledge base of rural marginalized community in an attempt to enhance their agency and subsequently bring about rural empowerment from within. Enhanced knowledge base is not simply an outcome of providing members of marginalized community equal access to knowledge. It is only when the rural marginalized becomes *knowledge-capable*, that is, they develop evaluative capacities to process acquired knowledge for practical benefits, can they translate their enhanced knowledge base in pursuit of pronouncing individual and collective agency.

2.2.2 Empowerment and Opportunity Structure

One of the key deficiencies in many marginalized rural communities is the lack of linkage to local as well as larger metropolitan area opportunity structure, including financial, technical, social and political resources. Since marginalized rural communities are disconnected both physically and digitally from local as well as urban opportunity structures, they have (i) less access to quality educational support, training, advisory services (ii) less knowledge about the available local opportunities (community assets, sharable resources) (iii) less access to market links (buyer, seller, micro-credit etc.) and (iv) less access to any forum to discuss their problems with relevant agencies. Widespread hindrances along the above stated lines impoverish the knowledge base of the rural marginalized community. Lack of inter and intra communitarian linkage contributes in sustaining social, economic and civic isolation of rural community. As a result, the rural marginalized are not just deprived to venture in search of additional possibilities, but lack of relevant knowledge alienates them from the extant welfare schemes devised for rural development. It is by equipping rural population with relevant knowledge, we have not only attempted in enhancing opportunity scopes for rural marginalized producers, but also made provision of optimal utilization of existing schemes to achieve holistic empowerment.

Alsop (2005) insightfully chalks out the measurement criteria for degrees of empowerment into the following:- "i) whether the person has the opportunity to make a choice, ii) whether the person uses the opportunity to choose, and iii) once the choice is made, whether it brings desired outcome". This conceptualization highlights how opportunity structure, which refers to the formal and informal context within which actors operate, is equally mandatory along with agency, in any developmental framework designed to achieve self-driven empowerment. Even though various formal mechanisms have been undertaken, both along physical and digital lines to improve socio-economic conditions of rural community (Singh, 2009[24]; Minkes, 1952[25]), the informal and restrictive social structure often impedes them from utilizing the schemes designed for their benefit, thereby obstructing empowerment of the rural marginalized communities.

Out of the several schemes undertaken in the domain of rural craft industries, *Global Cottage Industry* initiative (Global Cottage Industry, 2012)[26] undertaken in the Middle East to enable effective artistic exchange between Bedouin women of Tunisia and women of Abu Dhabi as a part of Abu Dhabi's Ministry of Culture's Handicrafts Project, deserves special mention. The exchange has been fostered to effectively cultivate and share indigenous artistic styles and patterns, thereby enabling rural indigenous producers to attain global recognition and identity. Similar initiatives have been undertaken in various nations to promote their indigenous heritage and the rural practitioners on the global platform. To promote Small and Medium Enterprise's (SME's) growth and improve their indigenous entrepreneurial journey, the European Commission in 2008 adopted the Small Business Act, which demands for specific initiatives and sustained

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[23] Ali, L., & Avdic, A. (2015). A Knowledge Management Framework for Sustainable Rural Development: The case of Gilgit-Baltistan, Pakistan. *The Electronic Journal of Knowledge Management*, *13*(2), 103-165.
[24] Singh, K. (2009). *Rural Development: Principles, Policies and Management*. India: SAGE Publications.
[25] Minkes, A. (1952). A Note on Handicrafts in Underdeveloped Areas. *Economic Development and Cultural Change*, *1*(2), 156-160.
[26] *Global Cottage Industry*. (2012). Retrieved from http://handeyemagazine.com/content/global-cottage-industry

efforts to enable SMEs to realize their true potential. It also encourages Member States to implement measures in support of micro-enterprises (EU, 2014)[27]. During the last decade, indigenous industries, both farm and non-farm, have increasingly become important components of modern post-industrial knowledge-based economies and have raised a great interest about their effective economic value. Apart from this, the increasing penetration of online portals has created an opportunity for the rural produce to gain global visibility, thereby creating enhanced market prospects for rural indigenous producers (IMARC, 2018)[28]. Several E-commerce initiatives like *Etsy*, *Okhai*, *ArtFire*, *Supermarket* and others come up providing rural producers subsidized prospects to create sellers accounts and sell their produce to a global audience, tus connecting them to larger opportunity structure.

In spite of several initiatives taken both at global and local level, the welfarist agenda on which the initiatives have been premised have seldom been successful in addressing the issue at stake. In this context, we need to pay specific attention to the literacy level of the target group. While in the developed nations, there can be provisions of having a decent literacy rate among rural practitioners, the aspect of rural illiteracy loom prominent in context of developing and third world nations. As a result of low literacy rate, the rural population often does not have adequate knowledge regarding availability of various opportunities for their own benefit. Moreover, the physical and informational distance rural population share from urban transaction sites due to weak inter- and intra- communitarian linkage further contributes in aggravating their ignorance. Various national and international agencies have come up with a diverse range of skill building training programs for rural communities to enhance their skill set, market and entrepreneurial prospects. However, formulation of training modules without addressing the specific nature of rural need and lack of provision to impart the curriculum in local language together contribute in alienating the target group from the undertaken initiatives.

In order to enable members of rural communities with the capabilities needed for optimal usage of extant opportunity structure and cultivation of newer opportunities, knowledge operating capacities or knowledge capability among rural population needs to be enhanced. Development of operative capacities to process knowledge gained is a prior requisite before expecting rural members to benefit from the same. It is only when the rural marginalized community develops evaluative capacities to process acquired knowledge by virtue of knowledge capability, will they develop the credential to optimally utilize extant opportunity structure and venture out in search of newer possibilities of socio-economic betterment.

2.2.3 Empowerment and Social Capital

Along with agency and opportunity structure, social capital also plays a crucial role in facilitating rural empowerment, as has been identified in World Bank Development Report 2000-2001. Social capital referring to strength of social ties and norms governing social interactions plays a crucial role, along with agency and opportunity structure, in translating intended actions into desired outcomes. Social capital refers to the network of relationships between people residing in society, purposive interaction between whom enables the society to function effectively (Putnam, 2000)[29]. Our attempt to enhance social capital of rural community in the process of empowering them attempts at enhancing the target group's networking ties by fostering effective intra and inter communitarian knowledge and information exchange.

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[27] European Union. (2014). *The Artistic Crafts Sector in Europe: Operative Plans and Strategic Visions*. Interregional Cooperation Programme, INTERREG IVC, European Union Regional Development. Retrieved from https://issuu.com/ancitoscana/docs/3-eng

[28] IMARC. (2018). *Handicrafts Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2018-2023*. Report. ID: 4592343. Retrieved from https://www.researchandmarkets.com/reports/4592343/ handicrafts-market-global-industry-trends

[29] Putnam, R.D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Touchstone

Smooth communication and relevant exchange of information enables people to interact and collaborate with each other, establish community norms and values, share resources and build trustful relationships, which are the core values of social capital (Putnam, 2000). An enhanced social capital often acts as an accelerating force to bring about empowerment for marginalized segment, by improving inter- connectedness, thereby enabling them to overcome geographical isolation. It is by strengthening the social capital of the rural community, we proposes community empowerment scheme, dedicated to eventually blur the rural urban knowledge divide.

Our integrationist view to overcome rural-urban knowledge divide by virtue of fostering two-way knowledge exchange between these two spatial entities is undertaken to enhance inter-dependency of these two territorial units, instead of separating them further by conceptualizing them along polarizing terms. Fostering effective two-way networking between urban and rural communities is bound to have different yet empowering consequences for both ends. For example, by virtue of smooth communication and effective inter- and intra-communitarian exchange, rural communities will have improved access to various expert-mediated advisory services. Valuable advices from professional mentors will guide the rural target group to access quality resources based on their need, enable them to share their concerns on public forum and provide them necessary counseling wherever required. Smooth communications will enable mentors to interact with the rural community to identify their problems and impart knowledge to solve those problems, thereby enhancing the bridging social capital of the underprivileged community. Experts may also help rural marginalized community in assessing their community assets and competencies like traditional but extinct skills, arts, crafts, culture, and natural flora and fauna, wildlife etc. and help them translating these assets into opportunities. Access to such knowledge pool derivative of effective rural-urban networking will not only enhance the social capital of rural community, but will go beyond to mitigate their geographical isolation and enhance socio-economic prospects of rural community. On the other hand, the two-way knowledge exchange making the dynamics of indigenous production known to urban crowd contributes in enhancing their intellectual capital. The indigenous knowledge assets of rural community shared in the process of two-way exchange will subsequently pave the path for contextual policy formulation by informing urban communities and policy-makers about the specific nature of rural need. It is through this symbiosis, our research framework targets rural empowerment specifically along dialogic terms.

In a digitally connected world, it is important to use technology to strengthen the social capital of marginalized community by fostering effective exchange through the formation of virtual communities, which will enable underprivileged members of the rural community to be part of global knowledge network. We will discuss these issues in greater details in section 2.5. Strengthening social capital of rural communities by fostering purposive intra and inter communitarian networking will not only help in developing 'bonding' social capital (social ties within homogenous groups), but also pave the path for 'bridging' social capital (social ties within heterogeneous groups) by enabling interactions outside the purview of immediate closed community. Thus, cultivating social capital and growth of purposive communities is not only required to enhance internal solidarity of rural community, but also contributes in placing the marginalized members within the global knowledge network. This accounts to be a precursory measure in securing empowerment for marginalized rural community along with an enhanced agency and opportunity structure of target group, which will subsequently enable them to translate their intended actions into desired outcomes.

2.3 Knowledge Divide and Knowledge Capability: A Conceptual Framework

Possession of knowledge and its operating capacities by the rural target group are the manifesting criteria of holistic rural empowerment. While agency, social capital and opportunity structure are facilitators of empowerment in our framework, possession of knowledge capability and the ultimate overcoming of knowledge divide of the rural artisans can be identified as the ultimate manifesting criteria. In this section,

we will take up the concepts of knowledge divide and knowledge capability conceptually, to explain the relevance of the two in our empowering paradigm.

Before we delve deeper into the concepts of knowledge divide and knowledge capability, it is important to know what *knowledge* is. Any effort, dedicated to demystify what knowledge is, must at the very beginning, chart out the differences between knowledge, information and data. Davenport and Prusak (1998)[30] define data to be a set of discrete, objective facts about an event. Following a similar thread, we can conceptualize data to be a collection of numbers and characters, denoting values of qualitative or quantitative variables belonging to a set of items. Data becomes information, when it is presented as a message that makes a difference to the receiver of the message. Data transforms into information when some meaning is added to it. Methods of adding meaning can be *contextualizing*, *categorizing*, *calculation*, *correction* and *condensation* (Dave, 2012)[31]. Information, therefore, refers to a sequence of symbols that can be recorded as a message (utterance or expression).

Knowledge, in contrast to information, refers to a holistic concept, which includes within its purview facts, information, description or skills acquired through experience and education. Knowledge refers to the theoretical and/ practical understanding of a subject. Brooking (1999)[32] refers to Knowledge as organized information, together with the understanding of what it means. The holistic notion of knowledge also gets reflected in Davenport and Prusak's definition of knowledge. They defined knowledge as a fluid mix of framed experience, values, contextual information and expert insights that provide a framework for evaluating and incorporating new experiences and information (Dave et al, 2012). In order to conceptualize knowledge in organizational context, the authors formulated knowledge as being embedded, not only in documents and repositories, but also in organizational routines, processes, practices and norms. This marks the organic element of knowledge and further contributes in highlighting its difference in regard to the factual nature of information.

Knowledge is thought to derive its strength and application utility because of its humane elements, which makes the same a curious compilation of information, coupled with skills, experiences and attitude (Dellemijn, 2012)[33]. The human elements (skills, experience and attitude) mark the supremacy of knowledge over information. Eminent classical sociologist Claude Levi-Strauss insightfully distinguished knowledge from information, where he identified the latter as raw and the former as cooked and processed (Burke, 2000)[34]. Knowledge attains its processing flavor over information through *verification*, *criticism, measurement, comparison* and *systemization*, all of which are resultant of human interpretation of raw information.

Knowledge can easily travel the world, thereby making the resource accessible to a wide array of social members. Yet, as the World Bank Development Report of 1998-99 suggests, the access to knowledge resource does not necessarily mean that users are empowered to operate the resource and achieve practical benefits. This can be explained using a simple example. "Knowledge about how to treat a simple ailment, such as diarrhea, has existed for centuries—but millions of children continue to die from it because their

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[30] Davenport, T. H. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston: Harvard Business School Press.

[31] Dave, M., Dave, M., & Shishodia, Y. (2012). Emerging Trends and Technologies in Knowledge Management: A Holistic Vision. *International Journal of Recent Research and Review, III,* 60-67. Retrieved from http://www.ijrrr.com/papers3/paper7.pdf

[32] Brooking, A. (1999). *Corporate Memory: Strategies for Knowledge Management* (1st ed.). London: Cengage Learning EMEA.

[33] Dellemijn, R. (2012). *Knowledge Asymmetry in Inter-Firm Relationships: A Suggestion for a Knowledge Sourcing Strategy for the Ministry Of Oil of Iraq (*Student Theses, University of Twente, Netherland). Retrieved from http://essay.utwente.nl/61982/

[34] Burke, P. (2000). *The Social History of Knowledge*. Polity.

parents do not know how to save them" (World Bank, 1999;pg.1)[35]. World Bank differentiates between poor and rich countries not only in terms of the former having less capital, but also in terms of the former possessing less knowledge than the latter.

This opening sentence of World Bank's Development Report of 1998-99, titled, 'Knowledge for Development', accurately grasps the unequal distribution of knowledge *as resource*, even though the knowledge is generally present and flows throughout society. This highlights that availability, or even accessibility to knowledge is not enough to guarantee the optimal usage of the asset in pursuit of practical gains. Since knowledge cannot be mechanically transferred, and instead have to be accomplished, development following knowledge acquisition and exchange is based on individual credentials. These individual credentials are in turn shaped by social factors, which ultimately govern the logic of knowledge acquisition, production and distribution. This implies that there clearly exists a knowledge divide between those who are endowed with the capacity to possess and operate knowledge and those who lack the ability.

Rural India, characterized majorly by marginalization, inevitably falls on the disadvantageous side of knowledge divide. The socio-economic isolation of rural communities denies them the advantage to be sufficiently aware of the knowledge dynamics that govern the socio-economic operations of modern society. This divide not only brings socio-economic distress to the rural communities but also plays a significant role in sustaining their marginalization. Hence, in our empowering framework, enabling the rural community with sufficient knowledge features to be of acute importance in an attempt to improve their agency, social capital and opportunity structure, thereby ushering empowerment on a holistic scale. However, it needs to be remembered that it is not the mere possessing of knowledge resource, but the ability to acquire, operate and exchange it, that marks the knowledge capability of social actors that has a positive effect in mitigating extant knowledge divide. It is not inert possession of knowledge, but knowledge capability of users that makes knowledge acquisition and processing intrinsic to the process of boosting socio-economic performance.

Since knowledge is a *social product,* whose acquisition and distribution is governed by social norms and regulations, it is to be noted that any discussion on knowledge capability in social context need to consider both micro view (individual context) and macro view (social context) simultaneously. An incorporation of both micro and macro perspectives in capability theories also gets articulated in Martha Nussbaum's works. She insightfully stated that "….developing an internal capability requires favorable external conditions. A child raised in an environment without freedom of speech/ religion, does not develop the same potential/ religious capabilities, as a child who is raised in a nation that protects these liberties…." (Nussbaum, 2000;pg. 85-86)[36]. This statement highlights the urgency to accommodate a dual approach in the study of knowledge capability. The dual approach should involve on one hand direct nurturing of capability of individual knowledge sources, and on the other indirect support in the form of the creation of a generally empowering environment, which will enable individual members to realize the fruits of knowledge capability.

The importance knowledge capability expansion has in ushering holistic development enables us to interpret knowledge, not as a resource, commodity or belief structure, but rather as a core aspect of the way humans function in the world. Knowledge is instrumental, as well as constitutive freedom (Johnstone, 2005)[37]. Knowledge interacts with the environment, feeding into society new ideas, methods, attitudes, resources and forms of activity and interaction, thereby altering social and material conditions. The constitutive and

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[35] World Bank. (1999). *World Development Report 1998/1999: Knowledge for Development*. Retrieved from http://hdl.handle.net/10986/5981

[36] Nussbaum, M. C. (2000). *Women and Human Development: A Capabilities Approach.* Cambridge: Cambridge University Press.

[37] Johnstone, J. (2005). *Knowledge, Development and Technology: Internet Use among Voluntary-Sector AIDS Organizations in KwaZulu Natal* (Doctoral Thesis, Department of Information Systems, London School of Economics and Political Science, London). Retrieved from http://etheses.lse.ac.uk/id/eprint/282

instrumental role of knowledge on capability and creating an empowering social and material environment makes knowledge capability a mandatory pre-requisite in the process of enhancing socio-economic performances. A knowledge capability model, incorporating both micro and macro level perspective, enhances the ability of people to interact and communicate, thereby enhancing both individual and collective knowledge in the process.

However, we need to remember that knowledge, in any social setting, are highly distributed. In an attempt to expand knowledge capability on a macro and micro level along sustainable terms, it is crucial to connect the social actors to enable knowledge sharing. A social setting is not simply a collection of individuals. Their effective functioning is governed by a network of social interactions, which makes viable knowledge and other resource exchange within the setting. It is to facilitate effective knowledge exchange among different actors, in an attempt to expand knowledge capability, technology should be put to use.

In order to facilitate capability expansion through optimal usage of current technologies, in an environment where knowledge is distributed, it becomes crucial to systematically *manage knowledge* using technology to foster efficient distribution and exchange of the same. *Management of knowledge resources* (Gao et al, 2018)[38] can be seen as the process of enabling individuals to expand their knowledge capabilities, and integrate different information resources to improve both social and organizational performance. In the following segment, we will discuss our framework of rural empowerment through management of knowledge.

2.4 Rural Empowerment through Management of Knowledge: Social Knowledge Management

Knowledge, defined as theoretical and practical understanding of a subject, is considered the most crucial competitive asset in contemporary connected society (Gao, 2018)[39]. Knowledge is a concept, skill, experience and vision that provide a framework for creating, evaluating and using information (factual data) to achieve concrete benefits (Soltani, 2016)[40]. While knowledge accounts to be a valuable asset, its value is only realized by virtue of using and sharing it. Knowledge being an intellectual capital is capable of empowering people through relevant exchange in a connected environment. Since, it is the sharing and using knowledge that contributes in enhancing individual and collective empowerment, the concept of managing knowledge to boost performance outcomes is increasingly gaining importance in contemporary society.

Management of knowledge refers to the simultaneous practice of capturing, documenting, retrieving and using this knowledge, along with creating, transferring and reusing it (Gao, 2018). Contemporary world and its connected nature have made creation, assimilation and dissemination of knowledge an easy phenomenon, thereby enhancing the importance of managing knowledge to attain effective results. A vast body of literature highlights the importance of knowledge management from organizational perspective (Daneshfard, 2006[41]; Davenport, 1998[42]). Using innovative networking means to transfer knowledge has proven effective in many contexts in improving organizational performance. However, if we can truly

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[38] Gao, T., Chai, Y., & Liu, Y. (2018). A Review of Knowledge Management about Theoretical Conception and Designing Approaches. *International Journal of Crowd Science, 2*(1), 42-51. doi: 10.1108/IJCS-08-2017-0023

[39] Gao, T. Chai, Y. Liu, Y. (2018) "A review of knowledge management about theoretical conception and designing approaches", International Journal of Crowd Science, Vol. 2 Issue: 1. Pp.42-51. https://doi.org/10.1108/IJCS-08-2017-0023

[40] Soltani, Z. and Navimipour, N.J. (2016), "Customer relationship management mechanisms: A systematic review of the state of the art literature and recommendations for future research", Computers in Human Behavior, Vol. 61, pp. 667-688.

[41] Daneshfard, A., (2006). Effective Management of knowledge-centered organizations. Tadbir Journal, 174.

[42] Davenport, T.H. and L. Prusak, (1998). Working Knowledge: How organizations manage what they know. Boston: Harvard Business School Press

grasp the importance of knowledge as an asset, we will identify the need to take the concept of knowledge management beyond organizational boundaries and attempt social development through optimal management of knowledge.

Valuable body of literature, which focus on understanding the impact of knowledge management to improve organizational performance have primarily dealt with the dynamics of knowledge exchange in closed and homogenous organizational setting. In this project, we propose to manage knowledge to facilitate social development in a heterogeneous social setting (Bandyopadhyay, 2020)[43]. Our proposed framework to manage knowledge for sustainable rural empowerment considers every actor as possessors of knowledge, where we attempt to foster two-way knowledge transaction between urban and rural communities to mitigate extant knowledge divide. The physical and explicit knowledge isolation of rural community though contributes in sustaining their marginalization, the implicit knowledge they possess through enculturation and experiences in their unique socio-cultural environment nevertheless account to be a valuable indigenous asset (Hess, 2006)[44]. Our adhered model of rural development thus premises on two-way knowledge exchange between urban and rural communities, where it considers both urban and rural communities as contributors to the knowledge pool irrespective of their social location. Thus, by enabling the rural participants not only to acquire knowledge but also to share their own knowledge resources, our framework attempts in achieving rural empowerment from within, by cultivating strategies of self-development and self-sustenance among the target group.

Contemporary era and the dream to have one integrated world devoid of territorial boundaries have immense potential in sustaining a symbiotic knowledge transaction, where both urban and rural communities contribute to the knowledge pool in the process of creating, assimilating and disseminating knowledge via effective exchange. Social networking ties enable people to connect, communicate and collaborate easily. The promise of connectedness has the capacity to create a complex knowledge infrastructure that enables easier, faster and widespread exchange of knowledge (Hemsley, 2013)[45]. These affordances not only guarantee access to knowledge but by fostering effective exchange enables participants to develop evaluative capacities by virtue of which they gain the skill to process acquired knowledge for practical benefits. It is this knowledge capability of rural participants that contribute in enabling optimal management of knowledge to yield effective outcomes. It is the value of knowledge in its implementation mode, gained by virtue of relevant exchange that leads to 'developmental effectiveness'. 'Developmental effectiveness' contributes in reducing poverty and building capacity within communities, civil society and government to address their own developmental priorities (Stillman, 2013)[46]. This dynamic two-way exchange of knowledge enables mutual differences in knowledge, skills, opportunity, culture and political power to complement each other instead of contradicting. It is by realizing this spirit of inclusive knowledge management; we wish to deploy the concept in a heterogeneous social setting to attain holistic rural development. While in this chapter we have fleshed out on detail our conceptualization of rural empowerment as a knowledge-theoretic concept; agency, social capital and opportunity structure as facilitators of empowerment; over-coming of knowledge divide and enhancement of knowledge capability as manifestation of empowerment and how we have targeted rural empowerment through social knowledge management, we have reserved the final section to discuss about social technologies, which happens to our implementing tool in the process of attaining rural empowerment through social knowledge management.

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[43] Bandyopadhyay, Somprakash, Sneha Bhattacharyya and Jayanta Basak (2020). Social Knowledge Management for Rural Empowerment: Bridging the Knowledge Divide using Social Technologies. Routledge.

[44] Hess, C. G. (2006). Knowledge Management and Knowledge Systems for Rural Development. GTZ READER: Knowledge Management and Knowledge Systems for Rural Development.

[45] Hemsley, J. Mason, R. (2013). Knowledge and knowledge management in the social media age. Journal of Organizational Computing and Electronic Commerce, 23. 138–167.

[46] Stillman, Larry. (2013). Participatory action research: inclusive Information and Knowledge Management for empowerment. ACM International Conference Proceeding Series. 2. 163-166. 10.1145/2517899.2517903.

2.5 Social Technologies and Social Knowledge Management Practice: Creating Virtual Communities

We have entered into a new era of *networked world*. Technology has enabled us to interact, innovate and share knowledge in ways, which were previously unthinkable. We call this the Networked Society (Castells, 2004)[47], enabled by internet-enabled communications, platforms and tools, that include regular personal computers, embedded computers and mobile personal devices (Cell-phones, PDAs, Tablets), connected together using computer networking technologies. We call them *social technology,* an umbrella term used to capture a wide variety of terminologies depicting internet-enabled communications, platforms and tools, e.g. web 2.0, mobile 2.0, social media, social software, etc., which has the potential to establish *collaborative connectivity* among billions of individuals over the globe. This digital revolution is giving rise to a new economy –that can be termed as "digital network economy" (Brousseau, 2007)[48]. When two persons connect, their lives change. With everything connected our world changes.

This concept of connected world using social technology has the potential of transforming the way we innovate, produce, govern and sustain (Fitzgerald, 2013[49]). This internet-enabled digital economy has already started transforming the organization of firms, industries, markets and commerce. Some of these impacts can be exemplified as follows:

✓ Billions of people now use social media for learning, marketing, shopping and decision making. Internet-based social media sites enable us to create and consume multi-modal user-generated contents; facilitate us to stay connected with friends, family, colleagues, customers, or clients. Social networking can have a social purpose, a business purpose, or both, through sites such as Facebook, Twitter, LinkedIn, and Instagram, among others. Social networking has become a significant base for the marketing and advertising sectors, seeking to engage customers. Increasing use of social media platforms including social networking sites, blogs, video sharing sites, etc. now allows consumers to seamlessly share their consumption behaviours online. Such *socially shared consumption* (Kunst, 2014[50]) can range from electronic word-of-mouth to formal online reviews as well as automated product mentions facilitated by social media applications.

✓ The rapid development of social technology has enabled the development of what we call the new *platform economy* (Parker, 2016; Parker, 2017[51]), an emerging economic arrangement, which brings together strangers in one forum and fosters effective exchange of goods and services among them (e.g Airbnb, Lyft, LendingClub, etc). In this digitally driven platform economy, consumers and service providers form a collaborative network using the platform. Platform is the foundation of the entire ecosystem, providing a space for the exchange of information, trading, logistics and other facilities to consumers and service providers.

✓ The notion of platform economy, being a digital facilitator in economic and social transaction, is premised on the ideological and operative dynamics of sharing/collaborative economy (Sundararajan,

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[47] Castells, M. (2004). *The network society: a cross-cultural perspective*. Edward Elgar Publication

[48] Brousseau, E., & Nicolas, C. (2007). *Internet and Digital Economics: Principles, Methods and Applications*. Cambridge University Press.

[49] Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing Digital Technology: A New Strategic Imperative. *MIT Sloan Management Review*

[50] Kunst, K., & Ravi, V. (2014). *Towards a Theory of Socially Shared Consumption: literature Review, Taxonomy, and Research Agenda*. In Proceedings of the 22nd European Conference on Information Systems. Retrieved from https://pdfs.semanticscholar.org/b722/b0ed3cce8093514c8b7946478d3bdbbf71c8.pdf

[51] Parker, G., Alstyne, M. V., & Choudary, S. (2016). Platform Revolution: How Networked Markets are Transforming the Economy, and How to Make Them Work for You. *WW Norton*, New York, USA.

Parker, G., Van, Alstyne, M.V., & Jiang, X. (2017). Platform Ecosystems: How Developers Invert the Firm. *MIS Quarterly*, *41*(1), 255-266.

2016). This nascent form of economic arrangement encourages shared creation, production, distribution, trade and consumption of goods, services and ideas by *crowd* (e.g. YouTube, Airbnb, Etsy, bla-bla-car, etc), and hence termed as *crowd-based capitalism* (Sundararajan, 2016[52]). This attempt to build an integrated economy through effective sharing of goods (both informational goods and physical goods) and services is premised on the motivational and philosophical foundation of "sharism". The collaborative culture cultivated by sharing economy has enabled billions of people across the globe to get connected and actively participate in the process of achieving social development and developing collectively capacities to solve social atrocities (Tapscott, 2006)[53].

✓ The notion of *crowd collaboration* in a business context is an extension of what is known as outsourcing: operationalizing some of the internal business functions using external business entities. However, instead of an organized business body with a centralized governing apparatus, crowd collaboration has a decentralized premise and relies on free individual agents (the *crowd*) to collaborate to perform a given operation or to find solution for a given problem using social technologies (Tapscott, 2006). This kind of outsourcing is also referred to as *crowd-sourcing*, to reflect this difference. These crowd-based operations may be incentivized by monetary or equivalent reward, though it is not always mandatory.

✓ Benkler (2006)[54] uses the term 'networked information economy' and "commons-based peer production" to describe a "system of production, distribution, and consumption of information goods characterized by decentralized individual action carried out through widely distributed, non-market means that do not depend on market strategies." The examples of such collaborative efforts are creation of free and open source software and Wikipedia.

As depicted by Tapscott (2014)[55], "For over a century humanity has been taking steps to realize (Nathaniel) Hawthorne's vision of a world where human intelligence could be networked. That age has arrived…... The Age of Networked Intelligence is an age of promise. It is not simply about the networking of technology but about the networking of humans through technology. It is not an age of smart machines but of humans who, through networks, can combine their intelligence, knowledge, and creativity for breakthroughs in the creation of wealth and social development. It is an age of vast new promise and unimaginable opportunity."

The purposive exchange of information, ideas and knowledge that optimal social knowledge management requires can only be facilitated with the help of the collaboration supported by social technologies. The collaborative spirit of social technologies has the potential in triggering effective knowledge exchange and creates effective virtual communities in the process. The collaboration taking place in the virtual communities has the potential in enhancing knowledge capability of members and overcoming their knowledge divide, thereby enhancing their social capital, agency and opportunity structure in the process. The collaborative potential with which social technologies are endowed makes it a crucial implementing tool in our rural empowerment framework through social knowledge management. Social knowledge management in our context is a framework for rural empowerment using knowledge creation, assimilation and dissemination through digital connections and social collaboration, enhanced by social technologies. In this project, our aim is to architect as well as empirically validate a social knowledge management platform that would mobilize knowledge resources, bridging the gap between the urban-rural communities and creating and building social capital, leading to rural empowerment and, as a consequence, holistic development of the society.

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[52] Sundararajan, A. (2016). *The Sharing Economy - The End of Employment and the Rise of Crowd-Based Capitalism*. Cambridge: MIT press.
[53] Tapscott, D. & Williams, A.D. (2006). *Wikinomics: How Mass Collaboration Changes Everything*. Portfolio.
[54] Benkler, Y., & Nissenbaum, H. (2006). Commons-based peer production and virtue. *Journal of Political Philosophy*, *14*, 394-419.
[55] Tapscott, D. (2014). *The Digital Economy*. McGraw-Hill.

The Project Area Profile and Target Beneficiaries

3.1 The Project Area Profile

Birbhum, the area of our intervention, happens to be a rich reserve of natural resources and artistic heritage. Some of the notable forms of cottage industries of Birbhum include batik, kantha stitch, macramé (weaving by knotting threads), leather, pottery and terracotta, woodcarving, bamboo and cane craft, metal works and various tribal crafts. Other main industries in Birbhum are agriculture-based industries like textiles—especially cotton and locally harvested tussar silk textiles, non-timber based forest products (NTFP) based industries, arts and crafts.

The rich presence of multiple art forms inevitably makes Birbhum the house of thousands of skilled artists. In our project, we have mainly attempted in devising empowering schemes for the non-farm producers residing in different blocks across Birbhum. The objective of our research project is to architect a social knowledge management framework to usher socio-economic empowerment of handicraft artisans residing in Birbhum.

Selected blocks - We have triggered our project intervention by randomly selecting artisans from different blocks all over Birbhum, namely Bolpur, Mohammad Bazar, Nanoor, Rampurhaat, Labpur, Suri and Sainthia. We have collaborated with District Industries Center (DIC), Birbhum for this purpose.

Land use and Cropping Pattern - The major cropping pattern of the selected geographical area is Aman, Aus, Paddy, Wheat, Vegetable, Oilseeds, Pulses, Boro Paddy. Paddy is the major crop of Birbhum which covers an area of 94% of the total cultivated area of the district during kharif. Other major crops are Oilseeds, Wheat & pulses, vegetables. The major cropping pattern of the District is Aman/ Aus Paddy/Wheat/ Vegetable / Oilseeds/ Pulses/ Boro Paddy.

Practiced Art Forms – Birbhum is the melting pot of several indigenous art forms like batik, kantha stitch, leather craft, Khesh work, terracotta, wood craft, bamboo and cane craft, dokra art, metal works and various tribal crafts. A brief description of each of the major art forms practiced in Birbhum is given below, so that a fairer understanding of the region's artistic resources can be attained.

- **Batik -** Batik art form refers to the technique of wax-resist dyeing applied to the whole cloth. Although this art form originated in Java, Indonesia, it is extensively practiced with intricate detail in India. The applied wax resists dyes and therefore allows the artisan to colour selectively by soaking the cloth in one colour, removing the wax with boiling water, and repeating if multiple colours are desired. The art form requires flawless skill to get reproduced on a range of items. Birbhum of West Bengal, India, happens to be one of the indigenous sites where batik is practiced extensively. The skills and expertise of the craftsmen have witnessed reproduction of flawless batik work on a range of items and garments following an eco-friendly way of production.

Batik Work

Batik Skirt   Batik work on Bangalore Silk

- **Kantha Stitch -** Kantha is described as several layers of white or light-coloured cotton cloth, such as sarees, sewn or quilted together with predominantly white thread using successive rows of running stitches. The poor man's Kantha seldom had designs but later the trend of decorative Kantha, called Nakshi Kantha came into being. Patterns and special motifs were outlined with black, blue or red thread in backstitch. Motifs included flowers, animals, scenes from rural life and sometimes even historical figures. The creation of the cloth was usually considered a ritual as it was used for ceremonial purposes. Birbhum of West Bengal, India, happens to be one of the indigenous sites where kantha stitch is practiced extensively. The skills and expertise of the craftsmen have enabled Birbhum to earn the Geographical Indication (GI) tag for kantha work, denoting the locale as the most authentic origin of the art form.

Kantha Stitch

Art Silk Saree   Art Silk Saree   Art Silk Saree with Kantha work

- **Leather Craft -** Leather crafts have been one of the most prominent artistic traditions of India, particularly of Birbhum in West Bengal. The district houses a multitude of skilled leather practitioners, whose skills and expertise lead to the creation of items of a vast range intricately made out of leather. Ranging from bags to other accessories and items of home décor, leather craft exuberates a rich heritage of traditional aesthetics, elegance, and modern artistic creations.

Leather Embroidered Bag   Leather Embroidered HandBag   Leather Embroidered Mini Tote Bag

- **Wood craft –** Wood crafting is one of the oldest arts of humankind. Wooden spears from the Middle Paleolithic, such as the Clacton Spear, reveal how humans have engaged in utilitarian woodwork for millennia. With a tradition of its own, at present a number of artisans from Birbhum are involved in practicing the art form. With their skill and expertise, our artistic geniuses have been successful in carving out a variety of items in wood, ranging from items of home décor to utilities.
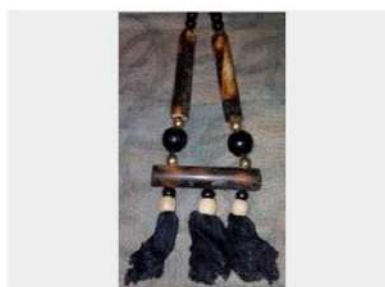
Wooden Astray   Wooden Beaded Necklace   Wooden Centre Table

- **Terracotta -** Terracotta is a traditional Indian art form that has taken shape over thousands and thousands of years. It includes intricate moulding of clay to create sculptures, figurines, earthenware and other varied elements. The art products in terracotta or burnt clay satisfied the creative impulse of the artists and also met the domestic and ritual needs of ordinary man. Clay objects were either baked in the sun or burnt into terracotta for hardening and durability and were used by man in his daily life since pre-historic times. In contemporary times, the popularity and demand of the art form has led reproduction of other items out of terracotta, like jewelleries and showpieces. Birbhum houses a significant number of terracotta artists, whose intricacy, skill and expertise have redefined carvings out of clay into antique pieces of aesthetic importance.

Teracotta

| Set of Decorative Pots | Terracotta and Fabric Neckpiece | Terracotta Locket with Fabric Tassle |

- **Khesh Work -** Khesh Work is considered to be an aesthetic tradition of relatively recent origin, having believed to originate from the aesthetic imagination of creative artists residing in Birbhum. The weaving technique essentially involves tearing old sarees into thin strips - the warp has the new thread and the weft uses the thin strips of sarees. The weavers collect cotton sarees and it is the women who tear the sari into long strips. Infused with indigenous aesthetics, khesh work produced on a variety of items reflects a fusion of traditional aesthetics and modern art.

| Khesh Kantha saree | khesh kantha saree | Khesh Kantha saree |

- **Jute craft -** The handicrafts of Jute is one of the oldest crafts known to man and India has a rich source of jute materials. Artisans at rural shades have a practice to produce stunning utility and decorative jute articles. While historically jute weaving was seen in the context of producing practical tools, at present the popularity of the art form has enabled skilled craftsmen to produce a range of utility and home decor items to innovative jute accessories, including bags and jewelleries. Birbhum houses numerous experienced jute artists, whose skills and expertise make them proficient in making innovative items out of jute.

| Beaded Jute Necklace | Jute Necklace | Jute Necklace |

- **Dokra Art -** Dokra art is non-ferrous metal casting using the lost-wax casting technique. This sort of metal casting has been practiced in India for the past 4000 years and at present dokra features to be one of the major artistic heritage of the nation. This art form features to be the indigenous heritage of the state of West Bengal, where districts Birbhum and Bankura house several skilled dokra artists of the nation. The skills and expertise of the craftsmen have witnessed aesthetic reproduction of dokra art to produce a vast variety of items ranging from intricate jewelleries, showpieces to figurines and idols carved out of lost wax technique.

| Antique teardrop neck set | Beaded Dokra Necklace with Pendant | Beads and Dokra Jewellery Set |

A brief description of the multiple art forms practiced in Birbhum reflects the aesthetic importance of the district. An appreciation and intention to promote and preserve indigenous heritage is incomplete without proposing empowering measures for the practitioners of the art forms. In order to do justice to indigenous art forms and their practitioners, in our project we have attempted in randomly selecting artisans from all across Birbhum, who are pursuing the multitude of art forms stated above. Following we will narrate details regarding our target beneficiaries selected for the said project.

3.2 Target Beneficiaries

Artisans from all over Birbhum, pursuing different art forms like kantha stitch, batik, leather, khesh work, woodcraft, handpainting, dokra work, appliqué work, terracotta, bamboo craft, jute craft and jewellery making are our potential target beneficiaries. A special emphasis has been given in our project to select a considerable number of artisans belonging to the Scheduled Caste background. Ensuring a significant portion of SC artisans among our target group, our project attempts to create holistic impact for the most disadvantageous within the community of artisans residing in Birbhum. We have collaborated with District Industries Center (DIC), Birbhum and DC Handicrafts, Bardhaman, West Bengal for this purpose. An initial list of target beneficiaries is provided in the **Appendix III** of this report.

Work done so far (1st April, 2020 to 31st March, 2021): An Outline

Considering the current pandemic situation and the "new normal" lifestyle that would follow the pandemic situation, we have reoriented our intervention plan using a "distributed intervention" strategy instead of a centralized intervention strategy. **In this strategy, we do not need to use / install any capital equipment to create centrally-located facilities but rely on the availability of smartphones with target user-groups.**

We had an initial plan of creating three centralized internet kiosks and mobile internet kiosks and our assumptions were (i) the target participants would come to these centralized facilities physically (in case of centralized internet kiosks), or, (ii) our project personnel will go to the target participants physically (in case of mobile internet kiosks). However, **we are now trying to implement a "distributed intervention" strategy, where everything will be done remotely in an online, virtual mode and we are approaching our rural target group using smart-phone enabled tools and platforms.** How we are doing it is highlighted below:

Our primary aim in this project is to digitally empower the artisans of Birbhum (with a focus on SC Community) and work towards enhancing their market performance by making them proficient in handling and prospering business through digital means. As a part of our project intervention to digitally empower rural artisans of Birbhum, in the said project we have created a digital platform (www.ncore.co.in) and are attempting to populate the platform with digital profiles of the artisans. We are uploading these profiles not only in our platform but also in social media pages like Facebook (https://www.facebook.com/ArtofBengal). A digital profile of an artisan in our digital platform ensures global visibility of the artisans and their products to a multitude of virtual customers. The profile includes a small story regarding the artisan and some snippets regarding his/her artistic endeavour, coupled by a video of the artisan and photos of sample products made by him/her.

Due to the ongoing pandemic situation, we are collecting this data from our artisans via telephonic means using calls and whatsapp chats. In this regard, to ensure ground level penetration remotely, we have also collaborated online with two local NGOs operative in the area, Amar Kuthi Welfare Organization and Kopai Charulota, both of which are working for the betterment of local artisans. The contacted artisans are instructed online by our research team remotely on how to click photos and videos properly, which will be suitable to get uploaded in the website and be exhibited on a virtual scale.

As a part of our pre-pilot studies, we have conducted several awareness workshops for artisans with DIC, Birbhum on (i) what is online business and how to do it (ii) digital photography and videography, (iii) innovative product design and marketing using digital channels, etc. Subsequently, we have planned to provide a systematic training to 700-800 artisans from Birbhum over a period of one year in a batch of 15 to 20, where each batch will receive training for a period of eight weeks. The training program is divided into three components:

- Online, live training sessions for 6 hours using Zoom Platform: These live training sessions (synchronous) will be for two hours each day on Monday, Wednesday and Friday (total six hours). Our weekly online training intervention operates along three major axes*: Digital Competency Training, Training on Photography & Videography,* and, *Innovative, Market-Oriented Product Development Training*.

- Following the online training, we will help each individual artisan to create their digital shops in our online platform and Facebook and also form a WhatsApp group to enable intra-and inter-community knowledge and information exchange.
- Additionally, we will periodically distribute small video tutorials in Bengali on topics related to digital marketing and entrepreneurship development. The duration of each video tutorial is 7 to 10 minutes. In a span of eight weeks, we plan to send around 60 video tutorials (one to tow tutorials per day).

This smart-phone based intervention plan will help the rural artisans to use their mobile devices in fruitful ways. Moreover, training the artisans to enhance their business prospects through smartphones will help them in the long run to stay connected with online customers and acquire knowledge regarding market operations easily. Optimal usage of smartphones for business related purposes will make our intervention sustainable, where the artisans will be able to use the digital medium from their mobile devices only, without depending on centrally-installed facilities by external entities. Conducting our activities through smart phones will therefore not incur any cost towards procuring capital equipment. As "social intermediaries", we aim to facilitate re-tooling and community building, both of which can be self-sustaining and have the potential to bring concrete socio-economic benefits even after the intervention. In general, our findings can have large scale policy implications for bottom-of-pyramid entrepreneurs by identifying mechanisms through which digital knowledge management tools can lead to greater entrepreneurial success in emerging markets.

The work done so far is elaborated under the following CHAPTERS:

5. **Architecting a Social Technology Driven Social Knowledge Management Framework**
   5.1   A Design Methodology for Requirement Analysis: Action Design Research
   5.2   Components of Social Knowledge Management Framework

6. **Technology Development:**
   A Social Knowledge Management Platform using Social technologies (NCoRe)
   6.1   Development of NCoRe: A Social Knowledge Management Platform for rural artisans
   6.2   Development of "Artisan Profiling App" for collecting artisans' profile in multi-media
   6.3   Onboarding artisans in NCoRe (100+ artisans till date)

7. **Use of Social media: Cultivating Communities of Practice and Communities of Purpose**
   7.1   Creating Community of Practice through Whatsapp enabling Community Knowledge Exchange
   7.2   Creating Community of Purpose through Facebook to Promote Market Linkage for Artisans

8. **Workshops and Trainings**
   8.1   Online Workshop on AV Presentation Making
   8.2   Online Workshop on Innovative Product Design and Marketing
   8.3   Online Workshop with Urban Boutiques Owners for Market Linkages
   8.4   Online Weekly Training **(started from 1st March, 2021 onwards)**
   8.5   Asynchronous Training Modules (Video tutorials in regional language)

9. **A Pilot Study for Analysing the Impact of Intervention: Some Preliminary Observations**
   9.1   The Model of Intervention and Expected Outcome
   9.2   Analysing the Impact of our SKM (Social Knowledge Management) Program Intervention

10. **Some Implementation Challenges towards Bridging Rural-Urban Bridge Rural-Urban Knowledge, Information and Market Divide**
    10.1 Accessibility of Internet and Internet-Enabled Devices
    10.2 Users' Capabilities
    10.3 Perceived Applicability of Internet for Business Transaction Management

11. **Work To Be Done from 1st April 2021**

Architecting a Social Technology Driven Social Knowledge Management Framework

5.1. A Design Methodology for Requirement Analysis: Action Design Research

Most of the ICT interventions in the context of rural transformation are exogenous in nature. They usually use a *push* approach and give less attention to the technology adoption capabilities of individual actors of the rural community. This approach assumes that rural development can be achieved through acquisition and implementation of technology[56]. This approach results in implementation failures of ICT interventions, since they fail to recognize the importance of the context and of users' practices[57]. The endogenous approach, on the other hand, is based on an understanding that the impact of ICT usages "are caused not by the technology, but by the new forms of informational behaviour they facilitate" [58]. The endogenous model thus focuses more directly on resources and aspirations of users in the context of development.

The design challenge is therefore about finding ways to appropriately integrate digital technologies in rural development that would help rural producers to accept and adopt the digital technologies as new methods of bridging information, knowledge and market divide. Researchers have conceptualized the concept of digital maturity both in the context of individual and organization[59]. One of our major design challenges is that the digital maturity levels of our rural users in India are poor in the following three dimensions:

- E-awareness: the aptitude to understand the opportunities of digital technology
- Digital literacy: competencies to use digital technologies to fulfil personal and professional objectives
- Informational literacy: the ability to retrieve, understand and interpret information coming from digital sources.

Thus, in this particular research, the concept and consequent design and development efforts need to be tuned according to the context and capacities of rural producers. Design science research in Information Technology and Systems focuses on the development of IT artifacts with the objective of improving the performance of the artifact in users' context. Design science research methodology uses a build-and-evaluate cycle keeping the application perspectives in mind. However, the exogenous approach of development described above is also prevalent in traditional Design Science Research (DSR) thinking in the context of Information Systems development. Existing DSR methods "value technological rigor at the cost of organizational relevance, and fail to recognize that the artifact emerges from interaction with the organizational context even when its initial design is guided by the researchers' intent"[60]. In order to incorporate a user-centric approach in design, Sein et al. (2011)[5] proposes the concept of "action design research (ADR)". ADR reflects the premise that "IT artifacts are ensembles shaped by the organizational context during development and use." ADR method focuses on the "building, intervention, and evaluation of an artifact" that not only captures the intent of the design but also the influence of it on users in context.

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[56] ITU (2011). "The Role of ICT in Advancing Growth in Least Developed Countries: Trends, Challenges and Opportunities", International Telecommunication Union Report, 2011 http://www.itu.int/pub/D-LDCICTLDC. 2011-2011

[57] Giolo, Fele (2012). Why is information system design interested in ethnography? Sketches of an ongoing story. In. G. Viscusi, G.M. Campagnolo and Y. Curzi (eds.), Phenomenology, organizational politics, and IT design: The social study of information systems (pp. 1–30). Hershey, Pennsylvania: IGI Global.

[58] Mansell, R. (2010). Power and interests in developing knowledge societies: Exogenous and endogenous discourses in contention. IKMWorking Paper No. 11, 2010. p. 7. http://wiki.ikmemergent.net/files/IKM_Working_Paper-11-Robin_Mansell-July2010-final-pdf.pdf

[59] Vardisio,Roberto and Patricia Chiappini (2015). Digital maturity: What is and how to build it. Proc of the international conference the future of education (5th edition), Florence, Italy 11–12 June 2015.
https://www.researchgate.net/publication/303683893_Digital_maturity_what_is_and_how_to_build_it

[60] Sein, M. K., Henfridsson, O., Purao, S., & Rossi, M. (2011). Action design research. MIS Quarterly, 35(1), 37–56

Our design methodology is motivated by ADR approach and uses the following four interwoven activities:

- *Problem Formulation:* problem perceived in practice or anticipated by researchers.
- *Building, Intervention, and Evaluation (BIE):* Testing the initial design of the IT artifact in the context of its usage. This phase "interweaves the building of the IT artifact, intervention in the organization, and evaluation".
- *Reflection and Learning:* This is an iterative process to build and refine a solution to make it applicable to a broader class of problems.
- *Formalization of Learning:* Finalizing a solution that addresses the problem

Our social technology driven social knowledge management framework is an outcome of our design methods discussed above and based on the premise that just providing access to technology through computer and internet are not enough to empower rural producers as active agents. Following the ADR approach, in the initial stage of our project intervention, we have attempted in delving deeper into the problems faced by our target group. In order to have a grass-root level idea, members of our Research Organization (RO) interviewed 70 artisans from Birbhum, pursuing different art forms like kantha stitch, batik, leather, khesh work, woodcraft, hand-painting, dokra work, appliqué work, terracotta, bamboo craft, jute craft and jewellery (Appendix II). In our project, we have randomly selected artisans from different blocks all over Birbhum, namely Bolpur, Mohammad Bazar, Nanoor, Rampurhaat, Labpur, Suri and Sainthia. A special emphasis has been given in our project to select a considerable number of artisans belonging to the Scheduled Caste background. Ensuring a significant portion of SC artisans among our target group, our project attempts to create holistic impact for the most disadvantageous within the community of artisans residing in Birbhum.

5.1.1 The Field Study

70 artisans were randomly selected from across different blocks of Birbhum district namely, Bolpur, Mohammad Bazar, Nanoor, Rampurhaat, Labpur, Suri and Sainthia. Due to the ongoing pandemic scenario, it was not possible or safe to interview artisans physically by going into the interiors of different locales. As a result, we resorted to detailed qualitative interactions with the target group of 70 artisans through telephonic means. The intention behind conducting the interviews is to attain maximum knowledge about the socio-economic background in which a particular artisan member is operating and to frame the intervention design in accordance to the needs and requirements of our target group. Our team members personally contacted each member of the target group prior to the interview to ask for a convenient time and subsequently recorded the telephonic session by taking prior consent from each artisan member. Each interview approximately lasted for 15-20 minutes. In the interview, each artisan is asked about the different hindrances they face while producing and selling handicraft goods. The constraints they face in each stages of production and marketing led us to understand the operative hindrances, which restrict market performance of rural artisans and in turn design our intervention in a way so that the socio-economic difficulties faced by the artisans of Birbhum can be broadly addressed. Following we will narrate the detailed analyses of the insights we gained after interviewing our artisans.

5.1.2 Analyses of Data

In the following section, we will break up the entire production and distribution process into multiple levels and talk about the challenges artisans face in each level of the process.

- ***Lack of knowledge about what other's are producing*** – 80% of the artisans interviewed stated that beyond their immediate local context, they have limited knowledge about what other artisans from different regions are producing. One of the artisans during the interview stated, *"I know what people in my locality are making. But I do not know what other artisans beyond my local context are producing. It would have been much better if I could know about what artisans from different regions are making.*

There is a lot to learn by seeing other's works". Even if some artisans said that they are members of social networking sites, which offers possibilities for artisans to contact and connect globally, lack of adequate digital knowledge disallows them to reap the maximum benefits out of such virtual platforms.

- *Lack of financial knowledge* – Although some master artisans recorded adequate financial knowledge to sustainably carry out profitable business ventures, majority of the independent artisans recorded distressed financial dynamics, more so due to the ongoing pandemic scenario. Physical selling of products from *melas* and *haats* has gone down drastically, making the independent artisans strive to make both ends meet. Lack of knowledge regarding how to procure loans, how to strategically plan their business operations have further rendered the artisans helpless amidst the ongoing tough times. One artisan recorded, "*I only sell on haats and melas. Once these channels are blocked, my entire life gets disrupted. I am getting old. I do not know how to innovate new business prospects"*.

- *Lack of selling channels* – The ongoing pandemic scenario has almost brought physical buying and selling to a halt. The melas and haats, which happened to be the primary selling sites of majority of the artisans, got closed down almost overnight. This has simultaneously increased the craze for online shopping. However, majority of the artisans with their limited digital knowledge, often shows the inability to sell via online channels. The ignorance about online selling sources has largely hindered business affairs of many artisans, more acutely amidst the ongoing tough times. One artisan insightfully remarked, "*Online selling has increased these days. Those who can do it are increasing their business now through digital means. However, since I am technologically incompetent, I fail to benefit from digital channels*".

- *Lack of direct access to customers* – Majority of the independent artisans complained about not having direct access to customers. They mostly sell to middlemen, who save a significant portion of profit for themselves, leaving the actual producers with negligible income. One artisan said, "*I do not have any independence in what I am producing. Satisfaction of income is also not there, because the middlemen bag the greater share of the profit attained after selling the product*". Lack of access to customers also disallow the artisans to have accurate knowledge regarding their customers' needs and preferences, which eventually hinder the artisans' market performances.

- *Lack of skill upgradation sources* – Majority of the artisans interviewed stated that they have limited access to channels, which can teach them on how to upgrade their skills, on how to innovate newer product and design ideas. The training facilities available mostly follow conventional curriculum, which many artisans feel will not add much value to their existing skill set. This gets reflected in the remarks of one artisan, "*There are no channels to teach us innovative product and design ideas that have more market value. As a result, most of us are compelled to implement traditional designs that we have learnt from our parents and family members*".

- *Lack of knowledge regarding government schemes* – The artisans interviewed recorded that they receive important information regarding government schemes from local DIC (District Industry Center) office. However, the ongoing pandemic scenario has imposed restriction on physical movement, making it difficult for artisans to commute to DIC office and collect important information. Lack of knowledge regarding the digital medium also disallows the artisans to resort to online channels for collecting information regarding government schemes. One artisan said, "*This COVID19 pandemic has killed us socio-economically. It has hampered our sale. Moreover, due to lockdown, we also cannot visit*

government offices to know about the welfare plans adopted by the government for our benefit. This lack of knowledge regarding government schemes has worsened the scenario".

- ***Alienation from the digital world -*** Contemporary digital technologies have heightened itself to such a status that information and knowledge have become the most important and accessible resources in this era. Yet, our in-depth interaction with the artisans revealed that very few, around 10% of the total artisans interviewed recorded resorting to digital medium for the purpose of their trade. Although, all members of our target group are possessors of smart phones, widespread instances can be found where the artisans remain incapable in optimally utilizing the fruits of the mobile devices. Digital ignorance of the majority has disallowed them to access and use the information available virtually for the betterment of their business. One artisan remarked *"...although I sometimes see cinemas in youtube in my phone, I do not know how to use my phone to derive business benefits*".

The multifaceted hindrances faced by the artisans as discussed above marks the different dimensions, which cumulatively limit the socio-economic performances of rural artisans. We will categorize the varied hindrances faced by the artisans into concrete second order theorizations, by analyzing the artisan responses as first order concepts. The following table is dedicated for this purpose:

Supporting Testimonials (First Order Concepts)	Second Order Theorizations
- "…due to lockdown, we also cannot visit government offices to know about the welfare plans adopted by the government for our benefit. This lack of information regarding government schemes has worsened the scenario"	Information Divide
- "I know what people in my locality are making. But I do not know what other artisans beyond my local context are producing. It would have been much better if I could know about what artisans from different regions are making. There is a lot to learn by seeing other's works"	Poor Social Capital
- "I do not know how to innovate new business prospects". - "There are no channels to teach us innovative product and design ideas that have more market value. As a result, most of us are compelled to implement traditional designs, we have learnt from our parents"	Knowledge Divide
- "Online selling has increased these days. Those who can do it are increasing their business now through digital means. However, since I am technologically incompetent, I fail to benefit from digital sources" - "I do not have any independence in what I am producing. I am given strict orders from the middleman for whom I work. Moreover, satisfaction of income is also not there, because the middlemen bag the greater share of the profit attained after selling the product"	Market Divide

5.1.3 Discussion

The above discussion highlights that the multifaceted hindrances faced by the artisans, as evident from our qualitative interactions, can be categorized broadly into information, knowledge and market divide and poor social capital. Lack of information regarding government schemes, can be categorized as information divide or lack of purely factual data. Poor social capital of artisans gets reflected in the networking issues they face.

Poor communication channels with local as well as global buyers and sellers put the rural artisans in disadvantageous positions. Knowledge divide, comprising of information divide coupled with lack in skill, experience and attitude, gets reflected in the artisans' ignorance regarding innovating new business prospects, innovating new product and design ideas and related things. Innovating business prospects and newer product and design ideas will not be possible if artisans have adequate information regarding business prospects and product and design ideas. It is only when along with adequate information, artisans develop their skills, experiences and attitudes, then only materialization in the form of concrete innovation can take place. Finally, ignorance regarding emerging selling channels and bondage to middlemen, curbing direct market access of artisans, ignorance regarding the market prospects that digital channels can offer can be categorized as market divide.

If the entire artisan community of Birbhum is to be considered as our potential beneficiary, then a group of 70 can only be understood as the subset of the whole group. However, the findings of requirement analysis, attained after conducting interviews with our initial group of 70 artisans, can be taken as a benchmark, against which our intervention can be designed. The findings as discussed above indicate that artisans of Birbhum face hindrances majorly along four-fold axes, namely, information, knowledge and market divide and poor social capital, addressing which will be the concern of our project intervention. We have designed our social knowledge management framework as a response to address the hindrances faced by our target group along the four-fold axes. The motive behind our social technology driven social knowledge management framework is to empower rural artisans and improve their socio-economic prospects by overcoming their information, knowledge and market divide and improving their social capital. And this we wish to achieve through the formation of purposive virtual communities, namely community of practice and community of purpose among rural artisans and across rural-urban entities.

The concept of virtual communities was introduced by Rheingold (1993)[61] in his popular book "Virtual Communities" where he described them as 'group of people who discuss a topic in a computer-mediated way sufficiently long with sufficient emotional involvement and who form interpersonal relationships. Virtual communities are online social networks in which people with common interests, goals, or practices interact to share information and knowledge, and engage in social interactions (Chui et al, 2006)[62]. It is the nature of social interactions and the set of resources embedded within the network that sustains virtual communities. Virtual community thus acts as a medium of interaction and communication that binds community members across geography for the purpose of enhancing both bridging ad bonding social capital (Lin, 2001)[63]. Social capital is a resource that can combat social exclusion. Trust, social interaction and mutual reciprocity via online communities have the potential to create an interactive environment for the residents.

In our context, what becomes important is which sort of community formation is to be cultivated to attain maximum benefits. Community of practice, facilitating practice-oriented collaborations within and across groups enables rural members to enhance their social capital and overcome their information and knowledge divide. However, it necessarily does not guarantee translation of enhanced capability into generating concrete economic results. Thus, community of practice can improve social capital and mitigate information and knowledge divide of rural producers, but not their market divide. In order to address the four-fold hindrances faced by rural artisans as stated above, in our project intervention, we have attempted in cultivating both community of practice and community of purpose among rural artisans and across rural urban entities through our social knowledge management framework.

The community of purpose, although under-defined in existing literature, can be defined as a community of people, unified with a common goal, purpose or objective. The reason why we think the community of

[61] Rheingold, Howard (1993) The Virtual Community: Homesteading on the Electronic Frontier. USA.
[62] Chiu, Hsu & Wang (2006) Understanding Knowledge Sharing in Virtual Communities: An Integration of Expectancy Disconfirmation and Justice Theories. 11th Pacific-Asia Conference on Information Systems.
[63] Lin, N. (2001) Social capital: a theory of social structure and action. Cambridge: Cambridge University Press.

purpose can be a prospective means to mitigate market divide of rural target group is because of the promise of purposive collaboration and networking that it assures (Stukes, 2016)[64].

The following section are dedicated to discuss the different components of our social knowledge management framework and how each component is designed to facilitate successful formation of purposive virtual communities among rural artisans and across rural-urban entities (community of practice and community of purpose), so that their information, knowledge and market divide can be addressed and social capital can be improved on a holistic scale.

5.2 Components of proposed Social Knowledge Management Framework

We have designed our social knowledge management framework in a way so that it can be effective in ushering holistic rural empowerment by improving social capital and mitigating information, knowledge and market divide faced by rural artisans. In order to address the four fold hindrances stated above, we have architected our social knowledge management framework by segmenting the framework into three concrete components.

5.2.1   NCore : A Social Knowledge Management Platform to bridge Knowledge Asymmetry using Social technologies

Our social knowledge management framework comes with a digital platform, NCoRe. NCoRe is designed to facilitate the formation of both community of practice and purpose among rural members and across rural urban entities. The platform's offering is divided into three segments:-

- Firstly, the platform offers the opportunity to urban consumers to co-create handicraft and handloom goods by collaborating with a range of rural producers.
- Secondly, the platform acts as a classic exhibiting site for a range of products (garments, bags, jewelleries, home décor items, etc.) created by artisans of Birbhum. The products are displayed in the platform, along with the stories of their respective creators. NCoRe houses online shops of a vast range of artisans from Birbhum, where stories of each artisan along with their videos and product photos are displayed.
- Thirdly, NCoRe offers both rural and urban entities unhindered opportunity to avail for skill upgradation prospects. The synchronous training facilities integrated in the platform while allows rural artisans to upgrade their skill by virtually connecting with domain experts on one hand, on the other hand, NCoRe also allows urban entities to get training from rural producers on indigenous art and craft.

5.2.2   Creating Community of Practice through Whatsapp community chat

Triggering interactions between rural artisans and across rural-urban entities by forming whatsap groups happens to be one component of our social knowledge management framework. Through whatsapp, we have attempted in enhancing both bridging and bonding social capital of rural artisans residing in Birbhum. We have created groups in whatsapp, where rural artisans all across Birbhum have been incorporated and they get a chance to engage in purposive knowledge exchange both within and across their community. It is through whatsapp, members of our RO send rural artisans asynchronous videos to boost up their production capacity. This implies the importance of whatsapp as a tool in our research intervention to facilitate cultivation of community of practice among our selected target group

5.2.3   Creating Community of Purpose through Facebook

One of the mottos of our social knowledge management framework is to familiarize rural artisans of Birbhum with social media sites like Facebook and Instagram and help them in using the same to derive

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[64] Stukes, F. (2016). Communities of Purpose. (PhD Thesis). The University of North Carolina. Charlotte.

business benefits. While through whatsapp, we have attempted in cultivating community of practice among and across rural urban entities, through social media sites like Facebook and Instagram, we have tried to transcend beyond triggering practice-oriented communication to purposive communication culminating to economic exchange. It is the cultivation of community of purpose leading to concrete business benefits that we have attempted to facilitate by taking resort to social media sites. Members of the RO have opened Facebook and Instagram accounts of individual members of the target group, where the products created by individual member artisans are exhibited, along with their stories and journeys to a range of social media users. The intention is to connect these artisans and their creations with the global pool of consumers, where purposive collaboration between the two is expected to attract concrete socio-economic benefits for the artisans. Cultivation of community of purpose via social media channels will not only improve social capital of rural members, but will also make a significant contribution in addressing their market divide.

In the following two chapters, we will elaborate these topics. In chapter 6, we will explain our technology development initiatives and narrate the design and development of a Community Driven Social Knowledge Management Platform to bridge Knowledge Asymmetry using Social technologies (NCoRe). We will also explain development of "Artisan Profiling App" for collecting artisans' profile in multi-media. In Chapter 7, we will show how the use of social media can supplement our SKM Framework. We will explain how we have cultivated Community of Practice through WhatsApp, enabling intra-and inter-community knowledge exchange; and, how we have cultivated Community of Purpose through Facebook to promote market linkage for artisans.
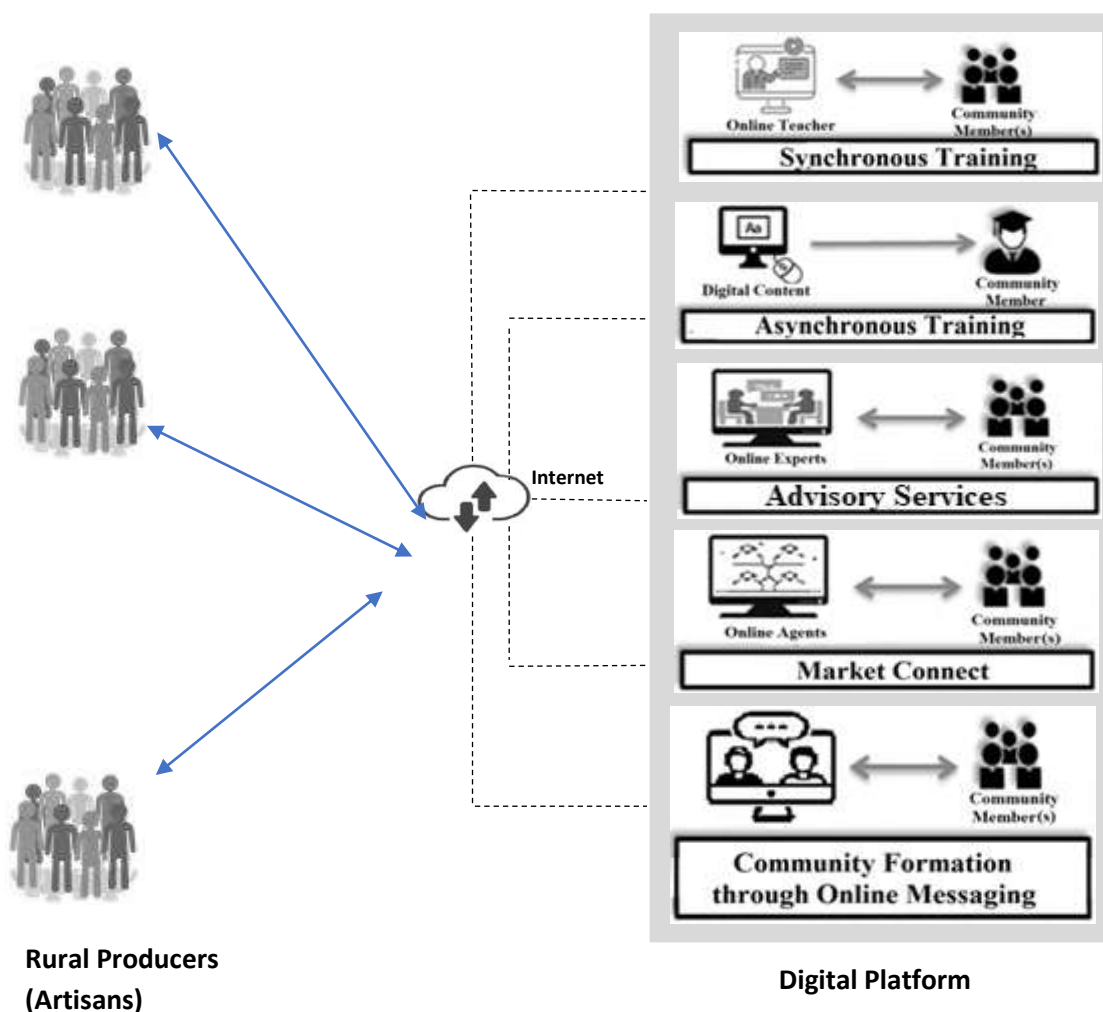

Figure 1. Functional Description of SKM Program Intervention

Technology Development:
A Social Knowledge Management Platform using Social technologies (NCoRe)

6.1 Development of NCoRe: A Social Knowledge Management Platform for Rural Artisans

In this section we will extensively talk about a social technology enabled Social Knowledge Management (SKM) platform to cultivate formation of virtual communities for rural producers on an integrated scale. Our SKM platform is an e-connecting and e-supporting platform, hosting a diverse range of entities, which include partners, mentors or trainers, end users and rural producers, all in one platform. The platform, by housing diverse agents, attempts in facilitating purposive collaborations through the formation of virtual communities.

6.1.1 SKM Platform: System Design

SKM platform facilitates communication, collaboration and trade between rural producers, partners, urban experts and trainers and other actors in the system. Specifically, it promotes transactions between rural producers, partners and other stakeholders (end users and mentors or trainers) by providing a standardized, flexible and open platform that not only improves productivity but also ensures fairness and financial benefits to all. The collaboration facilitated by this platform ensures transparency and helps in optimizing the positions of all stakeholders in the business. This platform provides a virtual space through which multiple actors in this system can exchange knowledge between them. We termed this virtual space as 'community'. Thus, this platform can be defined as a temporary association space of autonomous crowd workers who establish dynamic peer-to-peer connections to collaborate with each other through coordinated sharing of skills, resources, information, risks, costs and benefits, in order to satiate a given business opportunity.

The different modules of SKM platform, as depicted in figure 1, are discussed below:

Users

There are total 4 types of users in the system: (i) Rural Producers; (ii) Partners; (iii) End users; (iv) Mentors/ Trainers. All users are allowed to access the different modules of the SKM platform via a web interface from any computers or from individual smartphones.

- **Rural Producers:** The rural producers can advertise their profile, product details, contact details, skill sets, production capacity and product feedback, which will be maintained in a digital catalogue. The rural producer is also encouraged to view other rural producers' samples to broaden their outlook and learn from peers, while at the same time, make better and more informed decisions about skill enhancing and price quoting. Every rural producer participates in community activities under "user community" which will be detailed later.

- **Partners:** The partners are micro-entrepreneurs or urban traders who are willing to buy any product directly from the rural producers or can collaborate with rural producers to make customized products. Partners in the SKM platform can view profiles of rural producers in digital catalogues and express interest to collaborate for purchase from rural producers. Partners or micro entrepreneurs may need to customize a selected product/ design, to cater to a sizable market need. In that case, (s)he may need to train the rural producers to make that customization and then place an order for the customized product through the same module and also can access the training module to train the selected rural producers

online. Following the release of the suggested rural producer list for a specific job, partners can directly work with rural producers, provide them with the necessary training and make required customizable items as per his/her requirements.
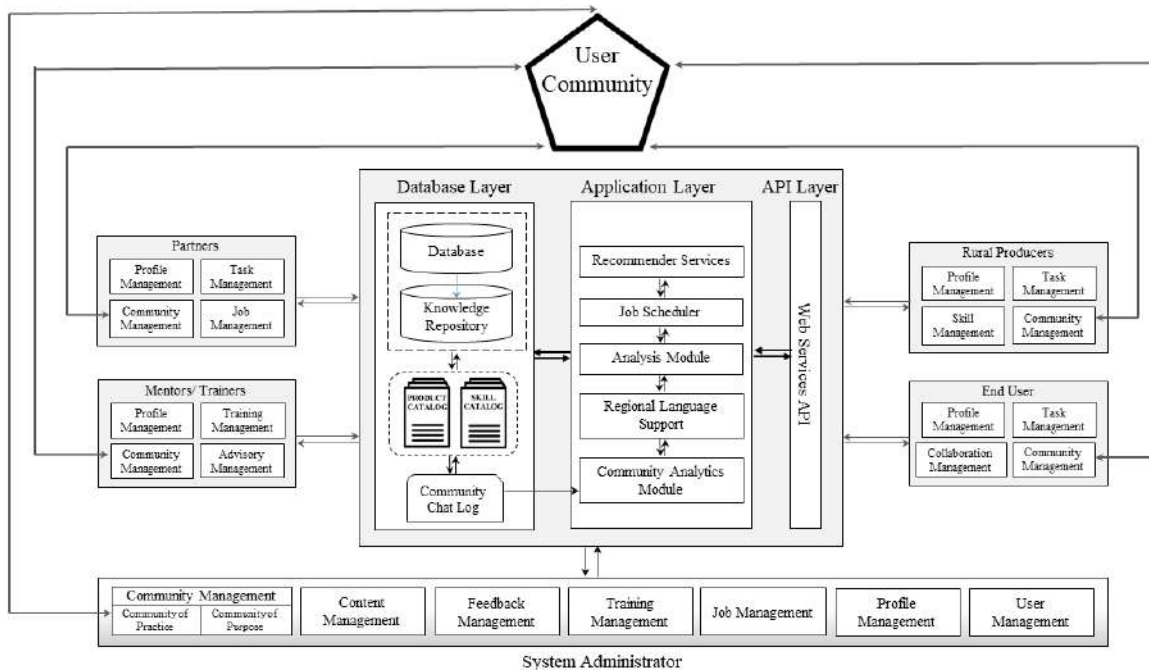

Figure 1. SKM Platform: System Design

- **Mentors / Trainers**: Responsibility of a mentor/trainer in the SKM platform is to provide training on skill up-gradation of any rural producer or giving expert advice to rural producers on any issue of concern. They will conduct various training sessions remotely (through platform) to any individual user or to a group of users on a particular topic. A trainer can also post asynchronous video clippings on any specific topic to train the users in the platform. Expert rural artisans also can be trainers who can train urban designers on indigenous art-form / craft-skills on demand.

Application Layer

- **Analysis Module:** The order distribution, product demands, customer comments, feedbacks, product ratings etc. for individual rural producers will be fed into this module which will be analysed to suggest the scope of future improvement in the business of a rural producer.

- **Job Scheduler:** Partners in the SKM platform can send his/her requirements to the system administrator for purchase of a product(s) or collaborate with artisans for create customizable products. In this case, partners want to send the exact requirements to the administrator via SKM platform. Based on the received parameters from the partners, system administrator will find the prospective rural producers from the backend database. Rural producers are negotiating with the partners regarding final price of the product, delivery deadline, product quantity etc. Conceptually, the primary task of this module is to-

  ➢ *Efficient Load Balancing*: keeping all available resources uniformly busy
  ➢ *Ensuring quality of service*: Selecting resources to ensure QoS
  ➢ *Minimizing Response Time*: Time from work becoming enabled until it is finished
  ➢ *Maximizing fairness*: Granting equal opportunity to all users according to the priority and workload

- **Regional Language Support:** This module uses a backend client library to provide the contents of the SKM platform in regional languages so that rural producers can interact seamlessly. Since we have designed this platform keeping in mind rural context, the platform provides provisions for rural users to navigate using native language.

- **Community Analytics Module:** Basic messages and discussion themes are the core content of SKM platform. Messages are information that is passed from one person or a group of people to another with the intention of producing an effect. Discussion themes are information or ideas designed specifically to focus the attention of a group on a problem and generate dialogue about possible actions to be taken. Actors in our system can participate in the *user community* module by sending a request to the system administrator. Based upon the approval status of the system administrator, an actor can post messages in the form of text or image. This module also allows different actors to post short videos related to any specific topic. Other actors can also reply to the same by typing some text or attaching an image file. Every communication between community members will be subsequently analysed by the system and a short track record will be kept in the database in the form of 'chat-log' for future use.

  Several studies indicate that most of the talented rural producers are fragmented and geographically not well connected. In this context, the "Community" (a virtual knowledge sharing space) serves multiple purposes. Firstly, it will bridge the communication gap between the community members by creating a digital knowledge repository/space that allows for the provision of knowledge accumulation and sharing, which equally increases the chances of solving local issues and helps rural communities to achieve business prospects through inter and intra group virtual networking. Secondly, it allows creating a digital repository among all stakeholders in the rural-urban production system to necessitate cultivation of their skill set.

API layer

Web services API is an interface that allows exchanging data and functions with Application Layer. Web services in our framework are XML-based information exchange systems that bundle with open protocols and standards for exchanging data between user and application layer of the SKM platform.

System Administrator

The system administrator is responsible for the upkeep, configuration, and reliable operation of the platform. The functional description of each activity of the system administrator is given below:

- **User management:** User management describes the ability for administrators to manage user access to various components of the systems. It maintains a directory service that has the capacity to authenticate, authorize, and audit user access in the platform. Present version of the SKM platform caters 4 different types of users, namely rural producers, partners, trainers and end users. Every user has different roles and responsibilities in the SKM platform. All roles and responsibilities have been managed by system administrator from this module.
- **Profile management:** Profile management auto-consolidates and optimizes user profiles in order to minimize management and storage demands and needs minimal administration, support and facilities while offering enhanced options for users.
- **Job management:** Job Management module in the SKM platform is responsible to collect the collaboration request from the partners or from the end users. This module analyses the exact requirements of the customers (partners or end users) and prepare a prospective list of rural producers

who are willing to cater to the requirements. There are few activities which are performed by this module. They are: a) Organize and search by collaboration request. b) Manage the list of rural producers, who are available to handle those requests. c) Manage requests through an easy to use console.

- **Community Management:** Community management is one of the most important activities in our platform. Here we deal with two types of virtual communities: (i) Community of Practice: a group of actors who share a concern or a passion for something they do, and learn how to do it better as they interact regularly, and (ii) Community of Purpose: is a group of actors in our platform who participate in the process of a product life-cycle from production to consumption.

- **Training Management:** Training Management module keeps track of all training related activities, which are conducted through our platform. Broadly, this module has 2 different activities; (i) Synchronous Training and (ii) Asynchronous Training. Synchronous Training connects trainers and learners synchronously via an integrated video conferencing system based on the requirements received from the trainers and trainees. On the other hand, Asynchronous Training module in this platform manages a repository of small video training materials / tutorials in regional languages, which are created or collected from cyber world. These training materials are available on the SKM platform that can be directly accessed by rural producers for betterment of their skills and knowledge.

- **Feedback Management:** This module captures and processes the feedback of different actors and performs analytical operations to produce meaningful results.

- **Content Management:** This module is a set of processes that supports the collection, managing, and publishing of digital content in our platform in any form or medium. Modification or adding new contents in the platform can be done through this module.

Apart from these modules, SKM platform introduces an "Advisory Services" module which enables users to send their requirements directly to the system administrator for immediate attention. Presently, advisory services are provided on four issues: Business Support, Govt. Information, Legal Support, and Emergency Management.

6.1.2 Implementation of SKM Platform: NCoRe

The architectural framework of SKM platform described above is an integrated, decentralized knowledge management platform that can facilitate formation and cultivation of both communities of practice as well as communities of purpose among relevant rural-urban actors. The proposed SKM framework is implemented in Hybernate (a Java web framework) with backend system in MySQL database and hosted in a cloud based web server with web URL: www.ncore.co.in

NCoRe is a creative digital platform, connecting rural artisans to a global network of urban buyers and designers to collaborate and co-create handcrafted products. NCoRe promotes rural artisans and their traditional & indigenous art forms in the global marketplace by providing an organic connection between rural artisans and urban consumers. This platform also provides a social B2C or C2C e-Commerce marketplace to the urban consumers for unique fashionable handmade goods by trusted rural artisans. In this context, NCoRe will directly link these urban consumers with thousands of rural artisans. These artisans have the skill and traditional abilities to redefine fashion in accordance with traditional culture and heritage.

User view of NCoRe platform

The platform works based on three things to connect rural artisans directly to the urban market, namely "Buy Product", "Create Product" and "Education & Training" (Figure 2).
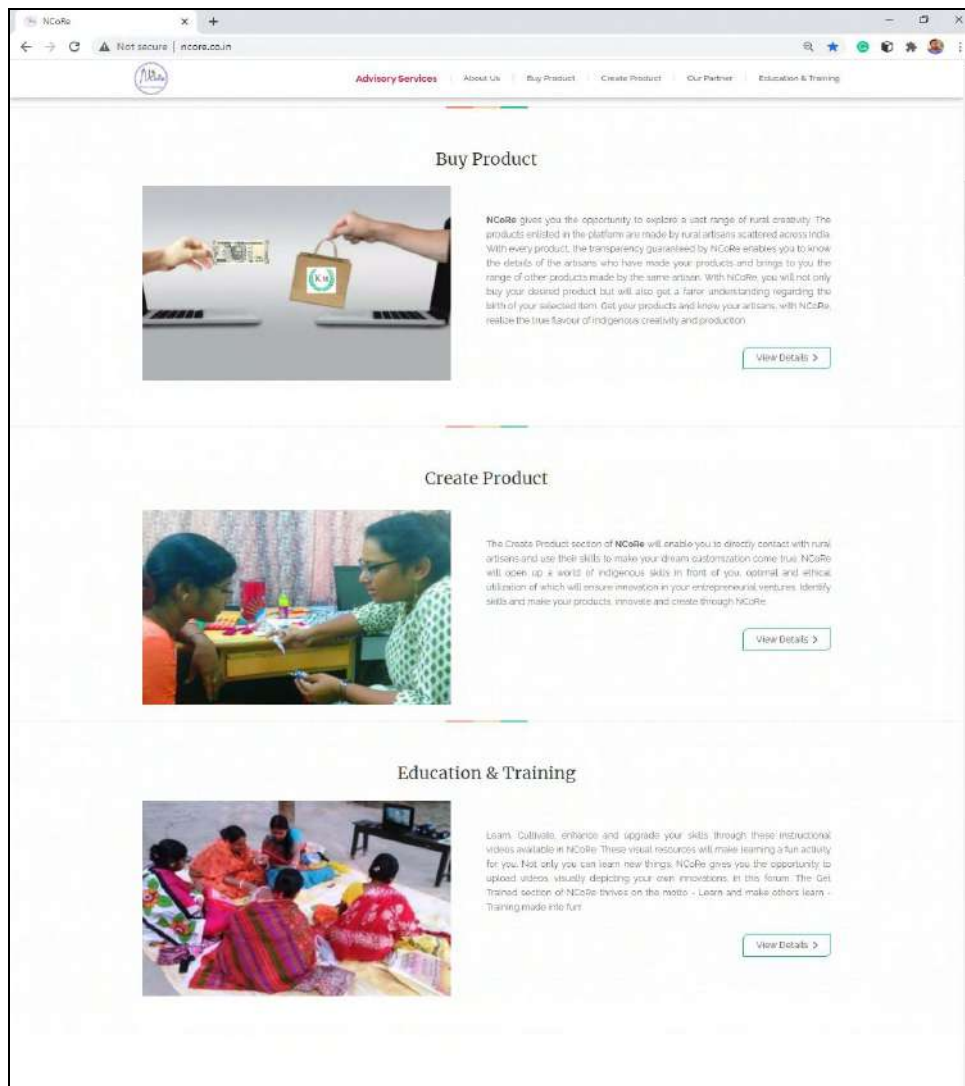
Figure 2. A glimpse of NCoRe platform (URL: www.ncore.co.in)

Buy Product section in the platform (Figure 3) is a business model which allows promoting rural artisans with their products along with price and other features directly to the customers. Through this section, a customer can place an order for particular products which directly notifies the artisans with a track record in the platform.

Any user can search an item in the platform by applying **3 different filers** (Product Category (Fig 3(A)), Sub-category (Fig 3 (B)) and Art-form) present the top of the website. Based on the search string, the platform will display some relevant items from the database. Every "product detail" page is displaying the artisan, the producer of the product (Figure 3 (C)). On clicking the artisan name, the entire artisan profile with his/her digital shop is displayed.
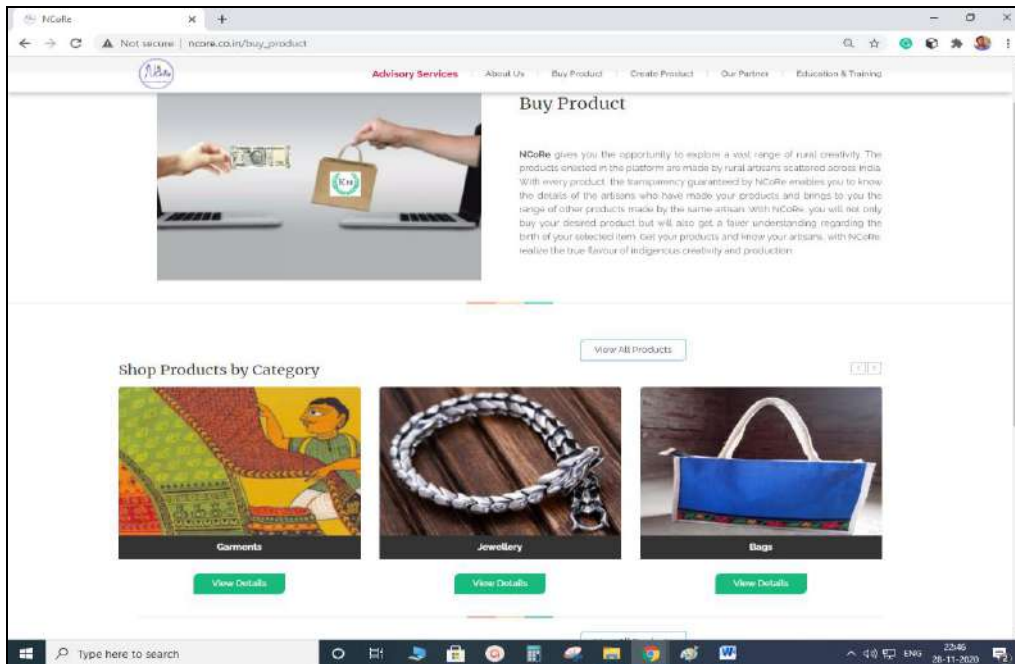
A. Product Category
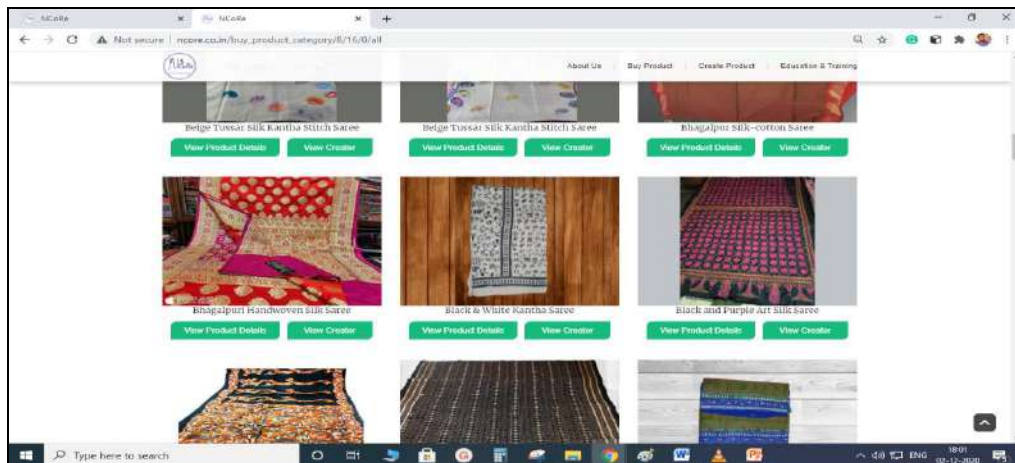
B. Product Sub-category (Saree)
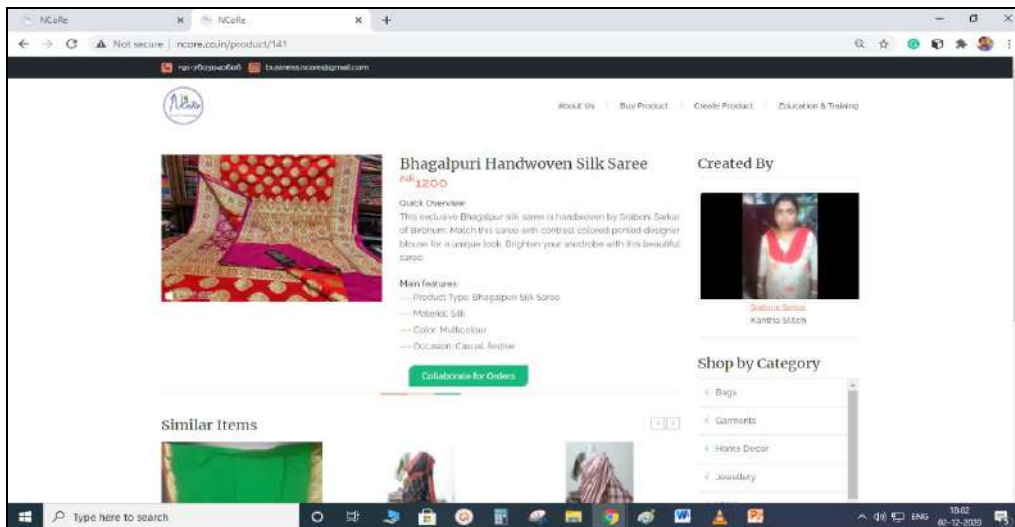
C. Product & Artisan Details

Figure 3. "Buy Product" section in the NCoRe platform

Create Product section in the NCoRe platform (Figure 4) will allows customers to co-create any product as per their own needs with the help of rural artisans. This section provides a collaborative environment which allows customers to know about any handicraft art-form and the associated artisans. Co-creation in the NCoRe platform will be done in the following 4 steps:

1. User can search some artisan by their 'Art & Craft' or 'Skill'.
2. Based on the 'Art & Craft' and 'Skill', a user can select one or more than one artisan.
3. User needs to do the negotiation with the artisan regarding the price, timeline etc. and finalize it.
4. Place the order and the item is delivered.
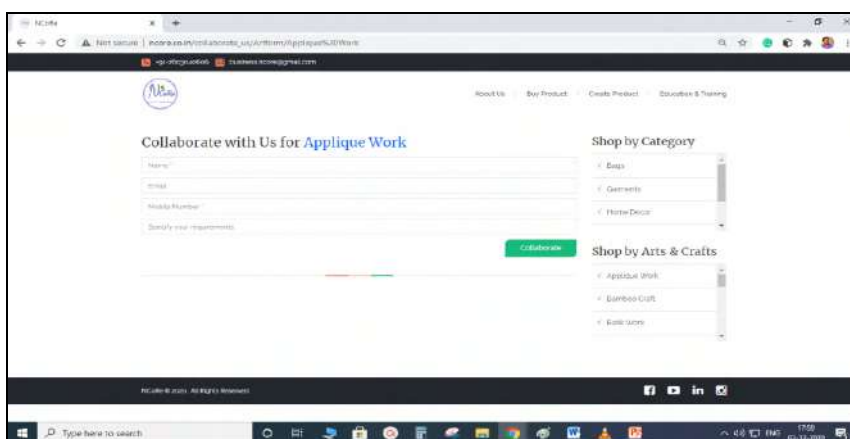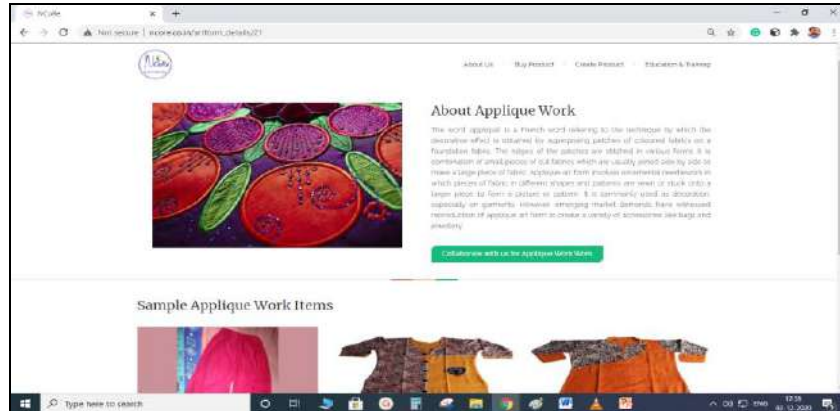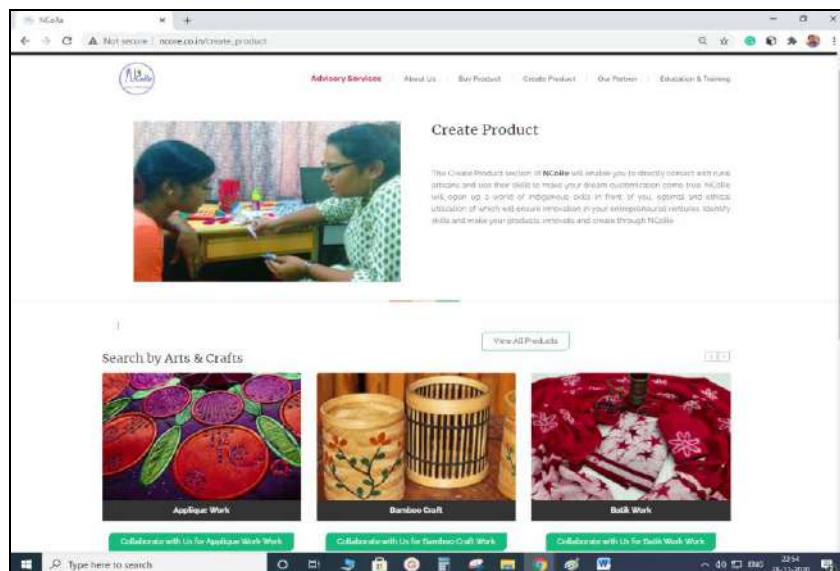
Figure 4. Create Product section in the NCoRe platform (URL: http://www.ncore.co.in/create_product)

Through "**Education & Training"** section in the NCoRe platform (Figure 5), an artisan can get trained from urban designers/trainers, or, an urban consumer can learn about traditional rural art form from rural artisans. Anyone can request for a trainer for live synchronous training using video conferencing platform, e.g. Zoom.

Also, an user can search/view the short video tutorials (asynchronous training materials) on different topics collected or created in the platform as per requirements.
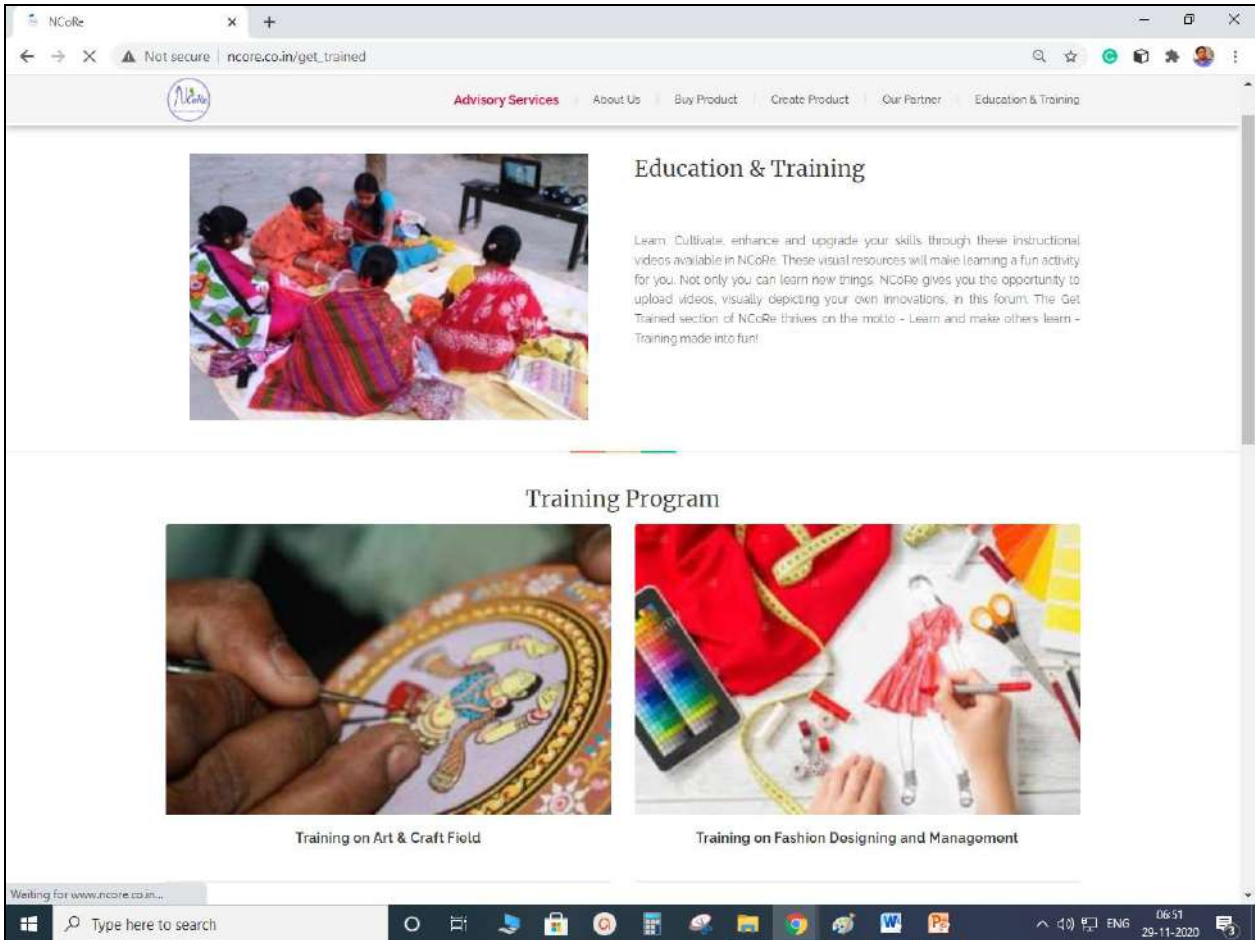
Figure 5(a). Education & Training section in the NCoRe platform (URL:
http://www.ncore.co.in/get_trained)
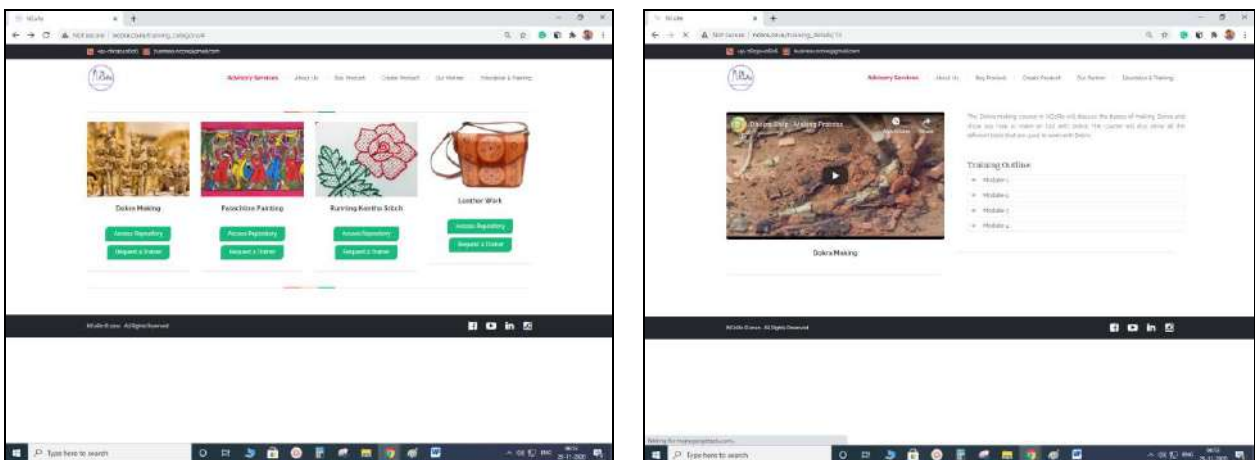
Figure 5 (b). Asynchronous Training modules in NCoRe Platform
(URL:http://www.ncore.co.in/training_category/4)

Apart from the above three functionalities in the NCoRe platform, a user can additionally find the following details in the NCoRe home page (Figure 6):

    (i)   Details of all on-boarded artisans with their digital shop in NCoRe platform which includes their promotional video, their handcrafted products with detailed description and price

    (ii) Detailed product catalogue of various handicraft items of Birbhum district

    (iii) Details of different traditional and indigenous art & craft of Birbhum.
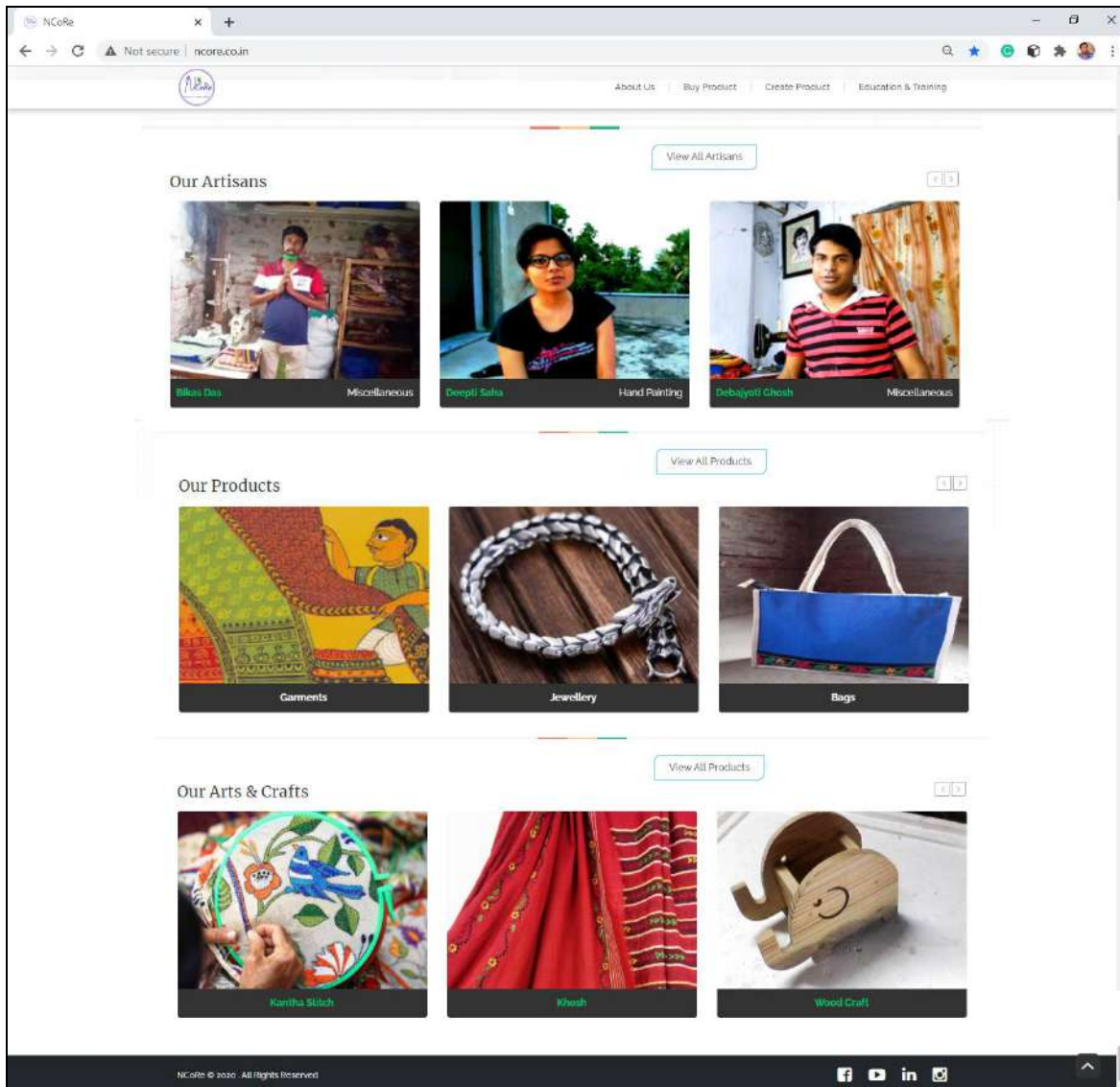
Figure 6. Details of on-boarded artisans, product catalogue and Art & Craft details of Birbhum

(i) Details of Birbhum Artisans:

All the artisans who are currently on the NCoRe platform are from Birbhum district of West Bengal and primarily involved in making handicraft and handloom items (Figure 7). This section allows creating a digital shop of every artisan to showcase their skills and products. Every digital shop has two different sections; (i) profile details section of artisans (Figure 8); and (ii) product details section of artisans (Figure 9). In the profile details section, an artisan can promote his/her skill by making a short video with a general introductory section which primarily includes, short bio of artisan, practicing art-form, year of experience, address etc. In the product details section, an artisan can showcase their products with detailed description. This entire profile is projected to the end-users of the platform in order to make a direct connection between them (end-users & artisans) and also to promote them in the global market place.
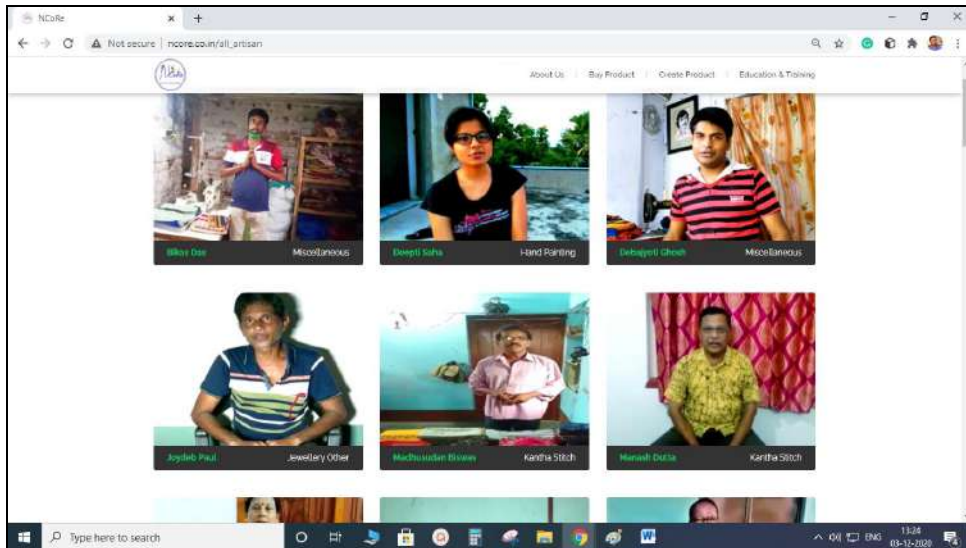
Figure 7. All artisans onboarded in NCoRe platform (URL: http://www.ncore.co.in/all_artisan)
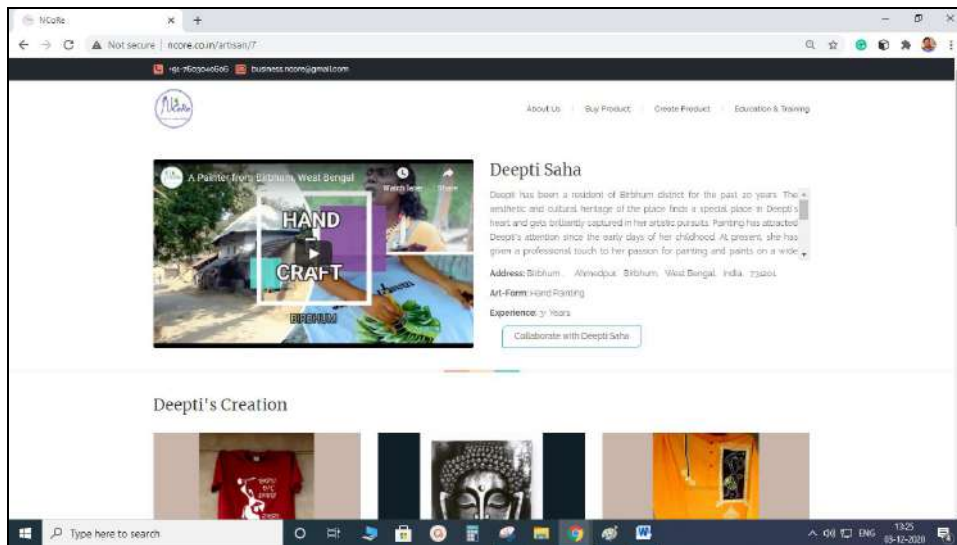
Figure 8. Digital shop of an artisan in NCoRe platform (URL: http://www.ncore.co.in/artisan/7)
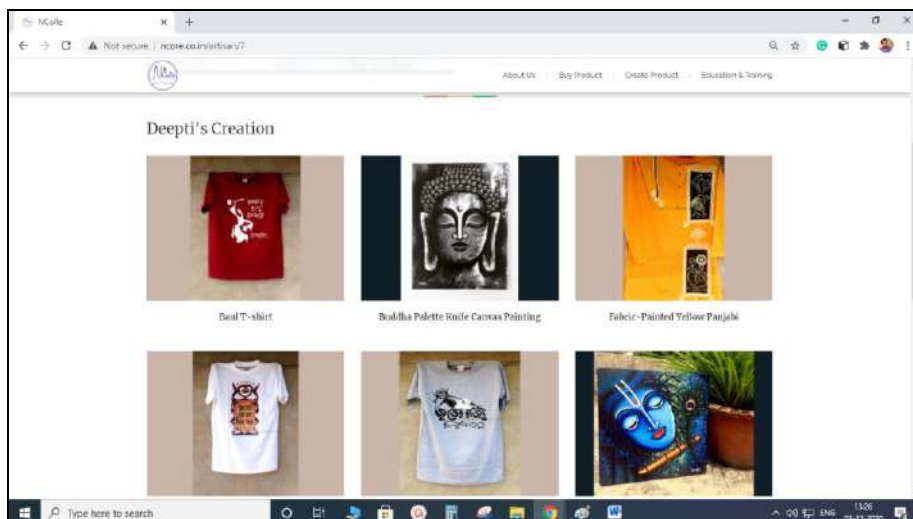
Figure 9. product gallery of an artisan (URL: http://www.ncore.co.in/artisan/7)

(ii) Detailed product catalogue:

NCoRe platform primarily promotes the handicraft items of Birbhum district. All products in the platform are manufactured by handicraft artisans that have been categorized in different sections like Garments, Jewellery, Bags, Home decor and Utilities. All items in every category are further subdivided into sub categories for better representation and visualization in the platform. Category and sub category of products are further used as a search string to find the required items easily from the database (Figure 10).
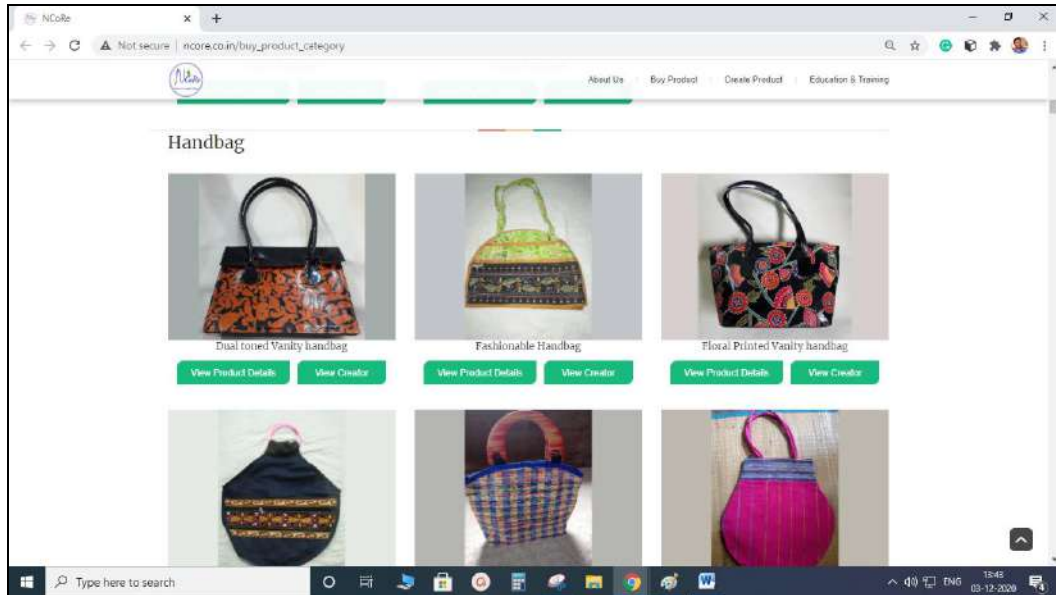
Figure 10. Product sub category "Handbag" made by rural artisans of Birbhum (URL:

(iii)Details of different traditional and indigenous art & craft of Birbhum

Birbhum is rich of culture and heritage. It is very important to categorize all handicraft items made by rural artisans as per the art & craft. In this context, NCoRe platform categorize all items as per the art form associated of a product, which shows the clear meaasge and better understanding about the products to the viewers of the platform. Presently NCoRe platform caters the following art-forms of the Birbhum district, like Katha Stitch, Khesh, Wood craft, Hand painting, Leather craft, Dokra art, Batik painting, Applique, Teracotta, Bamboo work, Jute work, Oxidized metal and different jewellery. A sample art-form is shown in figure 11.
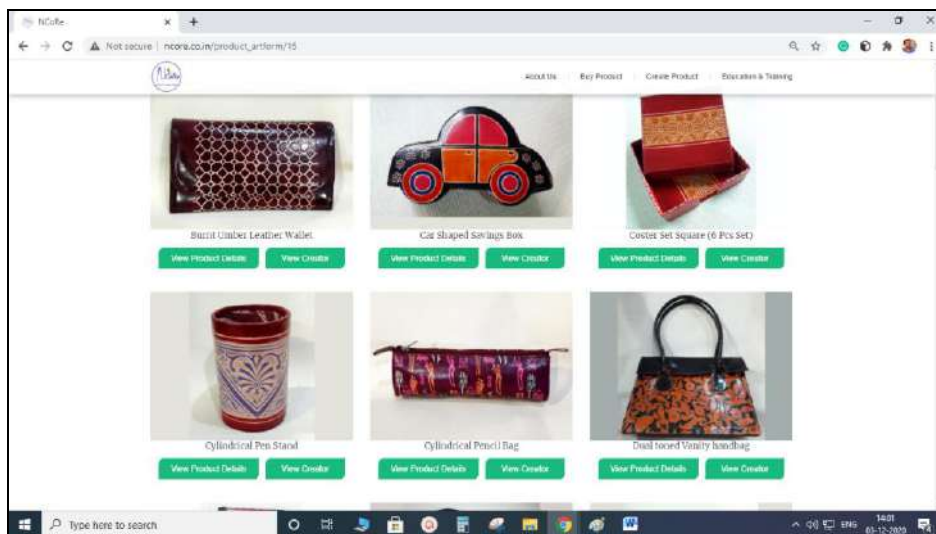
Figure 11. A sample of leather craft is shown in the above picture (www.ncore.co.in/product_artform/15)

6.1.3 Administrative modules in NCoRe platform

User Management Module:
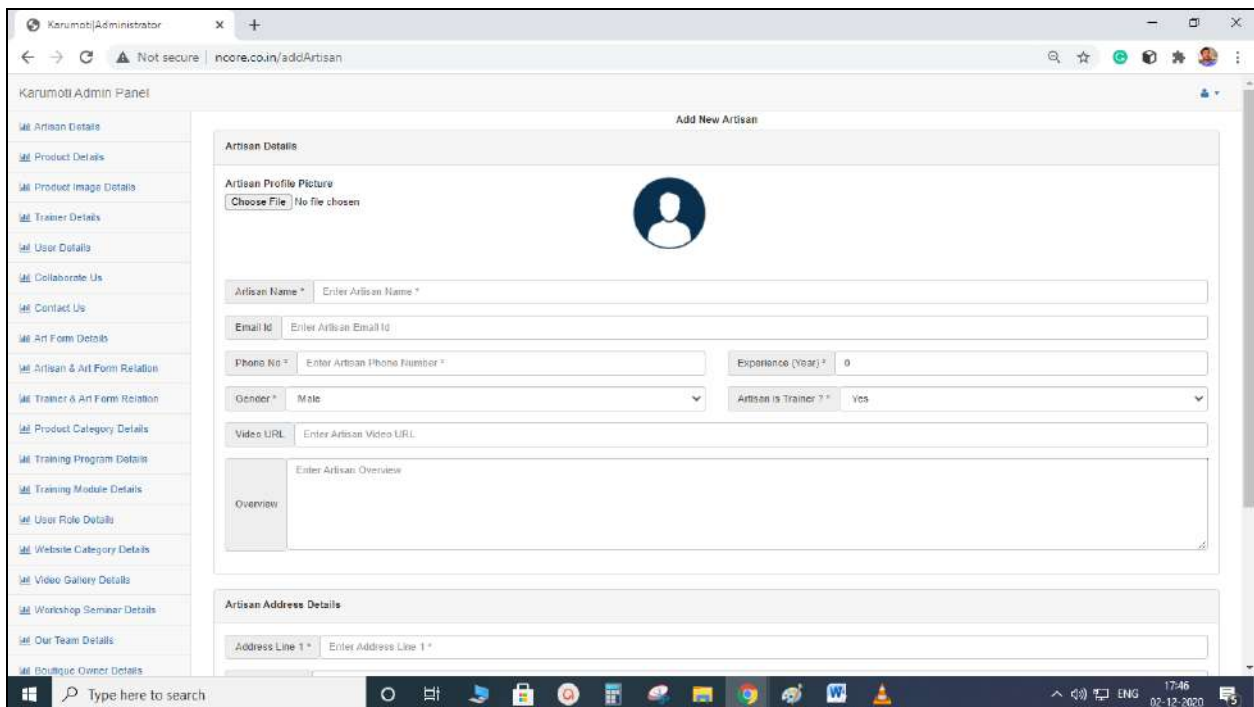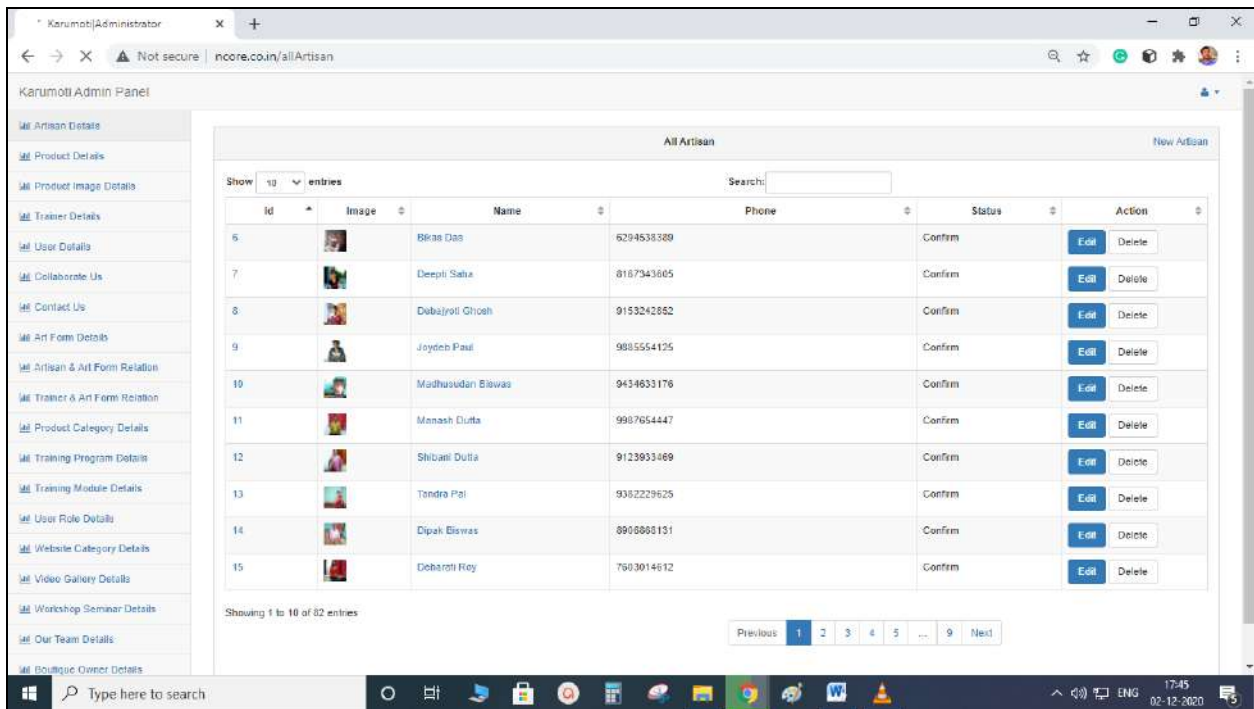
Product (content) Management Module:

Training Management Module:

Profile Management Module:

Feedback Management Module:

6.2 Development of "Artisan Profiling App" for Collecting Artisans' Profile in Multi-media

6.2.1 About the App

Artisan-Profiling-App is a mobile data collection app and web dashboard that helps NCoRe administrator to collect high-quality data from rural artisans in different ways ranging from simple text, and numeric data to audio and video. The mobile interface of the App allows artisans to capture their product features in native language along with images which permits to creating a digital product catalogue in NCoRe platform. App has different modules embedded in the backend which enable real-time data validations for ensuring better data collection and analysis. It also provides automatic categorization of different products which enable them to automatically group in NCoRe platform. This App helps artisans to create a digital catalogue which includes their personal details like art-form, experience with their product details which includes product features, price, multiple images etc. Just a click of a button, an artisan can publish their profile details with their products in NCoRe platform.

6.2.2 Artisan-Profiling-Apps features

- Automated data collection — in Bengali languages
- Translation — It converts artisan response from Bengali to English and store it in database
- Built-in monitoring — Track entities over time without having to re-enter baseline information.
- Custom validations to ensure data quality
- Upload questionnaires from Excel to quickly build a survey
- Supports different data formats like, text, number, images and videos.
- It supports image and video compression algorithms which ensures data collections in low bandwidth
- Collect multiple artisan data at a same time
- Download data in real time
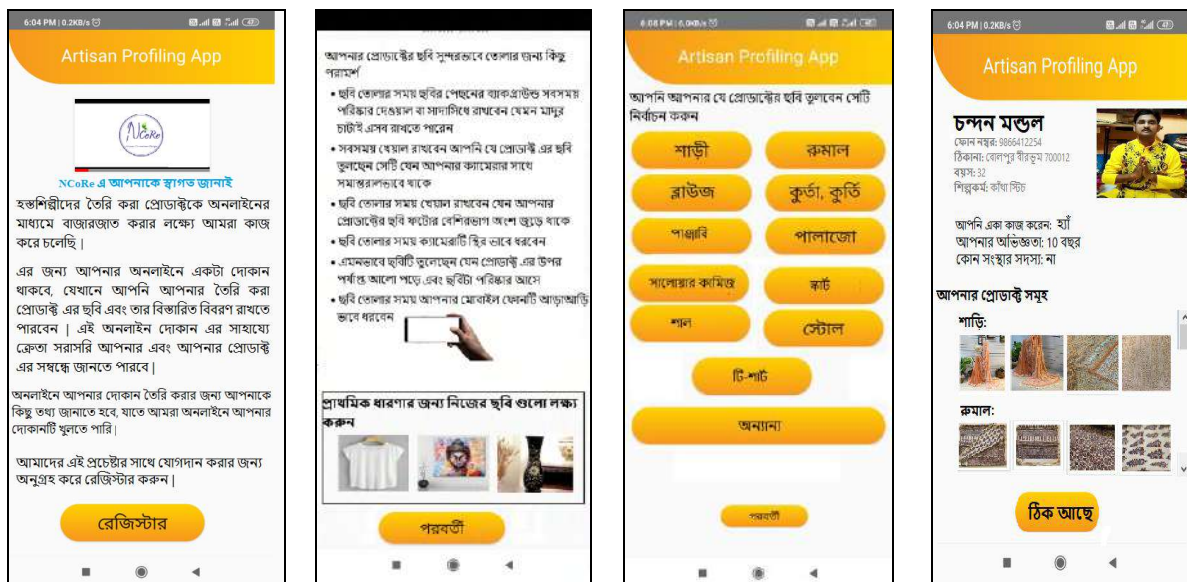
Some sample Snapshot of Artisan-Profiling-App (in Bengali)

Please see Appendix IV for detailed functional flow.

6.3 Onboarding artisans in NCoRe Platform (~100 artisans till date)

6.3.1 Process of Pilot Intervention

On-boarding is the process of helping new artisans to understand and experience how NCoRe platform is going to help them achieve their goal. The intervention towards on-boarding artisans into NCoRe platform has been done in the following ways.

1. Prepare structured questionnaires for the artisans
2. Record the responses of the artisans in digital form
3. Analysis of the responses collected from the artisans
4. Upload their data into NCoRe platform

6.3.2 Prepare structured questionnaires for the artisans

Preparing structured questionnaires for the artisans is the primary measuring instrument in our survey research. The use of a structured questionnaire has a close relationship with quantitative analysis. In this section, we will highlight only the questions on artisan details and his/her product details. Based on the questionnaires, we have interviewed 70 artisans (approx.) from the Birbhum district of West Bengal to collect their details along with their product-related information. All information has been used to create a digital catalogue of them which eventually used to promote them in the global market place to establish market connect with urban agents. For the convenience of explanation, we have shown below a sample example of information obtained from an artisan.

Artisan Details

1. **Name:** Bikash Das
2. **Age:** 35 Yrs
3. **Gender:** Male
4. **Where do you stay?** Pashoa, Bolpur, Dist. Birbhum
5. **How long have you been residing in this place?** Since birth (35 Yrs.)
6. **Are you part of any organization or group? (For eg. -** *Kopai Charulata Welfare Society, Amar Kutir)* DIC, NAC & Amar Kuthir
7. **Which art form do you practice? (***(for e.g., Kanthastitch, Patachitra, Leather Craft)***
   Kantha Stitch
8. **For how long have you been practicing this art form?** Since 9 Yrs.
9. **How have you learnt this art form? (For eg. - From family members or after acquiring professional training from an organization):** Trained from a bag maker residing at Bolpur.
10. **Do you work alone or you have people employed under you? If yes, how many?**
    Yes. 4 people working under him.
11. **What are the different categories of product you make? (for eg. – garments, utilities, kitchen appliances, accessories, etc.)** Accessories & Garments
12. **What are the different product subcategories made by you? (for eg. -** *(for e.g., Saree, Kurta, Kurti, blouse piece in garments; Mugs in kitchen appliances, bags in accessories; Penstand, Coaster in Utilities:* Sling bags, Laptop bags, Hand bags, Shoulder bags, Money purse (male & female), Shopping bags in accessories.
    Kurta & Kurti, Panjabi, Tops, Palazzo, Wrapper in garments

Artisan Name	Art form	Conversation	Progress
Bikash Das	Kantha stitch	Collected all details and instructed for the picture and video	He told that he will send it by tomorrow

6.3.3 Record the responses of the artisans in digital form

All responses are collected from every artisan are stored in a digital space for maintaining the overall consistency and accuracy of the data. These records are used to do the analysis on this in order to extract meaningful information from it. Apart from the above information, we have also collected their profile video and pictures of their products with price and other associated features. Below is one sample glimpse of collected responses (stored in Google Drive).
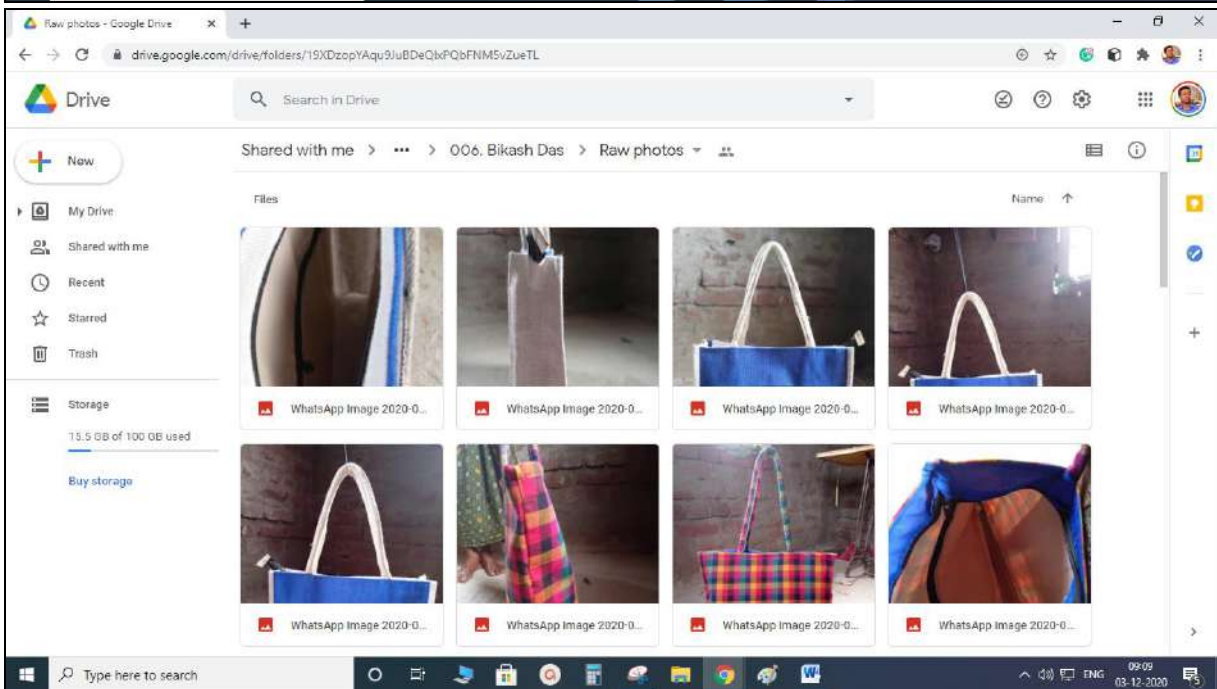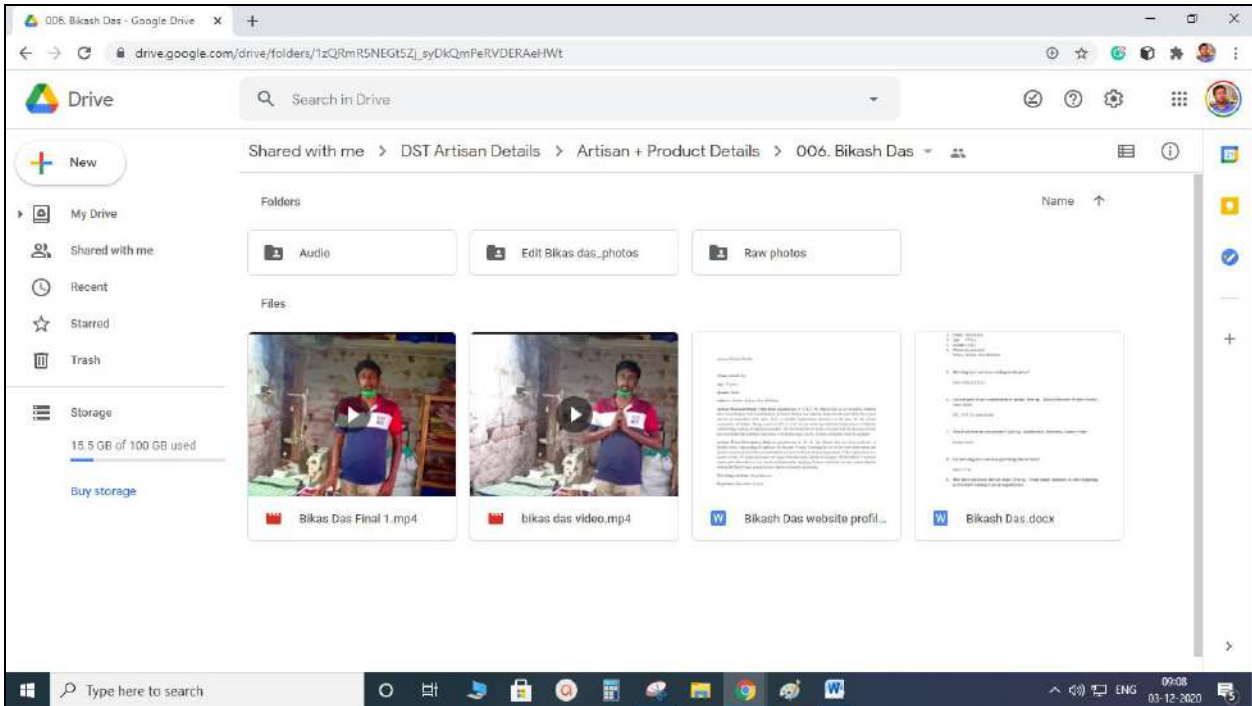
6.3.4 Analysis of the responses collected from the artisans

All responses are collected from the artisans are stored in a spread sheet for analysis. Analysis has been done manually to understand the pattern of collected data and keep a track record of all data in a single place.

6.3.5 Upload their data into NCoRe platform

The last step of artisan on-boarding in our intervention is to create a digital shop of every artisan in our NCoRe platform. For this purpose, we have done post-processing on the collected information from the artisan in order maintain the consistency of the data throughout the website. For the convenience of understanding, below are some screenshots of an artisan's digital shop/catalogue with their detailed product description in NCoRe platform.
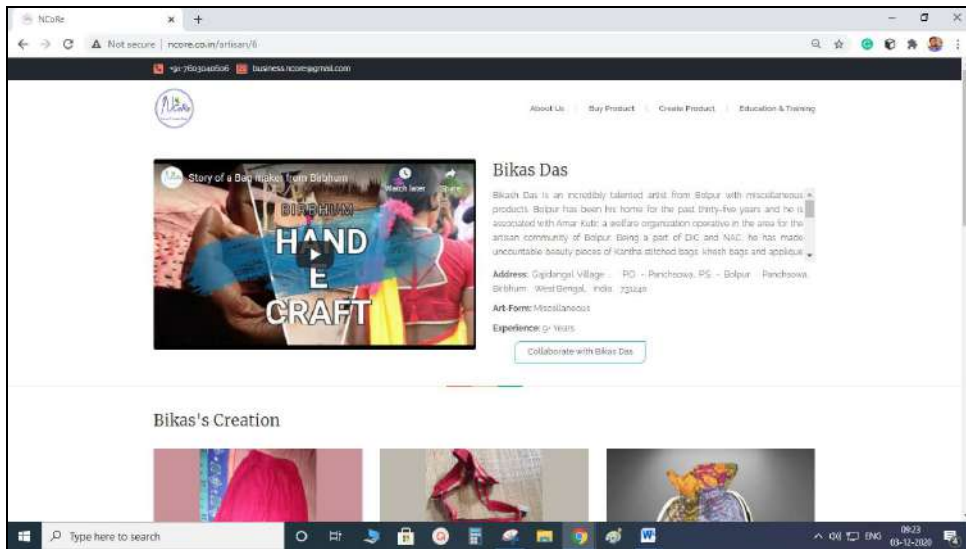
Profile description of artisan Bikas Das (URL: http://www.ncore.co.in/artisan/6)
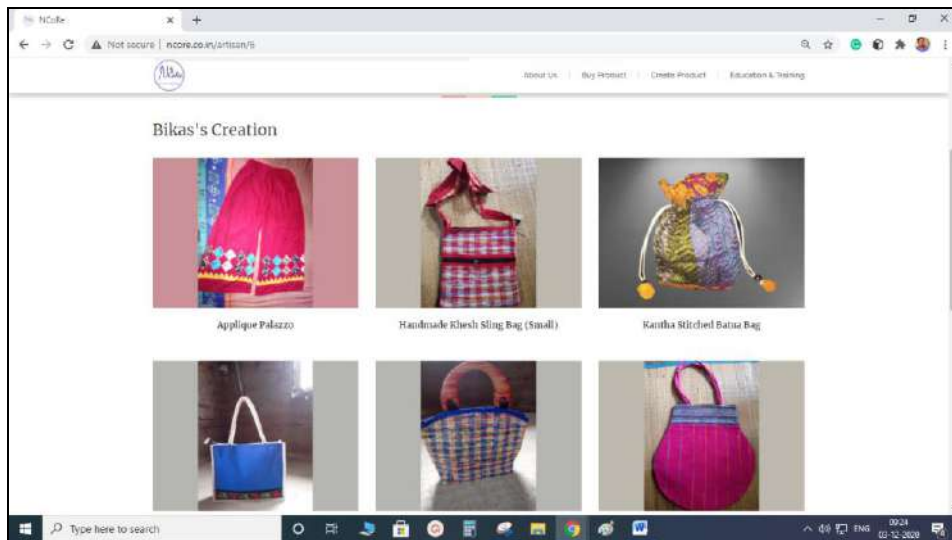
Online shop of Bikas Das (URL: http://www.ncore.co.in/artisan/6)
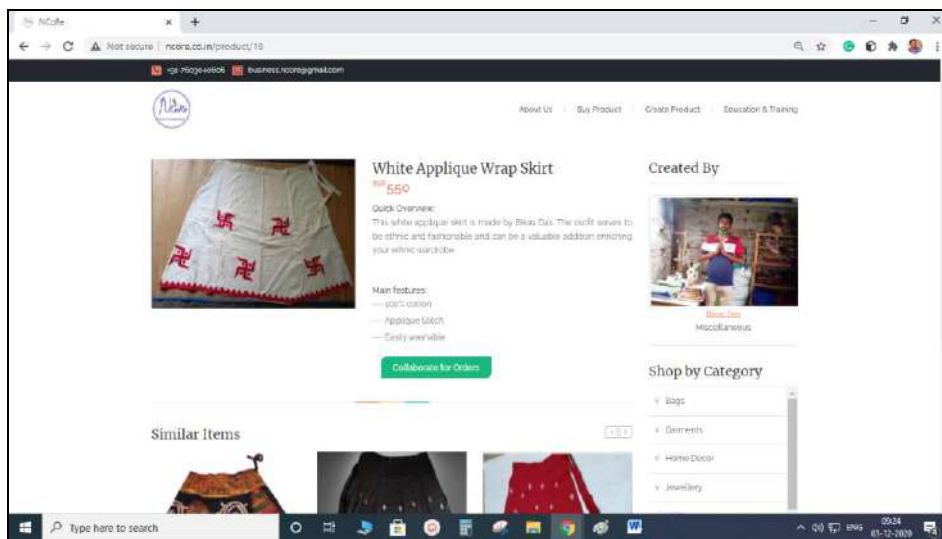
Individual product description of Bikas Das (URL: http://www.ncore.co.in/product/18)

Use of Social media:
Cultivating Communities of Practice and Communities of Purpose

7.1   Creating Community of Practice through WhatsApp enabling Community Knowledge Exchange

Triggering interactions between rural artisans and across rural-urban entities by forming WhatsApp groups happens to be one component of our social knowledge management framework. Through WhatsApp, we have attempted in enhancing both bridging and bonding social capital of rural artisans residing in Birbhum. We have created groups in WhatsApp, where rural artisans all across Birbhum have been incorporated and they get a chance to engage in purposive knowledge exchange both within and across their community. This section is divided into two subsections: in the first part, we will try to theoretically demystify what community of practice is and its effectiveness in improving social capital and information and knowledge divide of marginalized rural artisans. In the second part, we will shed light on how we have practically attempted in cultivating community of practice among rural artisans of Birbhum and urban entities with the help of WhatsApp.

7.1.1 Effectiveness of Cultivating Community of practice in Rural Context

According to Wenger et al. (2002)[65], communities of practice are like "gardens" that "benefit from cultivation". They proposed that "even though communities [of practice] are voluntary and organic, good community design can invite, even evoke, aliveness." We have reserved this section to explore the effectiveness of cultivating communities of practice among rural artisans in an attempt to create and strengthen their knowledge network. And, in subsequent section, we will show how in our proposed social knowledge management framework, we have practically cultivated communities of practice among rural urban entities using WhatsApp[66].

Unhindered knowledge exchange facilitated through the community of practice, leading to a collaborative learning space, bears prospects of improving the livelihood of rural participants. Active participation of rural population in the process of knowledge exchange, not only within their own communities but also with other communities including urban entities, enables them to apply newly acquired knowledge in pursuit of self and communitarian benefit[16]. In spite of significant concern from multiple sectors to uplift and enhance rural livelihood, attained results have been unable in achieving desired outcomes. Two reasons can be cited as major hindering aspects: (i) lack of information and knowledge flow among rural members, and (ii) rural-urban information and knowledge divide. Since, in our research drive, we have primarily traced marginalization of rural sector to the information, knowledge and market divide and poor social capital, building community of practice and facilitating unhindered knowledge exchange bears rich prospects in our model of rural empowerment.

Wenger defines Communities of practice as *"groups of people who share a concern or a passion for something they do and who interacts regularly to learn how to do it better"* (Wenger, 1997)[67]. The

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[65] Wenger, Etienne; McDermott, Richard; Snyder, William M. (2002). Cultivating Communities of Practice (Hardcover). Harvard Business Press; 1 edition. ISBN 9781578513307.

[66] Jayanta Basak, Siuli Roy and Somprakash Bandyopadhyay (2017), "Cultivating Online Communities of Practice as Rural Knowledge Management Strategy in India" Proc of the 18th European Conference on Knowledge Management (ECKM 2017), 7 – 8 September 2017, Barcelona, Spain

[67] Wenger, E. (1997). Communities of Practice: Learning, Meaning and Identity. Cambridge University Press: Cambridge.

characteristics of these communities include: "shared ways of engaging in doing things together; mutually defining identities; knowing what others know; what they can do and how they can contribute to an enterprise and a rapid flow of information and propagation of innovation" (Roberts, 2006, p. 625.)[68]. It is to be noted that the primary focus here is on learning through social participation, where the individual is an active participant in the practices of social communities and constructs his/her identity through these communities (Wenger et al. 2002). In this context, a community of practice is a group of individuals participating in the knowledge-sharing activity, and, at the same time, experiencing/creating their shared identity through practice-oriented collaborations.

Alexandra Talpau insightfully remarks how internet enabled social media platforms have ushered in a new era of communication (Talpau, 2014)[69]. In the same pretext, digital technologies have shown its immense potential in fostering and nurturing communities of practices where groups of strangers communicate and mutually engage each other with the purpose of reaching a common goal. These virtual spaces have thus been successful in reducing the spatial (physical space) and temporal (time) distances, enabling people from anywhere and at any time to join the community and perform their practice. Knowledge creation (generation) and sharing (exchange), considered to be crucial resources for a community of practice, can be successfully cultivated in such a virtual space (Ardichvilli, 2008)[70].

In our research initiative described below, we have taken the aid of WhatsApp to effectively cultivate virtual community of practice among rural communities and rural-urban communities to mitigate the extant information and knowledge divide and improve the social capital of rural participants.

7.1.2 Creating Community of Practice through WhatsApp

In order to facilitate unhindered information and knowledge exchange and to improve the social capital of our target group, we have created a Whatsapp group named 'Birbhum Artisans', comprising of 122 members. Out of the total members of the group, 12 members belonged to our research group. 2 members out of the total participants are members of Amar Kuthi and Kopai Charulota, welfare organizations operative in Birbhum to improve life and livelihood prospects of local artisans. Rest are all member artisans belonging from different blocks in Birbhum namely, Bolpur, Mohammad Bazar, Nanoor, Rampurhaat, Labpur, Suri and Sainthia.

The whatsapp group was created on 7th of July, 2020 and, as of 27th November, a **total of 1010 messages** were exchanged, coupled with **an exchange of 2854 photos and 78 links**. **An average of 32 messages is shared each day in the whatsapp group**. 78 accounts to be the total number of active users, with 28 members recorded as leaving the group during the stated course of time for multiple reasons. The primary intention behind creating the group was to connect artisans from different blocks across Birbhum and to trigger effective knowledge and information exchange between them and the members of the welfare organizations operating for the cause of rural artisans. During the stated course of time, different artisans shared their product photos for promotion and exhibition of their produce, many posted business-related enquiries, members of our RO posted training announcements and follow-up on issues discussed in the meetings, many artisans posted their requirements for products from other member artisans, so on and so forth. Analysis states 1st Sept 2020 to be the busiest date with maximum number of messages exchanged and Fridays to be the busiest day.

[68] Roberts, J. (2006). "Limits to Communities of Practice". Journal of Management Studies. Wiley Blackwell. 43 (3). Pp. 623–639.
[69] Talpau, A. (2014). Social Media - A New Way of Communication. Bulletin of the Transilvania University of Braşov. Series V: Economic Sciences • Vol. 7 (56) No. 2.
[70] Ardichvilli, A. (2008). "Learning and knowledge sharing in virtual communities of practice: Motivators, barriers and enablers". Advances in Developing Human Resources, 10(4), 541-554.
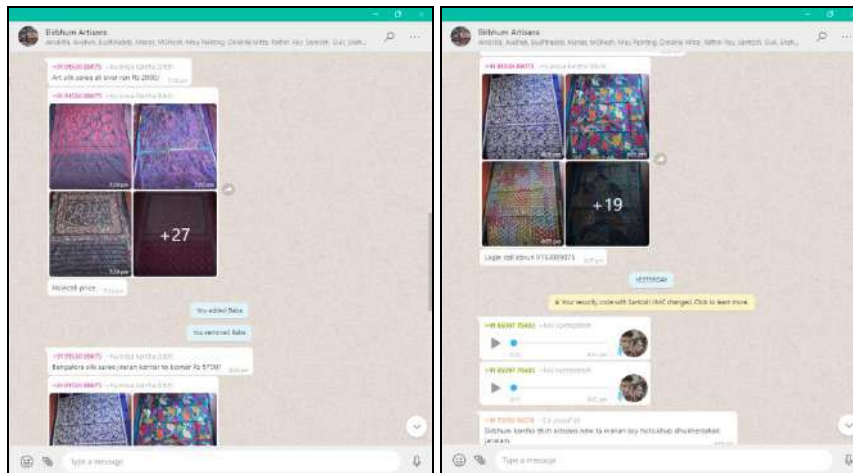
Fig 1. Screenshots of interactions talking place over Birbhum Artisans WhatsApp Group

Analysis of the whtasapp chat interaction reveals that Prashun Nasipuri (9547017742), a master artisan, has posted maximum times in the group, posting a total of 179 messages in the group during the stated course of time. Prashun has mostly shared images of his created sarees. Sraboni Sarkar (9614226103) seconds the list of most active users, followed by Satyajit Mondol (7407119937). The following is the graphical representation of the most active users and the extent of their posts in the WhatsApp group during the stated course of time. Users in the graph are marked in terms of their respective mobile phones, using which they have participated in the WhatsApp group.
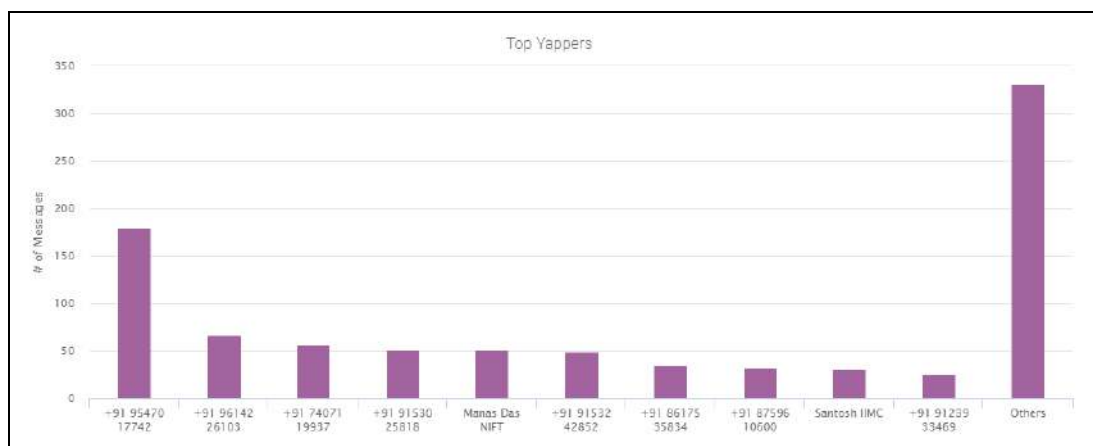
Fig. 2. Graph representing the mobile numbers who have interacted most in Birbhum Artisans Whatsapp Group from 7.7.20-27.11.20.

Analysis shows that interactions peaked during 10am, at the start of working hour, denoting that artisans somehow related to the group as a part of their daily professional activity. Interactions again triggered around 10pm at night, a considerably free time after the day's work, where knowing about what others are producing, interacting with other artisans regarding business related affairs seemed a voluntary choice, on part of the group members. The following is the graphical representation of the number of posts in respect to time of the day.

Fig. 3. Graphical Representation of the Number of Posts in Respect to Time of the Day.

The quantitative figures stated above explicitly show that engagement in the group from 7.7.20 – 27.11.20 has been quite high, where artisans mostly participated for business related affairs and in seeking advice. Exchange of around 3000 product images within a span of almost 5 months inferred voluntary and organic interest of artisans in posting images of their produce and exhibiting them to other artisans and members of RO (Research Organization). People practicing multiple art forms discussed about the images of the products posted, making the WhatsApp group a collaborative learning and discussion space. During the stated course of time, the WhatsApp group became a space where artisans made use of the new social capital acquired to learn more about products, designs and prices of similar products made by different artisans. Sometimes artisans debated over the specificities of products posted in the group.

A detailed date-wise tabulation of messages and media exchanged in the whatsapp group from 7.7.20 – 27.11.20 is provided in **Appendix I**. The document consists of two tables: one recording the responses triggered and replies to that from the artisans' end and the other from the RO's end.

From the artisans' end, pattern of exchange mostly pertained to:

- Exchange of product images
- Enquiry regarding price of posted images
- Posting of product requirements by other artisans
- 2 communications culminated in actual sale of product over WhatsApp interaction
- Discussion and debate regarding the optimal price of a product, regarding the actual material of the product and other practice related conversations

From the RO's (Research Organization's) end, pattern of exchange mostly pertained to:

- Posting training requirements with details of subjects to be covered
- Advice and guidance to artisans regarding how to successfully attend virtual meetings and trainings over video conferencing apps Zoom.
- Posting links of online shops of artisans created in NCoRe for other members to see and comment
- Moderate conversations in the group to resolve conflict regarding any post in the group
- Posting Facebook links of artisan profiles and encouraging artisans to participate purposively in social media sites
- Contacting boutique owners and sharing their feedback regarding artisan products

The communication triggered over WhatsApp not only attempted in improving the social capital of the member artisans but the effective practice oriented exchange facilitated due to the formation of community of practice attempted in mitigating information and knowledge divide of rural participants.

7.1.3 Influence of WhatsApp Interaction on Social Capital of Rural Target Group

The effective information and knowledge exchange triggered in WhatsApp has enabled member artisans to connect and communicate with artisans across Birbhum and share with them their product images, price-related and business-related information. This effective exchange has radically improved the social capital of the target group, where they are exposed to more information, knowledge and guidance required to expand their business horizon. The WhatsApp group has not only facilitated bonding social capital among rural artisans in Birbhum. The group has also triggered information and knowledge exchange among members of RO and other welfare organizations and rural participants, thereby positively influencing the latter's bridging social capital. The facilitation of inter and intra communitarian exchange through WhatsApp has thereby attempted in addressing the networking issues faced by the artisans of Birbhum

7.1.4 Influence of WhatsApp Interaction on Information Divide of Rural Target Group

Through WhatsApp, members shared a multitude of factual information like price of products, address of artisans with whom interested personnel wishes to collaborate for business purposes, contact details of several artisans, the availability of particular products, the availability of raw material, so on and so forth. Information exchange along the stated lines positively influenced in enhancing the information base of WhatsApp group members.

7.1.5 Influence of WhatsApp Interaction on Knowledge Divide of Rural Target Group

Apart from exchange of factual information, effective exchange facilitated via WhatsApp also helped in addressing the knowledge divide of artisans, which constitutes of information divide coupled with lack in skill, attitudes and experience. The new topics discussed in meetings were further taken up in WhatsApp interactions. For example, when artisans were given the training on how to click attractive product photos, they attempted in applying the newly acquired knowledge gained through training and click product photos accordingly and post it in the WhatsApp group. Different members discussed regarding the same topic, gave feedback on the photos artisans posted by applying the lessons learnt in training, which made grasping the particular topic easier for the rural members. Through such an exchange, the rural members not only acquired factual information regarding how to click attractive photos, but through debate and discussion, they internalized the lesson learnt, adopted the new skill and showed an inclination towards a more adaptive attitude, which in turn positively impacted in addressing their knowledge divide.

The above discussion explicitly highlights the impact of cultivating community of practice among and across rural urban entities over WhatsApp on social capital, information and knowledge divide faced by rural members. The exchange taking place over WhatsApp has been mostly practice-oriented (See detail in WhatsApp tabulation given in the appendix), some of which has culminated in actual sale. However, although such an exchange can create impact on social capital, information and knowledge divide faced by rural members, it is not sufficient in addressing the market divide faced by the target group. In an attempt to address market divide along with social capital, information and knowledge divide faced by rural members, in the following section we will narrate how we have attempted in cultivating community of purpose via social networking sites like Facebook and Instagram among rural urban entities.

7.2 Creating Community of Purpose through Facebook to Promote Market Linkage for Artisans

One of the objectives of our social knowledge management framework is to familiarize rural artisans of Birbhum with social media sites like Facebook and Instagram and help them in using the same to derive

business benefits. While through WhatsApp, we have attempted in cultivating community of practice among rural artisans and across rural-urban entities, through social media sites like Facebook and Instagram, we have tried to transcend beyond triggering practice-oriented communication to purposive communication culminating to economic exchange. It is the cultivation of ***community of purpose*** leading to concrete business benefits that we have attempted to facilitate by taking resort to social media sites. Members of the RO have initiated opening Facebook and Instagram accounts not only of NCore (where we have aggregated the products and profiles of artisans of Birbhum), but also of individual members of the target group, where the products created by individual member artisans are exhibited, along with their stories and journeys to a range of social media users. The intention is to connect these artisans and their creations with the global pool of consumers, where purposive collaboration between the two is expected to attract concrete socio-economic benefits for the artisans.

7.2.1 Effectiveness of Cultivating Community of Purpose in Rural Context

Community of purpose is defined as a community of people, who are going through the same process, or are trying to achieve a similar objective. While shared practice accounts to be the premise of community of practice, it is purpose or a clearly defined objective that unites the members of community of purpose. In rural context, while practice-oriented community formation has huge prospects in enhancing the social benefits of the members, it is important alongside to augment the social benefits with economic pursuit. This highlights that both community of practice and purpose, in amalgamation, have the credentials to counter marginalization of rural sector along socio-economic axis. When economic pursuit, being a specific and defined purpose, triggers community formation in rural context, the outcome assures socio-economic benefits on a holistic scale.

Community of purpose, in spite of possessing enormous potentials to uplift rural communities, is under-defined in prior research literatures. Barring a few sources, like Wikipedia and a white paper published by e-Moderation, a social media management group, community of purpose has not received much attention, both in academic and developmental sphere. The few sources, which bear mention of the concept, primarily define it along the premise of a shared objective, a common clear defined goal (Littleton, 2010)[71]. Since the concept has immense prospects in doing justice to a specific purpose by facilitating relevant knowledge exchange among communitarian members, it becomes crucial to demystify how to construct, nurture and sustain an ecosystem, which will support formation of community of purpose[72].

In our research framework, we have attempted in building community of purpose among rural-urban agencies, where market incentives account to be the unifying purpose[22]. If economy is to be taken as the unifying purpose, then we can see a lot of efforts, which attempted in unifying rural producers to urban buyers, both along physical and virtual lines. However, it needs to be remembered that forming community of purpose is different from conventional direct-selling physical marketplaces and e-commerce sites. Cultivating a community of purpose to boost market prospects of rural producers, apart from taking account of aspects related to market transactions, also serves to be a product of social knowledge management. In rural context, participants not just lack access to market but also suffer from other ancillary factors, which in amalgamation contribute in sustaining their marginalization. Since they account to be disempowered groups, economic initiatives, with solely economic focus, account to be insufficient in generating desired outcomes. It is through community formation, through relevant dialogue and collaboration, attempts can be undertaken to empower the rural marginalized on a holistic scale. Cultivating community of purpose through social

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[71] Littleton, T. (2010). Communities of Purpose. [White Paper], eModeration

[72] Bhattacharyya, S., Basak, J., Bhaumik, P., Bandyopadhyay, S. (2020). Cultivating Online Virtual Community of Purpose to Mitigate Knowledge Asymmetry and Market Separation of Rural Artisans in India. In the proceedings of 11th International Development Informatics Association Conference (IDIA 2020). Macau, China

knowledge management offers hope in this prospect, because, apart from providing relevant market-related connections, it also attempts in developing knowledge capability of rural members through purposive collaborations.

7.2.2 Cultivating Community of Purpose through Facebook

In our research intervention, we have attempted in creating community of purpose among rural urban agents through social media sites like Facebook. In Facebook, members of RO have created a Facebook page called NCoRe Hand-e-Craft (https://www.facebook.com/ArtofBengal) and individual profiles of member artisans, where their created products are displayed along with short snippets on the creator of the handmade goods (https://www.facebook.com/pg/ArtofBengal/videos/). Since members of our target group are practitioners of different art forms and creator of a multitude of different products, the NCoRe page hosts category-wise image of handmade goods, namely, garments, jewelleries, home furnishings, bags, utilities and others.
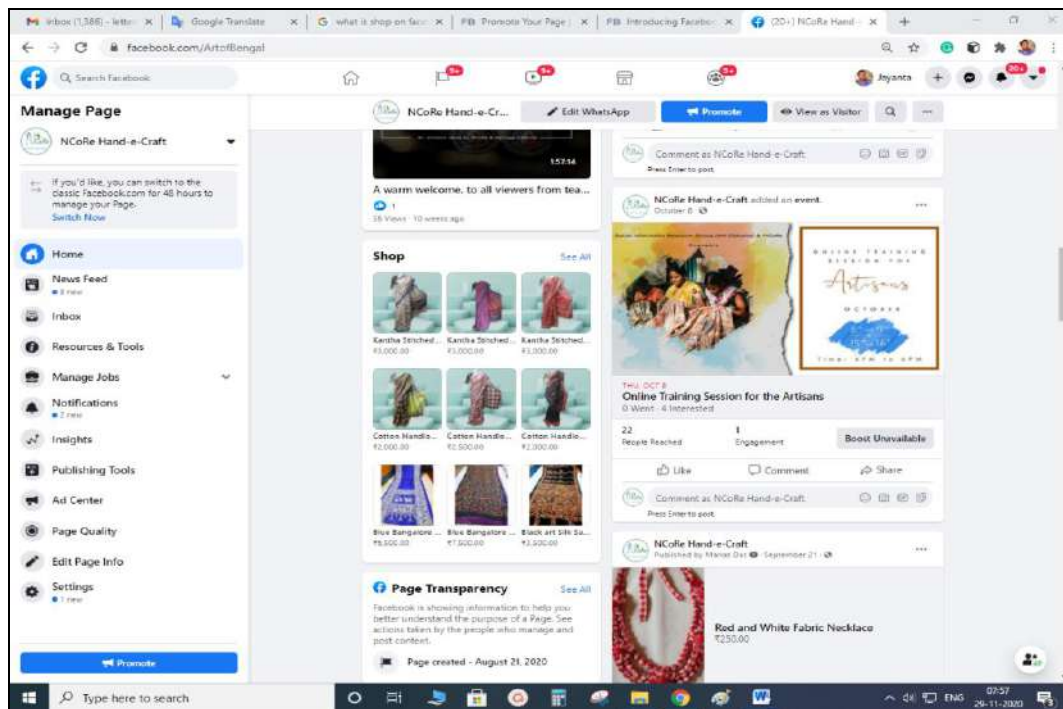
Fig. 4. Screenshot of NCoRe Facebook page

Facebook provides a mobile-first shopping experience where an individual/business entity can easily create an online store. As many businesses are creating and strengthening their digital presence online amidst the ongoing pandemic scenario, we are building digital shops on Facebook to promote different handcrafted items manufactured by rural artisans, so that the latter's business does not affect much amidst the changing setting. All items are showcased in Facebook with proper description and artisan name. https://www.facebook.com/ArtofBengal/shop/?referral_code=page_shop_tab&ref=page_internal

Every handcrafted item in the Facebook page is linked with the digital catalogue exhibited in our digital platform, NCoRe, for more detailed explanation and visualization. Apart from that, this digital shop allows customers to contact directly with the rural artisans through WhatsApp to resolve product-related queries, offer support and more. Through Facebook, artisans are expected to connect globally with a pool of buyers and sellers and benefit socio-economically from the purposive exchanges taking place. Fig. 4 and 5 are screenshots of our NCoRe Facebook page, which depicts the way the page is designed, the products are displayed and artisan details posted alongside the products to narrate holistically to the buyer the journey behind the exhibited handmade good.
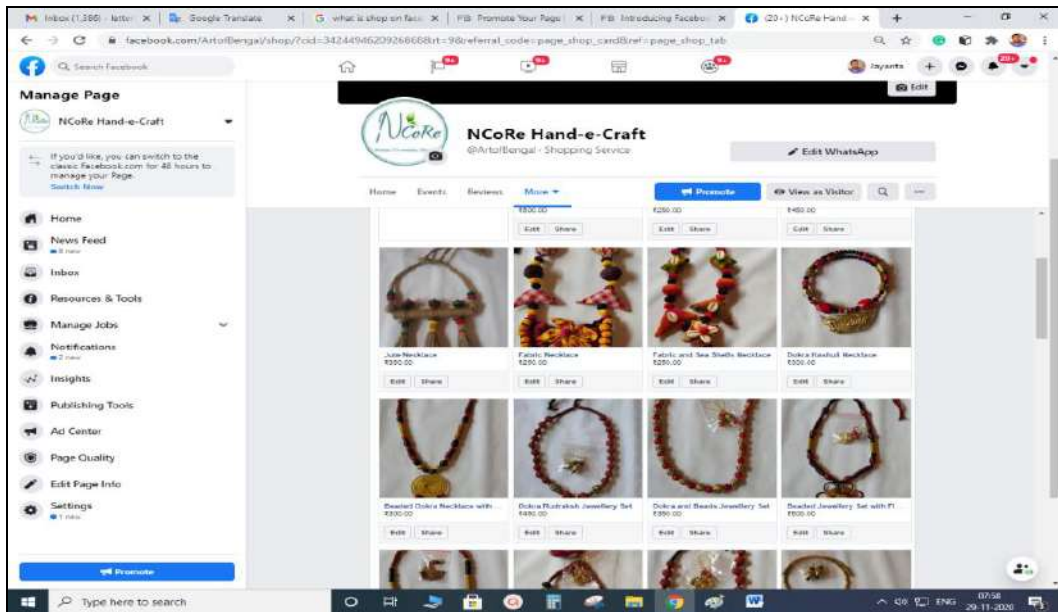
Fig. 5. Screenshot of NCoRe Facebook page

Our
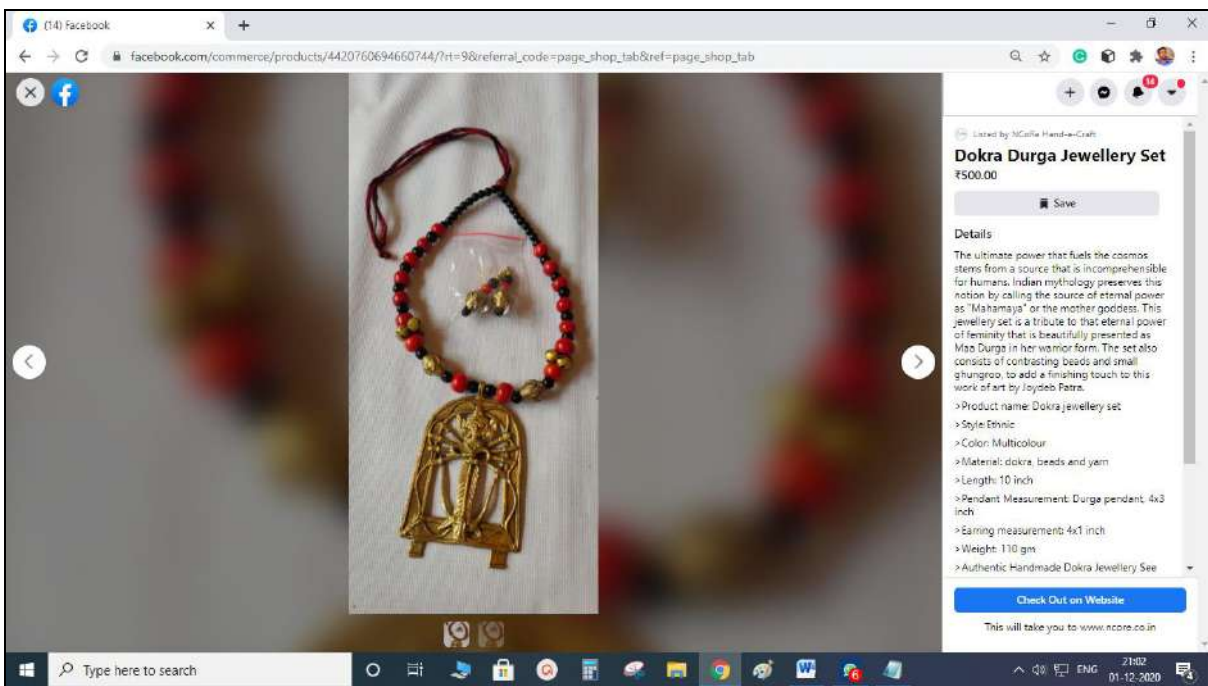
Fig 6. Product Description section in NCoRe Facebook Page

NCoRe Facebook page also comes with the provision of community formation, where artisans get the opportunity to connect with other artisans, who are either pursuing same and different art forms and also with a pool of global consumers. The community part in Facebook is similar to the community we have formed over WhatsApp. However, the Facebook community being open in nature, as opposed to the closed WhatsApp community, is endowed with the capacity to extend the reach of our artisans to a multitude of global consumers, thereby bearing the prospect of ushering concrete socio-economic benefit. Figure 6 is the screenshot of our Facebook community page.
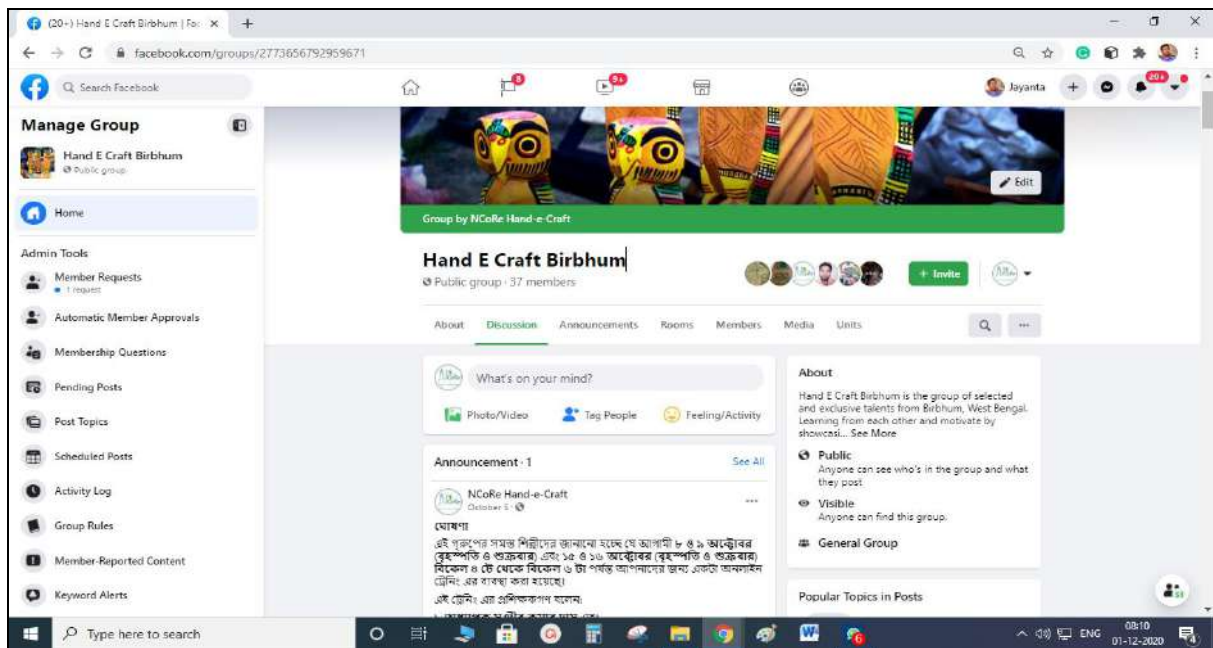
Fig 7. Screenshot of NCoRe Community Page

In today's world, with the rapid and remote penetration of smart phones, every other rural member is whatsapp user. However, the artisans' familiarity with Facebook is not that high. Hence, at present we are engaged in populating our NCoRe Facebook page and simultaneously creating Facebook accounts of individual artisan members, who do not possess one already. Creating a Facebook account and to encourage artisans in participating in purposive exchange through Facebook is a process, which we have just started. With sustained cultivation of community of purpose over Facebook, eventually we can expect concrete socio-economic benefits, where artisans will be able to complete transaction cycles independently through social media sites.
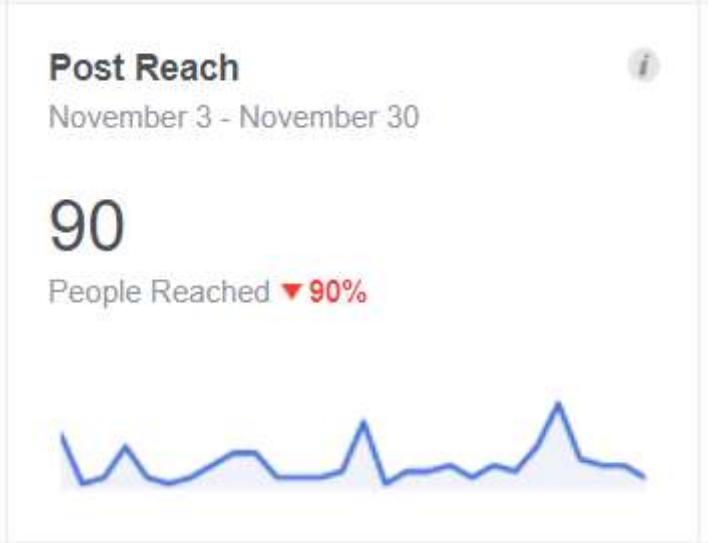
We have also recently undertaken a similar venture as done in Facebook in Instagram also, where we are currently engaged in opening an Instagram page and individual Instagram accounts of member artisans. Familiarizing marginalized artisans with social media operations is a time-consuming process, where we can expect results only eventually.

7.2.3 Facebook Page Analytics (https://www.facebook.com/ArtofBengal)

- **Total number of products (made by artisans of Birbhum) in Facebook Page: 639**
- **Total number of Artisans engaged in Facebook Page: 70**

Below are some detailed analytics of the NCoRe Facebook page which are collected from the insights section of the page. Insights about a Facebook page provide information about Page's performance, like demographic data about page visitors and how people are responding to posts. We can use Insights to:

- Understand how people are engaging with NCoRe Page.
- View metrics about Page's performance.
- Learn which posts have the most engagement and see when your audience is on Facebook.

Page Views: The number of times NCoRe page's profile has been viewed by logged in and logged out people.	**Page Views** ⓘ November 3 - November 30 **51** Total Page Views ▲ **112%**
Page Likes: The number of new people who have liked NCoRe page, broken down by organic and paid page likes.	**Page Likes** ⓘ November 3 - November 30 **11** Page Likes ▲ **0%**
Post Reach: The number of people who saw any of NCoRe post at least onece.	**Post Reach** ⓘ November 3 - November 30 **90** People Reached ▼ **90%**

Post Engagement: The number of times people engaged with NCoRe post through reaction comments shares and clicks.	**Post Engagement** November 3 - November 30 **20** Post Engagement ▼39%
Videos: The number of time NCoRe pages videos played for at least 3 seconds or more by paid or non-paid users.	**Videos** November 3 - November 30 **14** 3-Second Video Views ▼36%
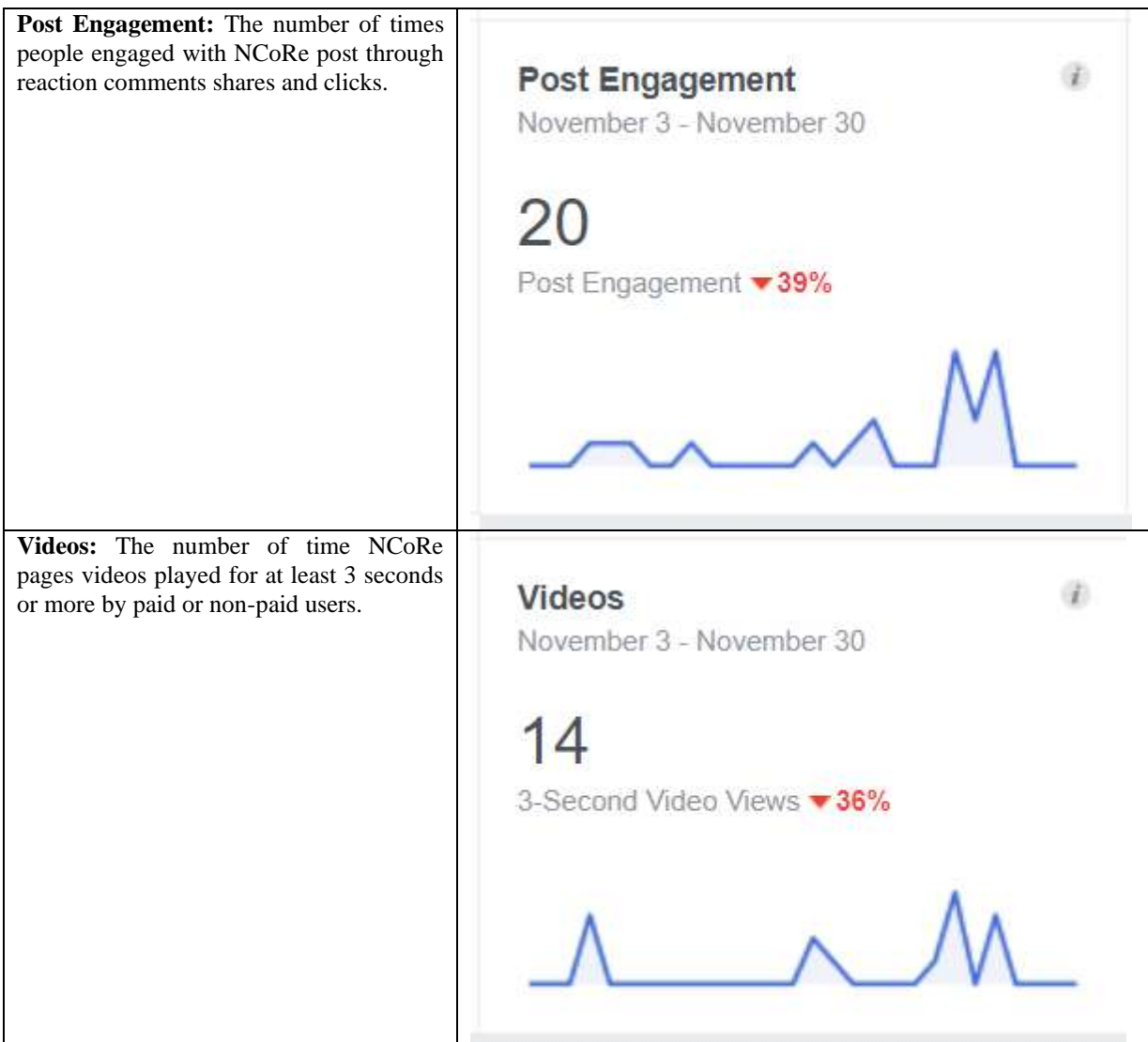
Detailed Analytics of a Single Post (selected) from NCoRe Page:

- No of people reached: 953
- No. of Likes: 27
- No. of Shares: 19

8
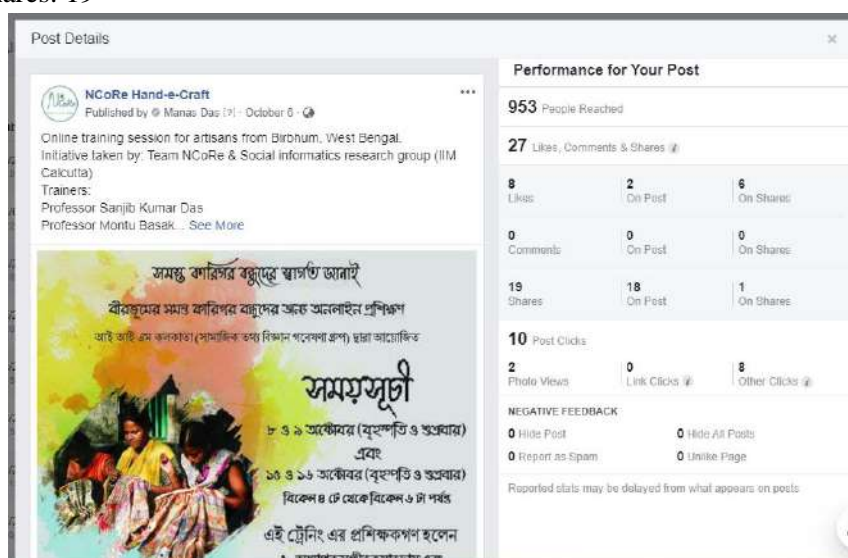
Workshops and Trainings

As a part of our pre-pilot studies, we have conducted following workshops and planned for a set of skill-building trainings.

8.1 Online Workshop on Photography and Videography

Given the fact that online marketing and selling of products is to a great extent dependent on the way the products are exhibited in the digital channels, we need to train artisans on how to capture attractive photos of their products and videos of themselves using simple mobile devices. With this training, artisans will be expected to develop better capabilities in displaying their products and showcasing their artistic story in front of a global pool of customers. This training will also help the artisans in creating an attractive digital shop in NCoRe for themselves.

In this connection, we collaborated with Prof. Madhupa Bakshi, Dean, Dept of Media Science, The Heritage Academy, Kolkata to make a training plan to train the artisans on how to click attractive photos and videos of themselves and their products using their camera phone, which would enable us to create their digital shops on the web-platforms. Prof Madhupa Bakshi and her team conducted a train-the-trainer workshop with artisans of Birbhum and all our team members where they explained the basics of shooting, product placement and aesthetics during a photo-shoot, recording techniques of audio and video using smart phone and use of lights. We have conducted a demo online workshop on ZOOM on 31st August , 2020 followed by a two-day-four hour online workshop (two hours each day) on ZOOM on 9th September and 11th September 2020, where 15 artisans of Birbhum participated.
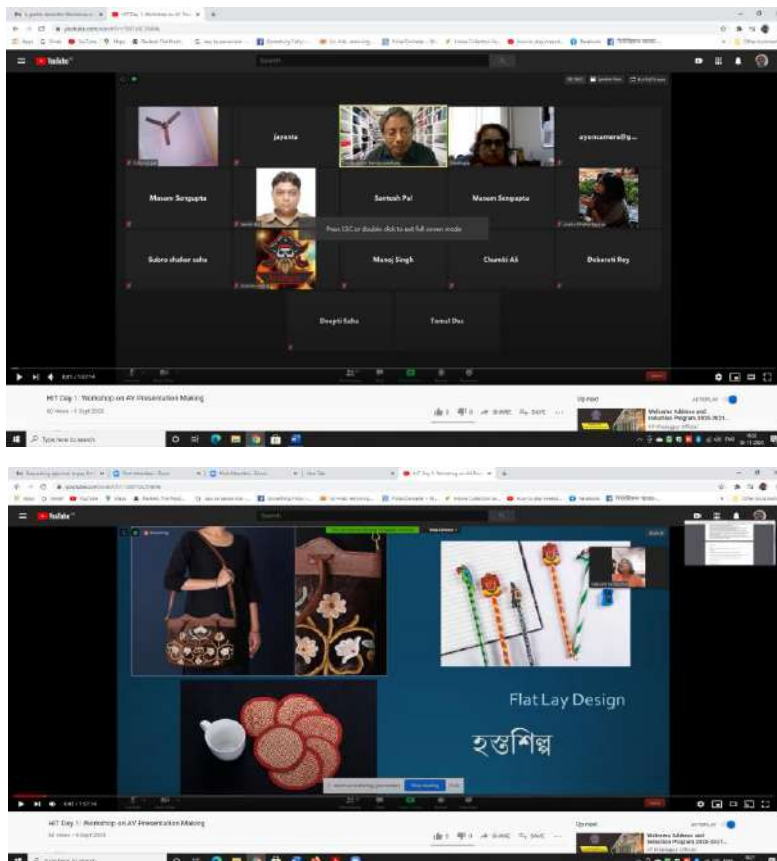
https://www.youtube.com/watch?v=TS87s3C3NMk
https://www.youtube.com/watch?v=-Kstp7s6DNQ&feature=youtu.be

Based on the feedback of participants, we have designed a two-hour synchronous training module for the artisans of Birbhum, followed by a series of asynchronous video in regional language to supplement their skill on digital photography and videography (to be discussed in details in section 7.4).

8.2 Online Workshop on Innovative Product Design and Marketing

In a similar manner, we organized workshop for the artisans on how to innovate and develop products in way, which will secure enhanced business benefits. In this connection, we collaborated with Prof Sanjib Kumar Das and Prof Montu Basak of NIFT (National Institute of Fashion Technology), Kolkata to train the first batch of artisans online on innovative product design and development and we have conducted an 8-hours workshop on innovative product design and development.

In this context, we organized four-day-eight-hours (2 hrs each day: which include 8th, 9th 15th and 16th October from 4 pm to 6 pm) online workshop for 16 artisans as well as our team members on how to produce in accordance to market trends and how to benefit economically from such product and design innovation. The focus of this workshop series was as follows:

- Introduction to Indian Handicraft Market and Business Opportunity
  https://www.youtube.com/watch?v=UwzM9Uosbtc
- Basic exposure to the concept of Elements of Design in the context of handicraft
  https://www.youtube.com/watch?v=zpwaqDoOqgw
- Product Diversification & Target Market
  https://www.youtube.com/watch?v=0IG--7wz3EA
- Design and Market Trend for the future market
  https://www.youtube.com/watch?v=iKxnR4e10xM

Based on the feedback of participants, we have designed a two-hour synchronous training module for the artisans of Birbhum, followed by a series of asynchronous video in regional language to supplement their skill on innovative product design and market development (to be discussed in details in section 7.4).
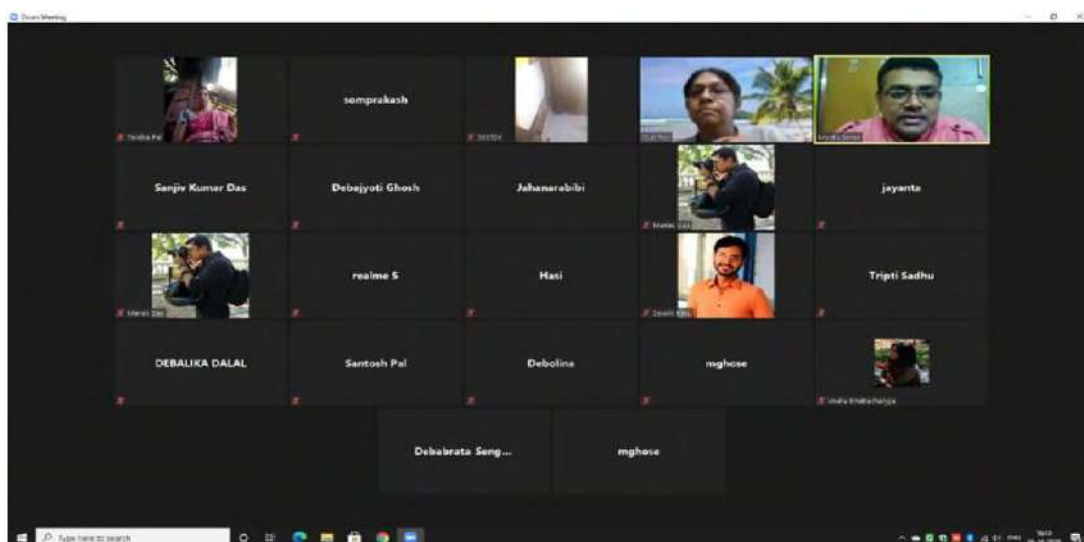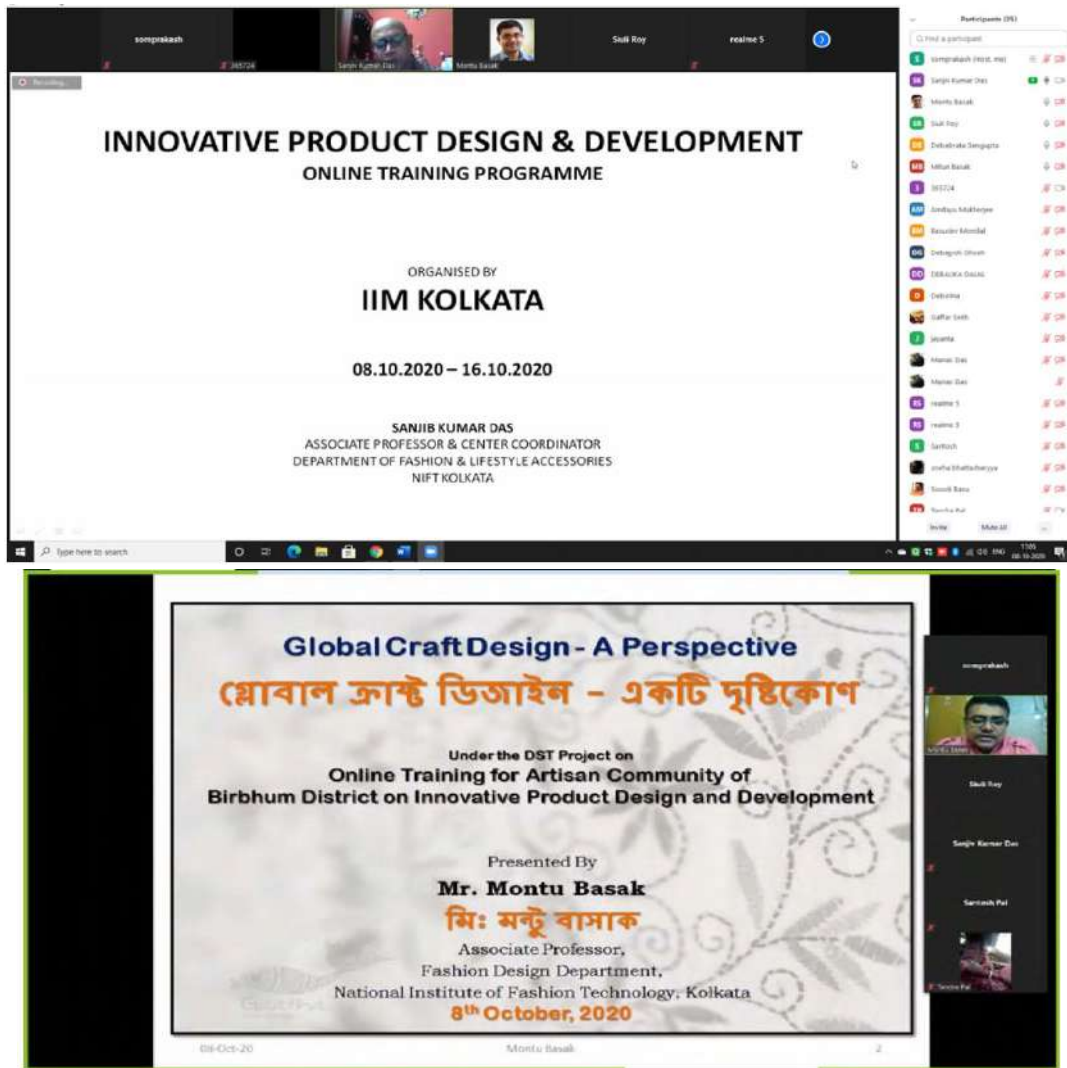
8.3 Online Workshop with Urban Boutiques Owners for Market Linkages

In order to engage buyers community in the process, we have organized an online workshop on 7th November, 2020 with boutique owners of Kolkata to promote the products of artisans and to discuss the problems and opportunities.
https://youtu.be/H1JHLV3g1KI
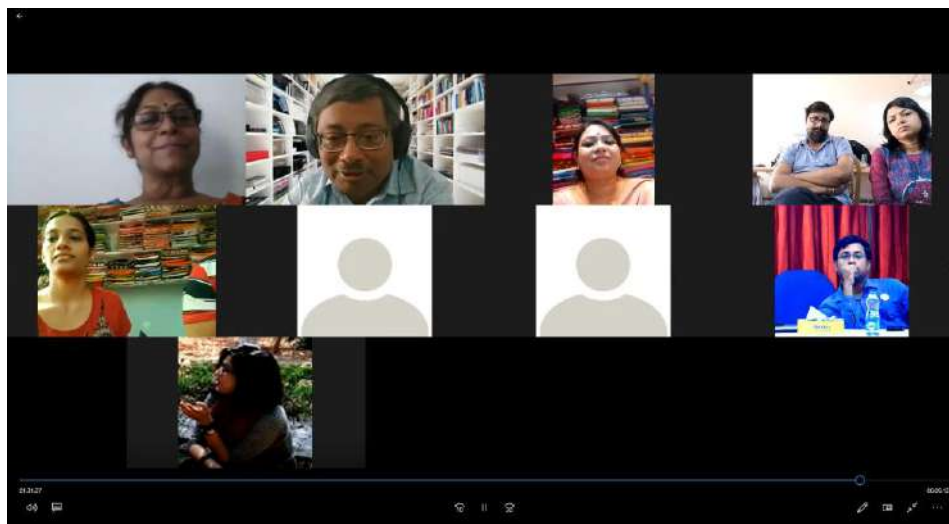
8.4 Online Weekly Intervention Plans (started on 1st March, 2021 onwards)

Based on the feedback on our pre-pilot workshops and pilot study, we have planned to provide a systematic training to around 600 artisans from Birbhum over a period of one year in a batch of 15, where each batch will receive training for a period of eight weeks. The training program is divided into three components:

(i) **Online, live training sessions for 6 hours using Zoom Platform**: These live training sessions (synchronous) will be for two hours each day on Monday, Wednesday and Friday (total six hours). Our weekly online training intervention operates along three major axes*: Digital Competency Training, Training on Photography & Videography,* and, *Innovative, Market-Oriented Product Development Training* (discussed below**).

(ii) **Individualized tutoring and On-Boarding Artisans in our Digital Platform**: Following the online training, we will help each individual artisan to create their digital shops in our online platform and Facebook and also form a WhatsApp group to enable intra-and inter-community knowledge and information exchange.

(iii) **Asynchronous, Video-based Tutorials:** Additionally, we will periodically distribute small video tutorials in Bengali on topics related to digital marketing and entrepreneurship development. The duration of each video tutorial is 7 to 10 minutes. In a span of eight weeks, we plan to send around 60 video tutorials (one to two tutorials per day).

8.4.1 Online, live training sessions for 6 hours using Zoom Platform

The three weekly training modules are:
1. Digital Competency Training (Monday): 2 hours
2. Training on Photography and Videography (Wednesday): 2 hours
3. Product Development and Market Trend Analysis Training (Friday): 2 hours

All training materials are given in **Appendix VI.**

Digital Competency Training:

In this segment, we will train the artisans on how to use the digital medium to acquire knowledge regarding market operations, to learn about new things of interest using Internet and how to use the digital medium to enhance their sale by exhibiting their products to a multitude of virtual customers. The Artisans would learn about how to participate in e-commerce ventures, how to exploit online channels to obtain knowledge necessary for market benefit and how to advertise their own produce digitally. This section will give detailed guidance to artisans on how to use their phones to expand business prospects using whatsapp and facebook, for example, to sell products. In this section, we will also introduce artisans to our platform NCoRe, where artisans can create their digital shops, get trained and also help them to get connected with boutique owners, trainers and other Govt and non-Govt agents. The Session Plan for this 2-hour training is:

- Introducing Internet and Internet-enabled services, searching contents in Google, introducing e-commerce site like Amazon, flipkart for online buying/ selling; use YouTube for watching audio/videos: 30 minutes
- Using smart phones to expand business prospects – usage of whatsapp and facebook for business purposes : 30 minutes
- How to participate in e-commerce ventures – how to get registered as online sellers in different e-commerce sites like Amazon karigar and strategies to reach out efficiently to more and more global customers : 30 mins
- Introduction to our NCoRe platform – Navigating through NCore, showcasing the digital profiles of already enlisted artisans to aware artisans regarding the content, prospect and motto of NCoRe, connecting with other agents and seeking advisory services from NCore: 30mins

Training on Photography and Videography:

Given the fact that online marketing and sell of products is to a great extent dependent on the way the products are exhibited in the digital channels, in this section we will train artisans on how to capture attractive photos of their products and videos of themselves using simple mobile devices. With this training, artisans are expected to develop better capabilities in displaying their products and showcasing their artistic story in front of a global pool of customers. This training will also help the artisans in creating an attractive digital shop in NCoRe for themselves. The Session Plan for this 2-hour training is:

- Introduction – Chalks out the need of good pictures for online product display and the impact it has on buyers when the product looks interesting. This section concludes with the discussion on buying intension by showing some website examples – 20 mins
- Important factors in product photography – how to create a story for the product picture, the adequate lighting required to shoot, selection of appropriate backgrounds, optimal camera angles – 30 mins
- Mobile handling to shoot better picture - How to hold and balance mobile during the click, how to focus on product during the click, important settings of camera to get better output, demonstrating a mobile app developed for the product photoshoot- 30 mins
- Video capturing instruction for artisans profiling - Mobile handling and balancing during the video, selection of appropriate backgrounds, lighting instructions, avoiding unnecessary sounds during the shoot – 20 mins
- Example of ideal product images and discussion – 20 mins

Product Development and Market Trend Analysis Training:

In this segment, we will train artisans on how to innovate and develop products in way, which will secure enhanced business benefits. In this context, we will train artisans on how to produce in accordance to market trends and how to benefit economically from such product and design innovation. The Session Plan for this 2-hour training is:

- Introduction: Elements of handicraft design – Exploring colour, pattern, motifs and principles of designing – 30 mins
- Trend Interpretation and design process - General handicraft trends and current product trend identification, trend interpretation in a Design Development Process, interpretation of fusion design – 30 mins
- Product Diversification and Target Market - Product diversification in the context of handicraft, target market and customer match – 30 mins
- Product standardization, Product presentation & packaging and Product pricing - Elements of product standardization for global market, interpretation of product display and packaging for online and offline platform, simplified idea of product pricing – 30 mins

8.4.2   *Individualized tutoring and On-Boarding Artisans in our Digital Platform*

Following the online synchronous training, we contact artisans individually (either phone or WhatsApp video call) to help each individual artisan to clarify his/her doubts and to create their digital shops in our online platform (www.nocore.co.in) using our App and also form a WhatsApp group to enable intra-and inter-community knowledge and information exchange. The process is discussed in details under section 6.3: "Onboarding artisans in NCoRe Platform".

8.4.3   *Asynchronous Training Modules using small video tutorials in regional language*

We have supplement these three online live training sessions with a set of asynchronous small video tutorials (6 to 10 minutes duration) on related topics in regional language, to be circulated among those artisans everyday for eight weeks. Some of these video tutorials will be collated from YouTube, some we are preparing ourselves. The topics are given in Table 1 below and the details are given in **Appendix V**:

Table 1. Day-wise Schedule for Asynchronous Video Tutorials in Bengali Language

Week 1 TRAINING WEEK	Video 1.1	Introduction to Internet
	Video 1.2	Google & Youtube
	Video 1.3	GBoard & Hi-Translate
	Video 1.4	Open Camera App
	Video 1.5	Product photo-shooting and Shooting a self-video
	Video 1.6	New Product and New Design: Concepts & Examples
	Video 1.7	Creating Digital Shops at our NCoRe e-Business Portal
Week 2 DIGITAL BASICS	Video 2.1	Basics of digital marketing
	Video 2.2	Browsing different websites Part I
	Video 2.3	Browsing different websites Part II
	Video 2.4	Searching for Potential customers
	Video 2.5	Sharing Google Search content with others using WhatsApp
	Video 2.6	Navigation using Google Map
	Video 2.7	Google Translate
Week 3 New Product / Design Ideas : Understanding Product-market fit	Video 3.1	New Product and New Design: Concepts & Examples
	Video 3.2	Do-it-yourself: Jewelry
	Video 3.3	Identifying market trends and diversification of products
	Video 3.4	**Do-it-yourself:** Easy to make face mask
	Video 3.5	How to advertise / show-case your product & understand Price Trends
	Video 3.6	Do-it-yourself: Kantha Stitch Laptop Bag
	Video 3.7	How to package your product
Week 4 Social Media Marketing: Youtube	Video 4.1	How to use YouTube Videos for doing Business
	Video 4.2	Jewellery Display Video
	Video 4.3	Kurti Display Video
	Video 4.4	Handbag Display Video
	Video 4.5	Saree Display Video
	Video 4.6	Creating your own YouTube channel
Week 5 Do-it-Yourself: New Product- New Design	Video 5.1	Do-it-Yourself: Batik Art
	Video 5.2	Do-it-Yourself: Jute Craft
	Video 5.3	Do-it-Yoorself: Hand Embroidery
	Video 5.4	Do-it-Yoorself: Bamboo Craft
	Video 5.5	Do-it-Yoorself: Kanthastitch Craft
	Video 5.6	Do-it-Yourself: Dokra Art
Week 6 Government and non-Government schemes for Medium and Small Entrepreneurs	Video 6.1	Prime Minster's Mudra Yojana scheme
	Video 6.2	Getting Loans from MSME
	Video 6.3	Employment Generation Program
	Video 6.4	Swami Vivekananda Swanirbhor prokolpo
	Video 6.5	How to make an application for getting any loan
	Video 6.6	Getting loan from Bandhan Bank: An Example
	Video 6.7	How to package your product
Week 7 Social Media Marketing: Facebook	Video 7.1	Facebook Basics
	Video 7.2	Creating Facebook Account
	Video 7.3	Facebook marketing Part I
	Video 7.4	Facebook marketing Part II
	Video 7.5	Facebook marketing Part III
	Video 7.6	Facebook marketing Part IV
	Video 7.7	Digital Showroom App tutorial
Week 8 E-Commerce: Doing Business using Amazon	Video 8.1	E-Commerce Basics
	Video 8.2	How to buy in Amazon
	Video 8.3	How to sell in Amazon: Part I
	Video 8.4	How to sell in Amazon: Part II
	Video 8.5	Introduction to online financial transaction
	Video 8.6	How to handle digital cash: Some examples
	Video 8.7	How to package your product

A Pilot Study for Analysing the Impact of Intervention:
Some Preliminary Observations

Before rolling out the planned, structured 50-week intervention (to be discussed in Chapter 11, Section 1), our team conducted a pilot study on artisans who had been informally trained and onboarded onto NCoRe, and had also formed a Whatsapp community. The onboarding process in NCoRe is discussed in details under section 6.3: "Onboarding artisans in NCoRe Platform". We have data from a total of 50 artisans belonging to 37 different villages in Birbhum, West Bengal. The primary objective of the pilot study was to:

- Validate our study design, as illustrated below;
- Validate our questionnaire, namely:
    a. Whether artisans are able to understand and respond to all questions
    b. Whether the scales we have developed are reliable measures
- Conduct some basic exploratory analysis of the responses collected.

9.1 The Study Design: Model of Intervention and Expected Outcome

In this project, our objective is to utilize the potential of social technologies and socially enabled applications in addressing problems related to marginalization and social exclusion of rural communities. We have conceptualized a *social knowledge management framework* and developed a *platform* that empowers rural communities by connecting them with urban markets, government agents, trainers, investors etc. Social knowledge management in our context is a framework for rural empowerment using knowledge creation, assimilation and dissemination through digital connections and social collaboration, enhanced by social technologies. The suggested framework aims to digitally bridge rural-urban knowledge, information and market divide, by connecting rural community members with relevant agents and opportunities online. We propose to study the connection and collaboration among various entities that enables formation of virtual communities to bridge knowledge, information and market divide of rural community. Formation of these virtual communities has the most positive effect on social capital when they can increase network density and facilitate the spread of knowledge and information.

Our social knowledge management framework comprises of three components: -

- NCoRe - Our social knowledge management framework comes with a digital platform, NCoRe. The platform's offering is divided into three segments:-
    o Firstly, the platform offers the opportunity to urban designers to co-create innovative handicraft and handloom products by collaborating with a range of rural producers of Birbhum.
    o Secondly, the platform acts as a classic exhibiting site for a range of products (garments, bags, jewelleries, home décor items, etc.) created by artisans of Birbhum. The products are displayed in the platform, along with the stories of their respective creators. NCoRe houses online shops of a vast range of artisans from Birbhum, where stories of each artisan along with their videos and product photos are displayed.
    o NCoRe offers both rural and urban entities unhindered opportunity to avail for skill upgradation prospects. Both synchronous and asynchronous training facilities integrated in the platform while allows rural artisans to upgrade their skill by virtually connecting with domain experts on one hand, on the other hand, NCoRe also allows urban entities to get training from rural producers on indigenous art and craft.

- Whatsapp – Whatsapp happens to be an integral part of our social knowledge management framework. Through whatsapp, we have attempted in enhancing both bridging and bonding social capital of rural artisans residing in Birbhum. We have created groups in whatsapp with rural artisans of Birbhum and they get a chance to engage in purposive knowledge exchange both within and across their community. It is through whatsapp, members of our Research Group send rural artisans asynchronous videos to boost up their knowledge and skills and helps them to get connected with other urban entities.

- Social Media sites like Facebook and Instagram – One of the mottos of our social knowledge management framework is to familiarize rural artisans of Birbhum with social media sites like Facebook and Instagram and help them in using the same to derive business benefits. The NCoRe Facebook and Instagram page exhibits the products created by artisans of Birbhum, along with the stories and journeys of respective producers, to a range of social media users. With our help, artisans are expected to optimally exploit social media channels to promote and sell their products online.

Digital Platform
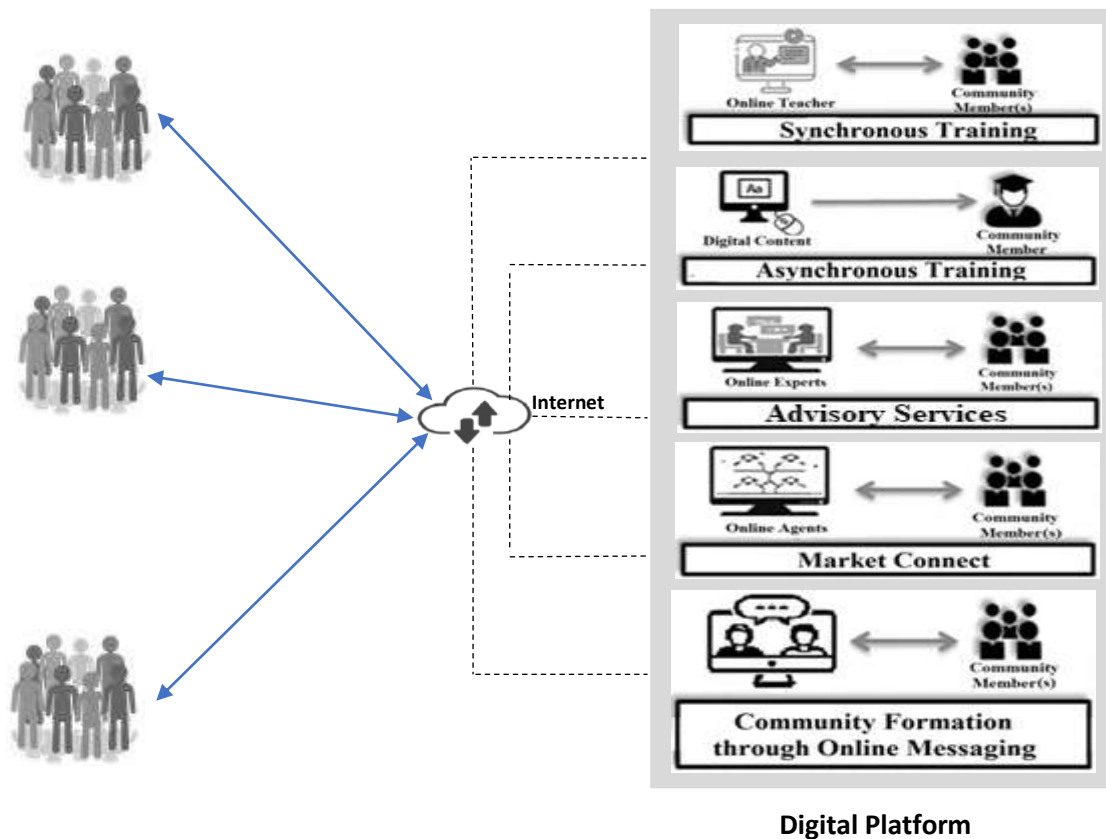
Functional Description of SKM Program Intervention

Expected Outcome of our SKM programme intervention

The SKM framework helps the rural artisans:

- to know opportunities in local market and the dynamics of local production [through Whatsapp virtual community formation]
- to know opportunities in non-local market [by giving information of boutique owners or other non-local customers through SKM platform (NCore) and other e-commerce (e.g. Amazon) / social networking websites (e.g. Facebook)]
- to know customers' tastes and preferences through direct interactions with customers [using phone / chat] and indirect information from e-commerce / social networking sites
- to know sources of finance and related welfare schemes from Govt agencies [through advisory service]

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The SKM framework also helps the rural artisans:

- to learn use of internet to search product / market related information
- to learn about how to click attractive photos of my products and make it exhibitable on online selling channels
- to learn about new online selling channels and how to register and perform business successfully in e-commerce sites
- to learn about how to use different social networking sites (FB, Instagram) to attain business benefits
- to learn about new designs and get insights on product innovation from domain experts

9.2 Analysing the Impact of our SKM (Social Knowledge Management) Program Intervention
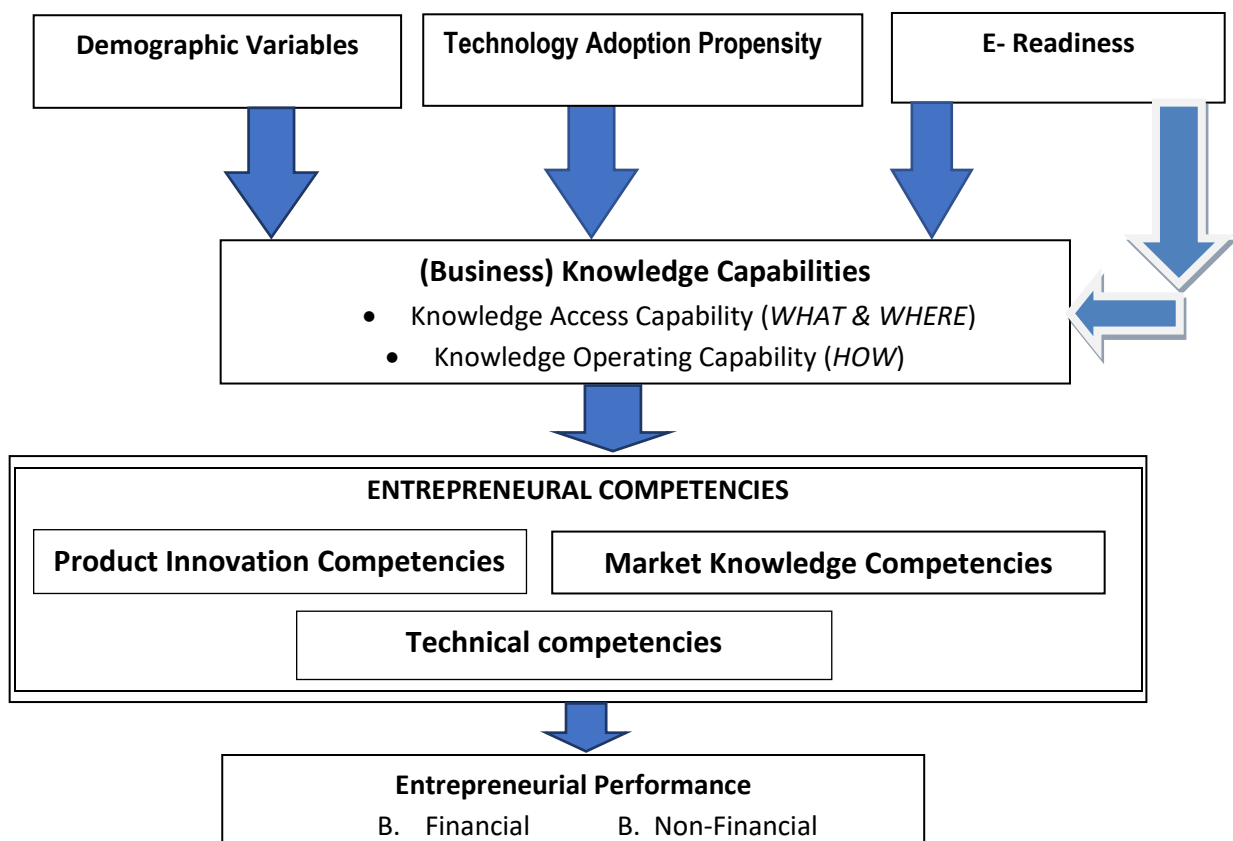
9.2.1 Definition of Terms

Technology Adoption Propensity[73]: As the name suggest, it measures the propensity or inclination of a user to adopt new technology and consists of four factors. (i) *Optimism* and *Proficiency* of a user that contribute to a user's technology adoption propensity; and (ii) *Vulnerability* and *Dependence* of a user that inhibits a user's technology adoption propensity.

E-Readiness: It indicates preparedness of an individual towards information technologies adoption[74]. We have used three indicators to measure e-readiness: use of smart phone (reasons for use and frequency of use),

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[73] Ratchford, M., & Barnhart, M. (2012). Development and validation of the technology adoption propensity (TAP) index. Journal of Business Research, 65(8), 1209-1215.

[74] Nair, J., Chellasamy, A. and Singh, B.N.B. (2019), "Readiness factors for information technology adoption in SMEs: testing an exploratory model in an Indian context", *Journal of Asia Business Studies*, Vol. 13 No. 4, pp. 694-718. https://doi.org/10.1108/JABS-09-2018-0254

attitude towards smart phones (extent of willingness to learn and use) and facilitating conditions (affordability and accessibility of internet).

(Business) Knowledge Capabilities: The ability to benefit from knowledge has two basic elements: a) the ability to acquire knowledge that already exists, and b) the ability to apply new knowledge. It is not the mere possessing of knowledge resource, but the ability to acquire, operate and exchange it, that marks the knowledge capability of social actors that has a positive effect in mitigating extant knowledge divide. Thus, knowledge capability includes *knowledge access capability* coupled with *knowledge operating capabilities*, that make knowledge resource effective and profitable[75].

*Entrepreneurial Competencies***:** Entrepreneurial competencies[76] have been defined as the total ability of the entrepreneur to perform a job. There is a scarcity of literature on the required entrepreneurial competencies of Bottom-of-Pyramid (BoP) entrepreneurs; so, we have identified three competencies as components of Entrepreneurial competencies that may be applicable for BoP entrepreneurs: product innovation, market knowledge[77],[78] and technical competencies[79]. Product innovation competency is defined to comprise innovations that depart from serving existing, mainstream markets and that create a new customer values for emerging markets. Market knowledge competence is defined as the processes that generate and integrate market knowledge, thus generating market knowledge stock. market knowledge competence has two components: customer knowledge competence and competitor knowledge competence, Customer and competitor knowledge competence together comprise market knowledge competence. Technical competencies, in our context, is viewed as competencies that would help bridging information and knowledge divide and would serve as a source of information in the opportunity recognition process[80]. It captures competencies to use social technologies to retrieve, understand and interpret information coming from digital sources to fulfil personal and professional objectives.

Entrepreneurial Performance: Several scholars identified that entrepreneurial competencies are factors which influence the success or the performance of an entrepreneurship business. Entrepreneurial performance, a multidimensional factor, can be divided into two categories: financial and non-financial. Financial performance is underpinned by the indicators of sales turnover, profitability, etc. Nonfinancial performance indicators are factors such as customer satisfaction, customer retention, etc.

9.2.2 Results from pilot study

Before rolling out the planned 50-week intervention (to be discussed in Chapter 11), we conducted a pilot study on artisans who had informally been onboarded onto Ncore, and had also formed a Whatsapp community. We have data from a total of 50 artisans belonging to 37 different villages in Birbhum, West Bengal.

The primary objective of the pilot study was to:

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[75] Bandyopadhyay, Somprakash, Sneha Bhattacharyya and Jayanta Basak (2020). Social Knowledge Management for Rural Empowerment: Bridging the Knowledge Divide using Social Technologies. Routledge.

[76] Man, T, Lau., T., and Chan, K.F. (2002), "The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies", Journal of Business Venturing, Vol. 17 No. 2, pp. 123-142.

[77] Li, Tiger, & Calantone, Roger J. (1998). The impact of market knowledge competence on new product advantage: Conceptualization and empirical examination. Journal of Marketing, 62(4), 13–29.

[78] H. Erkan Ozkaya, Cornelia Droge, G. Tomas M. Hult, Roger Calantone, Elif Ozkaya (2015). Market orientation, knowledge competence, and innovation. International Journal of Research in Marketing, Volume 32, Issue 3,2015,Pages 309-318,ISSN 0167-8116, https://doi.org/10.1016/j.ijresmar.2014.10.004.

[79] Syed Abidur Rahman A A Noor H Ahmad S K Taghizadeh , (2015),"Supporting entrepreneurial business success at the base of pyramid through entrepreneurial competencies", Management Decision, Vol. 53 Iss 6

[80] Ozgen, E. and Minsky, B.D. (2006), "A perspective into entrepreneurial opportunity recognition in high technology domains: Technical competencies as a source of information", Journal of Business and Entrepreneurship, Vol.18 No. 1.

- Validate our questionnaire, namely:
    a. Whether artisans are able to understand and respond to all questions
    b. Whether the scales we have developed are reliable measures
- Conduct some basic exploratory analysis of the responses collected.

Validation of questionnaire

We have 4 main scales:
- E-readiness: 8 questions
- (Business) Knowledge Capability: (6+5=) 11 questions
- Entrepreneurial Competency: 7 questions
- Entrepreneurial Performance: 5 questions

Each scale item was measured on a Likert scale going from 1 to 5. For subsequent analysis, we normalize there scores out of 100. So, if the average scale response is 4.5/5, it is normalized to 90/100.

To measure the internal consistency for each scale, we computed the Cronback's alpha. This measure tells us how closely related a set of items are as a group, and ranges from 0 to 1[81]. For a reliable scale, we would expect items to be correlated and thus have a high Cronback's alpha. For each of our 4 scales, we achieve values > 0.8, indicating that scale items are highly reliable measures.

Table 1: Cronback's alpha values for the main scales in our study.

Scale name	Mean Cronback's alpha	Upper Limit Cronback's alpha	Lower Limit Cronback's alpha
E-readiness	0.89	0.94	0.85
Capability	0.92	0.95	0.88
Competency	0.95	0.97	0.92
Performance	0.93	0.96	0.9

The distribution of raw responses to individual questions appearing in the above scales are provided below in their original Bengali version (Figures 1-4). Based on pilot inputs, we have reworded some questions that were vague and did not elicit consistent responses. For example, the 9th question on the e-readiness scale (Figure 1, Panel 7) did not elicit any 3 point responses due to wording issues, and was rectified. Questions that were readily understood by the artisans were retained unchanged for the final intervention.

Basic exploratory analysis

We collect demographic information from the artisans, based on which we provide some preliminary correlations visualized as boxplots (Figures 5-8). The size of the boxes is proportional to the data points within each category, and the solid horizontal line indicates the median value for each category.[82] The main takeaways are:

- There is no clear relationship between gender and any of our scale items. This indicates that a successful intervention that is able to raise capability, competency and/or performance measures is likely to have similar effects regardless of gender. A similar pattern holds for caste.
- For our e-readiness, capability and performance metrics, less experienced artisans have higher scores. For competency however, there is a U-shaped relationship with years of experience.
- E-readiness and capability metrics are positively correlated with education levels. However, the relationship is less stark for competency metrics. Hence, education level appears to play a smaller role in predicting competency.

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[81] https://stats.idre.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/
[82] https://en.wikipedia.org/wiki/Box_plot

Figure 1: E-readiness raw responses
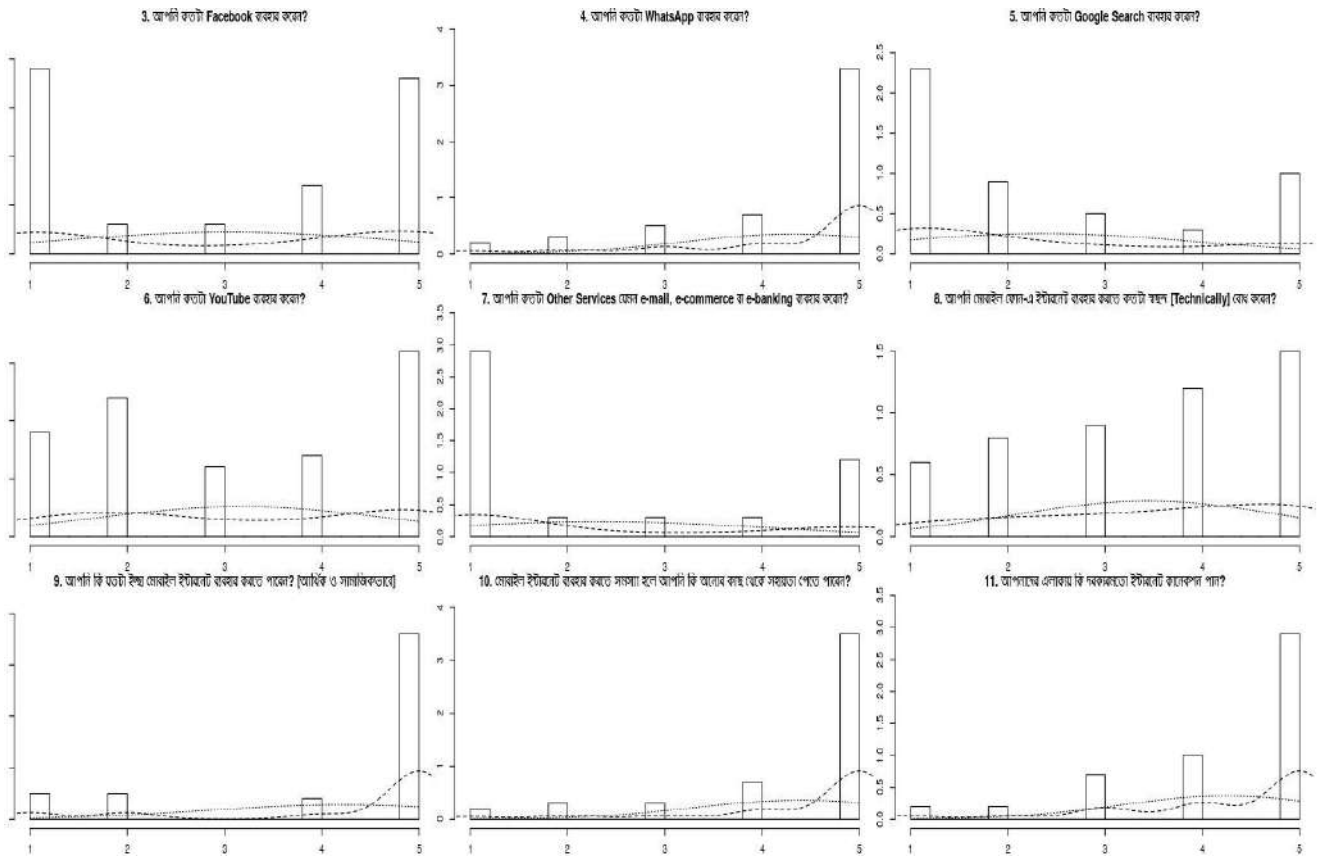
Figure 2: Capability raw responses

81
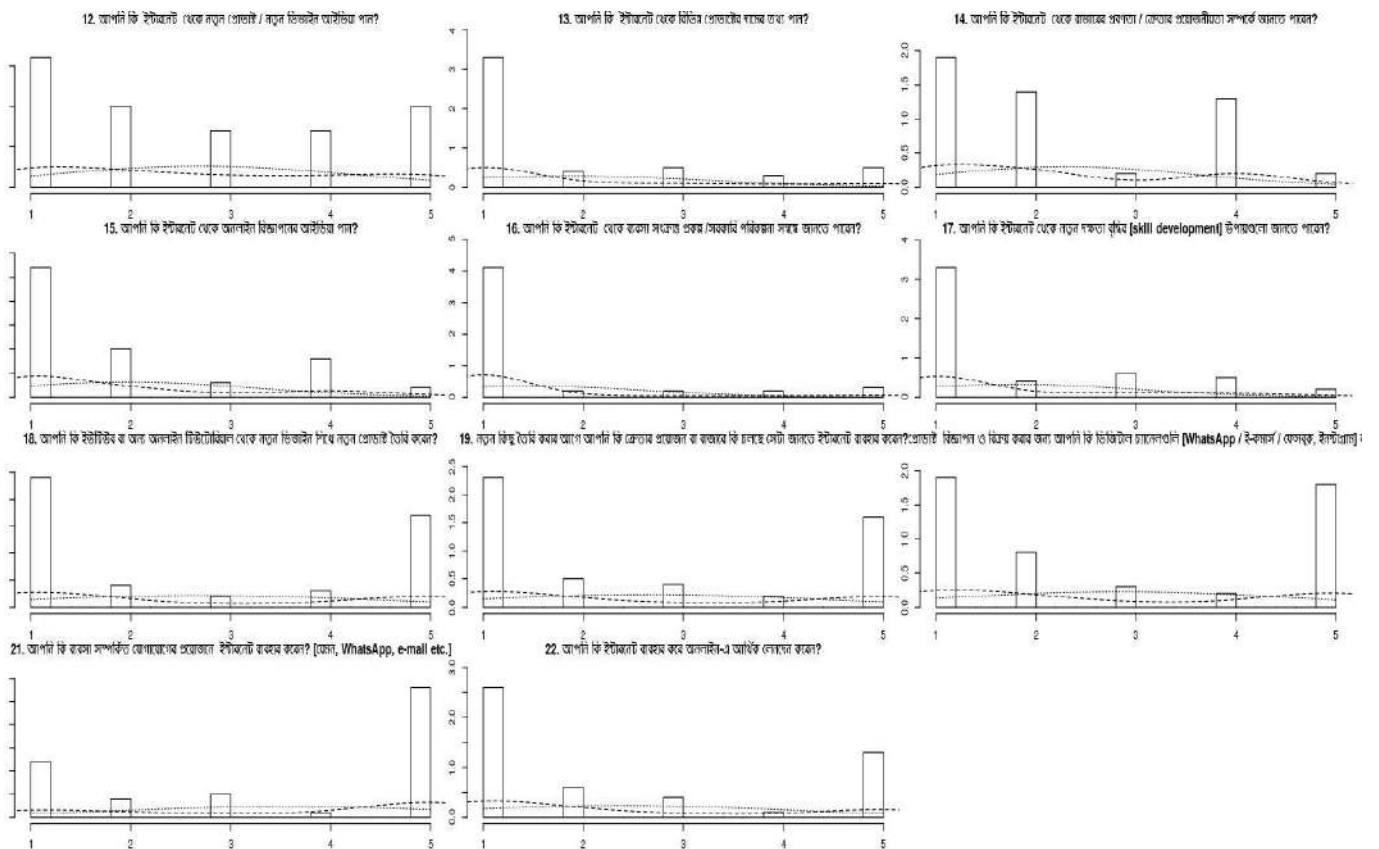
Figure 3: Competency raw responses
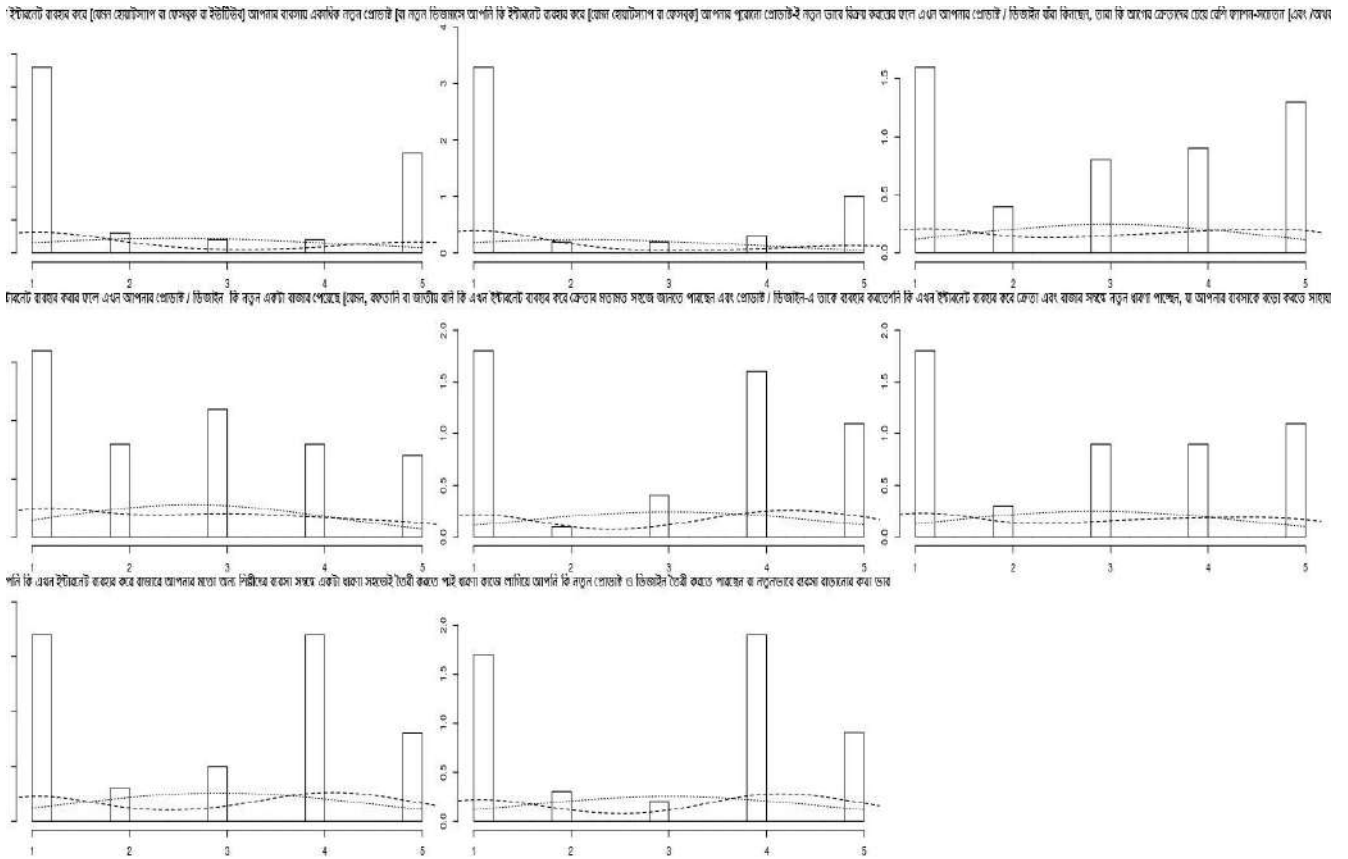
Figure 4: Performance raw responses
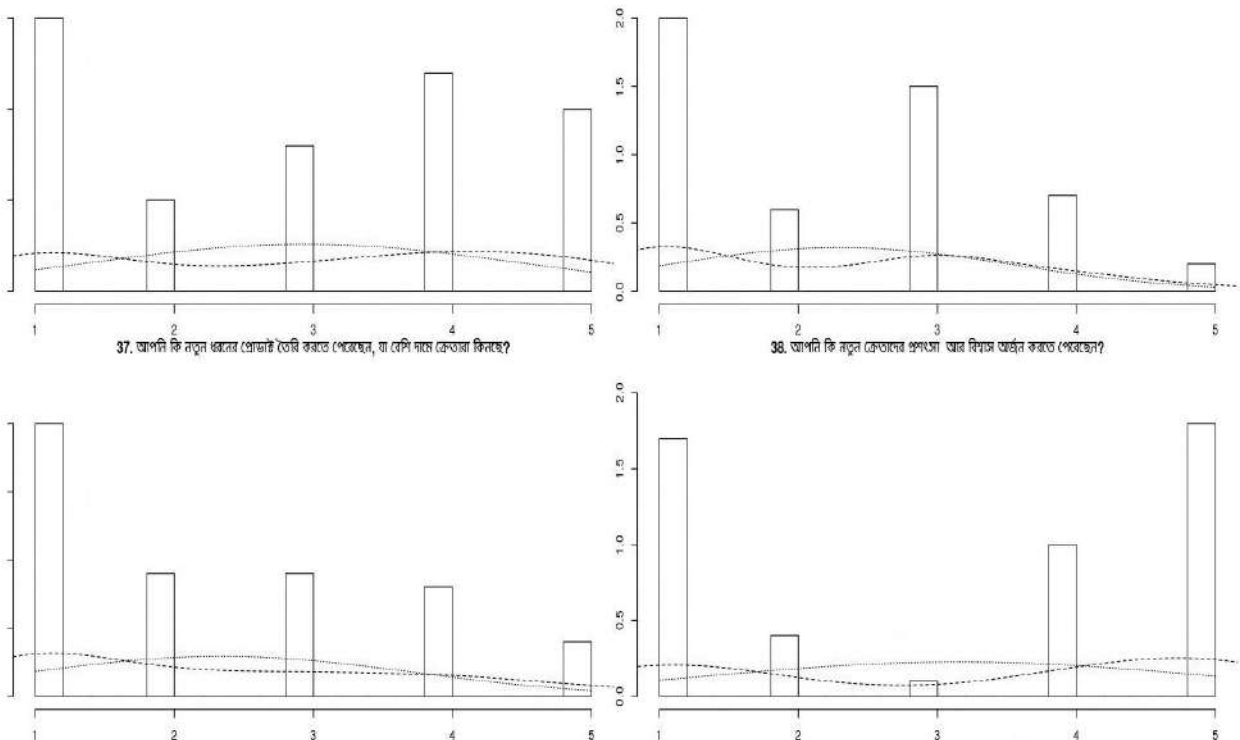
Figure 5: E-readiness score and demographics
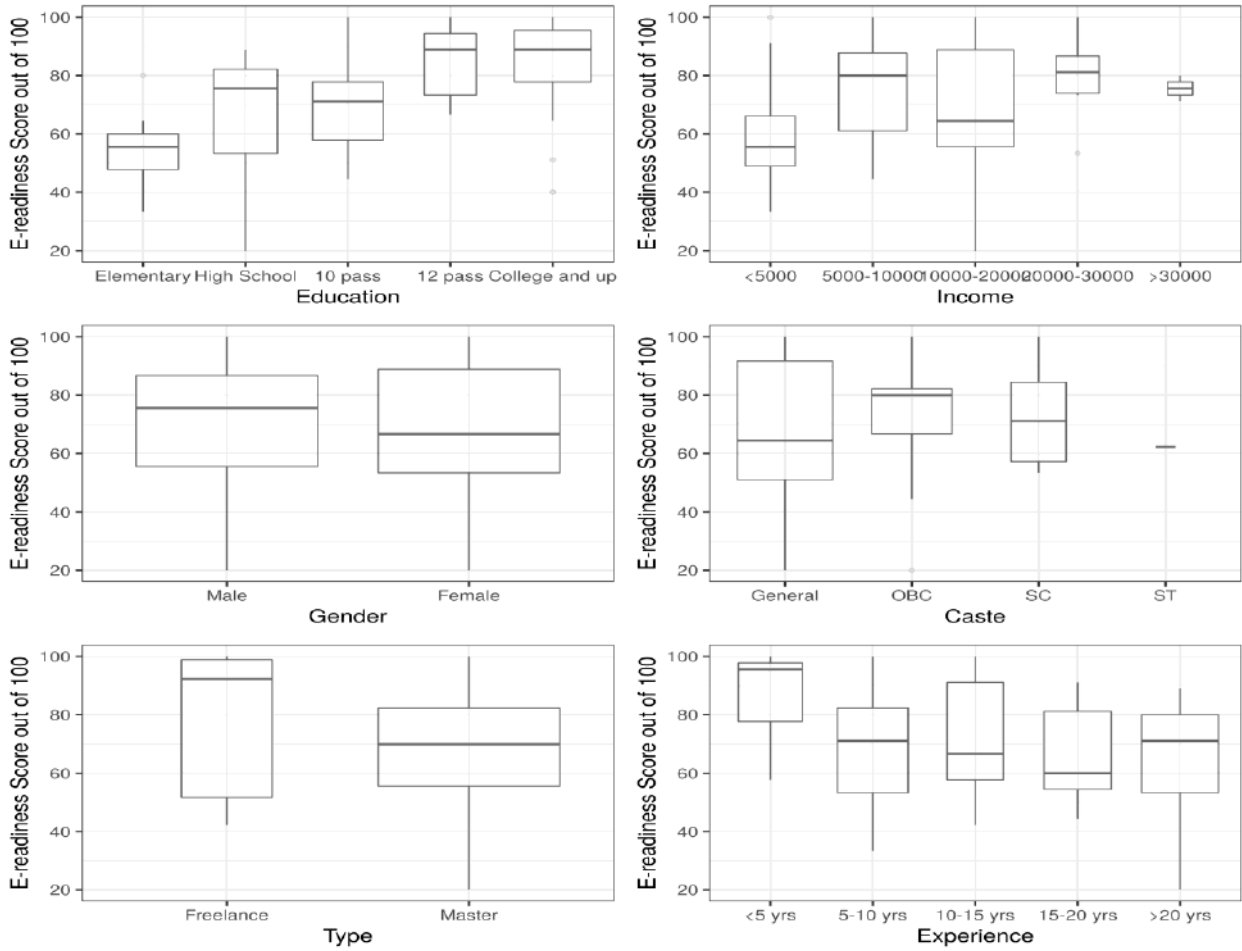
Figure 6: Capability score and demographics
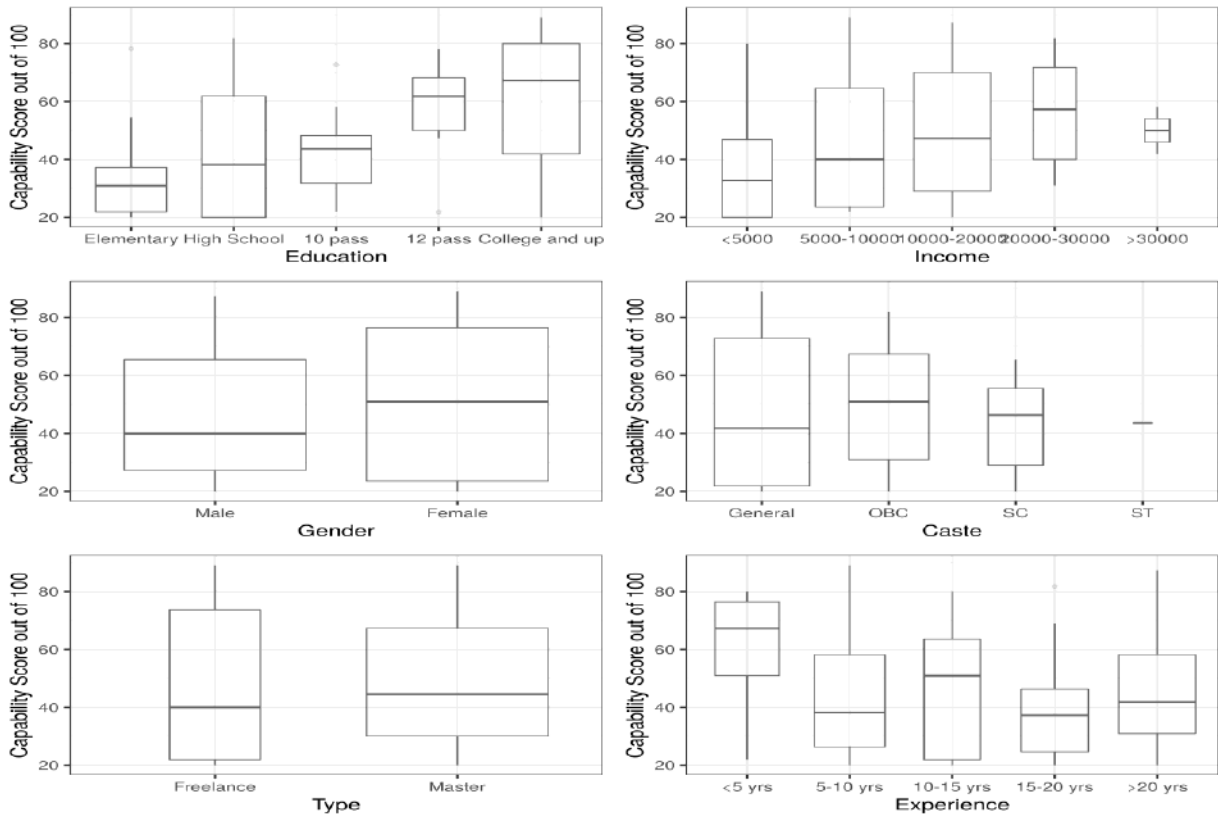
Figure 7: Competency score and demographics
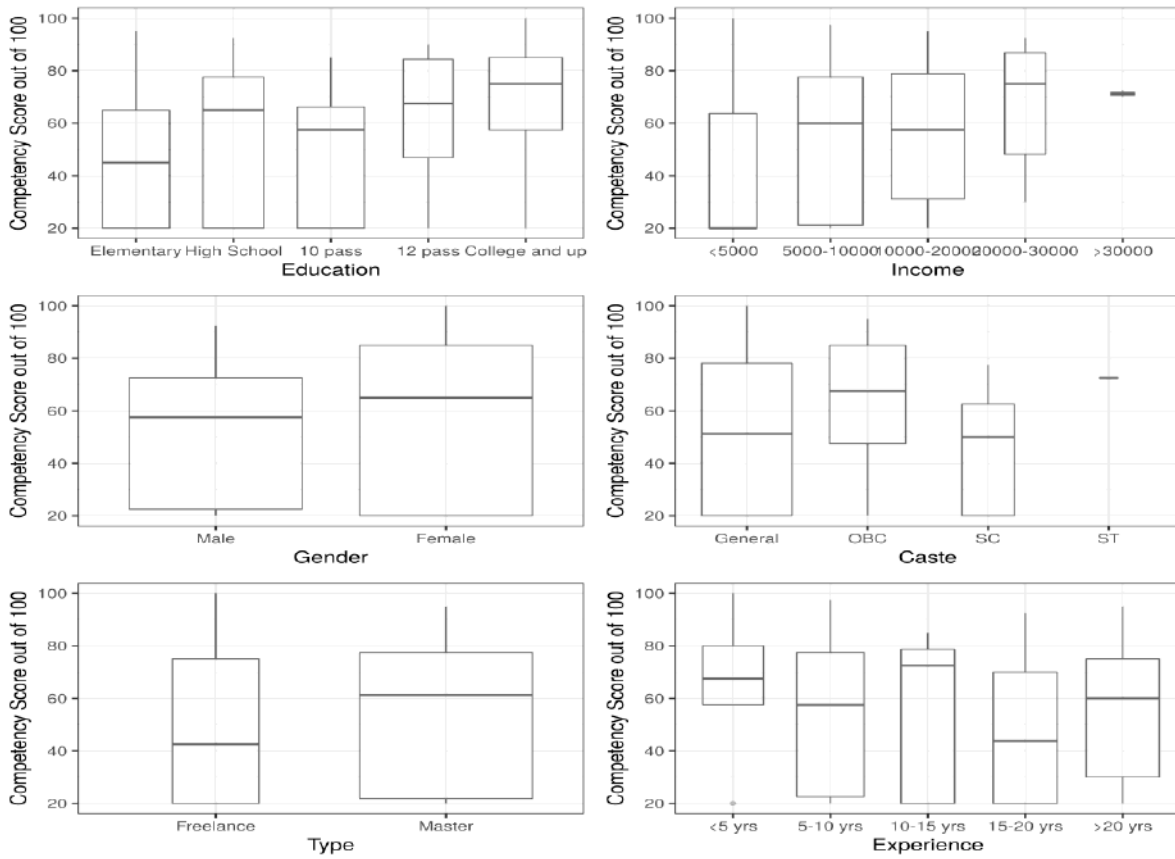
Figure 8: Performance score and demographics
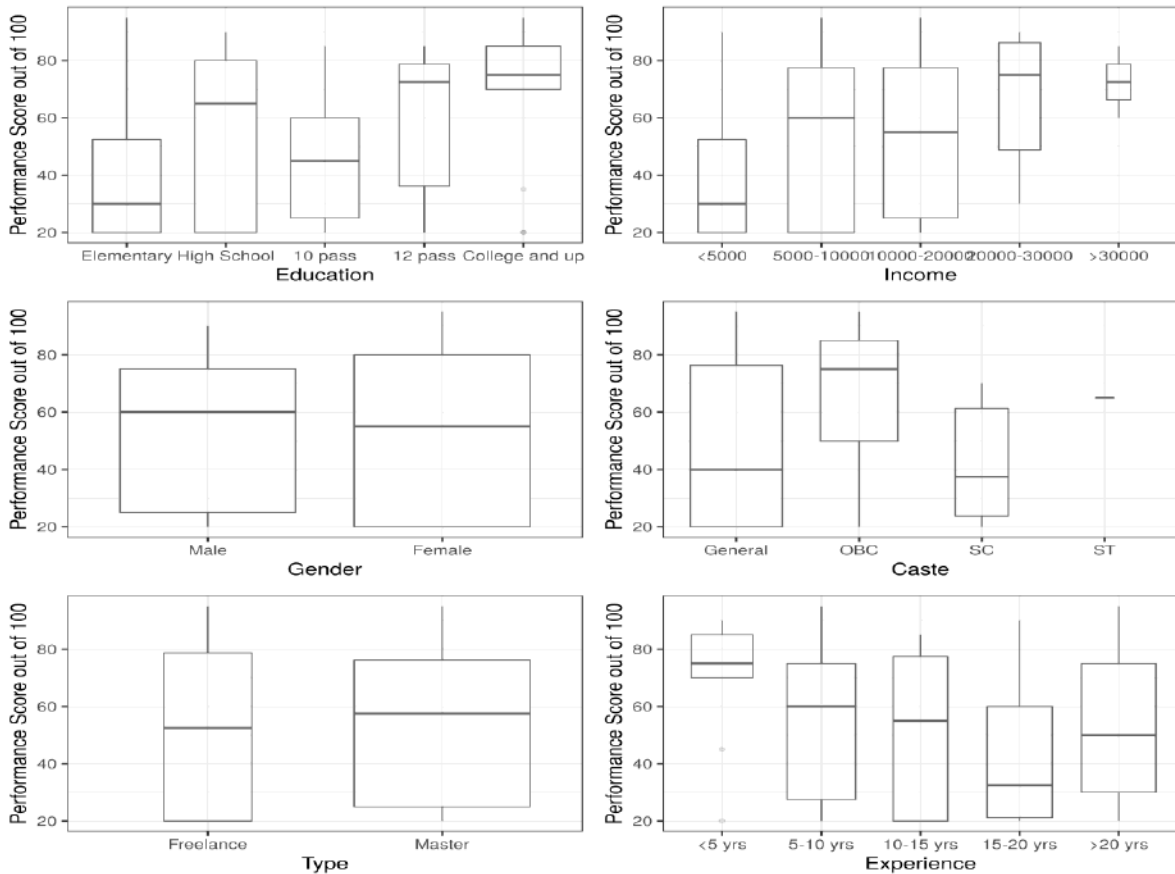
Next, we model correlations across our scales to better understand how they might be related to each other. Linear regressions (Figure 9) show that:

- E-readiness and capability are positively correlated
- Capability and competency are positively correlated
- Competency and performance are positively correlated

The goal of our intervention is to eventually demonstrate that enhancing capability and e-readiness can have a downstream effect on competency and performance. We conduct 2 preliminary mediation analyses to examine whether this hypothesis is plausible.[83]

- First, we examine **the effect of capability on performance**, using competency as the mediator. We find partial mediation (67%), which indicates that 67% of the effect of capability on performance is through its effect on competency.
- Next, we examine **the effect of e-readiness on performance**, using competency as the mediator. In this case, we do not find a direct effect of e-readiness on performance, and find full mediation (92%), indicating that e-readiness affects performance ONLY through its effect on competency.

Figure 9: Linear regressions of (1) Capability on e-readiness, 2) Competency on Capability and 3) Competency on Performance

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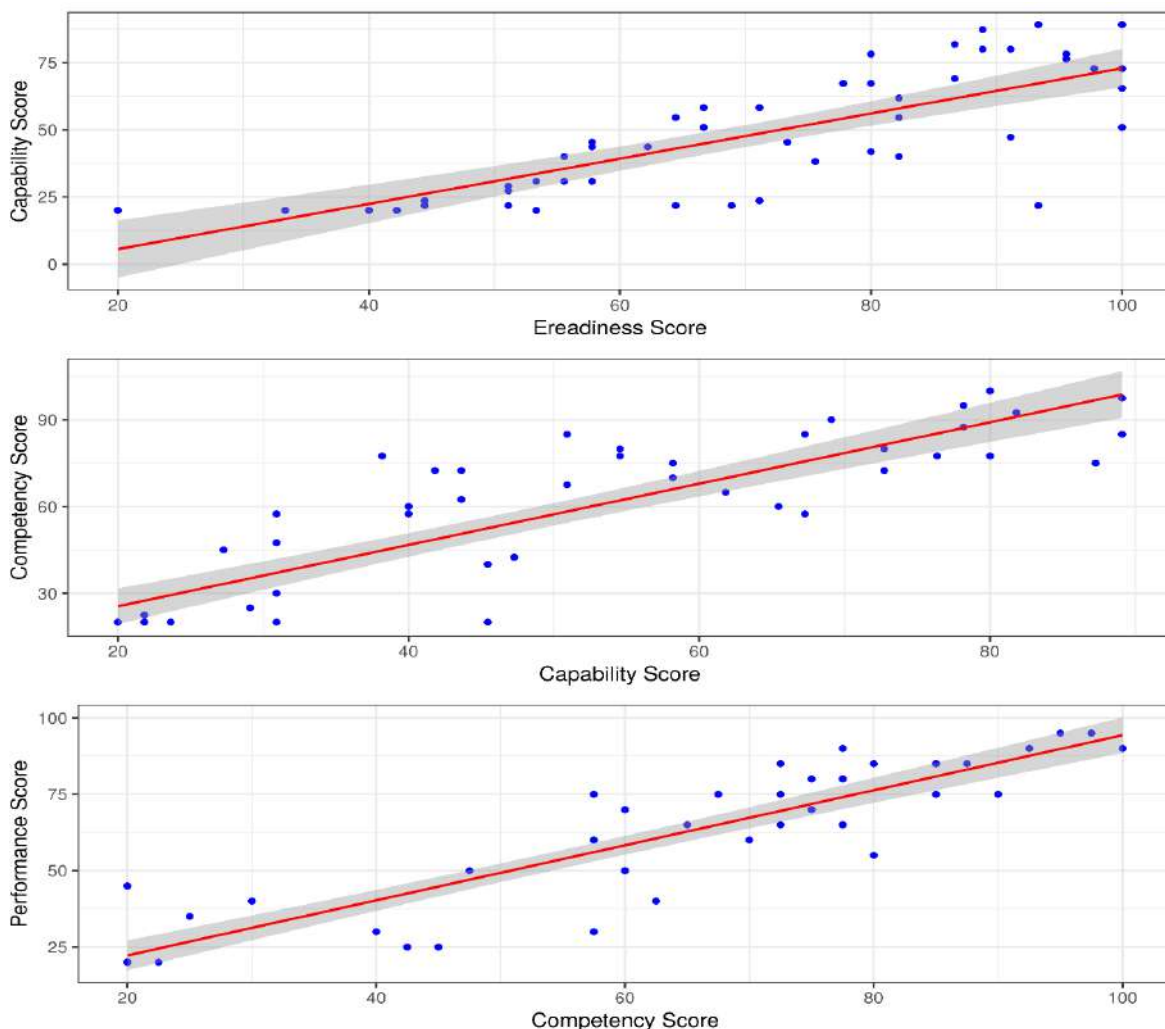
[83] https://en.wikipedia.org/wiki/Mediation_(statistics)

9.2.3 Questionnaire

DEMOGRAPHIC VARIABLES		
Name		
Village		
Block		
Pin Code		
Phone No. (WhatsApp)		
Age		
Art-form		
Gender (1= M; 2= F; 3=O; 4=Don't want to tell)		
Caste (G=1; OBC=2; SC =3; ST=4)		
Av Monthly Income from your business (Profit) ➢ Less than 5000 =1 ➢ 5000-10000 =2 ➢ 10000-20000 =3 ➢ 20000-30000 = 4 ➢ Above 30000 =5		
Av Monthly Household Income ➢ Less than 10000 =1 ➢ 10000-20000 =2 ➢ 20000-30000 = 3 ➢ 30000 - 50000 =4 ➢ Above 50000		
Are you the main source of Income to the household 1= Yes; 2=No		
Are you a: ➢ Freelance Artisan (=1) ➢ Master Artisan (=2) ➢ Agent (=3) ➢ Trader (=4) Number of team members= (permanent= Freelancers=)		
Years of Experience ➢ Less than 5 Years =1 ➢ 5-10 Yrs =2 ➢ 10-15 Yrs =3 ➢ 15 -20 yrs = 4 ➢ Above 20 Yrs =5		
Academic Background ➢ Till primary =1 ➢ Secondary but not passed class X =2 ➢ Passed class X =3 ➢ Passed class XII = 4 ➢ Graduate and above = 5		
Are you getting Internet connectivity in your area? ➢ 1= Not at all; ➢ 2= Not at all places and speed is very slow; ➢ 3= get the connection but the speed is very slow ➢ 4= Occasionally getting good (high speed) connectivity ➢ 5= Always getting good (high speed) connectivity		

1. Whose smartphone do you use?
   o 1: My own
   o 2: My spouse's
   o 3: My son's / daughter's
   o 4: My friend's
   o 5: Family owned smartphone		

2. How much monthly recharge do you do on your phone ?		

Technology Adoption Propensity	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
3. Smart-phone allows me to do the things I want to more easily, when I want to.					
4. Smart-phone make my life easier.					
5. Other people come to me for advice about new technologies.					
6. I must be careful while using my smartphone and internet, as criminals can make use of it to target me (harm me)					
7. I am afraid that I would do something wrong on the mobile					
8. I find it difficult to learn and operate new technological products and services					

INFORMATION TECHNOLOGY READINESS (8)

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
USE OF SMART PHONE-ENABLED APPLICATIONS	I never use	I use once or twice in a month	I use once or twice in a week	I use once or twice a day	I use everyday whenever needed
9. FACEBOOK	1	2	3	4	5
10. WHATSAPP	1	2	3	4	5
11. YOUTUBE	1	2	3	4	5
12. GOOGLE SEARCH	1	2	3	4	5
13. OTHER SERVICE (E-Commerce, E-Banking, etc)	1	2	3	4	5
ATTITUDE TOWARDS MOBILE PHONE	1	2	3	4	5
14. How comfortable do you feel using the internet on your mobile phone?	Not at all	I only see Whatsapp/ Youtube	I only use WhatsApp (read / write)	I use WhatsApp and Facebook	I Use Internet regularly

	1	2	3	4	5
15. Can you use mobile internet as much as you want? (Financially and socially)	Not at all	I cannot afford financially	I do not find time for internet due to household work	I use internet in spite of obstacles	I use internet freely as and when needed
FACILITATING CONDITIONS					
16. Can you get help from others if you have problems using mobile internet?)	Not at all	I do not know anyone who can help me in this	I do not prefer to ask for help	I get help occasionally	I get help whenever I need it

DIGITAL KNOWLEDGE ACCESS CAPABILITY (*WHAT & WHERE*) [Digital Access to Knowledge] (6)

PRODUCT KNOWLEDGE ACCESS	1	2	3	4	5
17. Do you get **new** product / **design** ideas from the internet + social networks?	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites
MARKET KNOWLEDGE ACCESS	1	2	3	4	5
18. Do you get **price** information of similar products from the internet + social networks	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites
19. I get knowledge regarding **market trends / consumer need** from the internet + social networks	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites
20. I get **advertising ideas** from the internet + social networks	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites
ACCESSING KNOWLEDGE ABOUT GOVT / NON-GOVT SUPPORT					
21. I know about **Welfare Schemes** and Govt. Policies related to my business from the internet + social networks	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites
22. I get information on **new skill** building opportunities from the internet + social networks	Not at all	From WhatsApp or YouTube	From WhatsApp and YouTube	From WhatsApp + YouTube + Facebook / Instagram	From any Social Media and popular E-Commerce sites

DIGITAL KNOWLEDGE OPERATING CAPABILITY (*HOW*) (5) (using acquired knowledge through digital channels for business benefits)					
	1	2	3	4	5
23. Do you use internet to **learn new designs** from tutorials in YouTube and similar channels and *to create your new products*	Not at all	I know, but don't do it for my business	Started working on it but not yet gained any business benefits	Working on it and hope to get significant business benefits	Doing it and able to generate business benefits
24. Do you use internet to know ongoing **market trends/ customer needs** from social media / other e-commerce sites *to create your new products*	Not at all	I know, but don't do it for my business	Started working on it but not yet gained any business benefits	Working on it and hope to get significant business benefits	Doing it and able to generate business benefits
25. Do you use **e-commerce** and/or different **social media sites** (FB, Instagram) to advertise and sell my products	Not at all	I know, but don't do it for my business	Started working on it but not yet gained any business benefits	Working on it and hope to get significant business benefits	Doing it and able to generate business benefits
26. Do you **use internet (e.g. WhatsApp, email)** to communicate with business-related contacts (customers/suppliers)	Not at all	I know, but don't do it for my business	Started working on it but not yet gained any business benefits	Working on it and hope to get significant business benefits	Doing it and able to generate business benefits
27. I **use internet** to do online financial transactions for business/work related activities	Not at all	I know, but don't do it for my business	Started working on it but not yet gained any business benefits	Working on it and hope to get significant business benefits	Doing it and able to generate business benefits
Entrepreneurial Competencies (7) [demonstrated capability]					
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
28. In last two months, have you introduced multiple new products (or new design) in your business?	Not at all	Thought of it	Started doing it now: in the process	Introduced 1-5 products/ designs	Introduced more than 5 products/ designs
29. In last wo months, have you used any online channels (e.g. Amazon, Facebook or WhatsApp) to sell your product?	Not at all	Thought of it	Started doing it now: in the process	Introduced 1-5 products/ designs	Introduced more than 5 products/ designs

#	Question					
30.	Are your current customers, who are buying from you using Internet, different from our existing customers (more fashion conscious and/or able to pay more)?	Don't know	I don't think so	May be; not sure	Yes (e.g. non-local market within state)	Definitely Yes (e.g. outside state / export market)
31.	Are your new products addressing an opportunity in a market that is different from your existing market. (e.g. export or national market)?	Don't know	I don't think so	May be; not sure	Yes (e.g. non-local market within state)	Definitely Yes (e.g. outside state / export market)
32.	Are you using internet to get customers' feedback/ need that can influence your product design?	Don't know (because I do not use Internet)	I don't think so	May be; not sure	Yes	Definitely Yes
33.	Are you using internet to get an idea about non-local market trends that can positively influence the growth of your business?	Don't know (because I do not use Internet)	I don't think so	May be; not sure	Yes	Definitely Yes
34.	Are you using internet to get an idea about your competitors / competing products in the market?	Don't know (because I do not use Internet)	I don't think so	May be; not sure	Yes	Definitely Yes
	Entrepreneurial Performance (5)					
35.	In last one month, how many customers contacted you ONLINE?					
36.	Out of those customers, how many of them bought your products or in pipeline?					
37.	In last one month, how much have you earned from ONLINE business?					
38.	Has your business improved as a result of using the Internet?	Don't know (because I do not use Internet)	I don't think so	May be; not sure	Yes	Definitely Yes
39.	Have you gained the admiration and trust of new buyers?	Don't know (because I do not use Internet)	I don't think so	May be; not sure	Yes	Definitely Yes

Some Implementation Challenges towards Bridging
Rural-Urban Knowledge, Information and Market Divide

In our project we have attempted in deploying the spirit of contemporary digital technologies in improving socio-economic prospects of rural SC handicraft producers of Birbhum district. Our intervention across five blocks in Birbhum district (Suri, Sainthia, Labpur, Bolpur-Sriniketan, Nanoor) is premised along a three-phase process:- firstly, we conduct live online sessions with our target group over Zoom, a video-conferencing software, where we train them on appropriate usage of internet and internet-enabled devices so that they can exploit the same for deriving socio-economic benefits. In this context, we also attempt in sensitizing our target group regarding the current ongoing market trends, innovative product development, ways of appropriately showcasing their produce in front of global virtual customers through attractive product photography and videography. Secondly, we help them to create their digital shops in our NCoRe Platform using our Artisan Profiling App. Thirdly, we supplement the knowledge disseminated in online sessions with short-duration asynchronous videos on the topics taught, which we send our target group through Whatsapp. This enables our rural learners to resort to these videos anytime they want and master and implement the knowledge gained in the process. Adherence to this supplementary audio-visual aid has been done by keeping in mind the power of audio-visual mediums in conveying necessary information in a fashion, which has proven conducive for learners in retaining and learning their lessons better.

Apart from this three-phase intervention, our digital platform NCoRe enables the rural artsans to get directly connected to a vast pool of global customers. Each artisan holds their individual online shop in NCoRe, which consists of a short description about the artisan, followed by his/her introductory video and images of products made by that particular entity. By exhibiting the online shops of artisans in holistic detail, the intention of NCoRe is to move beyond mere e-commerce, where in reality it attempts in organically connecting the buyers and sellers, thereby giving the provision to the buyers to not only source authentic handicraft goods directly from the artisans but also to know their producers and the surrounding in which they are producing. Our synchronous live sessions, as detailed earlier, are followed by an onboarding intervention, where we help our intervened group of artisans to create their own online shop in NCoRe. In this context, we have developed a mobile app in Bengali for the artisans, which is designed to guide the artisans in creating their profile and uploading their product images and specifications in the app, which directly creates the online shop in NCoRe once the uploading process in the app is complete.

A brief description of our intervention explicitly highlights how our entire research plan is premised on the pre-condition that if artisans are to benefit from the digital medium, they must possess internet-enabled devices to engage in digital activities on a regular basis. While our research intervention, by targeting SC rural producers, is committed to ground-level percolation, availability of smart phones often pose a problem in case of the selected target group. Not only in terms of access, we have also faced significant implementational challenges in terms of our target group's capability and applicability of digital usage. Since our entire intervention is driven by internet and internet-enabled devices, implementation and successful operationalization of our project plan for underprivileged rural SC community of Birbhum is fully dependent on (i) accessibility of internet and internet-enabled devices; (ii) users' capability to effectively use the technology; and, (iii) applicability of internet and internet-enabled devices, as perceived not only by users, but also by other connected agents, specifically in the context of underprivileged community.

10.1 Accessibility of Internet and Internet-Enabled Devices

While internet and smartphone penetration are rapidly increasing, there are still over three billion people who don't have access to the Internet[84]. Nearly **60 percent** of the world's population is already online. However, although the coverage gap (those who do not live within the footprint of a mobile broadband network) is as low as 9%, still over 40 percent of the world's total population remains unconnected to the internet[84]. At the same time, percentage of people accessing Internet also varies across socio-economic profiles. In developed countries, most people are online, with close to 87 per cent of individuals using the Internet. In the least developed countries (LDCs), on the other hand, only 19 per cent of individuals are online in 2019[84]. This divide is also prevalent within countries as well, where the poor, elderly, and rural people are less likely to be connected. Women also have less access than men, especially in low-income countries[85].

Similar disparity exists in case of accessibility to internet-enabled mobile devices (smartphones, tablets), and, growth in mobile technology varies widely across and within nations. People in advanced economies are more likely to have smartphones and are more likely to use the internet and social media than people in emerging economies. In a survey conducted by Pew Research Center[86], it has been found out that, "a median of 76% across 18 advanced economies surveyed have smartphones, compared with a median of only 45% in emerging economies". In some countries like South Korea, Israel and The Netherlands, smartphone penetration is more than 90%; whereas countries like Poland, Russia and Greece have only around 60% penetration. The smartphone usage rate also varies substantially in emerging economies, ranging from 60% in South Africa and Brazil to 40% in Indonesia, Kenya and Nigeria[86].

However, the proliferation of mobile technologies is growing rapidly around the globe. The number of active mobile broadband subscriptions continues to grow strongly, with an 18.4 per cent per year[84]. For example, as on 2020, Internet users in India are 50% of its population with a yearly growth rate of 23%. Currently, internet is predominantly accessed via smartphones (91 %) in India. While overall mobile phone users in India is 78%, smartphone users have increased to 67% in 2020, although not all smartphone users are accessing Internet[87].

The non-uniformity of internet usage followed by a low inclination towards possession and usage of digital devices in marginalized rural backgrounds of developing nations posed a major hindrance in the path of our intervention. In our project, Birbhum district, characterised as a rural locale situated in the eastern part of Indian subcontinent, forms our field of study. Every week, we randomly select around 10-15 participants from different locales across 5 blocks in Birbhum for our intervention. Our participants belong from SC community, who are incorporated in our research study with the pre-condition that they have regular access to smart phones or other digital gadgets. Since our entire intervention is designed along digital lines, *possession or regular access to smart phones with high-speed Internet connectivity account to be a mandatory prerequisite in our research paradigm*. To illustrate the challenges we have faced in this context, we will like to give a brief glimpse of the way we proceed on to select one batch of participants, comprising of 10-15 members roughly.

We have created a list of 150 randomly selected participants each from different locales across different blocks in Birbhum. Out of these 150 participants, we select around 10-15 members, who together constitute a

[84] ITU. (2019). Measuring *digital development: Facts and figures 2019. Telecommunication Development Bureau, International Telecommunication Union (ITU).*

[85] Pisa, M., & John, P. (2019). *Governing Big Tech's Pursuit of the Next Billion Users* [CGD Policy Paper. Washington, DC: Center for Global Development]. Retrieved from https://www.cgdev.org/publication/ governing-big-techs-pursuit-next-billion-users

[86] Taylor, K. & Laura, S. (2019). *Smartphone Ownership Is Growing Rapidly Around the World, but Not Always Equally*. Pew Research Center. Retrieved from www.pewresearch.org

[87] Kemp, S. (2020). *Digital India 2020*. Retrieved from https://datareportal.com/reports/digital-2020-india

single batch in our research study. These participants are selected on the pre-condition that they have expressed willingness to participate in our intervention and have regular access to smartphones with high-speed internet connectivity. Around 60% of 150 participants automatically get excluded from our intervention due to their lack of regular access to smartphones with Internet connectivity. Of the ones who do have access, in some context, even their access to smartphones seems limited or restricted by family obligations or likes.

Our in-depth intervention has revealed a general tendency, where many of the rural households of Birbhum with whom we have interacted report the presence of a single smart phone to be used by all members of the family. Since the digital domain is particularly more attractive to the younger generation, members of our target group often report limited availability of their family smartphones because the same are being utilized more by their children, leaving them with little or no lone time with the device. Contacting the members of our target group for aspects related to research intervention often becomes problematic from our end, more so for female participants, where the smart phones are often being taken by the husbands or children to their workplace, making it difficult for us to contact our participant, who is in turn left with limited usage of the device. The usage of smartphone of female participants is also sometimes reported to be limited due to family obligations, where many female participants although having expressed their willingness to participate in our training initially have dropped out in the course due to family restrictions. These practical hindrances highlight that undertaking empowering measures for marginalized communities following digital path can be challenging because majority of the target group still lacks unrestricted access to smartphones including proper access to Internet on a daily basis.

10.2 Users' Capabilities to Effectively use the Technology

There are several government and private initiatives all over the globe to increase Internet accessibility for the underprivileged community, making available cheap smart phones and affordable Internet connectivity[88]. However, improved accessibility will not always ensure improved usability of any system; users' capability needs to be cultivated so that they can use smartphone and internet effectively to satisfy their need.

Majority of the underprivileged population in developing countries does not have the capability to use smartphone and internet effectively to satisfy their need. There are several reasons for this. One of the primary reasons is non-availability of local content. Most of the content available online are in English, making it incomprehensible to underprivileged community members, who having low literacy rate. The vast majority of the population simply do not know what information is available, where to find it and how to use it. The usage pattern also varies across gender as well as socio-economic and educational profile.

So, enhancing users' capability to help them using the system is not limited to offering digital literacy training. Information and knowledge transactions, especially with disempowered people and groups, are a complex process and ICT needs to be appropriated and used in a way that helps resolve users' concerns. Most of the ICT implementation initiatives in the context of development are exogenous in nature. They usually use a *push* approach and give less attention to the technology adoption capabilities of individual actors of the underprivileged community. This approach assumes that social development can be achieved through acquisition and implementation of technology[89]. This approach results in implementation failures of

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[88] Pisa, M., & John, P. (2019). *Governing Big Tech's Pursuit of the Next Billion Users* [CGD Policy Paper. Washington, DC: Center for Global Development].

[89] ITU. (2011). *The Role of ICT in Advancing Growth in Least Developed Countries: Trends, Challenges and Opportunities* [International Telecommunication Union Report, 2011].
      Retrieved from   http://www.itu.int/ pub/D-LDCICTLDC

ICT interventions, since they fail to recognize the importance of the context and of users' capabilities[90]. The endogenous approach, on the other hand, is based on an understanding that the impact of ICT usages "are caused not by the technology, but by the new forms of informational behaviour they facilitate"[91]. The endogenous model thus focuses more directly on resources, aspirations and capabilities of users in the context of development.

The design challenge is therefore about finding ways to appropriately integrate digital technologies that would help the community members to accept and adopt the digital technologies as new methods of transactional systems. Researchers have conceptualized the concept of digital maturity both in the context of individual and organization[92]. In order to improve digital maturity of underprivileged population, the following three dimensions need to be taken into account:

- E-awareness: the aptitude to understand the opportunities of digital technology

- Digital literacy: competencies to use digital technologies to fulfil personal and professional objectives

- Informational literacy: the ability to retrieve, understand and interpret information coming from digital sources.

Thus, the technology development and intervention design efforts need to be tuned according to the learning context and capabilities of underprivileged learners.

In our framework, we have attempted in acting as a mentoring body, which introduces and familiarises rural target group of Birbhum with digital ways of life conducive in bringing socio-economic empowerment and nurturing their digital capability in the process. Through a wide range of studies and analyses, Raposa et al. (2016)[93] have demonstrated the importance of mentorship and social relationships to cultivate shared interests and skills. They have also demonstrated the effectiveness of "natural" mentors in a digitally connected platform, as compared to formal or "assigned" mentoring, especially in the context of marginalized and vulnerable population[92]. In our intervention, after finalizing a particular batch, our next task is to train the selected 10-15 participants on how to attend an online training over Zoom, a video-conferencing software. Four members of our research group undertake a week-long activity to install the Zoom software in the smart phones of every member of our target group. While three members assist through telephonic means and try to complete the installation process by conversing with the participants virtually, one member physically visits the houses of the selected participants by taking prior consent to provide hands-on training to the members regarding Zoom installation and operation.

At this stage, the low motivational level of the rural participants becomes a concern, which we try our best to address. Although in this stage we deal with participants who have regular access to smart phones and Internet and have already expressed their willingness to participate in our intervention, their non-familiarity with digital ways and their uncertainty regarding the promise digital medium holds, in spite of possessing

[90] Giolo, F. (2012). Why is information system design interested in ethnography? Sketches of an ongoing story. *The social study of information systems* (pp. 1-30). Hershey, Pennsylvania: IGI Global.

[91] Mansell, R. (2010). *Power and interests in developing knowledge societies: Exogenous and endogenous discourses in contention*. IKM Working Paper No. 11, 2010.p.7.
Available at: http://wiki.ikmemergent.net/files/IKM_Working_Paper-11-Robin_Mansell-July2010-final-pdf.pdf

[92] Vardisio, R., & Patricia, C. (2015). Digital maturity: What is and how to build it. *In the proceedings of international conference the future of education (5th edition),* Florence, Italy. Retrieved from
https://www.researchgate.net/publication/303683893_Digital_maturity_what_is_and_how_to_build_it

[93] Raposa, E.B., Jean, E.R., & Carla, H. (2016). The Impact of Youth Risk on Mentoring Relationship Quality: Do Mentor Characteristics Matter?. *American Journal of Community Psychology*, *57*(3-4),320-329

smart phones, often leads to a fluctuating motivational level. This we try to address at this stage by detailed counselling of rural participants by members of our research group regarding the importance and necessity of conducting socio-economic affairs via the digital medium. The ongoing pandemic scenario and the severe blow it has given to face-to-face buying and selling options have rendered many rural handicraft producers jobless. Their non-familiarity of the digital medium has further contributed in aggravating the economic crisis faced by our target group. Our motivational approaches towards members of our target group majorly include explaining them the possibilities and the opportunities they will be able to uncover via the digital means in today's world, which were initially unknown or inaccessible to them.

Following the motivational counselling, members of our research group attempt in familiarising members of the target group regarding zoom operation and installation process, by virtue of which they are expected to derive the ability to properly navigate the software and attend our online live sessions via the same. Although we send the link of downloading the software via whatsapp, we have encountered scenarios where members face difficulty in installing and operating zoom by following verbal guidelines. To address that, we have created a navigational video for installing and operating zoom in Bengali, which we send to our participants via whatsapp along with the link for downloading the software, with the intention to assist them step-by-step through the entire procedure by resorting to audio-visual aids. The widespread difficulty in installing and operating an app in a smart phone, which is otherwise an easy task, reflects the low level of digital capability of rural members. This highlights the fact that possession or regular access to digital devices does not guarantee the users' capability of optimally using the same. It is because of this reason, in our research intervention, we have attempted in explaining our target group the effectiveness of adhering to a particular technological means prior to introducing them to the same. If the intention behind the usage of a particular digital feature is cleared before-hand to rural users, then with systematic mentoring and sympathetic introspection we can hope that the undertaken measure can be fruitful in enhancing the digital capability of rural participants in the process.

10.3   Perceived Applicability of Internet and Internet Enabled Applications for Business Transaction Management

Even if smartphone with Internet connectivity is available to an underprivileged user, who may also be capable of using it, will that ensure optimal usage of smartphone and Internet to generate business benefits? There is always a cost-factor involved with this usage, even if it is subsidized. So, what are the benefits an underprivileged user will get against this financial investment, other than some entertainment and socialization using Facebook, for example? So, in our context, users need to be properly motivated, highlighting the demonstrated benefits of the proposed digital medium. Digital inclusion must be linked with socio-economic inclusion of underprivileged community so as to motivate users to practice digital means. Digital connectivity must be able to link an underprivileged user with larger opportunity structure encompassing connections and practices that help them find their way to success in the wider world, which includes academic, career, civic, and political opportunities[94]. As the United Kingdom Cabinet office recognized in 2004: "Digital inclusion is not about computers, the internet or even technology, it is about using technology as a channel to improve skills, to enhance quality of life, to drive education, and to promote economic well-being across all elements of society. Digital inclusion is really about *social* inclusion, and because of this, the potential for technology to radically improve society and the way we live our lives

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[94] Ito, M. et al. (2020). *The Connected Learning Research Network: Reflections on a Decade of Engaged Scholarship*. Irvine, CA: Connected Learning Alliance. Retrieved from https://clalliance.org/publications/

should not be underestimated"[95]. Muir (2004)[96] argued that other than promoting access and imparting basic digital training, the importance of community connections using digital media needs to be emphasized.

One part of our intervention is dedicated in creating an asynchronous video module on the topics covered in online synchronous sessions for our rural participants. These videos are disseminated to the members of our target group via a whatsapp group, which comprises of both rural participants and members of our research group. Several such whatsapp groups are created, one for each batch of participants, with the intention of sending asynchronous video modules and to facilitate interaction over taught topics among group members. While the intention to facilitate purposive interaction among whatsapp group members stem from our desire to build social capital and contribute to community development and formation, asynchronous video modules are sent to participants for their future reference. Easy access to the pool of learning videos is expected to contribute positively in accrediting rural members with the ability to apply the knowledge gained during the course of our intervention. However, at this stage, there is no way to ensure whether all the intervened participants are watching these videos. The impact of the asynchronous module in triggering the translation of digital capability to digital applicability of rural members can only be evaluated in a post-study, after the passage of a determined amount of time.

The duration of our intervention for one batch of participants is for 8 weeks, where in the 1st week, members attend synchronous live sessions, followed by onboarding and creation of online shop in NCoRe in the 2nd week. The 3rd week is dedicated for tutorial, where members of our research group individually interact with members of target group to conduct a personalised doubt clearing and clarification and query resolution session. The rest 5 weeks are dedicated to systematically sending asynchronous video modules via whatsapp group and to encourage purposive interaction among participants regarding the new knowledge disseminated. With the simmering period of 2 weeks, we have scheduled our post-study for the particular batch on the 10th week. It is only after the completion of post study, can we analyse the impact of asynchronous video modules in triggering digital applicability of rural members.

However, there is one way to get a fair idea regarding the digital applicability sense of our rural members during the course of intervention, prior to post-study. The way our rural members progress in the NCoRe onboarding task, can be indicative of their digital applicability sense, where the tasks they are supposed to perform for creating an online shop via NCoRe app are based on the application of knowledge they have gained during our intervention. While majority of our members are showing good progress in creating their online shop in NCoRe with our assistance, some of them are raising alarming concerns.

At this juncture, it becomes imperative to spell out the socio-economic position of our target group and the inherent obstacles associated to such position, in order to explain the issue at hand. Our intervened group mostly comprise of labour artisans, who are employed under agents or middlemen. Supply of raw materials and marketing of final products are handled by the agents, who bag majority of the profit share, leaving this group of labour artisans with bare minimum wage. Such an operationalization not only deprives the rural members economically, but it also alienates them from the entire chain of production. Rural artisans, who are prey to such a system, have little or no knowledge regarding where to collect raw materials from, proper channels of sale, thereby making it next to impossible for them to start an independent business, although they have sufficient skills to create authentic handmade goods.

This problem got explicitly manifested in the NCoRe onboarding task, where when rural members were asked to send their product photos to be uploaded in their online shops, many reported the absence of real

[95] Cabinet Office. (2004). *Enabling a Digitally United Kingdom: A Framework for Action*. Retrieved from http://www.cabinetoffice.gov.uk/publications/reports/digital/digitalframe.pdf

[96] Muir, K. (2004). *Connecting Communities with CTLCs: From the digital divide to social inclusion*. http://library.bsl.org.au/jspui/bitstream/1/609/1/Connecting%_20communities%20with%20CTLCs.pdf

products at the time. Whatever they produce gets taken by the middlemen in lieu of some basic wage, thereby leaving these rural members with no product to claim as their own. Moreover, their financial status and lack of knowledge regarding how to procure raw materials, where to sell, disallow them to initiate an independent business venture. This highlights that digital applicability sense is not an inherent property among individuals. Digital non-users, through systematic monitoring and assistance can only reap the fruits of the digital medium in presence of a facilitating environment, which will encourage such transition. Favourable social, economic, political factors are mandatory prerequisites in any attempt undertaken to enhance digital applicability of rural non-users.

10.4 Role of Social e-commerce Marketplace to Provide Market Linkages to Rural Artisans

Rural artisans are expert in creating unique fashionable handmade goods which are directly sellable to the urban consumers. At present, artisans are restricted to sell their handmade products to their locality or in own districts. They usually sell their products through central and state exhibition conducted by the ministry or directly through traders.

These rural artisans specialize in making a variety of products that were made using a variety of traditional art forms of the Birbhum district. The most commonly used art forms are Katha Stitch. Apart from the Katha Stitch, they are also able to make products in dokra, shola, jute craft, wood craft etc. In order to increase their sales volume, it is required to open a parallel channel that promotes their skills and product as well as expand their reachability to the urban markets.

Now the internet connections are available in different parts of the village and some of the handicraft artisans have their own smartphones. We have taken this opportunity to enable artisans to promote their skill and products through the online marketplace. Considering handicraft artisan's skill-set and products range, Amazon is the most suitable e-commerce platform from their context. Amazon has a separate section in their platform "Amazon Karigar" (https://sell.amazon.in/grow-your-business/amazon-karigar.html), which allows rural handicraft artisans to open a digital shop in their platform that consists of different product portfolios.

Launching a business or opening a digital shop in "Amazon Karigor" requires completing below 4 steps:

- Registration: It requires to fill a form on the 'Amazon Karigor' website and Amazon will contact artisans with the next steps. The artisan must meet the eligibility criteria described in the FAQ section in the Amazon Karigor webpage
- On boarding and Training : Online training support will be provided to help artisans with how to sell online, i.e. how to run an account on Amazon
- Imaging & Cataloging: For the initial launch, support will be arranged for the photo-shoot of products and detailed cataloging
- Launch Business: Once account is launched, products will be available for sale on Amazon.in website

Apart from the above 4 steps, an artisan must hold the following things to hold an online shop in Amazon.in platform,

- A valid GST number
- A bank account details
- A registered business entity (with address)

Unfortunately, most of the rural handicraft artisans are not proficient to use the e-commerce platforms like amazon karigor because:

- ✓ Selling items through amazon requires a minimum inventory to deliver items within the delivery deadline specified by amazon (usually 7-10 days from the date of order placement). Most of the rural artisans are works on daily wages basis and they don't have any stock of physical product due to their financial constraints. It is difficult for them to maintain a minimum inventory of their items on regular basis.

- ✓ Most of the rural artisans are not very much familiar with the English language. This is a hindrance for them to sell products through Amazon. Because maintaining a seller account in Amazon requires writing a description of every product and execute various other operations from the seller dashboard. Clearly, it is a tedious job for the rural handicraft artisans. This is very problematic for the artisans who have little or no knowledge of English.

- ✓ Most of the artisans don't have any GST number. Obtaining GST and submit GST filing on a regular basis is problematic for small scale rural artisans.

- ✓ Listing product in Amazon.in platform requires selecting a brand name. Artisans don't have their own brand and, in that case, they can list their products under Generic brand. Here the chances of visibility of products to the customers in the amazon platform are very low and getting the organic orders is negligible. Also, acquiring good trust score and customer feedback is a big challenge for the newly registered artisans under the Generic brand category.

- ✓ Due to handmade nature of the products, every product is unique in design, style and shape. It is very difficult to maintain exact same standard for every handmade item. It is very difficult for rural artisans to upload their products on the e-Commerce platform maintaining standardization.

Despite that, very few artisans have their own GST number and a registered business address. We have set up an Amazon seller account for one of them on a trial basis and open a digital shop for displaying their products on the Amazon.in platform.
(https://www.amazon.in/s?me=A12JKHC2S8V0BE&marketplaceID=A21TJRUUN4KGV).

98
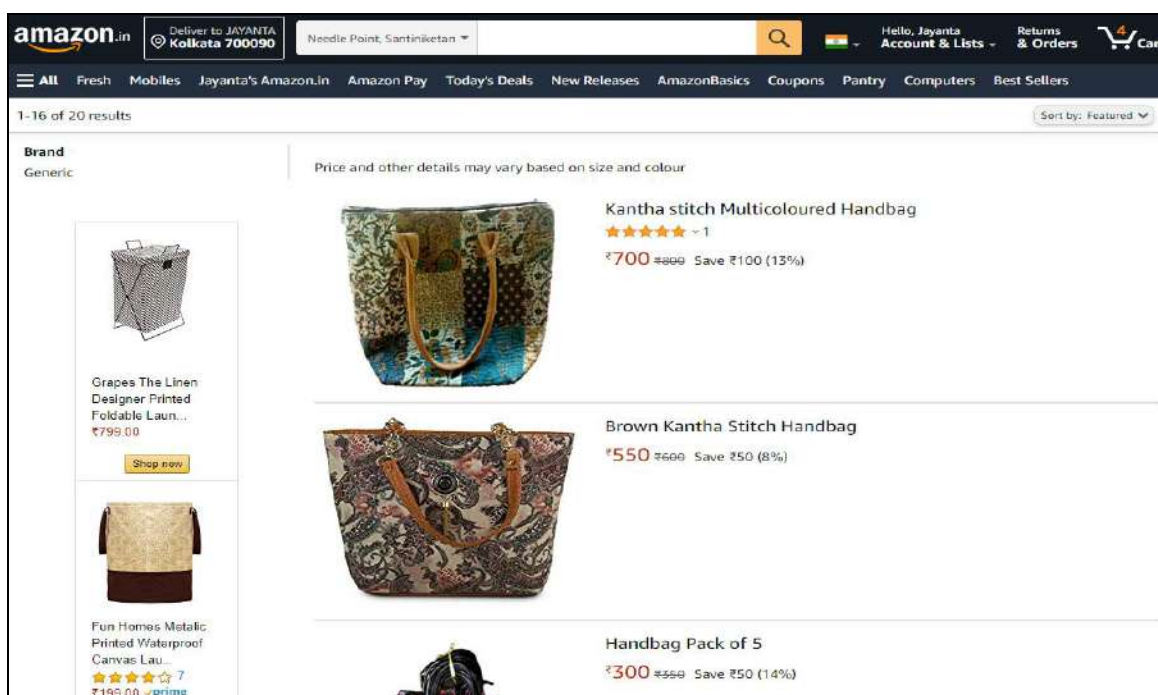
The following are the key observation point:

- Due to the traditional art forms and authenticity of the products, artisans are receiving good customer feedback for their products even if they are listing their products under Generic brand.
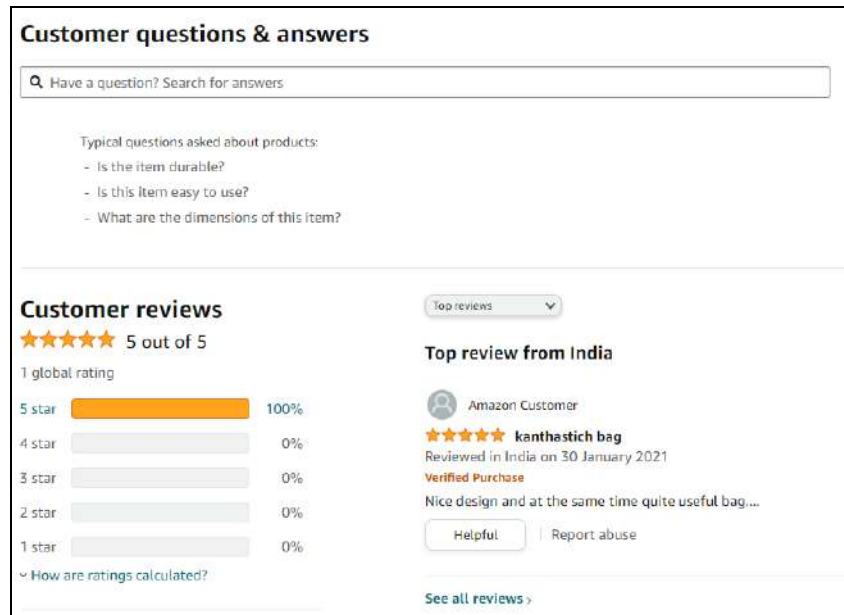
- Handling and maintaining inventory on regular basis in their warehouse is not possible for the rural artisans. This is because, most of the time they create products after receiving some orders from the customers. It is quite challenging for them to deliver the order on time. Because of that, some orders got cancelled.
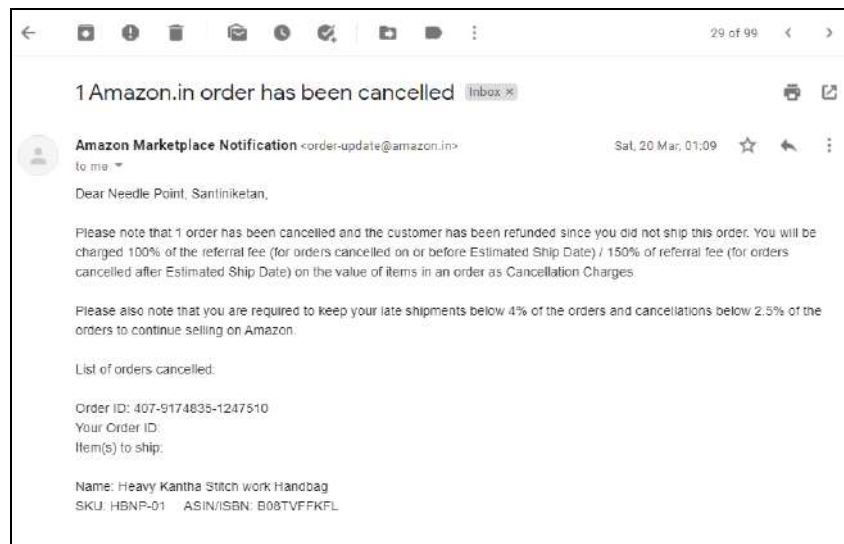
So the e-commerce market place like 'Amazon Karigar' is not the appropriate and suitable marketplace for the rural handicraft artisans even if they have a valid GST number and registered business address.

Considering handicraft artisan's skill-set and products range, social media channels like Facebook and WhatsApp is the most useful platforms where rural artisan can promote their skillset and showcase products also.

In Facebook, artisan can create a Facebook page to showcase their products which includes product images, price, brief description etc. The same can be done through Facebook Marketplace. The main challenges for the artisans of using Facebook for their business purpose are the mode of payment (it may be COD or bank transfer) and availability of logistics service providers in their locality. Additionally, they need some proficiency in English language.

WhatsApp is another promising marketing tool for the rural artisans through which they can do peer to peer marketing. Using WhatsApp Business, an artisan can create a digital catalogue of his/her products and send this to the customers for promotion. Once a customer is interested in a particular product, the customer can enquire more details from the artisan through WhatsApp (via text, audio and image exchange) like product quality, colour, size, shipping details, price etc. Even the customer can do the video conversation with the artisan via WhatsApp video call features for more clarity on his/her query. Once the customer is satisfied with all queries, the customer sends the amount to the artisan's bank account. Once the amount received, the artisan couriers the specific product to the customer's address.

We have done some experiments in this context. In our experiment, an urban buyer expressed interest in buying a leather folder and handbag from an artisan of Birbhum. We form a WhatsApp group between artisan and customer. Entire negotiation regarding product purchase (like, price, quality, and material) was done in WhatsApp. Once customer is satisfied with all parameters, she transfers the money to the artisan's bank account with evidence. After receiving the amount, artisan sends the product to the customer address via standard courier service.
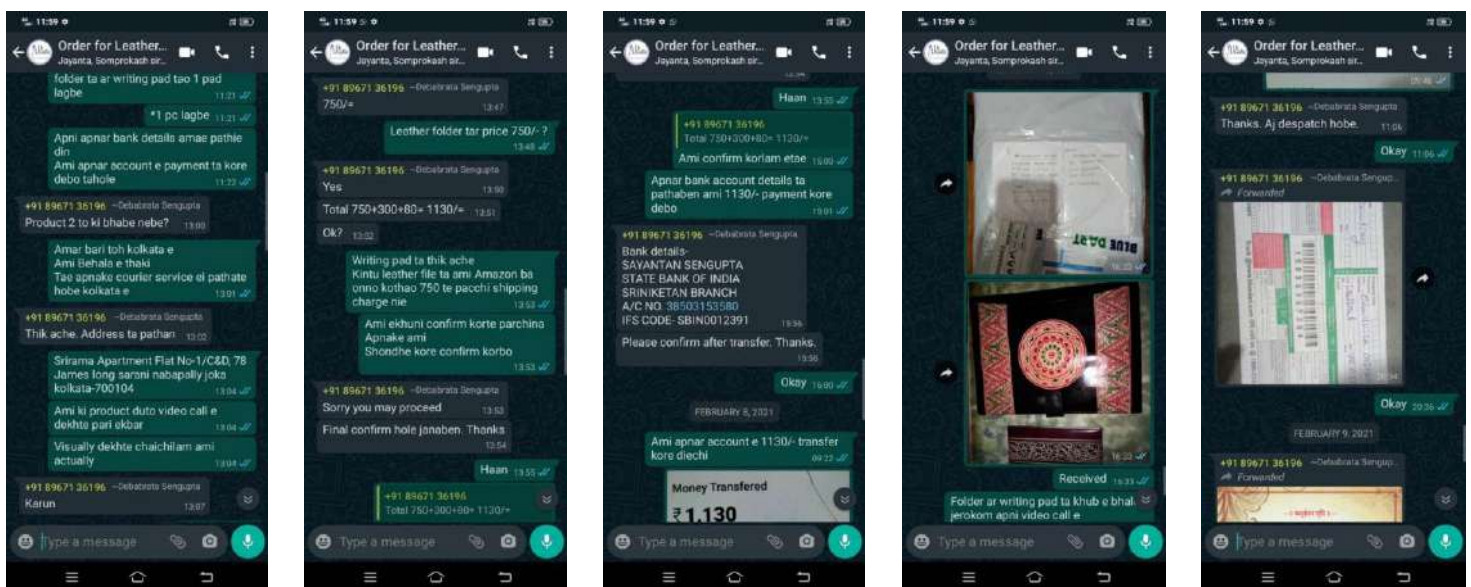
The main difficulty in doing this type of business transaction through WhatsApp is the trust issue. Customer and artisan both are unknown to each other and here is no intermediary who will take the responsibility for resolving any kind of dispute (if any).

Considering all the above observations regarding the promotion and selling of rural handicraft artisan products in the urban marketplace, we have developed a Social e-commerce Marketplace named NCoRe (described before in Chapter 6), which promote the artisans in the urban marketplace with their skill set and

products. NCoRe promotes rural artisans and their traditional & indigenous art forms in the global marketplace by providing an organic connection between rural artisans and urban consumers in their native language.

At the same time, NCoRe is an online marketplace for rural handicraft artisans to sell authentic traditional handmade products globally under their own brand name, ensuring customers a quality purchase at a fair price. We make sure artisans have enough technical knowledge to market their products digitally. We interact with artisans through ZOOM, make their stories, document their craft, and at the same time check the authenticity of the product. We provide complete product cataloguing for free, which includes product photography and writing product descriptions and specifications. This helps them create their own brand and get the due credit for their work (described before in Chapter 6).

The order execution cycle in the NCoRe platform is,
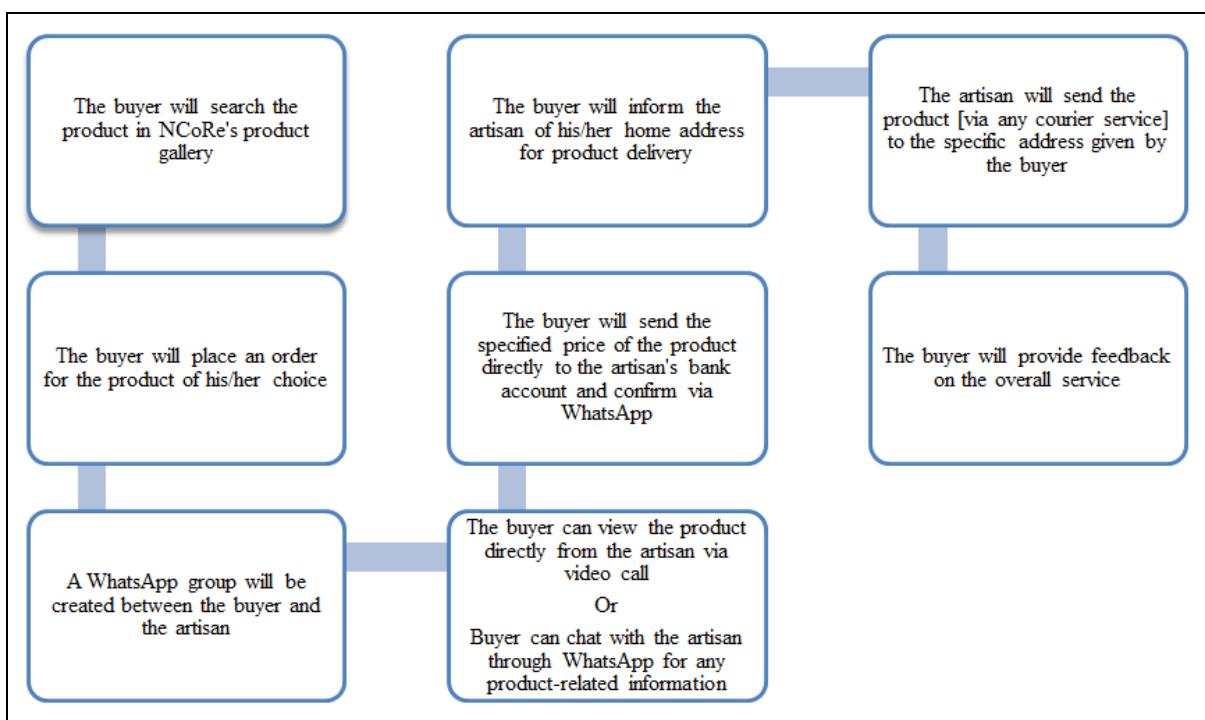
In the next chapter, we will illustrate our plan to evaluate the impact of our intervention through NCoRe in order to improve the entrepreneurial performance of rural artisans.

11

Work To Be Done from 1ˢᵗ April 2021

11.1 Intervention Design and Analysing the Impact of Intervention

In chapter 8, we have described our proposed social technology-driven Social Knowledge Management framework and our digital platform, NCoRe, for the rural SC community to bridge rural-urban knowledge, information and market divide. However, an analysis of the proposed framework reveals that the proposed digital platform is not only a technological artifact[97] but also a socio-technical artifact[98], working in a social context, and entails the engagement of many social actors. Here, the technology at its core is enabling a network of agents, promoting their dynamic interactions in the context of socio-economic-cultural-political context.

The introduction of socio-technological innovations in society to solve social problems require a deep transition from older system to a new technology-mediated system and it entails simultaneous development (co-evolution) of technologies, service operations, and people's practices and mindsets[99]. In our context, it is a transition from a face-to-face, centralized supply-chain production and distribution environment to a virtual, decentralized, connection-centric, collaborative and personalized environment. These *socio-technical transitions* take care of changes in user practices and formal and informal institutional structures (including socio-cultural, economic, regulatory, etc.) so that technology can be smoothly integrated with the extant social system[100]. The concept of sociotechnical transition stresses the interdependence of technological, social, cultural, and political dimensions, as well as the mutual adjustment of these dimensions.

Hence, in order to manage a socio-technical transition for underprivileged community involving multiple agents, *transition intermediaries* play an important role to speed up transitions. In our context, we, the research group, plays the role of transition intermediary, which can be defined as actor that positively influence transition processes by linking actors and activities, and their related skills and resources, with existing regimes in order to create momentum for socio-technical system change. We, as intermediary, facilitates and enables use of the digital platform, as well as takes an active role with the aim of empowering disadvantaged groups.

From April onwards, one of our objectives will be to demonstrate how this socio-technical transition can be managed through a transition intermediation process so that we can attempt to bridge rural-urban knowledge,

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[97] "**Technological artifacts** are in general characterized narrowly as material objects made by (human) agents as means to achieve practical ends. Moreover, following Aristotle, **technological artifacts** are as kinds not seen as natural objects: **artifacts** do not exist by nature but are the products of art." [Verbeek, P., & Pieter, E.V. (2012). *Technological Artifacts: A Companion to the Philosophy of Technology*. Wiley-Blackwell].

[98] Socio-technical artifacts are product or process artifacts with which humans must interact in the context of a social system to provide their utilities. [Vermaas, P., Peter, K., Ibo, V.P., & Maarten, F. (2010). *A Philosophy of Technology: From Technical Artefacts to Sociotechnical Systems.* Morgan & Claypool.]

[99] Kivimaa, P., Boon, W., Hyysalo, S., & Klerkx, L. (2019). Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda. *Research Policy, Elsevier*, *48*(4), 1062-1075.

[100] Markard, J., Raven, R., Truffer, B. (2012). Sustainability transitions: an emerging field of research and its prospects. Res. Policy 41, 955–967.

information and market divide using social technology enabled social knowledge management platform. We will show our implementation experience in Birbhum with a group of artisans belonging to SC community. To enhance the degree of participation in our platform and holistic growth among rural artisans, we, in collaboration with local NGOs and local civic agencies, has initiated

a systematic training to 500-600 artisans from Birbhum over a period of one year in a batch of 10 to 15, where each batch will receive training for a period of eight weeks. The training program is divided into three components:

(iv) Online, live training sessions for 6 hours using Zoom Platform: These live training sessions (synchronous) will be for two hours each day on Monday, Wednesday and Friday (total six hours). Our weekly online training intervention operates along three major axes: *Digital Competency Training, Training on Photography & Videography,* and, *Innovative, Market-Oriented Product Development Training* (discussed in details in **Chapter 8**).

(v) Following the online training, we will help each individual artisan to create their digital shops in our online platform and Facebook and also form a WhatsApp group to enable intra-and inter-community knowledge and information exchange.

(vi) Additionally, we will periodically distribute small video tutorials in Bengali on topics related to digital marketing and entrepreneurship development. The duration of each video tutorial is 7 to 10 minutes. In a span of eight weeks, we plan to send around 60 video tutorials (one to tow tutorials per day).

Through pre-study and post-study conducted on those artisans pre-and post-intervention, we will try to evaluate the performance of our intervention in terms of bridging rural-urban knowledge, information and market divide.

11.1.1 The Study Design

The study design and the validation of the design through a pilot study have already been illustrated in **Chapter 9**. In this section, we will highlight our sampling methods and the research methodology adopted to conduct the evaluation study.

11.1.2 Sampling Methods

We have collected names and contact details of around 6000 artisans of Birbhum belonging to SC community and divided them into 40 groups based on their geographic locations (Pin-code and Block). Table 11.1 illustrate the process of initial clustering , covering the following blocks of South Birbhum: Sainthia, Suri, Rampurhaat, Nanoor, Labpur, Mayureswar and Bolpur-Sriniketan. Then, we have applied a randomization algorithm to generate the following weekly plan:

Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8	Week9	Week10
Nanoor 2	Nanoor 3	Suri 3	Suri 4	Rampurhat	Labpur-1	Labpur-3	Labpur-2	Labpur-5	Labpur-6
Week11	**Week12**	**Week13**	**Week14**	**Week15**	**Week16**	**Week17**	**Week18**	**Week19**	**Week20**
Labpur-4	Labpur-8	Labpur-7	Suri 2	Bolpur 12	Mayureshwar -4	Mayureshwar -3	Mayureshwar -2	Mayureshwar -5	Mayureshwar -1
Week21	**Week22**	**Week23**	**Week24**	**Week25**	**Week26**	**Week27**	**Week28**	**Week29**	**Week30**
Suri 1	Saithia-1	Saithia-2	Saithia-4	Saithia-5	Saithia-3	Saithia-6	Nanoor 1	Bolpur 13	Bolpur 14
Week31	**Week32**	**Week33**	**Week34**	**Week35**	**Week36**	**Week37**	**Week38**	**Week39**	**Week40**
Bolpur -5	Bolpur-3	Bolpur -7	Bolpur -1	Bolpur -10	Bolpur-4	Bolpur-2	Bolpur-8	Bolpur-11	Bolpur-6

Table 11.1 The process of initial clustering , covering the following blocks of South Birbhum: Sainthia, Suri, Rampurhaat, Nanoor, Labpur, Mayureswar and Bolpur-Sriniketan.

Sainthia (928)		288	640
GROUP #	AREA (Village)	MALE	FEMALE
Pin Code: 731201			
1. Sainthia 1 (165)	Abhirampur Bagra Kanada, Ahmadpur, Bandhura Dewash Chandpur, Boro Sangra Choto Sangra, Bataspur, Belia, Bhromorkol,	44	121
2. Sainthia 2 (156)	Chandpur, Choto Sangra, Choto Nanu Bazar, Dakshin Banagram, Dewash, Indira Hatia, Jollow Bagra Kanada	44	112
3. Sainthia 3 (188)	Kadam Kondi, Kagas Belia, Kendua Dewash, Konarpur, Kurumsaha, Layekpur, Mahulashul, Masadda, Matiara Uttarkhayerbuni, Meherpur, Melanpur	42	146
4. Sainthia 4 (157)	Mitradaspur, Mohulasul, Nanu Bazar Choto Sangra, Nirisha, Pangram, Pargram Nirisha, Patharghata	56	101
5. Sainthia 5 (128)	Rupadihi, Sashidharpur, Shalgoria, Shibbandi Choto Sangra, Somsa Choto Sangra, Sukantapally, Tenduldihi Choto Sangra	46	82
6. Sainthia 6 (134)	Upper Dewash, Chandpur	56	78
Suri (547)		222	325
GROUP	AREA	MALE	FEMALE
Pin Code: 731101, 731102			
7. Suri 1 (110)	Changuria, Dhanonjoybati Ikra, HaraiPur, Kanshipai, Panuria	49	61
Pin Code: 731103, 731121			
8. Suri 2 (151)	Bansjore, Baralunda, Dhalla Kukhudihi, Gargaria, Kankhuria, Katunia Baram, Nandapur Baralunda, Panchpakria Kukhudihi, Shaktipur Baralunda	54	97
Pin Code: 731129			
9. Suri 3 (156)	Bansra Majigram, Bhagabanbati Ikra, Datanda, Dhaltikuri, Dhononjoybati, Goalgram Damdama, Ikra, Khamartora	67	89
10. Suri 4 (130)	Kharikatikuri, Majigram, Patanda Ikra, Purandarpur, Sadar	52	78
Rampurhat (120)		20	100
GROUP	AREA	MALE	FEMALE
Pin Code: 731202			
11. Rampurhat 1(120)	Basoa Baswa, Bishnupur, Lalitakundu Basoa, Melerdanga Basoa	20	100
Nanoor (533)		26	507
GROUP	AREA	MALE	FEMALE
Pin Code: 731215			
12. Nanoor 1 (171)	Angora, Atkula Basapara, Bandar, Basapara, Brahmakanda Basapara, Chatim Gram Khujutipara, Gamar Thupsara, Mangalpur, Pundara Bandar, Ramkrishnapur Thupsara, Tikuri Thupsara	16	155
Pin Code: 731301			
13. Nanoor 2 (143)	Baliguni Uchkaran, Belgram Nanoor Saota, Bogtore Dhrubabati, Fingtore Dhrubabati, Mohonpur, Muraripur, Pakurhans	4	139

GROUP	AREA	MALE	FEMALE
14. Nanoor 3 (219)	Amnahar Palsa, Bogtore Dhrubabati, Mohammadpur Dhrubabati, Brahmandih, Budhura Palsa, Dhrubabati, Fingtore Dhrubabati, Gokulbati Brahmanpara, Haranandapur Aligram, Jamna Dhrubabati, Kirnahar, Kotal Ghosh Labpur, Maheshgram Aligram, Parota Kirnahar	6	213
Labpur (1208)		**147**	**1061**
GROUP	AREA	MALE	FEMALE
Pin Code: 731303			
15. Labpur 1(137)	Abadanga, Adityapur	63	74
16. Labpur 2 (127)	Bagla Danga Kuniyara, Bagsina Labpur Thiba, Bakul Labpur, Bhagabanpur Langolhata, Bipratikuri, Panchpara, Bunia Labpur, Chak abadana, Chatra Labpur Indus, Chaturbhujpur Kajipara	13	114
17. Labpur 3 (195)	Dangal Labpur, Danrka, Dattabagtor Kurunnhar, Dhrubabati, Durgapur, Galaichandi Labpur, Gobindopur, Gokulbati Brahamanpara	38	157
18. Labpur 4 (141)	Haranandapur Aligram, Indas Bolpurpur, Joychandrapur Kajipara, Kandarkula, Kapsundi, Kuniara	9	132
19. Labpur 5 (144)	Kurunnahar, Langolhata, Lohadda Maheshpur	3	141
20. Labpur 6 (144)	Maheshpur, Mahula, Mohutar Biprotikuri, Makaipur, Malitpur, Manikpur, Manpur, Mirati, nabagram, Panchapara, Purba Durgapur, purba mahula	8	136
21. Labpur 7 (105)	Ramghati Thiba, Shalika Bolpurpur, Sharparajpur, shalampur, Shankhpur, shitalgram, Sonajuli, Suruliya, Tiltikuri Kurumba, Upar Dangal	8	97
22. Labpur 8 (215)	Thiba	5	210
Mayureshwar (790)		**250**	**540**
GROUP	AREA	MALE	FEMALE
Pin Code: 731234			
23. Mayureshwar 1 (171)	Abhirampur, Bajitpur, Bangra, Behira, Bhagobanbati, Bijuri Kinuri, Bilsha Fulur, Deriyapur,	42	129
24. Mayureshwar 2 (129)	Dihikopa Parishar, Fulur, Harisara Gorola, JIWE, Nabagram	19	110
25. Mayureshwar 3 (164)	Hatora, Mahishadohori, Miapur	54	110
26. Mayureshwar 4 (142)	Kamardanga, Kanturi JIWE, Kolora Chhoutara, Kunjuri, Kustor Fulur, Lowtore	46	96
27. Mayureshwar 5 (184)	Netur Fulur, Panchpara, Parishar Kunuri, Pathai Bajitpur, Punur, Rangaipur, Sainthia, Saugram, Uttaramarpur Derpur	89	95

		1745	12
Bolpur-Sriniketan (2289)			
GROUP	AREA	MALE	FEMALE
Pin Code: 731204		219	2070
28. BOLPUR-1 (182)	Adityapur	14	168
29. BOLPUR-2 (147)	Bhubandanga,,Albandha,Amdahara	8	139
30. BOLPUR-3 (170)	Bolpur	15	155
31. BOLPUR-4 (140)	Bolpur	15	125
32. BOLPUR-5 (170)	Darpashila, Jaljaliya, Adityapur	3	167
33. BOLPUR-6 (163)	Jambuni Bolpur, Kalikapur Bolpur, Kalharpur Laldaha	11	152
34. BOLPUR-7 (155)	Kunchli Gopal Pur, Khoskadampur , Mahula,Bogdwora	2	153
35. BOLPUR-8 (178)	Muluk, Patharghata Adityapur , Padmabatipur Sitapur	7	171
36. BOLPUR-9 (143)	Raipur, Ratanpur Laldaha	19	124
37. BOLPUR-10 (164)	Sitapur, Shitalpur	4	160
38. BOLPUR-11 (133)	Uttarnarayanpur, Supur, Ukilpatty	12	121
PIN: 731235			
39. BOLPUR-12 (138)	Paruldanga	15	123
PIN: 731236			
40. BOLPUR-13 (227)	Ballavpur Post Sriniketan, Debagram Parui Kandradangal	53	174
41. BOLPUR-14 (179)	Manoharpur, Mohidapur Binuriya, Surul Sriniketan	41	138
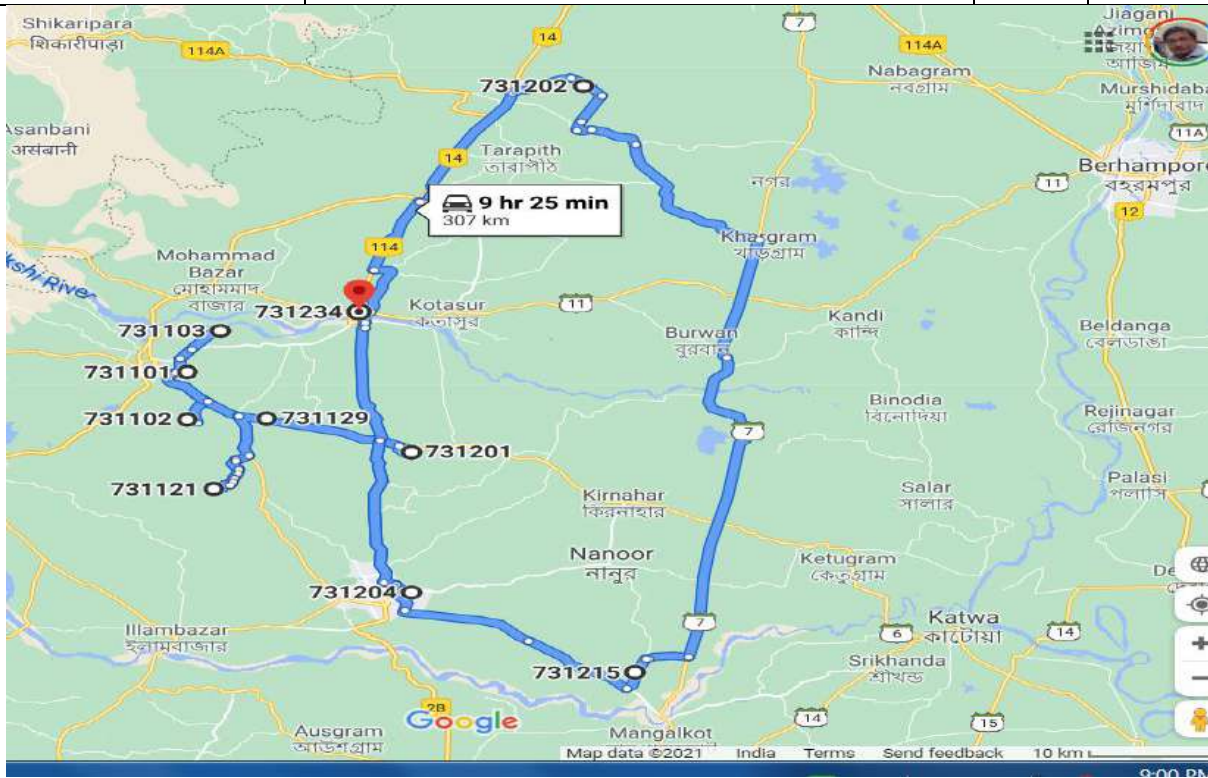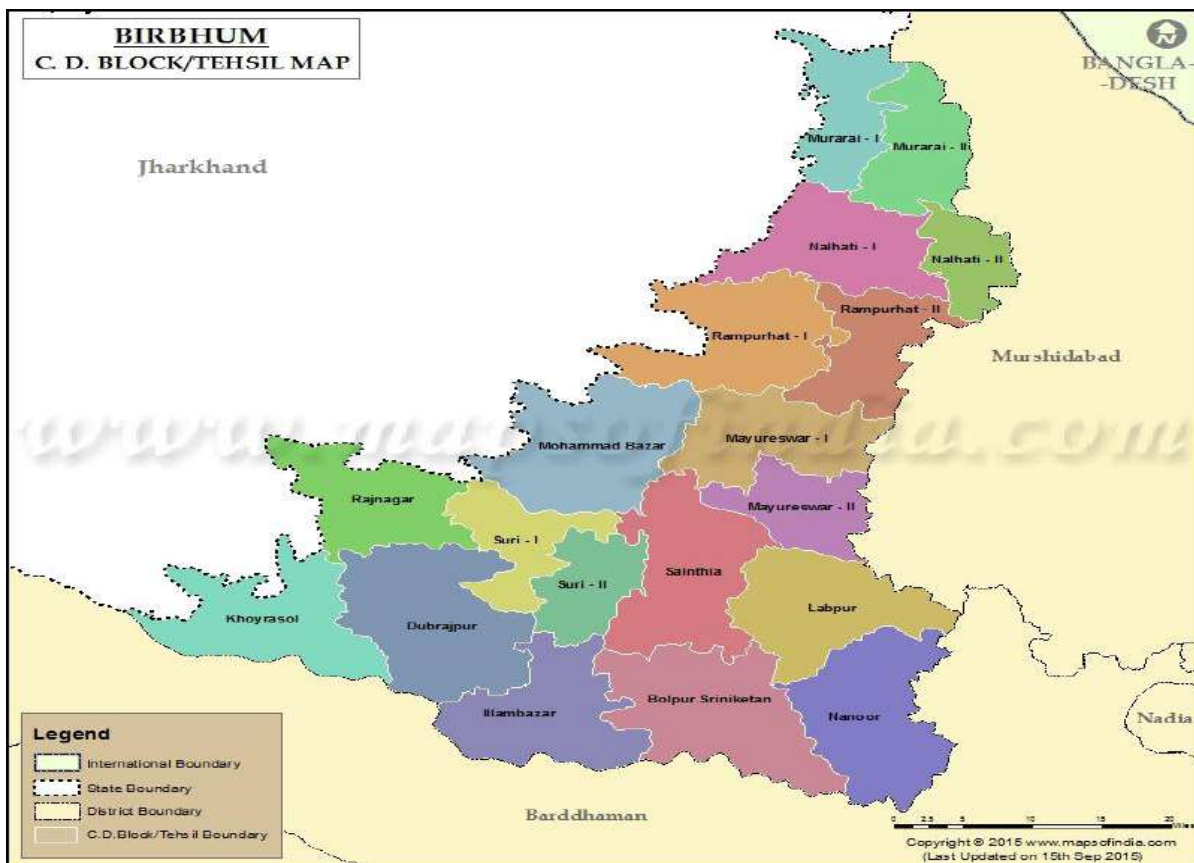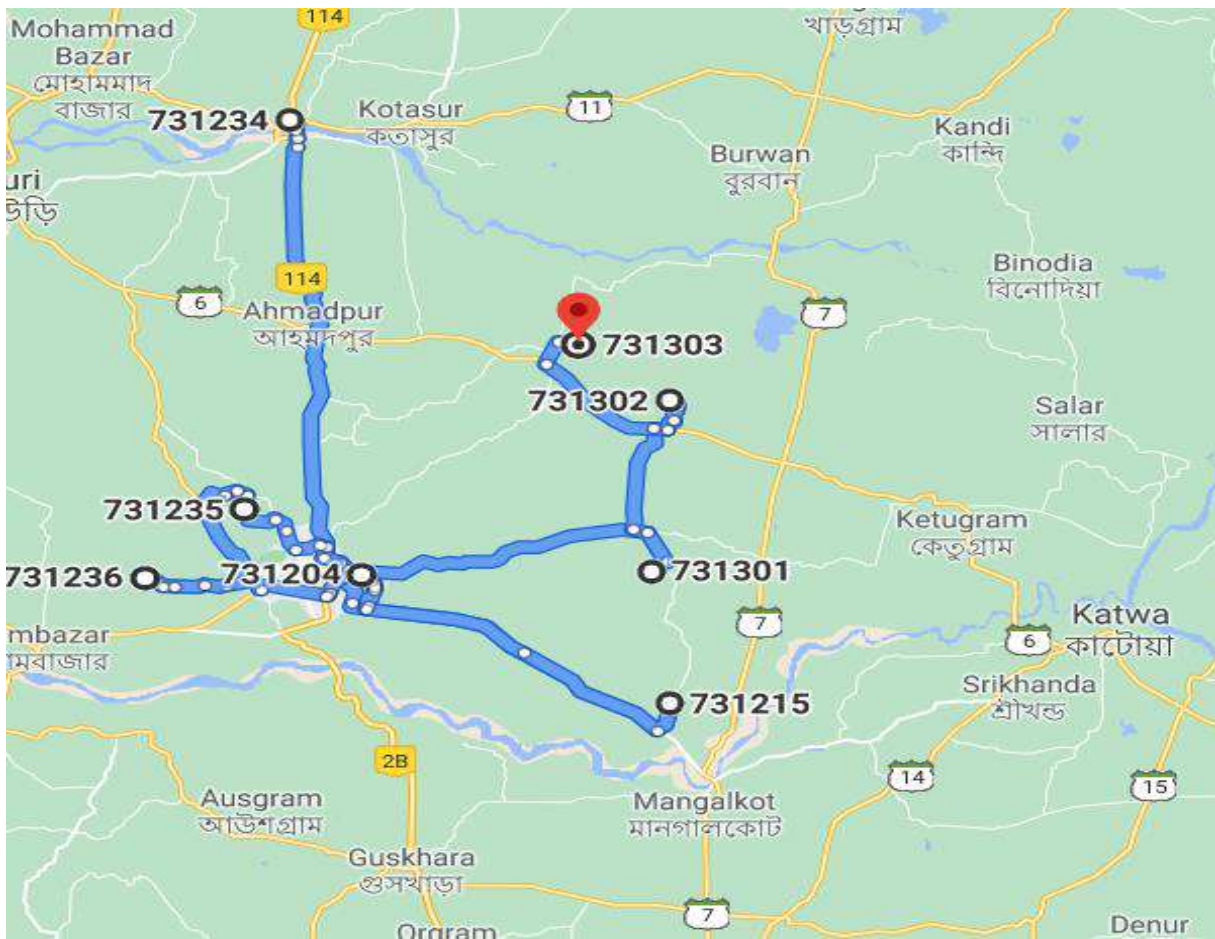
Thus, we have created a list of 150-200 randomly selected participants each from different locales across different blocks in Birbhum. Out of these 150-200 participants, our initial attempt was to select 25 to 30 participants per training group. However, in reality, we can select at most 10-15 members, who together constitute a single batch in our research study. These participants are selected on the pre-condition that they have expressed willingness to participate in our intervention and have regular access to smartphones with high-speed internet connectivity.

We have started the sampling from 1st March, 2021. Every week, we select a group from our randomized list and call them to find out whether he/she would be a potential candidate for our intervention. Out of these 150-200 artisans per group, our experience till date are as follows:

- The artisans' contact list provided by DC-Handicrafts is little old and most of the contacts have changed their phone numbers. As a result, most of the phone numbers in that list were either invalid or belong to a person who is not an artisan.
- The non-uniformity of internet usage followed by a low inclination towards possession and usage of digital devices in marginalized rural backgrounds of Birbhum poses a major hindrance in the path of our intervention. Our participants belong from SC community, who are incorporated in our research study with the pre-condition that they have regular access to smart phones or other digital gadgets. Since our entire intervention is designed along digital lines, ***possession or regular access to smart phones with high-speed Internet connectivity account to be a mandatory prerequisite in our research paradigm***.
- Around 60% of participants automatically get excluded from our intervention due to their lack of regular access to smartphones with Internet connectivity. Of the ones who do have access, in some context, even their access to smartphones seems limited or restricted by family obligations or likes. Our in-depth intervention has revealed a general tendency, where many of the rural households of Birbhum with whom we have interacted report the presence of a single smart phone to be used by all members of the family. Since the digital domain is particularly more attractive to the younger generation, members of our target group often report limited availability of their family smartphones because the same are being utilized more by their children, leaving them with little or no lone time with the device. Contacting the members of our target group for aspects related to research intervention often becomes problematic from our end, more so for female participants, where the smart phones are often being taken by the husbands or children to their workplace, making it difficult for us to contact our participant, who is in turn left with limited usage of the device. The usage of smartphone of female participants is also sometimes reported to be limited due to family obligations, where many female participants although having expressed their willingness to participate in our training initially have dropped out in the course due to family restrictions.

That is why our batch-size till date was 10 to 15 participants, in spite of the fact that we do have a contact list of 150+ artisans per batch.

11.1.3 The Flow-Chart depicting the Flow of our Intervention Plan

The following steps are followed in our intervention:

1. Creating a batch of 15 artisans for intervention
   a. Select a cluster out of 40 clusters
   b. Contact artisans to (i) explain the purpose of our intervention; (ii) select artisans, depending on their willingness and availability; and, (iii) to form a batch of 15 artisans
2. Induction of selected artisans
   a. With the selected artisans, Create WhatsApp Group or add to Existing WhatsApp Group
   b. Using their WhatsApp account, train them remotely to install Zoom and conduct practice sessions with each individual artisan using Zoom
   c. Conduct Pre-study with pre-designed questionnaire
3. Synchronous weekly training (6 hr total) using Zoom

a. The training sessions will be for two hours each day on Monday, Wednesday and Friday (total six hours). Our **weekly online training intervention** operates along three major axes:
    i. *Monday (6:00 to 8:00 PM) >> Digital Competency Training:* Here we will teach them how to use the digital medium to acquire knowledge regarding market operations, to learn about new things of interest and how to use the digital medium to enhance their sale by exhibiting their products to a multitude of virtual customers. In this segment, we will train them the use of whatsapp and facebook to create and sell products along innovative lines.
    ii. *Wednesday (6:00 to 8:00 PM) >> Training on Photography and Videography*: We will train them on how to click attractive photos and videos via their smartphones so that they can create their digital shops.
    iii. *Friday (6:00 to 8:00 PM) >>Innovative, Market-Oriented Product Development Training*: We will give them trainings on fashion designing, where keeping in mind the respective artistic pursuits, we will train them on how to bring innovation in their product design to fit current market demands;
b. Attendance and training feedbacks are monitored.
c. These online training sessions are supplemented by Asynchronous Training of one-per-day video tutorials to cover the training materials, distributed asynchronously at their WhhatsApp Account everyday
4. On-boarding each artisans in our Digital Platform, NCoRe, through creation of a digital shop for each individual artisan
    a. Contact each individual artisans to (i) clarify their doubts / difficulties related to the training sessions; (ii) train them individually to take photographs of their products and create his/her digital shop using NCoRe App
    b. Each individual artisans are also encouraged to shoot a self-video with product demonstration
    c. These activities are supplemented by Asynchronous Training of one-per-day video tutorials on (i) Digital Basics and (ii) New Product / Design Ideas : Understanding Product-market fit, distributed asynchronously at their WhatsApp Account everyday
5. Asynchronous Training based on one-per-day video tutorials on Social Media Marketing: YOUTUBE
6. Asynchronous Training based on one-per-day video tutorials on New Product Design
7. Asynchronous Training based on one-per-day video tutorials on Govt schemes and support
8. Asynchronous Training based on one-per-day video tutorials on Social Media Marketing: Facebook
9. Asynchronous Training based on one-per-day video tutorials on E-Commerce: Amazon

11.1.4 *Methodology of our Program Intervention and its Impact Evaluation*

The cluster randomized trial is a firmly established study design particularly useful for pragmatic evaluations of interventions, such as changes to the way services are delivered, educational interventions or public health type interventions, to name but a few[101,102]. In a parallel cluster randomized trial (parallel-CRT) half the clusters selected from a community are randomly assigned to the intervention condition and half to the control condition. On the other hand, the stepped-wedge cluster randomized trial (SW-CRT) involves the sequential transition of clusters from control to intervention conditions in randomized order, until all clusters are exposed[103,104,105]. In our context, the SW-CRT provides a means to conduct a randomized evaluation which otherwise would not be possible.

The study will be a 1-year stepped-wedge, cluster randomised controlled trial in which participating groups of artisans (total 40 groups) from 40 areas of Birbhum District crossed over from control to intervention phase (ie, one-way switch over) in different weeks throughout the year. The order of switch over ('sequence') for each group was determined randomly, and all received *programme intervention* by the end

[101] Murray DM. Design and Analysis of Group Randomized Trials. New York, NY: Oxford University Press, 1998.
[102] Eldridge S, Kerry S. A Practical Guide to Cluster Randomized Trials in Health Services Research. Chichester, UK: Wiley, 2012
[103] Ellenberg SS. The stepped-wedge clinical trial: evaluation by rolling deployment. JAMA 2018;319:607–08.
[104] Brown CA, Lilford RJ. The stepped wedge trial design: a systematic review. BMC Med Res Methodol 2006;6:54.
[105] Hussey MA, Hughes JP. Design and analysis of stepped wedge cluster randomized trials. Contemp Clin Trials 2007;28:182e91

of study (figure 11.1). Each group entered the trial at the same time point and acted as a control until such time as they were randomised to crossover from control to intervention.

| Select 40 Areas in Birbhum District (40 Groups) |
| Randomize Areas |
| Recruit 10-15 artisans from Each Area |
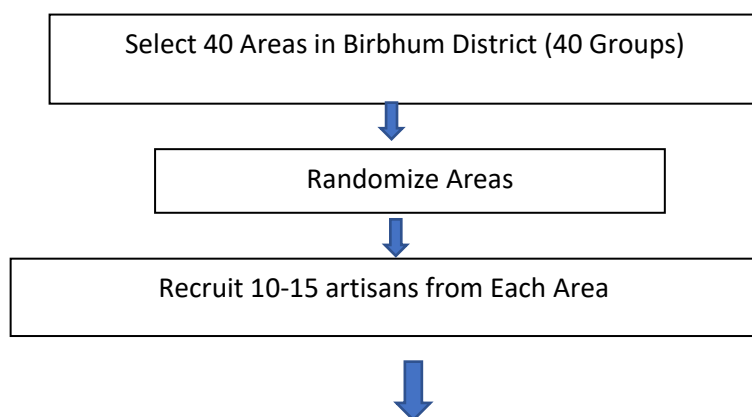
Group No.	Week 1	Week 2	Week 3	....	Week 39	Week 40
Gr 1	Intervention Group 1			…		
Gr 2	Control Group 2	Intervention Group 2		…		
Gr 3	Control Group 3	Control Group 3	Intervention Group 3	....		
……				…		
Gr 39	Control Group 39	Control Group 39	Control Group 39	…	Intervention Group 39	
Gr 40	Control Group 40	Control Group 40	Control Group 40	…	Control Group 40	Intervention Group 40

	Period 1 (1-10 weeks)	Period 2 (11-20 weeks)	Period 3 (21-30 weeks)	Period 4 (31-40 weeks)	Period 5 (41-50 weeks)
Seq A (10 groups x 15 artisans each group)	Pre-study of 10 Groups (A)	First Post-study of Groups (A)	Second Post-study of Groups (A)	Third Post-study of Groups (A)	Fourth Post-study of Groups (A)
Seq B (10 groups x 15 artisans each group)		Pre-study of 10 Groups (B)	First Post-study of Groups (B)	Second Post-study of Groups (B)	Third Post-study of Groups (B)
Seq C (10 groups x 15 artisans each group)			Pre-study of 10 Groups (C)	First Post-study of Groups (C)	Second Post-study of Groups (C)
Seq D (10 groups x 15 artisans each group)				Pre-study of 10 Groups (D)	First Post-study of Groups (D)

The detailed weekly intervention plan is shown in Table 11.2.

Table 11.2 The detailed weekly intervention plan

Place	Group #	Week 00 (15th Feb)	Week 0 (22nd Feb)	Week 1 (1st March)	Week 2 (8th March)	Week 3 (15th March)	Week 4 (22st March)	Week 5 (29th March)	Week 6	Week 7	Week 8	Week 9	Week 10
Nanoor B	Batch 1	CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7
Nanoor C	Batch 2		CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6
~~Surl C-1~~ Surl C1 + C2	Batch 3			CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5
~~Surl C-2~~ Bolpur Ad Hoc	Batch 4				CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4
~~Rampurhat~~ Bolpur A-9	Batch 5					CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3
Labpur-1	Batch 6						CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2
Labpur-3	Batch 7							CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1
Labpur-2	Batch 8								CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK
Labpur-5	Batch 9									CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK
Labpur-6	Batch 10										CREATING BATCH	Zoom & Prestudy	TRAINING WEEK
Labpur-4	Batch 11											CREATING BATCH	Zoom & Prestudy
Labpur-8	Batch 12												CREATING BATCH
Labpur-7	Batch 13												
Surl B	Batch 14												
Bolpur B	Batch 15												
Mayureshwar I-4	Batch 16												
Mayureshwar I-3	Batch 17												
Mayureshwar I-2	Batch 18												
Mayureshwar I-5	Batch 19												
Mayureshwar I-1	Batch 20												
Surl A	Batch 21												
Salthia-1	Batch 22												
Salthia-2	Batch 23												
Salthia-4	Batch 24												
Salthia-5	Batch 25												
Salthia-3	Batch 26												
Salthia-6	Batch 27												
Nanoor A	Batch 28												
Bolpur C-1	Batch 29												
Bolpur C-2	Batch 30												
Bolpur A-5	Batch 31												
Bolpur A-3	Batch 32												
Bolpur A-7	Batch 33												
Bolpur A-1	Batch 34												
Bolpur A-10	Batch 35												
Bolpur A-4	Batch 36												
Bolpur A-2	Batch 37												
Bolpur A-8	Batch 38												
Bolpur A-11	Batch 39												
Bolpur A-6	Batch 40												

Place	Group #	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Nanoor B	Batch 1	FIRST POST-STUDY									
Nanoor C	Batch 2	Async Training 7	FIRST POST-STUDY								
~~Suri C 1~~ Suri C1 + C2	Batch 3	Async Training 6	Async Training 7	FIRST POST-STUDY							
~~Suri C-2~~ Bolpur Ad Hoc	Batch 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY						
~~Rampurhat~~ Bolpur A-9	Batch 5	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY					
Labpur-1	Batch 6	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY				
Labpur-3	Batch 7	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY			
Labpur-2	Batch 8	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY		
Labpur-5	Batch 9	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY	
Labpur-6	Batch 10	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY
Labpur-4	Batch 11	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7
Labpur-8	Batch 12	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6
Labpur-7	Batch 13	CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5
Suri B	Batch 14		CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4
Bolpur B	Batch 15			CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3
Mayureshwar I-4	Batch 16				CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2
Mayureshwar I-3	Batch 17					CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1
Mayureshwar I-2	Batch 18						CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK
Mayureshwar I-5	Batch 19							CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK
Mayureshwar I-1	Batch 20								CREATING BATCH	Zoom & Prestudy	TRAINING WEEK
Suri A	Batch 21									CREATING BATCH	Zoom & Prestudy
Saithia-1	Batch 22										CREATING BATCH
Saithia-2	Batch 23										
Saithia-4	Batch 24										
Saithia-5	Batch 25										
Saithia-3	Batch 26										
Saithia-6	Batch 27										
Nanoor A	Batch 28										
Bolpur C-1	Batch 29										
Bolpur C-2	Batch 30										
Bolpur A-5	Batch 31										
Bolpur A-3	Batch 32										
Bolpur A-7	Batch 33										
Bolpur A-1	Batch 34										
Bolpur A-10	Batch 35										
Bolpur A-4	Batch 36										
Bolpur A-2	Batch 37										
Bolpur A-8	Batch 38										
Bolpur A-11	Batch 39										
Bolpur A-6	Batch 40										

Place	Group #	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30
Nanoor B	Batch 1		SECOND POST-STUDY									
Nanoor C	Batch 2			SECOND POST-STUDY								
~~Suri C 1~~ Suri C1 + C2	Batch 3				SECOND POST-STUDY							
~~Suri C 2~~ Bolpur Ad Hoc	Batch 4					SECOND POST-STUDY						
~~Rampurhat~~ Bolpur A-9	Batch 5						SECOND POST-STUDY					
Labpur-1	Batch 6							SECOND POST-STUDY				
Labpur-3	Batch 7								SECOND POST-STUDY			
Labpur-2	Batch 8									SECOND POST-STUDY		
Labpur-5	Batch 9										SECOND POST-STUDY	
Labpur-6	Batch 10	FIRST POST-STUDY										SECOND POST-STUDY
Labpur-4	Batch 11	Async Training 7	FIRST POST-STUDY									
Labpur-8	Batch 12	Async Training 6	Async Training 7	FIRST POST-STUDY								
Labpur-7	Batch 13	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY							
Suri B	Batch 14	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY						
Bolpur B	Batch 15	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY					
Mayureshwar I-4	Batch 16	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY				
Mayureshwar I-3	Batch 17	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY			
Mayureshwar I-2	Batch 18	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY		
Mayureshwar I-5	Batch 19	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY	
Mayureshwar I-1	Batch 20	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY
Suri A	Batch 21	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7
Saithia-1	Batch 22	CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6
Saithia-2	Batch 23		CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5
Saithia-4	Batch 24			CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4
Saithia-5	Batch 25				CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3
Saithia-3	Batch 26					CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2
Saithia-6	Batch 27						CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1
Nanoor A	Batch 28							CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK
Bolpur C-1	Batch 29								CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK
Bolpur C-2	Batch 30									CREATING BATCH	Zoom & Prestudy	TRAINING WEEK
Bolpur A-5	Batch 31										CREATING BATCH	Zoom & Prestudy
Bolpur A-3	Batch 32											CREATING BATCH
Bolpur A-7	Batch 33											
Bolpur A-1	Batch 34											
Bolpur A-10	Batch 35											
Bolpur A-4	Batch 36											
Bolpur A-2	Batch 37											
Bolpur A-8	Batch 38											
Bolpur A-11	Batch 39											
Bolpur A-6	Batch 40											

Place	Group #	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40
Nanoor B	Batch 1	THIRD POST-STUDY									
Nanoor C	Batch 2		THIRD POST-STUDY								
~~Suri C 1~~ Suri C1 + C2	Batch 3			THIRD POST-STUDY							
~~Suri C 2~~ Bolpur Ad Hoc	Batch 4				THIRD POST-STUDY						
~~Rampurhat~~ Bolpur A-9	Batch 5					THIRD POST-STUDY					
Labpur-1	Batch 6						THIRD POST-STUDY				
Labpur-3	Batch 7							THIRD POST-STUDY			
Labpur-2	Batch 8								THIRD POST-STUDY		
Labpur-5	Batch 9									THIRD POST-STUDY	
Labpur-6	Batch 10										THIRD POST-STUDY
Labpur-4	Batch 11	SECOND POST-STUDY									
Labpur-8	Batch 12		SECOND POST-STUDY								
Labpur-7	Batch 13			SECOND POST-STUDY							
Suri B	Batch 14				SECOND POST-STUDY						
Bolpur B	Batch 15					SECOND POST-STUDY					
Mayureshwar I-4	Batch 16						SECOND POST-STUDY				
Mayureshwar I-3	Batch 17							SECOND POST-STUDY			
Mayureshwar I-2	Batch 18								SECOND POST-STUDY		
Mayureshwar I-5	Batch 19									SECOND POST-STUDY	
Mayureshwar I-1	Batch 20										SECOND POST-STUDY
Suri A	Batch 21	FIRST POST-STUDY									
Saithia-1	Batch 22	Async Training 7	FIRST POST-STUDY								
Saithia-2	Batch 23	Async Training 6	Async Training 7	FIRST POST-STUDY							
Saithia-4	Batch 24	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY						
Saithia-5	Batch 25	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY					
Saithia-3	Batch 26	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY				
Saithia-6	Batch 27	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY			
Nanoor A	Batch 28	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY		
Bolpur C-1	Batch 29	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY	
Bolpur C-2	Batch 30	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY
Bolpur A-5	Batch 31	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7
Bolpur A-3	Batch 32	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6
Bolpur A-7	Batch 33	CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5
Bolpur A-1	Batch 34		CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4
Bolpur A-10	Batch 35			CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3
Bolpur A-4	Batch 36				CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2
Bolpur A-2	Batch 37					CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1
Bolpur A-8	Batch 38						CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK	TUTORIAL WEEK
Bolpur A-11	Batch 39							CREATING BATCH	Zoom & Prestudy	TRAINING WEEK	ONBOARDING WEEK
Bolpur A-6	Batch 40								CREATING BATCH	Zoom & Prestudy	TRAINING WEEK

Place	Group #	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50
Nanoor B	Batch 1	FOURTH POST-STUDY									
Nanoor C	Batch 2		FOURTH POST-STUDY								
~~Suri C 1~~ Suri C1 + C2	Batch 3			FOURTH POST-STUDY							
~~Suri C 2~~ Bolpur Ad Hoc	Batch 4				FOURTH POST-STUDY						
~~Rampurhat~~ Bolpur A-9	Batch 5					FOURTH POST-STUDY					
Labpur-1	Batch 6						FOURTH POST-STUDY				
Labpur-3	Batch 7							FOURTH POST-STUDY			
Labpur-2	Batch 8								FOURTH POST-STUDY		
Labpur-5	Batch 9									FOURTH POST-STUDY	
Labpur-6	Batch 10										FOURTH POST-STUDY
Labpur-4	Batch 11	THIRD POST-STUDY									
Labpur-8	Batch 12		THIRD POST-STUDY								
Labpur-7	Batch 13			THIRD POST-STUDY							
Suri B	Batch 14				THIRD POST-STUDY						
Bolpur B	Batch 15					THIRD POST-STUDY					
Mayureshwar I-4	Batch 16						THIRD POST-STUDY				
Mayureshwar I-3	Batch 17							THIRD POST-STUDY			
Mayureshwar I-2	Batch 18								THIRD POST-STUDY		
Mayureshwar I-5	Batch 19									THIRD POST-STUDY	
Mayureshwar I-1	Batch 20										THIRD POST-STUDY
Suri A	Batch 21	SECOND POST-STUDY									
Saithia-1	Batch 22		SECOND POST-STUDY								
Saithia-2	Batch 23			SECOND POST-STUDY							
Saithia-4	Batch 24				SECOND POST-STUDY						
Saithia-5	Batch 25					SECOND POST-STUDY					
Saithia-3	Batch 26						SECOND POST-STUDY				
Saithia-6	Batch 27							SECOND POST-STUDY			
Nanoor A	Batch 28								SECOND POST-STUDY		
Bolpur C-1	Batch 29									SECOND POST-STUDY	
Bolpur C-2	Batch 30										SECOND POST-STUDY
Bolpur A-5	Batch 31	FIRST POST-STUDY									
Bolpur A-3	Batch 32	Async Training 7	FIRST POST-STUDY								
Bolpur A-7	Batch 33	Async Training 6	Async Training 7	FIRST POST-STUDY							
Bolpur A-1	Batch 34	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY						
Bolpur A-10	Batch 35	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY					
Bolpur A-4	Batch 36	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY				
Bolpur A-2	Batch 37	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY			
Bolpur A-8	Batch 38	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY		
Bolpur A-11	Batch 39	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY	
Bolpur A-6	Batch 40	ONBOARDING WEEK	TUTORIAL WEEK	Async Training 1	Async Training 2	Async Training 3	Async Training 4	Async Training 5	Async Training 6	Async Training 7	FIRST POST-STUDY

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11.2 Planning and Execution of a Digital Marketing Strategy using Digital Channels

The Indian cottage industry, comprising mainly handicrafts and textiles, has been traditionally known for its exquisite handiwork and a distinct mix of beauty and tradition. However, the advent of the internet and e-commerce have posed stiff challenges. Patrons, past and potential, now prefer the convenience of shopping online. While artisans have tried to themselves shift online, there are few success stories to speak of. Here, we will explore a step-by-step process to redefine the digital marketing strategy for artisans:

Step 1. Build an engaging website – with online payment capabilities (we will discuss that in section 11.3)

Step 2. Leveraging social media

Now that we have a running site, we need to leverage it. We need to be active in all social media channeld. Using social media can be divided into two buckets:

2a. Pay-per-click Advertising (Google and Facebook)

The power of advertising through both Facebook and Google is sheer customisability. Users pay only when potential customers click on their ads. With proven ROI of upwards of 5x, Google Ads and Facebook Ads are an instrumental tool that can help MSMEs grow inorganically.

https://ads.google.com/home/
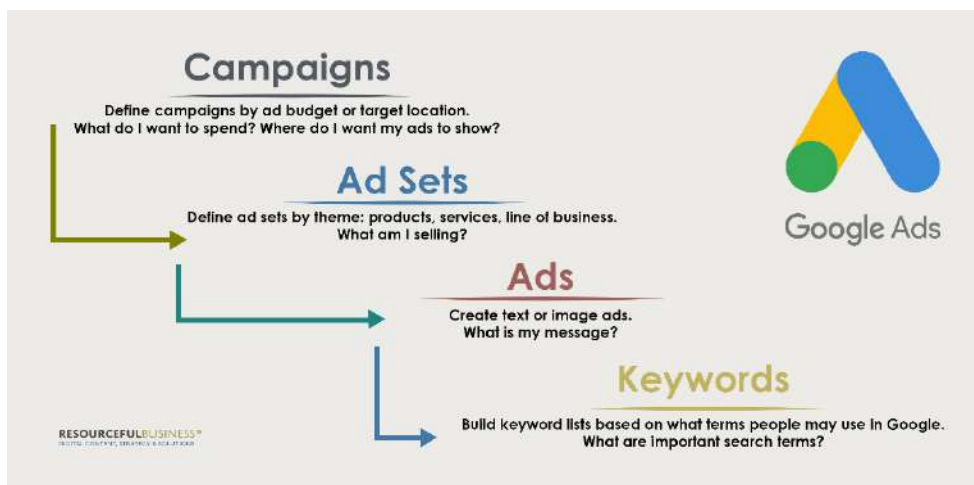
2b. Embedding business in social media

We have fulfilled the basic requirement of embedding social media in our business by adding direct contact options (such as links to WhatsApp/ Messenger chat). Now we have to do the far more important thing – embed our business into social media.

WhatsApp and Facebook are places where people spend a huge amount of time, especially WhatsApp in India. Through WhatsApp Pay and WhatsApp Business, it is emerging as the new place for people to discover catalogues of new products and greatly increases ease of shopping for customers, just with the help of the mobile number of the business.

https://netolink.com/whatsapp-business/

https://techvirendra.com/whatsapp-payments-in-india-how-to-activate-transfer-money/

Step 3. Using e-commerce

3a. Private players like Amazon/ Flipkart

Amazon especially has been aggressively pushing to onboard MSMEs, with special programs and onboarding subsidies for women entrepreneurs, emerging businesses and handicrafts.

https://www.amazon.in/b/?node=16183878031&tag=1AMZT1

3b. Government push – Khadi India online portal

The MSME ministry under Modi government has also been trying to prop up MSMEs, especially after last year's *Atmanirbhar* appeals. On 31st December 2020, Khadi and Village Industries Commission (KVIC) launched Khadi India's official site, not only for Khadi products, but also all handicraft and other products made by MSMEs. Sellers can register themselves on the platform. And start selling. What is significant is that even Government of India and PSUs will make purchases from here, such as Indian Railways for linen to be used in trains. This platform can be a significant source of demand in coming years with increasing reliance on self-sufficiency.

https://www.ekhadiindia.com

https://www.goodreturns.in/news/msme-khadi-india-s-official-e-commerce-site-launched-1195950.html

For immediate lead generation: **Influencer marketing**

Process to be followed:

1. Tie ups with influencers: Try to reach out to social media influencers, and try to create a pro-bono partnership, where influencers will post about the website and its products. Convince influencers for a pro-bono partnership on the grounds of helping rural craftsmen, in addition to the fact that it is a government initiative to help such artisans.
2. Send few products to influencers for their use and ask them to vehemently spread the word.
3. Identify influencers based on following parameters:
   a. No of followers >10k
   b. Fashion/Travel/Leisure focussed

11.3 Design and Development of a Prototype Commercial Platform for Artisans using CS-Cart

NCoRe is a social marketplace with an objective to promote the artistic journey of rural handicraft artisans along with their handcrafted products to urban consumers. In order to strengthen the market linkage of the rural artisans, it is important to promote them through some online channels. Direct transactions between artisan and customers regarding any product selling or purchase will require standard payment handling and proper tracking mechanisms. Standard payment handling mechanisms include integration of payment gateway, UPI, Smart cards (debit and credit card), mobile banking etc. Since NCoRe is a research project and funded by the Department of Science and Technology (DST), Govt. of India, that's why the NCoRe platform cannot manage or handle the monetary transaction between rural handicraft artisans and customers.

But to increase the sales volume of the rural artisans, it is very important to enable the artisans in such a platform where all kinds of activities (which includes inventory management, vendor management, logistics tracking, payment utilization etc.) regarding the product selling can be performed. As a solution, we have plan to design and develop a *commercial prototype version* of NCoRe in a multivendor eCommerce platform **named CS-Cart.**

A multivendor marketplace is an e-commerce platform that empowers multiple vendors' i.e. rural artisans to sell their products from one storefront. CS-Cart multivendor software supports an unlimited number of artisans. It helps an artisan to market their products online, even globally. In CS-Cart, every seller (ie artisan) has their own backend panel and a storefront: their own online store with all the necessary eCommerce features.

Key Features in CS-Cart Multi-Vendor Platform (under development):

- **Mobile App:** Offer a more convenient way to buy from CS-Cart online marketplace. With a mobile app for iOS and Android, customers can browse CS-Cart marketplace, add products to wish lists and carts, and pay via offline payment method or PayPal Express Checkout. All the data is synced with virtual mall: if it change categories, products, users, carts, wish lists, orders, and other data, the changes will affect the app. Admin are free to customize the look and feel of application by changing a logo and colors. When the app is ready, it will upload to Google Play and App Store and keep it up to date.

- **Advanced Artisan Payout System:** Automate payouts to artisans to save time. Payments management is the most significant part of every online marketplace. It has to deal with commissions and distribution of payments between artisans every day. CS-Cart supports automatic or manual artisan payouts. Automatic payouts are carried out via a built-in "PayPal for Marketplaces" payment method. It distributes the payment between artisans and sends commissions to respective bank account. With PayPal for Marketplaces customers can pay for their orders in bulk—payments are not split into multiple steps when a customer buys products from more than 5 artisans.

- **Common Products for Artisans:** Make marketplace catalog look nice, clean, and uniform. With the Common Products for artisans feature, it can forbid artisans from creating new products. Enable them to only use listings created and designed by platform owner. In such listings, artisans can only set their prices and quantity. Of course, it is free to allow artisans to add their products as well.

  The Common Products for artisans function adds a comparison table to a product page. If a product is sold by several artisans, a customer can compare prices and choose the best listing.

- **Configurable Artisan Plans:** The platform owner can earn extra with artisan's monthly payments. In the Multi-Vendor system, it will allow to create subscription plans for artisans with different conditions and limitations. Artisan plans is a flexible tool that helps to increase revenue. First of all, apart

from commissions, it allows to take a monthly fee from artisans for selling in CS-Cart. Secondly, with artisan plans, commissions are pre-set for each plan, and a new artisan just picks the most suitable option. The artisan plans functionality will save from troubles with setting commissions for artisans manually.

- **Category Commissions:** Attract more artisans by offering affordable commissions on low-margin products. Popular products such as facemask, handbags are sold with a low margin. To attract artisans selling these kinds of products, set a lower commission for low-margin product categories. On the other hand, it will allow setting a higher commission for high-margin products such as heavy katha stitch saree, jewellery and getting more income from your artisans.

- **Multiple Levels of Administrative Access:** Running a large-scale marketplace is much easier when delegating certain duties with staff members. The Multi-Vendor platform allows registering employees and set different levels of access to the admin panel.

- **Flexible Product Approval System:** Make product management simple and efficient. In Multi-Vendor, product approval is flexible and handy at the same time. It will have 3 options:
  - ✓ Let your artisan's showcase products without moderation.
  - ✓ Check every product added by artisans.
  - ✓ Allow certain artisans to add products without moderation.

- **Advanced Order Management System:** Offer customers the most convenient checkout process. CS-Cart eCommerce marketplace will contain thousands of products. What if a customer orders 2 products from different artisans? In Multi-Vendor, customers don't need to place multiple orders to buy goods from several artisans. They place only one order and make a single payment in this case. From the admin panel side, 2 separate orders are created, and each artisan can see an order that contains only his or her products.

- **Detailed Statistics and Reports:** It is impossible to run a successful marketplace without deep analysis based on statistics and reports. What does Multi-Vendor offer in terms of statistics? Multi-Vendor is integrated with Google Analytics. This service generates detailed statistics about website visitors. It gives rich insights into website traffic and marketing effectiveness. Another built-in analysis tool is called "Sales reports". It gives detailed statistics on the sales in marketplace. Statistics may be represented in a form of graphical or tabular charts. For convenience, charts are grouped into separate reports.

A Detailed Report on Analyses of Community Interactions through WhatsApp

From Artisans' End

Date	Response Sent By	Pattern of Response	Reply to Response
7th July, 2020	Tasnim Handicrafts (9126397343)	Tasnim Handicrafts requested the RO to add his friend Nasim Akhtar in the group. Forwarded the said person's number	Nasim Akhtar was added to the group
30th July 2020	Deepti Saha (8167343605)	Sent her self video, which has been uploaded in NCoRe Sent her product photos (Hand painted T-shirt, Panjabi and Canvas Paintings)	Tasnim Handicrafts (9126397343) appreciated the products and enquired about Deepti's address
30th July, 2020	Santiniketan Sarees (6296102355)	Sent 11 photos of kantha stitched salwar kameez suit piece	No response
31st July, 2020	Satyajit Mondol (7407119937)	Sent the photo of his business card and one sample photo of his hand-painting and natural dye on tussar silk	No response
31st July, 2020	M.D. (7679319587)	Sent 11 photos of kantha stitched skirts	No response
31st July, 2020	Biton (7865034584)	Sent 13 photos of hand printed ladies kurti	Amitayu Mukherjee appreciated the photos
31st July, 2020	Manas Dutta (7384153994)	Sent 10 photos of kantha stitched kurta, salwar kameez set, skirt and sent his contact number separately so that interested people can contact him	No response
31st July, 2020	Biswajit Saha (7001710187)	Sent 18 photos of kantha stitched bags	No response
9th August, 2020	Satyajit Mondol (7407119937)	Sent one photo of his hand-painting and natural dye on tussar silk	No response
11th August, 2020	Deepti Saha (8167343605)	Enquired if anyone in the group has plain or monochrome panjabi	Urmila Das (9732168059) replied yes and further enquired regarding the material (khadi or cotton) required
11th August, 2020	Rinku Das (9851171831)	Sent photos of dokra jewelleries and hair accessories	No response
11th August, 2020	Subhas Dhara (8759334881)	Sent photos of jewelleries	No response
11th August, 2020	Debalika Dalal	Sent one photo of a jewellery set. Said that the same piece is available in varied combinations	Madhu Da (9434633176) enquired about the wholesale rate Member of RO appreciated the product picture
11th August, 2020	India (7001915162)	Posted his requirement of Panjabi and gave his contact details (9126397343) for artisan members to contact him	Sraboni Sarkar (9614226103) responded and enquired further on the quantity, size and colour of Panjabi required
11th August, 2020	B.S. (7864932912)	Posted his wholesale requirement of Kantha stitched gachi tussar saree	Sk Saifuddin shared his contact details (7718331620) and 27 photos of kantha stitched sarees
11th August, 2020	Sk Saifuddin (7718331620)	Posted 27 photos of kantha stitched sarees in response to B.S.'s requirement	Biswa Shilpa Kutir (8906868131) appreciated the sarees and enquired about Saifuddin's address Satyajit Mondol replied that the posted sarees are not tussar and asked Saifuddin to send pictures of tussar sarees
11th August, 2020	Sk Saifuddin (7718331620)	Posted photos of kantha stitched gachi tussar sarees in response to Satyajit Mondol's requirement	Member of RO appreciated the product picture

			B.S. shared his contact number (8967136196) and asked to call him the next day at 10am Satyajit Mondol seemed satisfied with the material of the sarees as depicted in the photos sent in this lot
12th August, 2020	Rinku Das (9851171831)	Sent photos of dokra jewelleries	No response
12th August, 2020	Manas Dutta (7384153994)	Sent photos of kantha stitch salwar kameez piece and sarees	No response
12th August, 2020	Tasnim Handicrafts (9126397343)	Shared his contact details and address and sample photos for contacting him regarding any requirement on Panjabi, kurti and top designing, cutting and stitching	Biswa Shilpa Kutir asked for more photos, which Tasnim Handicrafts posted eventually
12th August, 2020	Sraboni Sarkar (9614226103)	Posted photos of handloom sarees	No response
18th August, 2020	Debabrata Sengupta (8967136196)	Posted requirement for kantha stitch batua bag	No response
19th August, 2020	Debabrata Sengupta (8967136196)	Posted his urgent requirement for appliqué kurti with photo and wholesale price	No response
24th August, 2020	Sannasi Das (7865072811)	Posted photos of leather bags	Member of RO appreciated the product pictures
24th August, 2020	Biswa Shilpa Kutir (8906868131)	Informed he has viewed his profile (Dipak Biswas) and liked it immensely. However, rectified his pin	Member of the RO took note of the change in pin and eventually rectified the mistake in the website
26th August, 2020	Ski needle work (9775234717)	Expressed his concern that this group should only comprise of artisans and conversations must be all business oriented	Member of RO assured the same
27th August, 2020	Madhab Pal (9679455534)	Posted 77 pictures of kantha stitch sarees	(9735145323) appreciated the photos and enquired about Madhab Pal's address and the type of materials in which he does kantha stitch.
28th August, 2020	Debolina (9474395558)	Posted 10 photos of hand batik uttorio	Biswa Shilpa Kutir, Sourav Halder, Sannasi Das appreciated the photos Debabrata Sengupta enquired about the price
28th August, 2020	Mita Das (8759077388)	Posted 19 photos of kantha stitch salwar kameez piece	Madhab Pal enquired about the price
28th August, 2020	(9475852020)	(9475852020) requested the RO to add Nabirul Mallick's number (8944820052) in this whatsapp group	RO added the number to the group
31st August, 2020	Prashun Nasipuri (9547017742)	Posted one photo of block printed saree	Satyajit Mondol sent his own hand printed product photo in response to assert the difference between hand and block print. Satyajit Mondol then asked Prashun for more photos, which he sent eventually Madhusudan Biswas enquired about Prashun's address
31st August, 2020	Kshama Pal 9547503328)	Posted photos of kantha stitched jackets, blouse piece, kantha stitched sarees	Member of RO appreciated the product pictures Shibani Dutta enquired about the price of a kantha stitch saree and blouse piece
31st August, 2020	Madhab Pal	Posted one photo of kantha stitch saree with price	No response
31st August, 2020	Prashun Nasipuri	Posted pictures of hand printed sarees	Satyajit Mondol (whose expertise is hand painting) commented that the products are not upto the mark

Date	Name (Contact)	Activity	Response
31st August, 2020	Sabari (8759610600)	Posted pictures of some kantha stitched sarees and asked artisan members regarding what should be the optimum price of those products Also enquired about the price of mirror-fitting gujrati kathiawari work. Said that she will inform the artisans in case any customer contacts her	No respones
31st August, 2020	Debabrata Sengupta	Posted his requirement regarding the price of hand parinted saree, enquired about the material of those sarees and regarding wholesale price of kantha stitched jackets. Informed interested artisans to call him the next morning	Madhab Pal posted photos of kantha and hand painted sarees with the wholesale price of Rs 1300
31st August, 2020	Sraboni Sarkar	Posted photos of kantha stitched sarees	Member of RO appreciated the product pictures
1st Sept. 2020	Serina bibi (9635971870)	Posted her requirement for kantha work on Panjabi, with embroidered neck and sides	Shibani Dutta posted 4 pictures of kantha stitched panjabis
1st Sept. 2020	Sunny (9933165492)	Posted his requirement for a collection of art silk sarees	
1st Sept. 2020	Urmila Das (9732168059)	Posted 47 pictures of kantha stitch sarees Posted 12 photos of kantha stitch blouse piece and khesh bag Sent 5 photos of jute jewellery and kantha stitched salwar kameez suit piece	Member of RO appreciated the product pictures The manager of Amar Kuthi (9734368050) enquired about the price of one blouse piece Madhab Pal enquired about the price of kantha stitched salwar kameez suit piece Shibani Dutta enquired about the kantha stitched salwar kameez suit piece and asked whether the pricing is done for individual items or for the overall 3 piece set
1st Sept. 2020	Madhab Pal	Posted 4 pictures of kantha stitch sarees	Member of RO appreciated the product pictures
1st Sept, 2020	Riziya Sultana (9002283461)	Posted 39 pictures of kantha stitch sarees	No response
1st Sept. 2020	Chandon Mondol (8250213945)	Posted 66 photos of kantha stitch art silk, bangalore silk and khesh kantha saree	No response
1st Sept. 2020	Sunny (9933165492)	Posted his requirement for cheap art silk kantha saree	Madhab Pal posted one photo of art silk kantha saree with the price Rs 2000. This saree was booked by Sunny over whatsapp, in response to which Madhab Pal shared his contact details Kshama Pal posted 12 art silk kantha saree in response out of which Sunny booked 6 sarees over whatsapp However the artisans failed to deliver the booked sarees regarding which Sunny expressed his discontentment.
1st Sept, 2020	Ski needle work (9775234717)	Posted one photo of 6/7 nakshi kantha bedsheet	No response
1st Sept. 2020	Kshama Pal	Posted 6 photos of kantha stitched panjabis 12 photos of kantha stitched sarees Posted 6 photos of kantha stitch blouse piece collection	No response
1st Sept. 2020	Bappa (9547996755)	Posted photos of 4 kantha stitched sarees and asked about the prices from other artisan members	No response

1st Sept. 2020	Satyajit Mondol	Posted his requirement for hand painted sarees hand painted sarees	Prashun Nasipuri sent 24 photos of handpainted sarees in response on 2nd Sept.
2nd Sept. 2020	Debojyoti Ghosh	Posted his requirement for kantha stitch salwar kameez suit piece. Requested the artisan members to contact him	No response
2nd Sept. 2020	Chandon Mondol	Posted photos of plain khesh sarees with the information that interested people can buy in bulk and the sarees are extremely cheap	Kajol Nath enquired about the prices of plain khesh sarees Biswa Shilpo Kuthir enquired about the prices of plain khesh sarees on 3rd Sept to which Chandon Mondol replied Rs 400
2nd Sept. 2020	Sk Ismail (9635123953)	Posted 20 photos of fabric jewellery	No response
2nd Sept. 2020	Kshama Pal	Posted 3 photos of kantha stitched sarees	Debabroto Sengupta enquired about the material of the sarees to which Kshama replied 'silk' (9735145323) appreciated the photos
2nd Sept. 2020	Joydev (6296097131)	Posted 6 photos of handmade jewelleries	Member of RO appreciated the product pictures
2nd Sept. 2020	Amar Kuthi Manager (9734368050)	Posted the number of Manoj Singh and requested the admin to add the contact in the group	The contact was added immediately
2nd Sept. 2020	Shibani Dutta	Posted 3 pictures of kantha stitch panjabi	No response
4th Sept. 2020	Debojyoti Ghosh	Requested member artisans working in Batik and Bandhni work to contact him	Ski needle work shared the contact details of Majibul, the artisan involved in batik work
4th Sept. 2020	Amitayu Mukherjee	Posted 13 photos of kantha stitched palazzos.	Member of RO appreciated the product pictures
4th Sept. 2020	Kshama Pal	Posted photos of her collection of kantha stitch blouse piece	No response
4th Sept. 2020	Joydev (6296097131)	Posted 6 photos of handmade jewellery	No response
4th Sept. 2020	Shibani Dutta	Posted her requirement for batik and cotton bed sheet	No response
4th Sept 2020	Ananda Ghosh (9153025818)	Posted 13 photos of kantha stitch sarees	Member of RO appreciated the product pictures Sunny booked 3 sarees on whatsapp
4th Sept. 2020	Kshama Pal	Posted 19 photos of kantha stitch saree and panjabi	Madhab Pal enquired about the price
5th Sept 2020	Prashun Nasipuri	Posted 10 photos of hand painted sarees	No response
5th Sept 2020	Anisur Rahaman (8670152697)	Posted his requirement for high quality silk and tassar saree, dupatta. Requested artisans to only send photos of those products which are in stock	No response
6th Sept 2020	Partha Mondol (9002294432)	Posted one photo of wall hanging	No response
6th Sept 2020	Anisur Rahaman	Posted 2 photos of handmade hair band with cotton threads	No response
7th Sept 2020	Kshama Pal	Posted her collection of kantha stitch blouse piece	Member of RO appreciated the product pictures and requested the artisan to attend the upcoming training
7th sept. 2020	Shantiniketan Batik (9749198032)	Posted the photo of readymade handmade batik kurti	No response
7th sept. 2020	Prashun Nasipuri	Posted photos of 23 sarees	Member of RO appreciated the product pictures and requested the artisan to attend the upcoming training
7th sept. 2020	Debobroto Sengupta	Posted photos of leather bags	No response
7th sept. 2020	Sunny	Posted a picture of kantha stitched cotton dupatta and asked if anybody in the group has similar products	Madhuchanda Ghosh asked about the quantity required to which Sunny asked for the product photos

			Sk Jahangir (9800100336) replied on 8th sept that he has the product available
8th Sept. 2020	Shantiniketan Batik (9749198032)	Posted pictures of mesh and khesh batik saree	Madhuchanda Ghosh and Kajol Nath (8334995214) enquired about the price to which Shantiniketan Batik replied Rs 850 (wholesale rate) Shibani Dutta (9th sept) enquired about the wholesale rate of one saree and said that she will purchase it for sure
8th Sept. 2020	Prashun Nasipuri	Posted 24 photos of plain tussar than	No response
8th Sept. 2020	Kshama Pal	Posted 7 photos of kantha stitch salwar kameez and 9 photos of kantha stitch dupatta	No response
9th Sept. 2020	Bani Israil (9474836332)	Posted 6 photos of block kantha dupatta, 3 photos of hand painted dupatta	No response
9th sept. 2020	Debojyoti Ghosh, Deepti Saha, Madhuchanda Ghosh	They expressed difficulty in attending the zoom meeting	Member of RO resolved the issue
9th Sept. 2020	Deepti Saha	Sent a photo by replicating the instructions given during the training, which taught the artisan members on how to attractive product photos by narrating a story	Member of RO appreciated the product picture Madhuchanda Ghosh got impressed with the idea of clicking photos using a story line and since she was unable to attend this meeting, she expressed her willingness to participate in the next training session without fail
9th Sept. 2020	Shantiniketan Batik (9749198032)	Sent one photo of hand batik salwar kameez set (7.5 meters)	Aviman Hazra (7098246130) enquired about the price India (7001915162) stated that he will be needing this suit piece and asked whether the seller will set in credit, to which Shantiniketan Batik replied No. Bappa (9547996755) enquired about the price
10th Sept. 2020	Pronob Ghosh (9851627592)	Posted photo of one kantha Panjabi and asked the member artisans if anyone can make the same for him	M.D. (7679319587) posted photos of two kantha panjabis
10th Sept. 2020	Manas Dutta (7384153994)	Posted 23 photos of kantha stitch skirts, 8 photos of kantha stitch salwar kameez set Posted 11 photos of kantha stitched jackets Posted 5 photos of kantha stitch bed covers	Member of RO appreciated the product pictures and gave handy instructions on how to simply improve the quality and aesthetics of clicked photos Sannasi Das asked for the price of salwar kameez set Bappa (9547996755) enquired about the price Madhab Pal enquired about the price
10th Sept. 2020	Humdumkazi.95 (9046723405)	Posted 16 photos of palazzo sets, readymade kurtas	Sarada Mondol Saha (9434097826) enquired about the price and size
10th Sept. 2020	M.D. (7679319587)	Posted the photos of his collection of blouse piece	No response
10th Sept. 2020	Shibani Dutta	Posted her requirement of leather bag along with their wholesale price	No response
11th Sept. 2020	Ananda Ghosh (9153025818)	Postyed photos of kantha stitch art silk sarees	Madhuchanda Ghosh and Kshama Pal enquired about the prices

11th Sept. 2020	Madhuchanda Ghosh	Posted her request to other member artisans regarding following up of enquiries. She requested other artisans to only send pictures of those products which are available and to pick up their phones to clarify the enquiries of people who are willing to buy the products.	No response
11th Sept. 2020	Madhuchanda Ghosh	Sent photos of block printed sarees	No response
11th Sept. 2020	Debabrata Sengupta	Posted photos of natural dyed kurtas and kantha stitch sarees	Shibani Dutta enquired about the pricing of the kantha stitch saree and natural dyed kurta and requested Debabrata to send photos of leather bags along with their wholesale rates.
11th Sept. 2020	Amitayu Mukherjee (9932248473)	Posted photos of kantha stitch sarees	No response
11th Sept. 2020	Manas Dutta	Posted photos of khesh and block sarees	Member of RO appreciated the product pictures and gave handy instructions on how to simply improve the quality and aesthetics of clicked photos
11th Sept. 2020	M.D. (7679319587)	Posted 7 photos of readymade kurtis	No response
12th Sept. 2020	Prashun Nasipuri	Posted photos of handloom sarees	No response
12th Sept. 2020	Anisur Rahaman	Posted his requirement for high quality silk and tassar sarees and requested artisan members to only send photos of only those products, which they have in stock	Madhuchanda Ghosh enquired whether he wanted the art work to be only kantha. To which Anisur replied that although kantha work is a priority, batik, hand print, fabric paint, skirts, palazzo also falls within his requirements Kshama Pal posted 15 photos of tussar kantha stitch sarees Ski Needle Work posted photo of one saree Mithun Basak (9614257924) posted 11 photos of handloom sarees to which Amar Kuthi Manager enquired about the price of one saree
16th Sept. 2020	Ananda Ghosh	Posted 6 photos of kantha stitch sarees	No response
18th Sept. 2020	Madhab Pal	Posted his requirement for saree, Panjabi, kurta, shirt, palazzo to be sold in wholesale rate and quantity	Satyajit Mondol asked whether the payment will be made in cash
19th Sept. 2020	Bandi pisi (7319380060)	Posted photos of readymade kurta and tops	Urmila Das enquired about the price of tops to which Bandi Pisi replied Rs 300 (wholesale rate)
20th Sept. 2020	Joydev (6296097131)	Posted 8 photos of dokra jewellery	No response
20th Sept. 2020	Shibani Dutta	Posted her requirement for silk Panjabi and kurti	No response
21st Sept. 2020	Madhuchanda Ghosh	Expressed her viewpoint that it will be better if the RO clicks photos and videos of some artisans, who are unable to do the same themselves due to technological inability	Member of RO explained that one of the motive of the research project is to empower artisans themselves and train them in clicking attractive product photos and videos of themselves, so that they can do online business even without the help of others.
22nd Sept. 2020	SG Handicrafts (9851174106)	Posted photo of one file folder	Madhuchanda Ghosh enquired about the price, to which SG Handicrafts replied Rs 99
23rd Sept. 2020	Madhuchanda Ghosh	Posted photos of natural dyed raw silk	Mithun Basak asked whether she will dye cotton sarees and what will be the price. Madhuchanda Ghosh said that she dyes on malmal material Satyajit Mondol posted photos of cotton dyed sarees

Date	Name	Post	Response
23rd Sept. 2020	Tripti Sadhu (9474008783)	Posted photos of kantha stitched covered shoes and said if anyone can make these, she will take it. She also enquired about the pricing of such shoes	No response
25th Sept. 2020	Amitayu Mukherjee	Posted hgis requirement for cotton kantha bedsheet and requested the producing artisans to send photos	Madhuchanda Ghosh (26th sept) asked the quantity required and whether he needs bedcover or bedsheet. Amitayu told her to send photos of bedcovers.
26th Sept. 2020	Debojyoti Ghosh	Posted his requirement for high quality Panjabi within Rs 350	No response
26th Sept. 2020	Joyguru Handicrafts (9614226103)	Posted photo of one kantha stitch saree and asked member artisans whether anybody has made such a saree	Sk Ambia (9474411598) replied that he has a saree of similar colour but not the same design. Joyguru Handicraft said that he requires the exact design.

Madhuchanda Ghosh replied that she can make the same in two months |
27th Sept. 2020	Baidyanath (8617535834)	Posted photos of showpiece and jewelleries	Member of RO appreciated the product pictures
27th Sept. 2020	(9883204379)	Posted a photo of terracotta jewellery set and asked whether anybody can make the same	Sujit Das (9641521785) enquired about the price of the jewellery set posted
27th Sept. 2020	Deepti Saha	Asked whether anybody is having premium quality colour resistant monochrome khadi panjabi	Bani Israil (9474836332) posted photos of monochrome panjabis
27th Sept. 2020	Debabrata Sengupta	Posted his requirement for jam kantha saree and its price	No response
28th Sept. 2020	J Monal (9564613040)	Posted photos of kantha stitched sarees	Member of RO appreciated the product pictures
28th Sept. 2020	Sk Yousuf Ali (7029216278)	Posted photos of laminated wall hangings made out of copper wires	Member of RO appreciated the product pictures
29th Sept. 2020	M.N. Akhtar (7001406218)	Posted photos of affordable readymade shirts. Both retailers and wholesellers can contact him. Customers can order from home or can come to his physical shop and select from a variety of collection	Sourav Pal (6294118985) asked about the price to which M.N. Akhtar replied from Rs 199-520
29th Sept. 2020	Amitayu Mukherjee	Posted his requirement for nakshi kantha work on kora tussar saree	Tripti Sadhu sent photos of nakshi kantha sarees, to which Amitayu replied the posted sarees do not have run work. Tripti Sadhu again posted photos matching Amitayu's requirements
30th Sept. 2020	Tasnim Handicrafts	Posted photos of readymade kurtas	No response
1st October, 2020	Prashun Nasipuri	Posted 26 photos of tussar zari sarees. Price – Rs 2600	Mithun Basak enquired about the material and price of the sarees and after knowing the same enquired about Prashun's address

(9883204379) enquired about the price of one saree (3rd Oct) |
| 1st October, 2020 | Akbar (8670767600) | Posted his requirement for a single coloured thread pure tassar saree with a photo | Madhuchanda Ghosh said that if two months are given, she can make the same. |

Date	Name	Activity	Response
			She also posted for other artisan members stating that anyone needs any type of sarees with any work on it, she can make the same in two months (any quantity)
1st October, 2020	Tripti Sadhu (9474008783)	Posted photos of kantha stitch dupatta	Urmila Das enquired about the price to which Tripti replied Rs 1150
1st October, 2020	Satyajit Mondol	Asked interested people to contact him if they are in need for kantha stitch or hand print on pure tussar saree Posted his requirement for hand printed sarees	Kshama artisan posted photos of kantha stitched sarees Madhuchanda Ghosh asked him to come to her shop for hand printed sarees Prashun Nasipuri posted 100 photos of hand printed sarees
3rd October, 2020	Nunnisa Kantha Stitch (9153089075)	Posted 5 photos of gachi tussar sarees Posted 27 photos of Bangalore silk kantha stitch sarees Posted 12 photos of art silk kantha stitch sarees	Member of RO appreciated the product pictures
7th October, 2020	Anisur Rahaman	Asked member artisans to post photos and videos of tussar sarees for his urgent requirement	No response
9th Oct. 2020	Shibani Dutta	Posted her requirement for cotton all over work dupatta with wholsale price and clear photos	No response
10th Oct. 2020	Debojyoti Ghosh	Posted photos of hand printed and block printed salwar kameez set piece	Tripti Sadhu enquired about the price and material to which Debojyoti replied hand block chanderi silk dress materials. Top and dupatta (2.50x2 mtrs), bottom cotton (2.50 mtrs). Price – Rs 1700 + shipping charges
10th Oct. 2020	M. N. Akhtar	Posted his requirement for hand work kurti	No response
13th Oct. 2020	Deepti Saha	Expressed her grievance that one member from the whatsapp group has been sending inappropriate messages to her	Members of RO blocked the person sending inappropriate messages to Deepti
14th Oct. 2020	Shibani Dutta	Posted her urgent requirement for plain jamidari neck panjabis. Size required – 40. 42. 44. 46	No response
14th Oct. 2020	Tripti Sadhu	Posted 15 photos of kantha stitched blouse piece. Price – Rs 150	Saptami (9153327186) and Madhuchanda Ghosh appreciated the product photos Member of RO appreciated the product pictures
15th Oct. 2020	Kshama Pal	Posted 8 photos of readymade kantha stitch Panjabi. Price Rs 500	(9735145323) appreciated the product photos (9883204379) enquired about the price
15th Oct. 2020	Tumi Robe Nirobe (6294282069)	Posted photos of cotton handloom sarees. Price Rs 700	No response
15th Oct. 2020	Dhiman Das (9064348712)	Posted his requirement for rabindranath embroidered file cover	Satyajit Mondol said that such a file cover is available with him.
15th Oct 2020	Jesmin (7679244857)	Posted 25 photos of jewelleries	No response
17th Oct. 2020	Debarati Roy (7603014612)	Posted her urgent requirement for 48 size kantha stitched Panjabi and kurta for men	Kshama Pal posted 7 photos of readymade kantha stitched panjabis.
18th Oct. 2020	Baidyanath (8617535834)	Posted photos of utility items like cup dish set, basket made out of bamboo craft	Akbar (8670767600) appreciated the product photos Member of RO appreciated the product pictures
24th Oct. 2020	Bani Israil	Posted 7 photos of handloom sarees	No response

	(9474836332)		
24th Oct. 2020	Joyguru Handicrafts (9614226103)	Posted photos of handloom sarees	Tasnim Handicrafts appreciated the product photos and asked the price. He was impressed with the product photos but expressed his inability to purchase the same due to poor ongoing market conditions.
24th Oct. 2020	Satyajit Mondol	Posted photos of kantha stitched sarees	No response
27th Oct. 2020	Shibani Dutta	Posted photos of readymade kurtas	No response
30th Oct. 2020	Sk Mujibar (9749198032)	Posted photos of hand batik panjabis Posted photos of Bangalore silk batik sarees	(9735145323) appreciated the photos and enquired about the price, to which Sk Mujibar told him to call him personally for further product details
31st Oct. 2020	Madhuchanda Ghosh	Posted photos of hand worked side bags. Rs 250 each	Anisur Rahaman enquired whether the materials of the bags are cotton, and whether the print is hand print. Madhuchanda replied that the material is canvas
5th Nov. 2020	Tumi Robe Nirobe (6294282069)	Posted 13 photos of hand printed sarees	No response
12th Nov. 2020	Sabari (8759610600)	Posted 42 photos of kantha stitched sarees. Material blended Bengal silk. Price – Rs 2800	Member of RO appreciated the product pictures Member of RO stated that Rituparna Dutta from Roopkotha Boutique has liked and enquired in detail regarding Sabari Dhara's sarees
15th Nov. 2020	Sabari	Posted photos of 30 kantha stitched sarees	Sunny asked regarding the futility of posting product photos in the whatsapp group, as the group consists of all manufacturers and no buyers. Member of RO rectified his misconception and encouraged everybody to post their product photos in the group. The group has been created with the intention to share product photos of every artisans' creation, so that everybody comes to know about who is producing what and can exchange necessities when required
16th Nov. 2020	Sunny	Posted 7 photos of kantha stitched sarees	Member of RO appreciated the product pictures
16th Nov. 2020	Madhuchanda Ghosh	Requested the admin to add her second number as she is not receiving all the messages exchanged in the group	Madhuchanda Ghosh's second number was immediately added in the group by the member of RO (admin of the group)
16th Nov. 2020	Sabari	Posted photos of kantha stitched sarees	Member of RO appreciated the product pictures Sk Yousuf Ali appreciated the photos and requested Sabari to send more product photos Madhuchanda Ghosh enquired about the price of 3 sarees
16th Nov. 2020	Sunny	Requested the admin to add his second number so he can post new updates in the group	Sunny's second number was immediately added in the group by the member of RO (admin of the group)
16th Nov. 2020	Madhuchanda Ghosh	Posted her requirement for one deep coloured kantha stitched saree within Rs 4500-5500	Sunny enquired whether the material required is Bangalore silk. Madhuchanda said yes and

			Sunny asked her to contact him in his other number
16th Nov. 2020	Mili Khatun (8509779403)	Said interested people to contact her if they are in need of gujrati or kantha stitched stoles	No response
18th Nov. 2020	Mili Khatun	Posted 80 photos of kantha stitched sarees	Member of RO appreciated the product pictures
19th Nov. 2020	Amar kuthi Manager	Posted a newspaper article demonstrating government's interest to improve life and livelihood conditions of artisans.	No response
20th Nov. 2020	Debojyoti Ghosh	Posted photos of khesh jackets and asked whether anybody can make the same	Shibani Dutta (25th Nov. 2020) enquired about the wholesale price of the jackets
21st Nov. 2020	Anisur Rahaman	Said that he will be requiring silk sarees for reselling. Asked artisans who are involved in producing the same to post photos	Shibani Dutta posted photos of silk sarees
22nd Nov. 2020	Shibani Dutta	Posted her requirement for hand embroidered bed sheets	(8918658885) posted photos of hand embroidered bed sheets

Joy guru handicrafts asked the price of the bedsheet by (8918658885), to which the artisan replied Rs 7000. Sunny asked whether the material is tussar, to which the artisan replied no |
23rd Nov. 2020	(9735145323)	Posted photos of sarees	Madhuchanda Ghosh enquired regarding the details of the product and requested other members to post product photos by mentioning the details and price of the products
25th Nov. 2020	Shibani Dutta	Posted photos of hand printed sarees	No response
26th Nov. 2020	Shibani Dutta	Posted photos of one readymade kurta and asked about its wholesale price	No response
26th Nov. 2020	Jahanara Bibi (8670339462)	Posted photos of kantha stitched sarees	Mili Khatun enquired whether the material is tussar or art silk, to which Jahanara replied tussar. Mili further enquired whether its dee tussar or gachi tussar and what is the price. Jahanara replied gachi tussar. Rs 7000 price
26th Nov 2020	Tripti Sadhu	Posted photos of kantha stitched sarees	No response
26th Nov 2020	Manb (8372018505)	Posted photos of dokra jewelleries	No response
26th Nov 2020	Shibani Dutta	Posted her requirement for kantha stitched tussar shawls	Nunnisa Kantha Stitch (9153089075) on 27th Nov. posted photos of 36 inches tussar shawls. Rs 1700 And 44 inches tussar kantha stitched shawls – Rs 2000 And Bangalore silk 44 inches shawls for Rs 2100 Kantha stitched art silk stoles for Rs 400 Photos of kantha stitched art silk sarees with full body work Rs 2000 Photos of kantha stitched Bangalore silk sarees with full body work Rs 5700 (All the prices are wholesale rates)
27th Nov. 2020	Sk Mujibar	Posted photos of Bangalore silk hand batik sarees	No response
27th Nov. 2020	Debojyoti Ghosh	Posted photos of ikkat, handloom and kantha stitch sarees.	No response

From Research Organization's (RO) End

Date	Response Sent By	Pattern of Response	Reply to Response
12th July, 2020	Jayanta Basak	Jayanta Basak sent a google meeting link to Amitayu Mukherjee to understand the artisans' capacity in participating in video conferencing	The meeting was conducted successfully
23rd July, 2020	Santosh Pal	Sent Debaroti Roy's sample video in the group to give idea to other artisan members on what an ideal self video should look like, which the members were expected to replicate by watching the sample video	No Response
30th July, 2020	Santosh Pal	Sent Debojyoti Ghosh's sample video in the group to give idea to other artisan members on what an ideal self video should look like, which the members were expected to replicate by watching the sample video	No Response
31st July, 2020	Santosh Pal	Sent a welcoming address to the members of the whatsapp group Explained the member artisans the details about our project, the details regarding the online shop of artisands to be created on NCoRe, the requirements for creating the same and the purpose behind creating this whatsapp group Sent sample product photos (of different categories) and self video, which the artisan members were expected to replicate	No response
9th August, 2020	Santosh Pal	Posted additional canvas painting photos of Deepti Saha, which the latter had sent him personally	Anisur Rahaman liked the photos and enquired further regarding the price and exact availability status of the products to which Deepti replied Member of RO also appreciated the product pictures
9th August, 2020	Santosh Pal	Posted jewellery photos of Debalika Dalal, which the latter had sent him personally	Member of RO appreciated the product pictures
9th August, 2020	Santosh Pal	Posted photos of kantha stitched sarees made by Anisur Rahaman, which the latter had sent him personally	Member of RO appreciated the product pictures
10th August, 2020	Santosh Pal	Posted jewellery photos of Debalika Dalal, which the latter had sent him personally	Anisur Rahaman appreciated the intricate design and colour combinations of the jewelleries Biswa Shilpa Kutir advised Debalika to post her product photos in Facebook
12th August	Santosh Pal	Asked Satyajit Mondol and Sk Saifuddin to contact him as he is unable to get in touch with them	No response
18th August, 2020	Sneha Bhattacharyya	Posted the link of online shops of Bikas Das, Debojyoti Ghosh, Manas Dutta in NCoRe for everyone to see and comment	Debojyoti Ghosh was at first unable to view his shop, which got resolved eventually
20th August, 2020	Sneha Bhattacharyya	Posted the link of online shops of Debaroti Roy, Madhusudan Biswas, Joydeb Paul in NCoRe for everyone to see and comment	Satyajit Mondol had problem in opening the links at first, which got resolved eventually
21st August, 2020	Santosh Pal	Shared the link of NCoRe Facebook page and requested artisan members with Facebook profile to join NCoRe Facebook community	Sannasi Das expressed his agreement
24th August, 2020	Sneha Bhattacharyya	Posted the link of online shops of Tandra Pal, Dipak Biswas, Shibani Dutta, Deepti Saha, Tarapada Das in NCoRe for everyone to see and comment	Deepti Saha expressed her agreement

25th August, 2020	Sneha Bhattacharyya	Made a training announcement for 29th August and shared the zoom link, where artisans will interact with members of the RO, who will in turn inform the rural members regarding the project details and welfare plans and trainings to be provided by the RO	India (7001915162), Madhusudan Biswas, Debojyoti Ghosh and Amitayu Mukherjee expressed their agreement Sannasi Das expressed his confusion, which was dealt by a member of the RO in details over telephonic conversation
26th August	Somprakash Bandyopadhyay	Since many members were added in the last 24 hours, the training announcement to be held on 29th August between members of the RO and artisans was reposted	Barnali Pal expressed her agreement
28th August, 2020	Jayanta Basak	Since all the meetings and trainings are to be conducted virtually over zoom, Jayanta Basak posted a video in Bengali to guide the artisans on how to successfully install zoom app in their smart phone and how to participate in virtual meetings	Debojyoti Ghosh expressed the effectivity of the video in making the task easy
28th August, 2020	Santosh Pal	Training announcement reposted	No response
2nd Sept. 2020	Sneha Bhattacharyya	Posted the announcement for the training on how to click product photos and videos of oneself scheduled for 9th and 11th Sept along with the zoom link.	Deepti Saha and Debaroti Roy expressed her willingness to attend the training Debojyoti Ghosh said that he will not be able to attend the training on 9th due to prior engagement, to which member of RO advised him to attend the training in the next session to be scheduled duly.
3rd Sept. 2020	Santosh Pal	Reposted the link to NCoRe FB page and requested the member artisans to join the group	No response
3rd Sept. 2020	Sneha Bhattacharyya	Reposted the upcoming training announcement and sent a video, where the training plan and essentials to attend the meeting was described in an audio-visual fashion, which is more effective than text message in conveying important information to artisans	Tasnim Handicrafts, Sunny, Debaroti Roy, Debabrata Sengupta (4th sept), Joydeb Patra (5th sept), Debolina Halder (5th sept), Tarapada Das (5th sept) and India (7001915162) expressed their willingness to attend the training
6th Sept 2020	Manas Das	Requested the artisans to share their product images in our FB group	Joydev replied affirmative
7th Sept. 2020	Jayanta Basak	Reposted the training announcement for 9th and 11th sept.	Amitayu Mukherjee and Madhuchanda Ghosh (7001509262) expressed their willingness
9th Sept. 2020	Santosh Pal	Reposted the training announcement for 9th and 11th sept.	No response
9th Sept. 2020	Jayanta Basak	After the completion of the two hour training, announcement of the next session to be held on 11th of Sept was made. A gist of 9th Sept training was stated and member artisans were requested to click and send their product photos by following the instructions given during the training. The next session is supposed to be discussion session, where the experts will discuss each artisan members performance by analysing the product photos they are requested to send over whatsapp	No response
10th Sept. 2020	Jayanta Basak	Posted the you tube link of the training conducted on 9th Sept.	Madhuchanda Ghosh who could not attend the training for unavoidable circumstances and was eager to attend the upcoming session thanked the member of RO

11th Sept. 2020	Santosh Pal	Reposted the training announcement for 11th Sept along with the zoom link	No response
16th Sept. 2020	Santosh Pal	Notified regarding NCoRe Facebook group and the members who are part of it	No response
19th Sept. 2020	Jayanta Basak	Posted the link of online shops of Sraboni Sarkar, Partha Mondol and Debalika Dalal in NCoRe for everyone to see and comment	No response
19th Sept. 2020	Santosh Pal	Asked other artisan members whether anybody had the contact details of bamboo artist Byasdeb Laha	Ski Needle Work shared the contact details
21st Sept. 2020	Jayanta Basak	Posted the link of online shops of Biswajit Saha, Debabrata Sengupta and Subhash Dhara in NCoRe for everyone to see and comment	No response
26th Sept. 2020	Manas Das	Posted photos of sample necklaces to give examples to artisans on how to click attractive photos of their created necklaces	No response
27th Sept. 2020	Manas Das	Posted photos of sample jewellery sets to give examples to artisans on how to click attractive photos of their created jewellery sets	No response
28th Sept. 2020	Manas Das	Posted photos of sample earrings to give examples to artisans on how to click attractive photos of their created earrings	No response
30th Sept. 2020	Manas Das	Posted photos of sample bracelets to give examples to artisans on how to click attractive photos of their created bracelets	No response
1st October, 2020	Jayanta Basak	Posted training announcement and zoom link for 8-9th and 15-16th October. The training will be on how to create innovative products and designs, disseminated by faculties of NIFT	Amitayu Mukherjee appreciated the course material of the training and expressed his willingness to attend the same
6th October, 2020	Manas Das	Reposted training announcement and zoom link for 8-9th and 15-16th October along with a flyer specifying the details of the training, timings and subjects to be covered	No response
8th Oct. 2020	Santosh Pal	Reposted training announcement and zoom link for 8-9th and 15-16th October along with a flyer specifying the details of the training, timings and subjects to be covered	No response
11th Oct. 2020	Manas Das	Posted the image of an uncoloured pattern, which the artisans were told to colour using their sense of colour combinations. This is the task given to the artisans during the training, which the artisans were told to complete and send back by Wednesday, so that the faculties can give feedback on the work done in the next training day.	No response
14th Oct. 2020	Manas Das	Posted the image of an uncoloured pattern, which the artisans were told to colour using their sense of colour combinations.	Tripti Sadhu sent her coloured pattern Santosh Pal sent the photos of coloured pattern done by Debaroti Roy, which the artisan had sent him personally.
15th Oct. 2020	Santosh Pal	Asked other members whether any one can provide Basudeb Das' (leather artisan) contact details	Chandan Das (9851044996) posted Basudeb Das' contact number
16th Oct. 2020	Santosh Pal	Reposted training announcement and zoom link for upcoming training	No response
20th Oct. 2020	Jayanta Basak	Requested members to only post business related contents in the group. The members were requested not to post any religious or political comments	Other member artisans expressed their agreement

APPENDIX II

Master List of Artisans Included so far as a part of our Pilot Study

S. No.	Name	Mobile	Whats App No	Email ID	Age	Arform	Exp.	Social Media link	SC/ST (Yes/No)	Artisan Card (Yes/No)	Address					
											Address	Landmark	District	State	Country	Pin Code
1	Kshama Pal	9547503328		kshamapal1234@gmail.com	39	Katha Stich	15	https://www.facebook.com/kshama.pal.9655	No	Yes	Illambazar	Sukhbazar	Birbhum	West Bengal	India	731214
2	Deepti Saha	8167343605	also include in our whats group	deepti.0920@gmail.com	24	Painting	5	https://www.facebook.com/deepti.saha.52	No	No	Ahamedpur, Sainthia	Ricemil	Birbhum	West Bengal	India	731234
3	Debarati Roy	7603014612		debaratipal512@gmail.com	32	Jwellery	5	https://www.facebook.com/debarimi	No	No	Jambuni		Birbhum	West Bengal	India	731204
4	Debalika Dalal	8653159338		likadebdalal@gmail.com	28	Jwellery, Home décor	5	https://www.facebook.com/debalika.dalal.5	No		Bolpur, Santiniketan	Bolpur, Santiniketan	Birbhum	West Bengal	India	731235
5	Tandra Pal	9382229625	8016059550		30	Katha Stich	15	https://www.facebook.com/tandra.pal.334	No	No	Hatora, Sainthia	Hatora, Sainthia	Birbhum	West Bengal	India	731234
6	Debajyoti Ghosh	9153242852		debajyotigr@gmail.com	31	Bag	12	https://www.facebook.com/debajyoti.ghosh.333	No	No	Goalpara, Santiniketan	Goalpara, Santiniketan	Birbhum	West Bengal	India	731235
7	Sabari Dhara	8759610600	also include in our whats group		33	jwelery	10	https://www.facebook.com/sabari.dhara.3	OBC	No	Makarampur, Bolpur	Khelar Math	Birbhum	West Bengal	India	731204
8	Subhas Dhara	8759610600			44	jwelery	13	https://www.facebook.com/subhas.dhara.758	OBC	Yes	Makarampur, Bolpur	Khelar Math	Birbhum	West Bengal	India	731204
9	Riya Das	8927765387			20	Katha Stich	4		Yes	No	Ballavpur,Santiniketan	Daspara	Birbhum	West Bengal	India	731236

No	Name	Phone	Note	Email	Age	Craft	Exp	Facebook	Cat		Address1	Address2	District	State	Country	PIN
10	Kabatullah Sk	9126397343			30	Katha Stich	9	https://www.facebook.com/kabatullah.sk.56	OBC	No	Bataspur	Bataspur	Birbhum	West Bengal	India	731234
11	Sahajahan Ansari	8250253443		shahjahaansari24041996@gmail.com	48	Jwellery	15		OBC	No	Santiniketan	Rituranga Lodge	Birbhum	West Bengal	India	731235
12	Debolina Halder	8918379281	9474395558	halderdebolina888@gmail.com	19	Batik	5		No		Santiniketan	Santiniketan	Birbhum	West Bengal	India	731235
13	Bikash Das	8348743651		Daskanan1906@gmail.com	35	Katha Stich	10		Yes	Yes	Gajidangal,Pansua	Ganjidangal Anganwari Centre	Birbhum	West Bengal	India	731240
14	Serina Bibi	9635971870	Correct no		44	Katha Stich	10		No	Yes	Moldanga, Sriniketan	Moldanga, Sriniketan	Birbhum	West Bengal	India	731235
15	Shibani Dutta	9123933469		sibanid37@gmail.com	52	Katha Stich	19	https://www.facebook.com/vramar.dutta	No	Yes	Ratanpally, santiniketan	Ratanpally, santiniketan	Birbhum	West Bengal	India	731235
16	Ananda mohan Ghosh	9153025818			58	Katha stich, shilk, tashor	22		OBC	Yes	Illambazar	Near Girls school	Birbhum	West Bengal	India	731215
17	Sonali Hazra	7098246130		sonalirh205@gmail.com	36	Jwelery	17	https://www.facebook.com/somaliroyhazra.pinka	No	Yes	Vivekanandapally, ward no11 , Bolpur	C/o mintu hazra	Birbhum	West Bengal	India	731204
18	Satyajit Mondal	7407119937		satyajitmondaltantipara@gmail.com	26	Tashor	8	https://www.facebook.com/profile.php?id=100029319003729	OBC	Yes	Tantipara,Birbhum		Birbhum	West Bengal	India	731126
19	Urmila Das	9732168059	also include in our whats group		40	Katha Stich	30		Yes	Yes	Ratanpally, santiniketan	khoyai lodge	Birbhum	West Bengal	India	731235
20	sk rejaul hoque	9233698327		skrejaulhoque1985@gmail.com	36	Katha stich	4		OBC	No	Krinahar	Nanoor	Birbhum	West Bengal	India	731302
21	Joydeb Pal	6296097131			43	Jwellery	12	https://www.facebook.com/profile.php?id=100048776674810	OBC	Yes	Makarampur, baganpara		Birbhum	West Bengal	India	731204
22	Joydeb Patra	7001456277			49	Dokra	25		OBC	Yes	Makarampur	khelarmath	Birbhum	West Bengal	India	731204

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#	Name	Phone 1	Phone 2			Age	Craft	Years	Facebook	Caste	Y/N	Address 1	Address 2	District	State	Country	Pin
															Bengal		
23	Ismail Sk	9635123953				42	Jwellery	15		OBC	Yes	Baro Simulia, Bahiri Panmchsua		Birbhum	West Bengal	India	731240
24	Kayesh Mondal	9933165492				28	Katha Stich	7		No	Yes	Illambazar	College	Birbhum	West Bengal	India	731214
25	MITA DAS	8759077388				63	Katha Stich	40		Yes	Yes	Rabindrapally, Bolpur		Birbhum	West Bengal	India	731235
26	Partha Mondal	9002294432				33	Copper Artist	10		No	No	Makarampur, baganpara	Bolpur	Birbhum	West Bengal	India	731204
27	Mefuja Begum	9434326275				45	Katha Stictch	25	https://www.facebook.com/mafuja.begum.180	OBC	Yes	Nichu Bandhgora, Bolpur	Bolpur	Birbhum	West Bengal	India	731204
28	Yousuf ali	7029216278				48	gala	24	https://www.facebook.com/skyousuf.ali.129	OBC	Yes	Surul, Sriniketan	Surul, Sriniketan	Birbhum	West Bengal	India	731235
29	Uma Chowdhury	9563814834				44	Katha Stictch	22	https://www.facebook.com/uma.chowdhury.3517	No	Yes	Bhagabatibazar, Illambazar	Bhagabatibazar, Illambazar	Birbhum	West Bengal	India	731214
30	SubhasPal	7602461334	815997719			53	Bag	5		No	No	Hatora, Sainthia	post office	Birbhum	West Bengal	India	731234
31	RUBIA KHATUN	9474411598				45	Katha Stictch	22		OBC	Yes	choto Alunda, Itagoria	choto Alunda, Itagoria	Birbhum	West Bengal	India	731234
32	REHENA SULTANA	9800100336				46	Katha Stictch	25		OBC	Yes	Bbhubandanga, Bolpur	Santiniketan	Birbhum	West Bengal	India	731235
33	Sarada Mondal	9434097826				38	Katha Stictch	18		No	Yes	Mritadaspur, Sindurtopa	Mritadaspur, Sindurtopa	Birbhum	West Bengal	India	731234
34	SAPTAMI MONDAL	9153327186				44	Katha Stictch	20	https://www.facebook.com/saptami.mondal.3557	OBC	Yes	Kirnahar	Kirnahar	Birbhum	West Bengal	India	731302

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#	Name	Phone			Email	Age	Craft	No.	Website	Caste		Address 1	Address 2	District	State	Country	Pin
35	SEKH JAMIRUL HAQUE	9679718267				34	Katha Stictch	12		OBC	Yes	Imamnagar,Mangaldihi	Imamnagar,Mangaldihi	Birbhum	West Bengal	India	731214
36	SK LIAKAT	9775234717				56	Katha Stictch	23		OBC	Yes	Bheramari	Bheramari	Birbhum	West Bengal	India	731214
37	SK SIRAJUL	9635388056				38	Katha Stictch	14		OBC	Yes	Immamnagar, Illambazar	Immamnagar, Illambazar	Birbhum	West Bengal	India	731214
38	SUMANTA BAGDI	9749483869				37	Katha Stictch	15		Yes	Yes	Purbapally, Santiniketan	Purbapally, Santiniketan	Birbhum	West Bengal	India	731235
39	Ramesh Pradhan	9734061886				45	Leather	18	https://www.facebook.com/profile.php?id=100042084614131	Yes	No	Santiniketan	Santiniketan	Birbhum	West Bengal	India	731235
40	AJMIRA BIBI	9474836332				36	Katha Stictch	17	https://www.facebook.com/ajmira.bibi.9085	OBC	Yes	Bhromorkol	Bhromorkol	Birbhum	West Bengal	India	731234
41	BARNALI PAL	9832430582			barnalipal582@gmail.com	32	Katha Stictch	9		OBC	Yes	Kashiara,palsha	Kashiara,palsha	Birbhum	West Bengal	India	731234
42	BIDHAN MONDAL	9475038114				38	Katha Stictch	13	https://www.facebook.com/profile.php?id=100036278702197	No	Yes	Mritadaspur, Sindurtopa	Mritadaspur, Sindurtopa	Birbhum	West Bengal	India	731234
43	BRINDABAN DEBNATH	8653626478				48	Docra Puthi Mala	20	https://www.facebook.com/brindaban.debnath.372	No	Yes	Makrampur, Bolpur	Makrampur, Bolpur	Birbhum	West Bengal	India	731204
44	CHUMKI ALI	9775729306				42	Katha Stictch	21		OBC	Yes	Simantapally, Santiniketan	Simantapally, Santiniketan	Birbhum	West Bengal	India	731235
45	KAZI GOLAM GAUS	9046723405				38	Bag, Kantha stitch	15		OBC	Yes	Kazipara, PurbaIslampur	Kazipara, PurbaIslampur	Birbhum	West Bengal	India	731123
46	MABIA BIBI	7797738073				52	Katha Stictch	28		OBC	Yes	Bhubandanga, Bolpur	Bhubandanga, Bolpur	Birbhum	West Bengal	India	731235
47	LAXMAN ROY	9832710545				28	Docra Puthi Mala	8	https://www.facebook.com/laxman.ray.9638	No	Yes	Subhaspally, Santiniketan	Subhaspally, Santiniketan	Birbhum	West Bengal	India	731235

													Ben gal		
4 8	Madhab Pal	967945 5534			38	Katha Stictch	14	https://www.facebook.com/madhabpal.pal.71	OBC	Yes	kirnahar	kirnahar	Birb hum	Wes t Ben gal	India	731 123
4 9	Mamtaj Begam	973210 0235			40	Katha Stictch	22	https://www.facebook.com/Mumtaj-Begum-1898847223726611	OBC	Yes	ChotoAlunda, Itagoria	ChotoAlunda, Itagoria	Birb hum	Wes t Ben gal	India	731 234
5 0	Subhas Dhara	985146 7592			44	Docra Puthi Mala	16	https://www.facebook.com/subhas.dhara.94849	Yes	Yes	Surul, Sriniketan	Surul, Sriniketan	Birb hum	Wes t Ben gal	India	731 235
5 1	Subhas Dhara	875933 4881			48	Docra Puthi Mala	19	https://www.facebook.com/subhas.dhara.758	Yes	Yes	Makrampur, Bolpur	Makrampur, Bolpur	Birb hum	Wes t Ben gal	India	731 235
5 2	Apurba Roy	629679 9338			40	teracot a	20		No	Yes	Adityapur, Santiniketan	Adityapur, Santiniketan	Birb hum	Wes t Ben gal	India	731 235
5 3	Md Hafij Uddin	810158 1677	6296692 595		39	Katha Stictch	15		OBC	No	Sattor,Parui	Sattor,Parui	Birb hum	Wes t Ben gal	India	731 235
5 4	Syamali Mondal	956467 2112			46	Jweler y	30		OBC	No	baswa,margram	baswa,margra m	Birb hum	Wes t Ben gal	India	731 202
5 5	Samapti Khatoon	956461 3040			27	Katha Stictch	12		OBC	No	Jambuni	Jambuni	Birb hum	Wes t Ben gal	India	731 204
5 6	Tarapada Das	985117 1838	also include in our whats group		43	Dokra	23		Yes	Yes	Bolpur khadipara	Bolpur khadipara	Birb hum	Wes t Ben gal	India	731 204
5 7	Debabar ata Sengupta	891895 4677	8967136 196	artwing1991@gmail.co m	60	Leathe r	30	https://www.facebook.com/profile.php?id=100004350167278	No	Yes	Surul, Sriniketan	Surul, Sriniketan	Birb hum	Wes t Ben gal	India	731 235
5 8	Anisur Rahama n	867015 2697		chotonk@gmail.com	32	Katha Stictch	10	https://www.facebook.com/anisur.rahaman.79025	No	Yes	Jambuni	Jambuni	Birb hum	Wes t Ben gal	India	731 204
5 9	Shyamal i Pal	964151 4766			54	Katha Stictch	29		No	Yes	Kaiyara,Palsa, Labhpur	Kaiyara,Palsa, Labhpur	Birb hum	Wes t Ben gal	India	731 303

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No	Name	Phone	Note/Phone2	Email	Age	Craft	Exp	Facebook	Caste	Y/N	Address 1	Address 2	District	State	Country	Pin
60	Abdus Sattar	9327936099			27	Katha Stich	9		OBC	No	Bataspur	Bataspur	Birbhum	West Bengal	India	731234
61	Nashima Choudhuri	6294716442			52	Katha Stich	35		OBC	Yes	Prantik, Santiniketan	Natunpukur, Bolpur	Birbhum	West Bengal	India	731204
62	Sk liakat	6294752800	8017414627		38	Katha Stich	15		OBC	Yes	Uddayan Pally, Bolpur	Uddayan Pally, Bolpur	Birbhum	West Bengal	India	731204
63	Nashim Aktar	7001406218		mnaktar1990@gmail.com	30	Katha Stich	4	https://www.facebook.com/mn.akhtar.355	OBC	No	akudihi, Sainthia	akudihi, Sainthia	Birbhum	West Bengal	India	731234
64	Md Sabani Ansari	7001644830			37	Puthi mala, Katha Stich	10		No	No	Fuldanga, Santiniketan	Fuldanga, Santiniketan	Birbhum	West Bengal	India	731235
65	Biswajit Saha	7001710187			28	Katha Stich Bag	6		Yes	Yes	Kalikapur koloni, muluk	Kalikapur koloni, muluk	Birbhum	West Bengal	India	731235
66	Faridha Khatoon	7001915162	switch off										Birbhum	West Bengal	India	
67	Tara Parvin	7076056806			18	Jwelery	4		OBC	No		Prantik, Santiniketan	Birbhum	West Bengal	India	731235
68	Ferdosa Khatun	7318616893			22	Katha Stich	5		OBC	No	Boro Sija, Bataspur	Boro Sija, Bataspur	Birbhum	West Bengal	India	731234
69	Manas Dutta	7384153994		manasdutta29111964@gmail.com	56	Katha Stich	30	https://www.facebook.com/manas.dutta.3323	No	Yes	Ballavpur, Sriniketan	Ballavpur, Sriniketan	Birbhum	West Bengal	India	731236
70	Subrata Rudra	7501098217			38	Katha Stich	12	https://www.facebook.com/rudra.subrata.71	No	Yes	Kalikapur, Bolpur		Birbhum	West Bengal	India	731204
71	Debabrata Roy Halder	7602099890	Busy for 2days										Birbhum	West Bengal	India	
72	Manowara Bibi	7679615311		vaffarsekh9@gmil.com	38	Katha Stich	14		OBC	Yes	Nutangram, Pansowa, Bolpur		Birbhum	West	India	731204

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No	Name	Phone	Status	Email	Age	Craft	Years	Facebook	Col1	Col2	Address	Address2	District	State	Country	Pincode
														Ben gal		
7 3	Guriya Show	7797544130	switch off										Birb hum	West Ben gal	India	
7 4	sannasi Das	7865072811			45	Leathe r	25	https://www.facebook.com/sannyasidas.sannyasidas.165	Yes	Yes	Surul, Bolpur	Jo;l tanki, Tantipukur par	Birb hum	West Ben gal	India	731 204
7 5	Basudeb Chakrob orty	7872505774			55	Katha Stich	15		No	Yes	Sukhbajar, Ilambazar		Birb hum	West Ben gal	India	731 214
7 6	Saleha Begam	7872588949		salefmolla2@gmail.com	42	Katha Stich	20		OBC	Yes	Khiruli, Bergram		Birb hum	West Ben gal	India	731 236
7 7	Kishor Das	8145891121			34	Katha Stich	15		No	Yes	Dubrajpur, krishnagar		Birb hum	West Ben gal	India	731 124
7 8	Nina Bibi	8159903644	switch off										Birb hum	West Ben gal	India	
7 9		8250213945	NOT ANSWE RING										Birb hum	West Ben gal	India	
8 0	Sanatan Das	8293590557			45	Leathe r	25		Yes	Yes	Ballavpur		Birb hum	West Ben gal	India	731 235
8 1	Kajal Nath	8334995214			48	Katha Stich	20		No	Yes	Bolpur		Birb hum	West Ben gal	India	731 204
8 2	Basudeb Das		Not Answeri ng			Leathe r							Birb hum	West Ben gal	India	
8 3	Manab Debnath	8372018505			38	Dokra	30		No	No	Hattala, Bolpur		Birb hum	West Ben gal	India	
8 4	Swapan Das	8637087250	switch off										Birb hum	West Ben gal	India	

8 5	Pratima Singha	867035 5530	Incoming Call Off											Birb hum	Wes t Ben gal	India	
8 6	Akbar Ali Sk	867076 7600			48	Leathe r, Katha Stich	25		OBC	Yes	Logar, binuria, santiniketan		Birb hum	Wes t Ben gal	India	731 235
8 7	Koushik Bhattach ariya	890676 0189			52	Katha Stich	25		No	Yes	Amarkutir, Sriniketan		Birb hum	Wes t Ben gal	India	731 236
8 8	Dipak Biswas	890686 8131			55	Wood Craft	32		No	Yes	Saradapally, Jambuni		Birb hum	Wes t Ben gal	India	731 204
8 9	Nabirul Mallik	894482 0052			49	Katha Stich	22		OBC	Yes	Mohidapur,Bol pur		Birb hum	Wes t Ben gal	India	731 204
9 0	Md Firoz Hossain	900228 3461	no incoming call										Birb hum	Wes t Ben gal	India	
9 1		900793 4131	NOT ANSWE RING										Birb hum	Wes t Ben gal	India	
9 2	Dhiman Das	906434 8712			26	Leathe r	6		Yes		Surul, Sriniketan		Birb hum	Wes t Ben gal	India	
9 3	Md Olliullah	915308 9075			32	Katha Stich	16		OBC	Yes	Bhagabatibazar, Illambazar		Birb hum	Wes t Ben gal	India	731 214
9 4	Rampras ad Mondal	943455 9833			56	Bag	20		No	Yes	Makarampur	Petrol pump er west	Birb hum	Wes t Ben gal	India	731 204
9 5	Madhusu dan Biswas	943463 3176			57	Katha Stich bag	27	https://www.facebook.com/madhusud an.biswas.925	No	Yes	Sitalpur, Darpashila,Santi niketan		Birb hum	Wes t Ben gal	India	731 235
9 6	Sraboni Sarkar	961422 6103			29	Katha Stich	12	https://www.facebook.com/Joyguru-Handicraft-108780917600106	No	Yes	Santiniketan, Ratanpally		Birb hum	Wes t Ben gal	India	731 235
9 7	Subhra Jyoti Bairgya	973514 5323			29	Katha Stich	11		No	Yes	Darpashila, Santiniketan		Birb hum	Wes t	India	731 235

No.	Name	Phone			Age	Craft	Years	Link	Caste		Address	College	District	State	Country	Pincode
														Bengal		
98	Md Abul Fazal	9775167114			41	Katha Stich	14		No	Yes	Simantapally,Santiniketan		Birbhum	West Bengal	India	731235
99	Prabir Mondal	9775253356			28	Dokra	10		Yes	Yes	Prantik, Dreemland		Birbhum	West Bengal	India	731235
100	Hela Sk	9800161489	NOT ANSWERING										Birbhum	West Bengal	India	
101	Niyamat Sekh	9800334478			48	Katha Stich	28		OBC	Yes	Jagdal, Illambazar		Birbhum	West Bengal	India	731214
102	Chandan Das	9851044996			33	Leather	23		Yes	Yes	Ballavpur, Sriniketan		Birbhum	West Bengal	India	731236
103	Tatt Sekh Ali	9851425121			30	Katha Stich, Jwellery	12		OBC	Yes	Sian,Santiniketan		Birbhum	West Bengal	India	731235
104	Mamataj Bibi	9851627125			38	Katha Stich	20		No	Yes	Bolpur, Natunpukur		Birbhum	West Bengal	India	731204
105	Pranab Ghosh	9851627592	NOT ANSWERING										Birbhum	West Bengal	India	
106	Samsud Bibi	9933819831	NOT ANSWERING										Birbhum	West Bengal	India	
107	Mitun Basak	9614257924			45	Katha Stich	30	https://www.facebook.com/atanu.basak.313	OBC	Yes	Basak Para, Sainthia	Abhedanada College	Birbhum	West Bengal	India	731234
108	Hasi Ram	8900231480			55	Katha Stich	10		No	No	Indira pally, Baganpara, Santiniketan		Birbhum	West Bengal	India	731234
109	Sk Mujibar	9749198032			31	Batik	6		OBC	No	Veramari,Panrui		Birbhum	West Bengal	India	731235

110	Hem Chand Ram	9832171313			25	Katha Stich	5		SC	No	Indira pally, Baganpara, Santiniketan		Birb hum	West Bengal	India	731235
111	Madhu Chanda Ghosh	7602637754	7001509262	exxclussive.11@gmail.com	54	Block Print	13	https://www.facebook.com/Exxclussive-313510792102178/?ref=page_internal	No	Yes	Sebapally, Santiniketan		Birb hum	West Bengal	India	731235
112	Nilima Mondal	9434944808	6294282069		52	Katha Stich	30		No	Yes	Ahamedpur		Birb hum	West Bengal	India	731234
113	TRIPTI SADHU	9474008783			50	Katha Stich	30		No	Yes	Ahamedpr		Birb hum	West Bengal	India	731234
114	Jiten Mondal				48	Seed ornament	15		No	Yes	Ballavpurdanga, Santiniketan		Birb hum	West Bengal	India	731235

Birbhum Artisan Pre-Study Questionnaire
APPENDIX III

নাম

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গ্রাম

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ব্লক

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পিন কোড

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ফোন নম্বর (এক্ষেত্রে আপনি আপনার হোয়াটসঅ্যাপ নাম্বারটি বলবেন)

_____

বয়স

_____

আর্ট ফর্ম

_____

লিঙ্গ

◯ 1 (পুরুষ)

◯ 2 (মহিলা)

◯ 3 (অন্যান্য)

◯ 4 (বলতে ইচ্ছুক নই)

জাতি

◯ 1 (জেনারেল)

◯ 2 (ওবিসি)

◯ 3 (এসসি)

◯ 4 (এসটি)

আপনার ব্যবসা থেকে মাসিক আয় (লাভ)

◯ 1 (5,000 টাকা এর কম)

◯ 2 (5,001-10,000 টাকা)

◯ 3 (10,001-20,000 টাকা)

◯ 4 (20,001-30,000 টাকা)

◯ 5 (30,000 টাকা এর উপরে)

আপনি কি আপনার পরিবারের আয়ের প্রধান উৎস ?

◯ 1 (হ্যাঁ)

◯ 2 (না)

আপনি কি:

☐ 1 (ফ্রিল্যান্স শিল্পী)

☐ 2 (মাস্টার শিল্পী)

☐ 3 (এজেন্ট)

☐ 4 (ব্যবসায়ী)

আপনার দলে স্থায়ী সদস্য সংখ্যা কত?

_____

আপনার দলে কতজন ফ্রিল্যান্সার কাজ করে?

_____

আপনি কত বছর ধরে শিল্প চর্চা করছেন?

◯ 1 (5 বছরের কম)

◯ 2 (5-10 বছর)

◯ 3 (10-15 বছর)

◯ 4 (15 -20 বছর)

◯ 5 (20 বছরের উপরে)

শিক্ষাগত যোগ্যতা

◯ 1 (প্রাথমিক পর্যন্ত)

◯ 2 (দশম শ্রেণি তবে মাধ্যমিক পাস করা হয়নি)

◯ 3 (মাধ্যমিক পাস)

◯ 4 (দ্বাদশ শ্রেণি পাস)

◯ 5 (স্নাতক এবং উপরে)

আপনাদের এলাকায় কি দরকারমতো ইন্টারনেট কানেকশন পান?

☐ 1 (একদমই না)

☐ 2 (সব জায়গায় কানেকশন পাওয়া যায় না; ইন্টারনেট স্পিড খুব স্লো)

☐ 3 (সব সময়ই কানেকশন পাওয়া যায় ; কিন্তু ইন্টারনেট স্পিড খুব স্লো)

☐ 4 (মাঝে মাঝে ভালো ইন্টারনেট পাওয়া যায়)

☐ 5 (যখনই দরকার, ভালো ইন্টারনেট কানেকশন পাওয়া যায়)

1. আপনি যে স্মার্টফোন টি ব্যবহার করেন সেটি কার ?

◯ 1 (আমার নিজস্ব)

◯ 2 (আমার স্বামী-র বা আমার স্ত্রী-র)

◯ 3 (আমার ছেলে বা মেয়ের)

◯ 4 (আমার বন্ধু- র)

◯ 5 (পারিবারিক স্মার্টফোন)

2. আপনার ফোন-এ মাসে কত টাকা-র রিচার্জ করেন এবং কোন কোম্পানি-র সার্ভিস ব্যবহার করেন?

_____

3. স্মার্ট ফোন দিয়ে আমি অনেক কাজ আরও সহজেই করতে পারি

◯ 1 (দৃঢ়ভাবে না)

◯ 2 (না)

◯ 3 (জানি না)

◯ 4 (হ্যাঁ)

◯ 5 (দৃঢ়ভাবে হ্যাঁ)

4. স্মার্ট ফোন আমার জীবনকে আরও সহজ করে তুলেছে

◯ 1 (দৃঢ়ভাবে না)

◯ 2 (না)

◯ 3 (জানি না)

◯ 4 (হ্যাঁ)

◯ 5 (দৃঢ়ভাবে হ্যাঁ)

5. আমার বন্ধু বান্ধব / প্রতিবেশীরা আমার কাছে নতুন প্রযুক্তি সম্পর্কে পরামর্শের জন্য আসে

◯ 1 (দৃঢ়ভাবে না)

◯ 2 (না)

◯ 3 (জানি না)

◯ 4 (হ্যাঁ)

◯ 5 (দৃঢ়ভাবে হ্যাঁ)

6. স্মার্টফোন এবং ইন্টারনেট ব্যবহার করার সময় আমার আশংকা হয়, অপরাধীরা আমার ক্ষতি করার জন্য এটি ব্যবহার করতে পারে

○ 1 (দৃঢ়ভাবে না)

○ 2 (না)

○ 3 (জানি না)

○ 4 (হ্যাঁ)

○ 5 (দৃঢ়ভাবে হ্যাঁ)

7. স্মার্টফোন ব্যবহার করার সময় আমার আশংকা হয়, আমি হয়তো কিছু ভুল করে ফেলবো

○ 1 (দৃঢ়ভাবে না)

○ 2 (না)

○ 3 (জানি না)

○ 4 (হ্যাঁ)

○ 5 (দৃঢ়ভাবে হ্যাঁ)

8. আমি স্মার্টফোন / ইন্টারনেট শিখতে এবং চালাতে অসুবিধা বোধ করি

○ 1 (দৃঢ়ভাবে না)

○ 2 (না)

○ 3 (জানি না)

○ 4 (হ্যাঁ)

○ 5 (দৃঢ়ভাবে হ্যাঁ)

9. আপনি কতটা Facebook ব্যবহার করেন?

○ 1 (সেভাবে ব্যবহার করি না)

○ 2 (মাসে দু-একবার ব্যবহার করি)

○ 3 (সপ্তাহে দু-একবার ব্যবহার করি)

○ 4 (রোজ একবার বা দু-দিনে একবার ব্যবহার করি)

○ 5 (রোজ একবার-এর বেশি: যখনই প্রয়োজন অনুভব করি, তখনই ব্যবহার করি)

10. আপনি কতটা WhatsApp ব্যবহার করেন?

○ 1 (সেভাবে ব্যবহার করি না)

○ 2 (মাসে দু-একবার ব্যবহার করি)

○ 3 (সপ্তাহে দু-একবার ব্যবহার করি)

○ 4 (রোজ একবার বা দু-দিনে একবার ব্যবহার করি)

○ 5 (রোজ একবার-এর বেশি: যখনই প্রয়োজন অনুভব করি, তখনই ব্যবহার করি)

11. আপনি কতটা Google Search ব্যবহার করেন?

◯ 1 (সেভাবে ব্যবহার করি না)

◯ 2 (মাসে দু-একবার ব্যবহার করি)

◯ 3 (সপ্তাহে দু-একবার ব্যবহার করি)

◯ 4 (রোজ একবার বা দু-দিনে একবার ব্যবহার করি)

◯ 5 (রোজ একবার-এর বেশি: যখনই প্রয়োজন অনুভব করি, তখনই ব্যবহার করি)

12. আপনি কতটা YouTube ব্যবহার করেন?

◯ 1 (সেভাবে ব্যবহার করি না)

◯ 2 (মাসে দু-একবার ব্যবহার করি)

◯ 3 (সপ্তাহে দু-একবার ব্যবহার করি)

◯ 4 (রোজ একবার বা দু-দিনে একবার ব্যবহার করি)

◯ 5 (রোজ একবার-এর বেশি: যখনই প্রয়োজন অনুভব করি, তখনই ব্যবহার করি)

13. আপনি কতটা Other Services যেমন e-mail, e-commerce বা e-banking ব্যবহার করেন?

◯ 1 (সেভাবে ব্যবহার করি না)

◯ 2 (মাসে দু-একবার ব্যবহার করি)

◯ 3 (সপ্তাহে দু-একবার ব্যবহার করি)

◯ 4 (রোজ একবার বা দু-দিনে একবার ব্যবহার করি)

◯ 5 (রোজ একবার-এর বেশি: যখনই প্রয়োজন অনুভব করি, তখনই ব্যবহার করি)

14. আপনি মোবাইল ফোন-এ ইন্টারনেট ব্যবহার করতে কতটা স্বচ্ছন্দ [Technically] বোধ করেন?

◯ 1 (একদমই না)

◯ 2 (শুধু হোয়াটস্যাপ/ ইউটিউব দেখি, লিখতে পারি না)

◯ 3 (আমি শুধু হোয়াটস্যাপ ব্যবহার করতে পারি)

◯ 4 (আমি শুধু হোয়াটস্যাপ, ফেসবুক ব্যবহার করতে পারি)

◯ 5 (আমি নিয়মিত ইন্টারনেট [অন্যান্য ওয়েবসাইট] ব্যবহার করি)

15. আপনি কি যতটা ইচ্ছা মোবাইল ইন্টারনেট ব্যবহার করতে পারেন? [আর্থিক ও সামাজিকভাবে]

◯ 1 (একদমই না)

◯ 2 (আমি অর্থনৈতিক কারণে বেশি ইন্টারনেট ব্যবহার করতে পারি না)

◯ 3 (আমি পারিবারিক কারণে বেশি ইন্টারনেট ব্যবহার করার সময় পাই না)

◯ 4 (আমি বাধা অতিক্রম করে ইন্টারনেট ব্যবহার করার চেষ্টা করি)

◯ 5 (আমি স্বচ্ছন্দে নিয়মিত মোবাইল এ ইন্টারনেট ব্যবহার করি)

16. মোবাইল ইন্টারনেট ব্যবহার করতে সমস্যা হলে আপনি কি অন্যের কাছ থেকে সহায়তা পেতে পারেন?

- ◯ 1 (একদমই না)
- ◯ 2 (আমি এমন কাউকে চিনি না যে আমাকে ইন্টারনেট সংক্রান্ত সমস্যায় সাহায্য করতে সক্ষম)
- ◯ 3 (আমি চিনি কিন্তু সাহায্য চাইতে স্বচ্ছন্দ বোধ করি না)
- ◯ 4 (আমি মাঝে মাঝে সাহায্য পাই)
- ◯ 5 (আমি দরকার মতো সাহায্য পাই)

এবার আপনার ইন্টারনেট ব্যবহার নিয়ে কিছু প্রশ্ন করবো

- ◯ ঠিক আছে

17. আপনি কি ইন্টারনেট থেকে নতুন প্রোডাক্ট / নতুন ডিজাইন আইডিয়া পান?

- ◯ 1 (একদমই না)
- ◯ 2 (WhatsApp অথবা YouTube থেকে পাই)
- ◯ 3 (WhatsApp + YouTube থেকে পাই)
- ◯ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)
- ◯ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

18. আপনি কি ইন্টারনেট থেকে অন্যান্য শিল্পীদের তৈরী প্রোডাক্ট এর দাম জানতে পারেন ?

- ◯ 1 (একদমই না)
- ◯ 2 (WhatsApp অথবা YouTube থেকে পাই)
- ◯ 3 (WhatsApp + YouTube থেকে পাই)
- ◯ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)
- ◯ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

19. আপনি কি ইন্টারনেট থেকে বাজারে কি চলছে বা ক্রেতারা কি চাইছে তা জানতে পারেন?

- ◯ 1 (একদমই না)
- ◯ 2 (WhatsApp অথবা YouTube থেকে পাই)
- ◯ 3 (WhatsApp + YouTube থেকে পাই)
- ◯ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)
- ◯ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

20. আপনি কি ইন্টারনেট থেকে অনলাইন বিজ্ঞাপনের আইডিয়া পান?

- ◯ 1 (একদমই না)
- ◯ 2 (WhatsApp অথবা YouTube থেকে পাই)
- ◯ 3 (WhatsApp + YouTube থেকে পাই)
- ◯ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)
- ◯ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

21. আপনি কি ইন্টারনেট থেকে ব্যবসা সংক্রান্ত প্রকল্প /সরকারি পরিকল্পনা সম্বন্ধে জানতে পারেন?

○ 1 (একদমই না)

○ 2 (WhatsApp অথবা YouTube থেকে পাই)

○ 3 (WhatsApp + YouTube থেকে পাই)

○ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)

○ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

22. আপনি কি ইন্টারনেট থেকে নতুন দক্ষতা বৃদ্ধির [skill development] উপায়গুলো জানতে পারেন?

○ 1 (একদমই না)

○ 2 (WhatsApp অথবা YouTube থেকে পাই)

○ 3 (WhatsApp + YouTube থেকে পাই)

○ 4 (WhatsApp + YouTube + Facebook / Instagram থেকে পাই)

○ 5 (ই কমার্স ওয়েবসাইট [যেমন আমাজন, ফ্লিপকার্ট] অথবা অন্যান্য ওয়েবসাইট থেকে আইডিয়া পাই)

ইন্টারনেট থেকে যা জানছেন, সেটা আপনার ব্যবসার কাজে কিভাবে লাগছে, সেটা নিয়ে কিছু প্রশ্ন করবো

○ ঠিক আছে

23. আপনি কি ইউটিউব বা অন্য অনলাইন টিউটোরিয়াল থেকে নতুন ডিজাইন শিখে নতুন প্রোডাক্ট তৈরি করেন?

○ 1 (একদমই না)

○ 2. (করা যায় সেটা জানি, কিন্তু কাজে লাগাই না)

○ 3 (অনলাইন এ কাজকর্ম শুরু করেছি কিন্তু ব্যবসায় এখনো উপকার পাই নি)

○ 4 (অনলাইন এ শিখে নতুন নতুন প্রোডাক্ট তৈরী করছি যার বাজারে চাহিদা আছে বলে আমি মনে করি)

○ 5 (অনলাইন এ শিখে নতুন নতুন প্রোডাক্ট তৈরী করেছি এবং ব্যবসায় বেশ উন্নতি করেছি)

24. নতুন কিছু তৈরি করার আগে আপনি কি ক্রেতার প্রয়োজন বা বাজারে কি চলছে সেটা জানতে ইন্টারনেট ব্যবহার করেন?

○ 1 (একদমই না)

○ 2. (করা যায় সেটা জানি, কিন্তু কাজে লাগাই না)

○ 3 (অনলাইন এ কাজকর্ম শুরু করেছি কিন্তু ব্যবসায় এখনো উপকার পাই নি)

○ 4 (অনলাইনে বাজারে কি চলছে তার খবর জানছি এবং তা ব্যবহার করে ব্যবসা ক্ষেত্রে উন্নতি করার আশা করছি)

○ 5 (আজকাল অনলাইনে বাজারে কি চলছে তার খবর জানছি এবং তা কাজে লাগিয়ে ব্যবসায় উন্নতি করেছি)

25. আপনার প্রোডাক্ট বিজ্ঞাপন ও বিক্রয় করার জন্য আপনি কি ডিজিটাল চ্যানেলগুলি [WhatsApp / ই-কমার্স / ফেসবুক, ইনস্টাগ্রাম] ব্যবহার করেন?

- ◯ 1 (একদমই না)
- ◯ 2. (করা যায় সেটা জানি, কিন্তু কাজে লাগাই না)
- ◯ 3 (অনলাইন এ কাজকর্ম শুরু করেছি কিন্তু ব্যবসায় এখনো উপকার পাই নি)
- ◯ 4 (ডিজিটাল চ্যানেলগুলো ব্যবহার শুরু করেছি এবং তা ব্যবহার করে ব্যবসায় উন্নতি করার আশা করছি)
- ◯ 5 (ডিজিটাল চ্যানেলগুলো ব্যবহার করে ব্যবসায় বেশ উন্নতি করেছি)

26. আপনি কি ব্যবসা সম্পর্কিত যোগাযোগের প্রয়োজনে ইন্টারনেট ব্যবহার করেন? [যেমন, WhatsApp, e-mail etc.]

- ◯ 1 (একদমই না)
- ◯ 2. (করা যায় সেটা জানি, কিন্তু কাজে লাগাই না)
- ◯ 3 (অনলাইন এ কাজকর্ম শুরু করেছি কিন্তু ব্যবসায় এখনো উপকার পাই নি)
- ◯ 4 (অনলাইনে ব্যবসা সংক্রান্ত যোগাযোগ করেছি এবং এবং তা করে ব্যবসায় উন্নতি করার আশা করছি)
- ◯ 5 (অনলাইন এ ব্যবসা সম্পর্কিত যোগাযোগ করে ব্যবসায় বেশ উন্নতি করেছি)

27. আপনি কি ইন্টারনেট ব্যবহার করে অনলাইন-এ আর্থিক লেনদেন করেন?

- ◯ 1 (একদমই না)
- ◯ 2. (করা যায় সেটা জানি, কিন্তু কাজে লাগাই না)
- ◯ 3 (অনলাইন এ কাজকর্ম শুরু করেছি কিন্তু ব্যবসায় এখনো উপকার পাই নি)
- ◯ 4 (অনলাইনে আর্থিক লেনদেন করেছি এবং তা করে ব্যবসায় উন্নতি করার আশা করছি)
- ◯ 5 (আজকাল অনলাইনে আর্থিক লেনদেন করে ব্যবসায় বেশ উন্নতি করেছি)

ইন্টারনেট আপনার ব্যবসায়িক দক্ষতা বাড়াতে কতখানি সাহায্য করছে, এবারে সেটা নিয়ে কিছু প্রশ্ন করবো

- ◯ ঠিক আছে

28. গত দু-মাসে আপনি কি ইন্টারনেট ব্যবহার করে [যেমন হোয়াটস্যাপ বা ফেসবুক বা ইউটিউব] আপনার ব্যবসায় একাধিক নতুন প্রোডাক্ট [বা নতুন ডিজাইন] চালু করতে পেরেছেন?

- ◯ 1 (একদমই না)
- ◯ 2 (করার কথা ভেবেছি)
- ◯ 3 (এখন করা আরম্ভ করেছি; প্রক্রিয়ার মধ্যে)
- ◯ 4 (ইন্টারনেট ব্যবহার করে আমি কয়েকটি [5 এর কম] প্রোডাক্ট/ ডিজাইন চালু করেছি)
- ◯ 5 (ইন্টারনেট ব্যবহার করে আমি 5 বা তার বেশি নতুন প্রোডাক্ট/ ডিজাইন চালু করেছি)

29. গত দুমাসে, আপনি কি অনলাইন চ্যানেলগুলি [যেমন, হোয়াটসঅ্যাপ, ফেসবুক বা অ্যামাজন] ব্যবহার করে আপনার প্রোডাক্ট বিক্রি করতে পেরেছেন?

◯ 1 (একদমই না)

◯ 2 (করার কথা ভেবেছি)

◯ 3 (এখন করা আরম্ভ করেছি; প্রক্রিয়ার মধ্যে)

◯ 4 (ইন্টারনেট ব্যবহার করে আমি কয়েকটি [5 এর কম] প্রোডাক্ট বিক্রি করতে পেরেছি)

◯ 5 (ইন্টারনেট ব্যবহার করে আমি 5 বা তার বেশি নতুন প্রোডাক্ট বিক্রি করতে পেরেছি)

30. ইন্টারনেট ব্যবহার করার ফলে এখন আপনার প্রোডাক্ট / ডিজাইন যাঁরা কিনছেন, তারা কি আগের ক্রেতাদের চেয়ে বেশি ফ্যাশন-সচেতন [এবং /অথবা] বেশি দাম দিতে সক্ষম?

◯ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলার কে বিক্রি করি)

◯ 2 (মনে হয় না)

◯ 3 (হেতেও পারে)

◯ 4 (হ্যাঁ [Non Local Market within State])

◯ 5 (নিশ্চিতভাবে হ্যাঁ [Outside State/ Export Market])

31. ইন্টারনেট ব্যবহার করার ফলে আপনার প্রোডাক্ট / ডিজাইন কি নতুন একটা বাজার পেয়েছে [যেমন, রফতানি বা জাতীয় বাজার]?

◯ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলারকে বিক্রি করি)

◯ 2 (মনে হয় না)

◯ 3 (হেতেও পারে)

◯ 4 (হ্যাঁ [Non Local Market within State])

◯ 5 (নিশ্চিতভাবে হ্যাঁ [Outside State/ Export Market])

32. আপনি কি ইন্টারনেট ব্যবহার করে ক্রেতার মতামত জানতে পারছেন এবং প্রোডাক্ট / ডিজাইন-এ তাকে ব্যবহার করতে পারছেন?

◯ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলারকে বিক্রি করি)

◯ 2 (মনে হয় না [ক্রেতার মতামত জানতে পারছি না])

◯ 3 (হেতেও পারে [ক্রেতাদের মতামত জানতে পারছি কিন্তু প্রোডাক্ট ডিজাইন ব্যবহার করছি না])

◯ 4 (হ্যাঁ [ক্রেতাদের মতামত জানতে পারছি এবং কিছু কিছু ক্ষেত্রে ব্যবহার করছি])

◯ 5 (ক্রেতাদের মতামত জানতে পারছি এবং সবসময় ব্যবহার করার চেষ্টা করছি)

33. আপনি কি ইন্টারনেট ব্যবহার করে ক্রেতা এবং বাজার সম্বন্ধে নতুন ধারণা পাচ্ছেন, যা আপনার ব্যবসাকে বড়ো করতে সাহায্য করছে?

◯ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলারকে বিক্রি করি)

◯ 2 (মনে হয় না [ক্রেতার বা বাজার সম্বন্ধে নতুন ধারণা পাচ্ছি না])

◯ 3 (হেতেও পারে [নতুন ধারণা পাচ্ছি কিন্তু ব্যবসা সেভাবে বাড়েনি])

◯ 4 (হ্যাঁ [নতুন ধারণা পাচ্ছি যা ব্যবসাকে বড় করতে পারে বলে আমি মনে করি])

◯ 5 (নিশ্চিতভাবে হ্যাঁ [নতুন ধারণা পাচ্ছি যা ব্যবহার করে ব্যবসাকে বড় করতে পেরেছি])

34. আপনি কি ইন্টারনেট ব্যবহার করে বাজারে আপনার মতো অন্য শিল্পীদের ব্যবসা সম্বন্ধে একটা ধারণা তৈরী করতে পারছেন?

○ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলারকে বিক্রি করি)

○ 2 (মনে হয় না [ইন্টারনেট ব্যবহার করে অন্য শিল্পীদের সম্বন্ধে ধারণা তৈরী করতে পারছিনা])

○ 3 (হতেও পারে [করা যায় জানি কিন্তু কাজে লাগাই নি])

○ 4 (হ্যাঁ [অন্য শিল্পীদের ব্যবসা সম্বন্ধে ধারণা পেয়েছি কিন্তু ব্যবসার কাজে লাগাই নি])

○ 5 (নিশ্চিতভাবে হ্যাঁ [অন্য শিল্পীদের ব্যবসা সম্বন্ধে ধারণা পেয়েছি এবং ব্যবসার কাজে লাগাতে পেরেছি])

ইন্টারনেট ব্যবহার করার ফলে আপনার ব্যবসায় কতটা উন্নতি হয়েছে, এবারে সেটা নিয়ে কিছু প্রশ্ন করবো

○ ঠিক আছে

35. গত এক মাসে কতজন ক্রেতা অনলাইন -এ আপনাকে যোগাযোগ করেছে ?

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36. এই ক্রেতাদের মধ্যে থেকে কতজনকে আপনি বিক্রি করতে পেরেছেন / চালু অর্ডার রয়েছে?

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37. গত একমাসে অনলাইন ক্রেতাদের কাছে আপনার মোট কত টাকার জিনিস বিক্রি হয়েছে?

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38. ইন্টারনেট ব্যবহার করার ফলে আপনার ব্যবসার কি সামগ্রিকভাবে উন্নতি হয়েছে ?

○ 1 (এখনো কোনো ফল পাই নি)

○ 2 (সেভাবে উন্নতি বুঝতে পারি নি)

○ 3 (উন্নতি হবার আশা আছে)

○ 4 (হ্যাঁ)

○ 5 (নিশ্চিতভাবে হ্যাঁ)

39. আপনি কি অনলাইন ক্রেতাদের কাছ থেকে প্রশংসা আর বিশ্বাস অর্জন করতে পেরেছেন?

○ 1 (জানি না, কারণ আমি ইন্টারনেট সেভাবে ব্যবহার করি নি / আমি master artisan- /হোলসেলারকে বিক্রি করি)

○ 2 (মনে হয় না)

○ 3 (হতেও পারে)

○ 4 (হ্যাঁ)

○ 5 (নিশ্চিতভাবে হ্যাঁ)

APPENDIX IV

Day-wise Schedule for Asynchronous Video Tutorials

Week 1 TRAINING WEEK	Video 1.1 (Monday Morning)	Introduction to Internet	আজ থেকে আমাদের ট্রেনিং আরম্ভ হবে সন্ধ্যা ছটায়। আমরা শিখবো, কিভাবে স্মার্টফোন এবং ইন্টারনেটকে দৈনন্দিন ব্যবসার কাজে ব্যবহার করা যায়। তার আগে আমরা এই ভিডিও-টা একবার দেখে নি : https://www.youtube.com/watch?v=YfyL90_XA4U
	Video 1.2 (Tuesday Morning)	Google & Youtube	কালকের ক্লাসে আমরা বলেছি, ইন্টারনেটে গুগল (Google) এর সাহায্য কিভাবে নিজের প্রয়োজনীয় তথ্য খুজে বের করবেন: এখন এই ভিডিও টি দেখুন.. https://www.youtube.com/watch?v=54-6c-CSRtc একইভাবে ইউটিউব (YouTube) কিভাবে ব্যবহার করবো জেনে নি। ক্লাসে আমরা বলেছি, ইন্টারনেটে ইউটিউব (YouTube) এর সাহায্যে কিভাবে পছন্দের ভিডিও খুজে বের করবেন: এখন এই ভিডিও টি দেখুন.. https://www.youtube.com/watch?v=0AnRNhQgzj0
	Video 1.3 (Wednesday Morning)	GBoard & Hi-Translate	জি-বোর্ড কীবোর্ড-এর কথা আমরা আপনাদের জানিয়েছি, যাতে আপনারা বাংলা ভাষায় টাইপ করতে পারেন। সেটা কিভাবে ইনস্টল ও ব্যবহার করবেন, সেটা জানাতে একটা ভিডিও পাঠালাম https://www.youtube.com/watch?v=g-E9x7pd4jY আমরা ক্লাস-এ দেখিয়েছিলাম, কিভাবে হাই-ট্রান্সলেট-এর সাহায্যে যেকোনো ইংরেজি লেখা কে বাংলায় অনুবাদ করা যায়। এখন সেটা বুঝতে এই নিচের YOUTUBE ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=wJCLnDUauEA
	Video 1.4 (Thursday Morning)	Open Camera App	আমরা ক্লাস-এ দেখিয়েছি, কিভাবে OPEN CAMERA (ওপেন ক্যামেরা) App-এর সাহায্যে ভালো ছবি আর ভিডিও তোলা যায়। এখন সেটা বুঝতে এই নিচের YOUTUBE ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=xaqQxw1oVd4 আপনাদের বুঝতে কোন সমস্যা হলে অবশ্যই আমাদের সঙ্গে যোগাযোগ করুন
	Video 1.5 (Friday Morning)	Product photo-shooting and Shooting a self-video	আপনার প্রোডাক্ট-এর ভালো ছবি কিভাবে তুলবেন, তার কিছু নির্দেশ এবং কিছু উদাহরণ এই ভিডিও-তে দেওয়া হলো https://www.youtube.com/watch?v=1f8grsCnYjQ ভিডিও কিভাবে তুলতে হয়ে এবং কি করে নিজের মোবাইল ফোন সেট করে বাড়িতেই অনায়াসে আকর্ষণীয় ভিডিও তোলা যায়, সেটা জানার জন্য ভিডিও টা দেখুন। https://www.youtube.com/watch?v=dROuia9baIg
	Video 1.6 (Saturday Morning)	New Product and New Design: Concepts & Examples	আমরা ক্লাস-এ আলোচনা করেছি, কিভাবে বাজার-উপযোগী নতুন নতুন ডিজাইন-এর প্রোডাক্ট তৈরী করতে হয়। নতুন ডিজাইনের প্রোডাক্ট ও তার নকশা নিয়ে বিস্তারিত জানার জন্য এই ভিডিও টি দেখুন: https://www.youtube.com/watch?v=ixJ9nsVxCOA

	Video 1.7 (Sunday Morning)	Creating Digital Shops at our NCoRe e-Business Portal	নমস্কার।।। গত সপ্তাহে আপনি তিনদিন (সোম, বুধ এবং শুক্রবার) ট্রেনিং নিয়েছেন কিভাবে আপনার প্রোডাক্টের ভালো ছবি তুলবেন এবং কিভাবে ইন্টারনেট ও স্মার্টফোনের সাহায্যে অনলাইনে ব্যবসা করবেন। এই অনলাইনে ব্যবসা করার জন্য NCoRe এ আপনার একটা ডিজিটাল দোকান আমরা তৈরি করে দেবো যেখানে আপনি আপনার সমস্ত প্রোডাক্টের ছবি ও তার বিস্তারিত বিবরণ রাখতে পারবেন। NCoRe এ আপনার ডিজিটাল দোকানের প্রাথমিক ধারণার জন্য এই ভিডিওটি দেখুন: https://youtu.be/oLV8leSrzoc এখন আমাদের প্রাথমিক কাজ হলো NCoRe এ আপনার একটা ডিজিটাল দোকান খোলা। এজন্য আপনাকে দুটো কাজ করতে হবে। ১. আপনার তৈরি করা সমস্ত প্রোডাক্টের কিছু ভালো ছবি আপনাকে আপনার ফোনে রাখতে হবে। ২. আপনাকে আপনার নিজের সম্বন্ধে একটা ভিডিও রেকর্ড করতে হবে। কিভাবে নিজের ভিডিও রেকর্ড করবেন তার প্রাথমিক ধারণার জন্য এই ভিডিওটি দেখুন: https://youtu.be/f01mkGQ78O8 এগুলো আপনি এই নম্বরে (7603040606) WhatsApp করবেন যাতে আপনার ডিজিটাল দোকানটি খুলতে পারি। জয়ন্ত এবং ঐন্দ্রিলা আপনাকে ফোন করে এই বিষয়ে সাহায্য করবে: মোবাইল নম্বর হলো জয়ন্ত: 7603040606 ঐন্দ্রিলা: 8240089853
Week 2 DIGITAL BASICS	**Video 2.1** (Monday Morning)	NCore App for creating Digital Shops at our NCoRe e-Business Portal	নমস্কার ।।। আমরা আপনাদেরকে বুধবারের ট্রেনিংয়ে দেখিয়েছিলাম আপনারা কিভাবে Artisan Profiling App ব্যবহার করে খুব সহজেই NCoRe এ আপনার একটা ডিজিটাল দোকান খুলতে পারবেন। এই ভিডিওটি দেখুন: Artisan Profiling App navigation video: https://youtu.be/flGRd1JFFr8 NCoRe এ আপনাদের ডিজিটাল দোকান খোলার জন্য আমরা আপনাদেরকে অ্যাপ-টা পাঠালাম। আপনারা প্রথমে অ্যাপটি ডাউনলোড করবেন এবং তারপর অ্যাপটি আপনার ফোনে ইন্সটল করে অ্যাপে দেওয়া নির্দেশ অনুযায়ী আপনার তৈরি করা প্রোডাক্টের ছবি ও অন্যান্য তথ্য দিন। কোনো কিছু বুঝতে অসুবিধা হলে আমাদের ফোন বা WhatsApp করুন 7603040606 এই নম্বরে। <APP DOWNLOADABLE FILE>
	Video 2.2 (Tuesday Morning)	Basics of digital marketing	ডিজিটাল মার্কেটিং কি ও কেন ? ডিজিটাল মাধ্যমের সাহায্যে পণ্য প্রদর্শন করে কীভাবে সমগ্র বিশ্বের ক্রেতাদের কাছে পৌঁছনো যায়? সেটা বুঝতে এই ভিডিও টি দেখুন https://www.youtube.com/watch?v=yO5Dp_6_NOE

	Video 2.3 (Wednesday Morning)	Browsing different websites Part I	ইন্টারনেট থেকে স্মার্ট ফোনের সাহায্যে আপনি খুব সহজেই পণ্যের বাজার দর, বাজারের চাহিদা, ক্রেতাদের পছন্দ সম্পর্কে ধারণা করতে পারেন। তার জন্যে আপনাকে ইন্টারনেট থেকে বিভিন্ন ওয়েবসাইট খুঁজে দেখতে হবে। সেটা কিভাবে করবেন, সেটা বুঝতে এই ভিডিওগুলি দেখুন। https://www.youtube.com/watch?v=ttkcoxa_wSA https://www.youtube.com/watch?v=so1vo5Wp3jw
	Video 2.4 (Thursday Morning)	Browsing different websites Part II	কাল আমরা দেখিয়েছিলাম, ইন্টারনেট থেকে স্মার্ট ফোনের সাহায্যে আপনি কি ভাবে খুব সহজেই পণ্যের বাজার দর, বাজারের চাহিদা, ক্রেতাদের পছন্দ সম্পর্কে ধারণা করতে পারেন। আজ আরও কিছু উদাহরণ দিলাম···. এই ভিডিওগুলি দেখুন https://www.youtube.com/watch?v=QsbLlz3DS_8 https://www.youtube.com/watch?v=Hi9teFfKu4M
	Video 2.5 (Friday Morning)	Searching for Potential customers	ইন্টারনেট থেকে স্মার্ট ফোনের সাহায্যে আপনি আপনার ব্যবসায়ের জন্য সম্ভাব্য ক্রেতাদের কীভাবে অনুসন্ধান করবেন ? সেটা বুঝতে এই ভিডিও টি দেখুন। https://www.youtube.com/watch?v=q8msAUGP4EU
	Video 2.6 (Saturday Morning)	Sharing Google Search content with others using WhatsApp	ইন্টারনেট থেকে আপনি হয়তো খুব কাজের কোনো ভিডিও বা ওয়েবসাইট খুঁজে পেয়েছেন. সেটা আপনি কিভাবে আপনার বন্ধুদের সঙ্গে অনলাইন-এ শেয়ার করবেন ? সেটা বুঝতে এই ভিডিও টি দেখুন। https://youtu.be/iQ-GPI3Rt4c
	Video 2.7 (Sunday Morning)	Google Translate	এখন ইংলিশ না জেনেই ইংলিশে কথা বলতে পারবেন || মুখে বাংলা বলুন ইংলিশ হবে || Google Translate https://www.youtube.com/watch?v=ZlNgGsPPjC8
Week 3 New Product / Design Ideas : Understanding Product-market fit	**Video 3.1** (Monday Morning)	New Product and New Design: Concepts & Examples	আমরা ক্লাস-এ আলোচনা করেছি, কিভাবে বাজার-উপযোগী নতুন নতুন ডিজাইন-এর প্রোডাক্ট তৈরী করতে হয়। নতুন ডিজাইনের প্রোডাক্ট ও তার নকশা নিয়ে বিস্তারিত জানার জন্য এই ভিডিও টি দেখুন: https://www.youtube.com/watch?v=ixJ9nsVxCOA
	Video 3.2 (Tuesday Morning)	Do-it-yourself: Jewelry	কিভাবে নতুন ধরনের গয়না তৈরি করবেন, তার ভিডিও লিংক দিলাম. আপনারা ইচ্ছে করলে আরো ভিডিও ইউটুবে-এ খুঁজে নিতে পারেন কিভাবে বাড়িতে বসেই বিডস দিয়ে সুন্দর হাতের ব্রেসলেট বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=6rqr5PH6iFo কিভাবে বাড়িতে বসেই বিডস দিয়ে কানের দুল বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=je60w4lof4U

			কিভাবে গামছা দিয়ে সুন্দর নেকলেস বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=6G8J6ffAPPc কিভাবে বাড়িতে বসেই টেরাকোটার লকেট এবং কানের দুল বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=O8X9409T2zI
	Video 3.3 (Wednesday Morning)	Identifying market trends and diversification of products based on customer need	হস্তশিল্প নিয়ে ব্যবসা করতে গেলে প্রথমেই বাজারের চাহিদা সম্পর্কে একটা ধারণা থাকা দরকার। যেমন, ক্রেতাদের রঙের এবং ডিজাইনের পছন্দ কি রকম, কোন কোন পণ্যের চাহিদা ক্রেতাদের কাছে কি রকম, এই সব বিষয়ে ধারণা তৈরি করা দরকার। এই ভিডিও-টিতে এইসব নিয়েই আলোচনা করেছি... https://youtu.be/WwkPeG3ZCxc
	Video 3.4 (Thursday Morning)	Do-it-yourself: Easy to make face mask	এখন করোনা অতিমারী-র জন্যে মাস্ক-এর চাহিদা খুব বেড়েছে...তাই কিভাবে কাঁথা স্টিচ-এর মাস্ক তৈরী করবেন? এই ভিডিও টি দেখুন: https://www.youtube.com/watch?v=5oK7eFEBvYo
	Video 3.5 (Friday Morning)	How to advertise / show-case your product & understand Price Trends	আপনার তৈরী প্রোডাক্ট-এর বিজ্ঞাপন কিভাবে করবেন ? কিভাবে তার গুণমান এর খেয়াল রাখবেন, যাতে ক্রেতাদের তা পছন্দ হয় ? কিভাবে-ই বা তার দাম ঠিক করবেন ? এইসব নিয়ে আমরা আগে ক্লাস-এ আলোচনা করেছি, এখন এই ভিডিও টি দেখুন: https://youtu.be/ZwuSOHzWF1k
	Video 3.6 (Saturday Morning)	Do-it-yourself: Kantha Stitch Laptop Bag	কেমন করে বানাবেন কাঁথাস্টিচ-এর ল্যাপটপ ব্যাগ ? নিচের ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=pFVbhfHzh70
	Video 3.7 (Sunday Morning)	How to package your product	আপনি যদি অনলাইন-এ আপনার ক্রেতা-র সন্ধান পান এবং তার সঙ্গে টাকা পয়সার লেনদেন-ও হয়, তারপরেও যে কাজ বাকি থাকে, তা হল প্রোডাক্ট-টি কোনো কুরিয়ার - এর সাহায্যে তার কাছে পৌঁছে দেওয়া। সেটার জন্যে দরকার ভালো প্যাকেজিং, যাতে আপনার প্রোডাক্ট ঠিকমতো আপনার ক্রেতার কাছে পৌঁছয়। কিভাবে করবেন, সেটা জানতে এই ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=ge2jx80ryxU
Week 4 Social Media Marketing: Youtube	**Video 4.1** (Monday Morning)	How to create your YouTube Videos for doing Business	নিজের ভিডিও তোলার সাথে সাথে জরুরি হলো নিজের প্রোডাক্টের ভালো ভিডিও তোলা। আপনার প্রোডাক্টের বিশেষত্বগুলো ভালো ভাবে দেখিয়ে ভিডিও তুললে, সেটা দেখে ক্রেতাদের প্রোডাক্ট টা কেনার ইচ্ছে বাড়বে। ইউ টিউবে নিজের চ্যানেল তৈরী করে, তাতে নিজের তৈরী প্রোডাক্টের ভিডিও আপলোড করলে, আপনি খুব অনায়াসেই আপনাকে এবং আপনার শিল্পকর্ম কে হাজার হাজার ক্রেতাদের কাছে পৌঁছে দিতে পারবেন। কিভাবে ইউটিউবকে আপনি ব্যবসার কাজে লাগাতে পারেন, তাই নিয়ে এই সপ্তাহে রোজ একটা করে ভিডিও পাঠাবো। আজকে আমরা দেখবো, কিভাবে কাঁথা স্টিচ-এর শাড়ি প্রদর্শন করবেন: https://www.youtube.com/watch?v=W7RXlK-g55s
	Video 4.2	Jewellery Display Video	আজকে আমরা দেখবো, আপনি যদি গয়না তৈরি করেন, তাহলে কিভাবে ভিডিও-র মাধ্যমে সেটি-র প্রদর্শন করবেন

		(Tuesday Morning)	https://www.youtube.com/watch?v=S4EAF7czMZ4
	Video 4.3 (Wednesday Morning)	Kurti Display Video	আজকে আমরা দেখবো, আপনি যদি কুর্তি তৈরি করেন, তাহলে কিভাবে ভিডিও-র মাধ্যমে সেটি-র প্রদর্শন করবেন: https://www.youtube.com/watch?v=XSdYkbB-fog
	Video 4.4 (Thursday Morning)	Handbag Display Video	আজকে আমরা দেখবো, আপনি যদি ব্যাগ তৈরি করেন, তাহলে কিভাবে ভিডিও-র মাধ্যমে সেটি-র প্রদর্শন করবেন: https://www.youtube.com/watch?v=qOmSjiaJID4
	Video 4.5 (Friday Morning)	Saree Display Video	আজকে আমরা দেখবো, আপনি যদি শাড়ি তৈরি করেন, তাহলে কিভাবে ভিডিও-র মাধ্যমে সেটি-র প্রদর্শন করবেন: https://www.youtube.com/watch?v=cKYzcBRv4Yw
	Video 4.6 (Saturday Morning)	Creating your own YouTube channel	কি করে ইউ টিউবে নিজের চ্যানেল বানাবেন এবং কি ভাবে তাতে নিজের তৈরী ভিডিও রাখবেন, সেটা জেনে নেওয়ার জন্য নিচের ভিডিওগুলো দেখুন:- https://www.youtube.com/watch?v=6_lreEgADQY
Week 5 Do-it-Yourself: New Product-New Design	**Video 5.1** (Monday Morning)	Do-it-Yourself: Batik Art	ইন্টারনেট থেকে অনেক ভাল ভাল ডিজাইনের ধারণা পাওয়া যেতে পারে। সেগুলো মাথায় রেখে ও বাজারের চাহিদা অনুযায়ী আধুনিক ডিজাইনের পণ্য তৈরি করলে ও সেই ডিজাইন অন্যান্য শিল্পী বন্ধুদের সঙ্গে বিনিময় করলে আপনার উৎপাদিত পণ্যের বাজার বাড়তে পারে| কিভাবে গ্লু বাটিক দিয়ে বাড়িতেই ক্যানভাস ব্যাগ তৈরী করা যায় সেটা দেখার জন্য নিচের ভিডিও দেখুন https://www.youtube.com/watch?v=zjbW9GC14cQ কিভাবে ক্রেয়ন বাটিক দিয়ে সুন্দর ডিজাইন বানানো যায় , যা অনায়াসেই জামা বা ব্যাগ এর ওপর আঁকা যাবে, সেটা দেখার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=y8JUA7EcNTE
	Video 5.2 (Tuesday Morning)	Do-it-Yourself: Jute Craft	কিভাবে নতুন ধরনের জুটের তৈরি জিনিস বানানো যায়, তার ভিডিও লিংক দিলাম. আপনারা ইচ্ছে করলে আরো ভিডিও ইউটুবে-এ খুঁজে নিতে পারেন: কিভাবে বাড়িতে বসেই জুটের তৈরী ওয়াল হ্যাঙ্গিং বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=wG3DbKtcy4Q কিভাবে বাড়িতে বসেই জুটের তৈরী চটি বানানো যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন https://www.youtube.com/watch?v=qo-DNKOkp74
	Video 5.3 (Wednesday Morning)	Do-it-Yoorself: Hand Embroidery	কিভাবে মধুবনী স্টাইলের নকশি কাঁথা ডিজাইন করতে হয় , সেটা জানার জন্য নিচের ভিডিও টা দেখুন। গতানুগতিক কাঁথার ডিজাইনের সাথে এইরকম আধুনিক ডিজাইন মিশিয়ে পণ্য তৈরী করলে, সেই পণ্য আধুনিক এবং অনন্য হবে https://www.youtube.com/watch?v=Ew54ZLVUC5k কিভাবে ফ্রেঞ্চ নট ডিজাইন করতে হয় , সেটা জানার জন্য নিচের ভিডিও টা দেখুন। গতানুগতিক কাঁথার ডিজাইনের সাথে এইরকম আধুনিক ডিজাইন দিয়ে আপনার তৈরী শাড়ী বা কুর্তির বর্ডার দিলে, সেই পণ্য আধুনিক এবং অনন্য হবে https://www.youtube.com/watch?v=MuEpzF0U1og
	Video 5.4	Do-it-Yoorself: Bamboo Craft	কিভাবে বাঁশ দিয়ে নতুন ধরনের জিনিস বানানো যায়, তার ভিডিও লিংক দিলাম. আপনারা ইচ্ছে করলে আরো ভিডিও ইউটুবে-এ খুঁজে নিতে পারেন:

	(Thursday Morning)		কিভাবে বাঁশ দিয়ে সুন্দর কাপ তৈরী করা যায় , সেটা জানার জন্য নিচের ভিডিও টা দেখুন। https://www.youtube.com/watch?v=NkLWbYo751U কিভাবে বাঁশ দিয়ে সুন্দর ঘর সাজানোর ল্যাম্প তৈরী করা যায় , সেটা জানার জন্য নিচের ভিডিও টা দেখুন। https://www.youtube.com/watch?v=rG6Mg1cY9-g
	Video 5.5 (Friday Morning)		ইন্টারনেট থেকে অনেক ভাল ভাল ডিজাইনের ধারণা পাওয়া যেতে পারে। সেগুলো মাথায় রেখে ও বাজারের চাহিদা অনুযায়ী আধুনিক ডিজাইনের পণ্য তৈরি করলে ও সেই ডিজাইন অন্যান্য শিল্পী বন্ধুদের সঙ্গে বিনিময় করলে আপনার উৎপাদিত পণ্যের বাজার বাড়তে পারে। কিভাবে বাড়িতে বসেই অনায়াসে সুন্দর ল্যাপটপ ব্যাগ বানাবেন,সেটা জানার জন্য নিচের ভিডিও টা দেখুন। https://www.youtube.com/watch?v=pFVbhfHzh70
	Video 5.6 (Saturday Morning)	Do-it-Yourself: Dokra Art	ইন্টারনেট থেকে অনেক ভাল ভাল ডিজাইনের ধারণা পাওয়া যেতে পারে। সেগুলো মাথায় রেখে ও বাজারের চাহিদা অনুযায়ী আধুনিক ডিজাইনের পণ্য তৈরি করলে ও সেই ডিজাইন অন্যান্য শিল্পী বন্ধুদের সঙ্গে বিনিময় করলে আপনার উৎপাদিত পণ্যের বাজার বাড়তে পারে। কিভাবে বাড়িতে বসেই ডোকরার তৈরী শো-পিস্ বানাবেন, সেটা জানার জন্য নিচের দুটি ভিডিও দেখুন https://www.youtube.com/watch?v=BfeTmRnbQF8 https://www.youtube.com/watch?v=TclkRqgyk4A
Week 6 Government and non-Government schemes for Medium and Small Entrepreneurs	**Video 6.1** (Monday Morning)	Prime Minster's Mudra Yojana scheme	ভারত সরকার (কেন্দ্রীয় ও রাজ্য উভয়) এবং কিছু বেসরকারি প্রতিষ্ঠান মাঝারি এবং ক্ষুদ্র উদ্যোক্তাদের তাদের ব্যবসায়িক উদ্যোগে সহায়তা করার জন্য বিভিন্ন কল্যাণমূলক পরিকল্পনা নিয়েছেো।আমরা এই সব নানাবিধ পরিকল্পনা নিয়ে আলোচনা করবো। প্রধান মন্ত্রী মুদ্রা যোজনা হলো একটা সরকারি প্রকল্প যা করা হয়েছে হস্তশিল্প ভিত্তিক মাঝারি এবং ক্ষুদ্র উদ্যোক্তাদের ১০লক্ষ টাকা পর্যন্ত লোন প্রদানের জন্য। এই স্কিম এর ব্যাপারে বিশদে জানতে নিচের ভিডিও গুলো দেখুন:- **https://www.youtube.com/watch?v=fSLK4S-ssEk** **https://www.youtube.com/watch?v=zrTLbHdo0Sk**
	Video 6.2 (Tuesday Morning)	Getting Loans from MSME	ভারত সরকারের মিনিস্ট্রি অফ মাইক্রো, মিডিয়াম এন্ড স্মল এন্টারপ্রাইসএর (MSME) একনিষ্ঠ উদ্দেশ্য হলো মাঝারি এবং ক্ষুদ্র উদ্যোক্তাদের বিভিন্ন কল্যাণমূলক পরিকল্পনার দ্বারা ব্যবসায়িক উদ্যোগে সহায়তা করা। MSME পোর্টালে কি করে নিজের ব্যবসা নথিভুক্ত করতে হয় এবং কি করে গ্যারান্টি ছাড়াই লোন পাওয়া যায় , সেই সংক্রান্ত বিশদে জানতে নিচের ভিডিওগুলো দেখুন:- *>> কি করে গ্যারান্টি ছাড়াই লোন পাওয়া যায়-* **https://www.youtube.com/watch?v=OfBQpuQWgUQ** *>>কি করে MSME পোর্টালে নিজের ব্যবসা নথিভুক্ত করতে হয়-* **https://www.youtube.com/watch?v=_A0Z8CVfAmw**
	Video 6.3 (Wednesday Morning)	Employment Generation Program	প্রধান মন্ত্রী এমপ্লয়মেন্ট জেনারেশন প্রোগ্রাম হলো কেন্দ্রীয় সরকার দ্বারা প্রদান করা হস্তশিল্প ভিত্তিক মাঝারি ও ক্ষুদ্র ব্যবসায়ীদের জন্য একটি ঋণ সংযুক্ত ভর্তুকি প্রকল্প। এই পরিকল্পনার উদ্দেশ্য হলো শহর এবং গ্রামাঞ্চলে বসবাসকারী হস্তশিল্প ব্যবসায়ীদের কর্মসংস্থানের সুযোগ করে দেওয়া।

			এই প্রোগ্রামের ব্যাপারে বিশদে জানতে নিচের ভিডিও দেখুন:- **https://www.youtube.com/watch?v=7-5kvP9wAUI**
	Video 6.4 (Thursday Morning)	Swami Vivekananda Swanirbhor prokolpo	স্বামী বিবেকানন্দ স্বনির্ভর কর্মসংস্থান প্রকল্প হলো রাজ্য সরকার দ্বারা প্রদান করা একটা কল্যানমুলক প্রকল্প। এই প্রকল্পের উদ্দেশ্য হলো শহর এবং গ্রামাঞ্চলে বসবাসকারী হস্তশিল্প ভিত্তিক মাঝারি এবং ক্ষুদ্র ব্যবসায়ীদের আত্মকর্মসংস্থানের সুযোগ করে দেওয়া। এই প্রকল্পের ব্যাপারে এবং এই প্রকল্পে কি করে আবেদন করতে হয় , তার ব্যাপারে বিশদে জানতে, নিচের ভিডিওগুলো দেখুন:- **https://www.youtube.com/watch?v=bjzz-iRm8a0** **https://www.youtube.com/watch?v=XHptZxmI1oQ**
	Video 6.5 (Friday Morning)	How to make an application for getting any loan	সরকারি প্রকল্প এবং লোন পাওয়ার উপায়গুলো জানাই শুধু যথেষ্ট নয়. অনায়াসে লোন পেতে গেলে নির্ধারিত পদ্ধতি মেনে আবেদন করা দরকার। লোন আবেদন করা কালীন কি পদ্ধতি অনুসরণ করলে উপকৃত হবেন, সেই ব্যাপারে বিশদে জানতে নিচের ভিডিও দেখুন:- **https://www.youtube.com/watch?v=LYoVAGo_-TM**
	Video 6.6 (Saturday Morning)	Getting loan from Bandhan Bank: An Example	বন্ধন ব্যাঙ্ক মাঝারি এবং ক্ষুদ্র উদ্দ্যোক্তাদের জন্য বিভিন্ন রকমের লোন প্রদান করে থাকে, যা পাওয়া খুবই সহজ. বন্ধন ব্যাংকে কিভাবে লোনের জন্য আবেদন করতে হয় এবং অনায়াসে কিভাবে লোন পাওয়া যায় সেটা জানতে নিচের ভিডিওগুলো দেখুন **https://www.youtube.com/watch?v=pPJT_ByUP78** **https://www.youtube.com/watch?v=W318BTR0570**
Week 7 Social Media Marketing: Facebook	**Video 7.1** (Monday Morning)	Facebook Basics	ফেসবুকের মাধ্যমে আপনি খুব সহজেই আপনার ব্যবসার প্রচার এবং প্রসার করতে পারেন। এ জন্য আপনাকে প্রথমে ফেসবুকে একটি অ্যাকাউন্ট খুলতে হবে এবং ফেসবুকে একটি পেজ বানাতে হবে। এক্ষেত্রে বলে রাখা ভালো ফেসবুকে পেজ টি হল আপনার একটি নিজস্ব ডিজিটাল দোকান যেখানে আপনি আপনার পছন্দমত প্রোডাক্ট এর ছবি তার বিস্তারিত বিবরণ এবং দাম প্রদর্শন করতে পারবেন। এই সপ্তাহে আমরা ফেসবুক কি ও কেন এবং কিভাবে ফেসবুককে আপনি ব্যবসার কাজে লাগাতে পারেন, তাই নিয়ে রোজ একটা করে ছয়দিনে ছয়টি ভিডিও পাঠাবো। আজকে আমরা দেখবো, ফেসবুক কি এবং কেনই বা আমরা ফেসবুক ব্যবহার করব :
	Video 7.2 (Tuesday Morning)	Creating Facebook Account	কালকে আমরা দেখেছি, ফেসবুক কি ও কেন। আজ আমরা দেখবো, কিভাবে আমরা ফেসবুক একাউন্ট তৈরী করব: https://www.youtube.com/watch?v=A_tb5vvtOuk কীভাবে ফেসবুক ব্যবহার করবেন: https://www.youtube.com/watch?v=kcYbkI1WERI

	Video 7.3 (Wednesday Morning)	Facebook marketing Part I	ফেসবুককে ব্যবসার কাজে লাগাতে প্রথমেই একটা ফেসবুক পেজ করতে হবে। সেটা কিভাবে করবেন, সেটা জানতে এই ভিডিওটি দেখুন: https://www.youtube.com/watch?v=Efi1MwsX5ZU
	Video 7.4 (Thursday Morning)	Facebook marketing Part II	আজকের ভিডিও তে আমরা দেখবো, কিভাবে ফেসবুক পেজ সেটিং করতে হয়: https://www.youtube.com/watch?v=1e69OcvI1hM
	Video 7.5 (Friday Morning)	Facebook marketing Part III	আজকের ভিডিও তে আমরা দেখবো, কিভাবে ফেসবুক এর সাহায্যে আপনি আপনার তৈরি জিনিসের প্রচার করতে পারেন https://www.youtube.com/watch?v=fiUFVOYOF8Q
	Video 7.6 (Saturday Morning)	Facebook marketing Part IV	আজকের ভিডিও তে আমরা দেখবো, কিভাবে ফেসবুক এ আপনি আপনার প্রোডাক্ট-এর সুন্দর সুন্দর ছবি এবং ভিডিও পোস্ট করতে পারেন: https://www.youtube.com/watch?v=pHw5Bjzk6tA
	Video 7.7	Digital Showroom App tutorial	ফেসবুক ছাড়াও ইন্টারনেট ব্যবহার করে আর হোয়াটস্যাপ ব্যবহার করে আপনি অনলাইন ব্যবসা করতে পারেন। কিভাবে করবেন, সেটা জানতে এই ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=CxluU_gNj3M
Week 8 E-Commerce: Doing Business using Amazon	**Video 8.1** (Monday Morning)	E-Commerce Basics	ই-কমার্স বর্তমান সময়ের সব থেকে পরিচিত একটি নাম। নামটি শুনলেই আমরা বুঝে নেই যে অনলাইনে পণ্য কেনা-বেচা করার নাম ই-কমার্স। তাই ই-কমার্স নিয়ে এই সপ্তাহে কিছু ভিডিও দেখাবো: https://www.youtube.com/watch?v=JvIw0k4yL7w
	Video 8.2 (Tuesday Morning)	How to buy in Amazon	ইন্টারনেটের সাহায্যে ব্যবসা করাকে অনলাইন বিজনেস বা ই-কমার্স বলা হয়। এই অনলাইন ব্যবসার ক্ষেত্রে ই-কমার্স সংস্থাগুলি (যা মূলত ওয়েবসাইট ভিত্তিক) গুরুত্বপূর্ণ ভূমিকা পালন করে থাকে। পণ্য বিক্রি করতে যেমন দোকান লাগে, ই-কমার্সেও তা-ই। ই-কমার্স ওয়েবসাইট এ প্রতিটি বিক্রেতার একটি করে ডিজিটাল দোকান থাকে যেখানে সমস্ত প্রোডাক্ট, তার বিস্তারিত বিবরণ এবং দাম সহ প্রদর্শন করা যায়। আজকের ভিডিও-তে আমরা দেখবো, কিভাবে অ্যামাজন বা অনুরূপ সাইটগুলি থেকে অনলাইনে কিনবেন https://www.youtube.com/watch?v=OZ6SpM4vKDE
	Video 8.3 (Wednesday Morning)	How to sell in Amazon: Part I	আমাজন-যে আপনি আপনার প্রোডাক্ট বিক্রি-ও করতে পারেন। আপনার প্রোডাক্ট বিক্রি করতে চাইলে কি কি জিনিস আপনাকে জানতে হবে: (a) ই-কমার্সের যেহেতু ক্রেতার কাছে সরাসরি প্রোডাক্ট দেখার সুযোগ নেই, তাই আপনাকে আপনার প্রোডাক্টের খুব ভালো ছবি দিতে হবে যাতে ক্রেতা সরাসরি আপনার প্রোডাক্ট সম্বন্ধে ধারণা করতে পারে; (b) আপনাকে আপনার প্রোডাক্ট এর সম্বন্ধে কিছু কথা লিখতে হবে যাতে ক্রেতা সরাসরি সেই লেখা পড়ে আপনার প্রোডাক্ট সম্বন্ধে জানতে পারে; (c) অর্ডার পেলে প্রোডাক্ট ডেলিভারি করতে কতদিন সময় লাগবে সেটা আপনাকে জানতে হবে। আমাজন-যে আপনার প্রোডাক্ট বিক্রি হলে আপনাকে কি কি করতে হবে, সেটা জানতে এই ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=Exs5qjafeNU
	Video 8.4	How to sell in Amazon:	কালকে আমরা দেখিয়েছি, আমাজন-এ প্রোডাক্ট বিক্রি করতে হলে কি কি করতে হবে। আজকের ভিডিওটি তার-ই দ্বিতীয় পর্ব:

	(Thursday Morning)	Part II	https://www.youtube.com/watch?v=v9OLF3KLd5g
	Video 8.5 (Friday Morning)	Introduction to online financial transaction	যে কোনো অনলাইন ব্যবসা করতে হলে আপনাকে জানতে হবে অনলাইন-এ টাকা-পয়সা কিভাবে লেনদেন করবেন	ইন্টারনেটের সাহায্যে আপনি সহজেই এক একাউন্ট থেকে অন্য একাউন্টে টাকা পাঠাতে বা গ্রহণ করতে পারবেন	নিচের ভিডিও টা দেখুন। **https://www.youtube.com/watch?v=L8fOB_IaaAE**
	Video 8.6 (Saturday Morning)	How to handle digital cash: Some examples	ইন্টারনেটের মাধ্যমে কাউকে টাকা পাঠাতে গেলে আপনাকে আপনার একাউন্টে "ইন্টারনেট ব্যাঙ্কিং" পরিষেবা টি উপলব্ধ থাকতে হবে	এছাড়া আপনি UPI ব্যবহার করে অনলাইন এর মাধ্যমে টাকা আদান প্রদান করতে পারেন	কিছু জনপ্রিয় UPI হলো গুগল-পে (Google Pay), ফোন-পে (Phone Pay), পেটিএম (PayTm) ইত্যাদি	অনলাইন-এ টাকা-পয়সা কিভাবে লেনদেন করবেন, সেটা জানতে এই ভিডিও-টি দেখুন: https://www.youtube.com/watch?v=qG5jw0bUvQM
	Video 8.7 (Sunday Morning)	Cyber-crime and how to be Safe from Cyber Attacks	ডিজিটাল পেমেন্টর সঙ্গে বাড়ছে প্রতারণা, দেশে ৫০০ % বৃদ্ধি সাইবার ক্রাইমের সাইবার ক্রাইম কি ? কীভাবে নিজেকে রক্ষা করবেন? সেটা জানতে দেখুন: https://www.youtube.com/watch?v=BBNPbXxyz1Y https://www.youtube.com/watch?v=v-vxF3flAbk

APPENDIX V: TRAINING MATERIAL

(i) Digital Competency Training (Monday);
(ii) Training on Photography and Videography (Wednesday);
(iii) Training on Product Development and Market Trends Analysis (Friday)

স্লাইড ১

বিষয়:
বীরভূমের কারিগরদের দক্ষতা এবং তাদের হস্তশিল্পের বাজার উন্নত করতে ইন্টারনেট ও স্মার্টফোনের ব্যবহার

সোশ্যাল ইনফোরম্যাটিক্স রিসার্চ গ্রুপ,
ইন্ডিয়ান ইনস্টিটিউট অফ ম্যানেজমেন্ট কলকাতা
এবং
DC-হ্যান্ডিক্রাফট, বর্ধমান ও
ডিস্ট্রিক্ট ইন্ডাস্ট্রিস সেন্টার (DIC), বীরভূম- এর যৌথ উদ্যোগে
এবং
ডিপার্টমেন্ট অফ সাইন্স এন্ড টেকনোলজি (DST),
গভর্নমেন্ট অফ ইন্ডিয়ার তত্ত্বাবধানে

স্লাইড ২ — ট্রেনিং এর রূপরেখা

- কিভাবে স্মার্টফোন এবং ইন্টারনেটকে দৈনন্দিন ব্যবসার কাজে ব্যবহার করা যায়
- কিভাবে ই-বাণিজ্য উদ্যোগে অংশগ্রহণ করা যায় এবং কিভাবে স্মার্টফোনকে ব্যবসার বিজ্ঞাপন এবং বিক্রির সম্ভাবনা প্রসারণ করতে ব্যবহার করা যায়
- আমরা আমাদের প্ল্যাটফর্ম NCoRe তে আপনাদের পরিচয় করিয়ে দেব, যেখানে আপনাদের ডিজিটাল দোকান তৈরি করতে পারবেন, প্রশিক্ষণ নিতে পারবেন এবং বুটিক মালিক, প্রশিক্ষক এবং অন্যান্য সরকারী এবং বেসরকারী এজেন্টদের সাথে সরাসরি সংযুক্ত হতে পারবেন
- কিভাবে ডিজিটাল মাধ্যম ব্যবহার করে শিল্পীরা কিভাবে নতুন প্রোডাক্ট এবং ডিজাইন এর ধারনা পেতে পারেন
- ডিজিটাল মাধ্যমের সাহায্যে পণ্য প্রদর্শন করে কীভাবে সমগ্র বিশ্বের ক্রেতাদের কাছে পৌঁছনো যায়

- **সোমবার:** অনলাইনে ব্যবসা বাণিজ্য করার প্রাথমিক ধারণা
- **বুধবার:** কিভাবে ছবি এবং ভিডিও তুলে অনলাইন বা ডিজিটাল দোকান সাজাতে হয় সেই সম্বন্ধে ধারণা
- **শুক্রবার:** আন্তর্জাতিক ও দেশীয় বাজারের চাহিদা অনুযায়ী প্রোডাক্ট ও তার ডিজাইনের মান উন্নতিকরণ

স্লাইড ৩ — কেন এই আয়োজন

ব্যবসা করতে গেলে যে বিষয়গুলি মাথায় রাখতে হয়, তা হলো:

নতুন প্রোডাক্ট / নতুন ডিজাইন আইডিয়া
অন্যান্য শিল্পীদের শিল্পকর্ম ও তার দাম সম্বন্ধে ধারণা (এখানকার অথবা অন্য কোনো জায়গার)
বাজারের প্রবণতা / ক্রেতার প্রয়োজনীয়তা
কোথায় বিক্রি করবো / কিভাবে বিজ্ঞাপন করবো
ব্যবসা সংক্রান্ত প্রকল্প / সরকারি পরিকল্পনা
নতুন দক্ষতা বৃদ্ধির (skill development) উপায়

স্লাইড ৪ — ইন্টারনেট কি?

ইন্টারনেটকে খুব সহজভাবে এক কথায় ব্যাখ্যা করতে গেলে আমরা বলতে পারি যে, ইন্টারনেট হলো সারা বিশ্বব্যাপী প্রসারিত কতগুলি কম্পিউটার এবং স্মার্টফোনের সমষ্টি যার মাধ্যমে আমরা পৃথিবীর এক প্রান্ত থেকে অন্য প্রান্তে যেকোনো ধরনের তথ্য আদান প্রদান করতে পারি

অর্থাৎ এক কথায়, আমাদের স্মার্ট ফোনকে ইন্টারনেটের সঙ্গে যুক্ত করতে পারলেই পৃথিবীর যে কোনো ইন্টারনেটে সংযুক্ত যন্ত্রের সঙ্গে তথ্য আদান-প্রদান করা যায়

স্লাইড ৫ — ইন্টারনেট কি?

স্লাইড ৬ — এবারে প্রশ্ন হলো ইন্টারনেট কেন প্রয়োজন এবং এর সাহায্যে আমরা কি কি করতে পারি?

ইন্টারনেট যেহেতু সারা পৃথিবী জুড়ে ছড়িয়ে আছে তাই এর সাহায্যে আমরা বিভিন্ন ধরনের কাজ কম্পিউটার বা স্মার্টফোন থেকে করতে পারি।

- বিভিন্ন প্রকার বিনোদন মূলক কাজ যেমন সিনেমা দেখা, গান শোনা, ভিডিও গেম খেলা ইত্যাদি (Entertainment) [www.youtube.com]
- অনলাইনে পড়াশোনা করা (Online Education) [https://www.youtube.com/watch?v=ZmmkH38PMOE]
- বিভিন্ন তথ্য অনুসন্ধান (Search) [www.google.com]
- একটি ভাষা থেকে অন্য ভাষায় অনুবাদ [https://translate.google.com/]
- বিভিন্ন প্রকার সোশ্যাল মিডিয়া ওয়েবসাইটের মাধ্যমে বন্ধুদের সাথে যোগাযোগ রাখা (Communication using Social Media) [www.facebook.com]

এবারে প্রশ্ন হলো ইন্টারনেট কেন প্রয়োজন এবং এর সাহায্যে আমরা কি কি করতে পারি?

- ব্যাংকের বিভিন্ন প্রকার কাজ ইন্টারনেটের মাধ্যমে করা যায় (e-Banking) [www.onlinesbi.com/]

- ইন্টারনেটের মাধ্যমে আমরা ঘরে বসে বিভিন্ন পণ্য কেনাবেচা করতে পারি (e-Commerce [www.amazon.com]

- ইন্টারনেটের সাহায্যে আমরা চাকরি সংক্রান্ত বিভিন্ন তথ্য জানতে পারি (Job search) [https://www.upwork.com/]

- এছাড়াও ইন্টারনেটের মাধ্যমে ট্রেনের টিকিট কাটা (Online Ticket Reservation), অন্য কোন জায়গা সম্বন্ধে বিস্তারিত তথ্য জানা, গবেষণা করা (Research), থাবার অর্ডার কর (Food Ordering), খবর শোনা (News) ইত্যাদি

7

ইন্টারনেট ও স্মার্টফোনকে কিভাবে আমরা আমাদের ব্যবসার কাজে লাগাতে পারি?

- ইন্টারনেটে ভাল ভাল প্রশিক্ষণ ভিডিও পাওয়া যায়। নিজের পেশাগত দক্ষতা বাড়ানোর জন্য ইন্টারনেট থেকে ভাল ভাল প্রশিক্ষণ ভিডিও দেখে নিজে শেখা ও অন্য শিল্পী বন্ধুদের শেখানো যায়

- ইন্টারনেট থেকে অনেক ভাল **ভাল ডিজাইনের ধারণা** পাওয়া যেতে পারে। সেগুলো মাথায় রেখে ও বাজারের চাহিদা অনুযায়ী আধুনিক ডিজাইনের পণ্য তৈরি করলে ও সেই ডিজাইন অন্যান্য শিল্পী বন্ধুদের সঙ্গে বিনিময় করলে আপনার উৎপাদিত পণ্যের বাজার বাড়তে পারে

- ইন্টারনেটের মাধ্যমে নিজের উৎপাদিত **পণ্যের বিজ্ঞাপন** করে দেশ বিদেশের খরিদ্দারদের জানানো যায় ও **পণ্য অন-লাইনে বিক্রি** করা যায়

- ই-মেল, ফেসবুক, হোয়াটস-আপের মাধ্যমে **অন্যের সঙ্গে যোগাযোগ রাখা** যায়

অর্থাৎ......

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ইন্টারনেট ও স্মার্টফোনকে কিভাবে আমরা আমাদের ব্যবসার কাজে লাগাতে পারি?

নতুন প্রোডাক্ট / নতুন ডিজাইন আইডিয়া
অন্যান্য শিল্পীদের শিল্পকর্ম ও তার দাম সম্বন্ধে ধারণা (এখানকার অথবা অন্য কোনো জায়গার)
বাজারের প্রবণতা / ক্রেতার প্রয়োজনীয়তা
কোথায় বিক্রি করবো / কিভাবে বিজ্ঞাপন করবো
ব্যবসা সংক্রান্ত প্রকল্প /সরকারি পরিকল্পনা
নতুন দক্ষতা বৃদ্ধির (skill development) উপায়

9

স্মার্টফোন এবং ইন্টারনেটের কিছু প্রাথমিক ব্যবহার

আপনি আপনার স্মার্টফোন এবং ইন্টারনেটকে দৈনন্দিন এবং ব্যবসার কাজে ব্যবহার করতে হলে এর সম্বন্ধে প্রাথমিক কিছু ধারণা রাখতে হবে। এজন্য প্রথমে আমরা স্মার্টফোন এবং ইন্টারনেটের কিছু প্রাথমিক ব্যবহার নিয়ে আলোচনা করব, যেমন

- ইন্টারনেটে গুগল (Google) এর সাহায্য কিভাবে নিজের প্রয়োজনীয় তথ্য খুঁজে বের করবেন

- ইউটিউব (YouTube) এর সাহায্যে পছন্দের ভিডিও খুঁজে বের করা

- ইন্টারনেটের সাহায্যে অনলাইনে পড়াশোনা করা

- সোশ্যাল মিডিয়া এবং দৈনন্দিন জীবনে তার ব্যবহার

- গুগল ম্যাপের সাহায্যে কোন অচেনা জায়গা খুঁজে বের করা

- বিভিন্ন প্রকার ই-কমার্স ওয়েবসাইট ও তাদের কার্য পদ্ধতি

- ইন্টারনেটের মাধ্যমে অর্থ লেনদেন করা

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গুগল (Google) এর সাহায্য প্রয়োজনীয় তথ্য খুঁজে বের করা

গুগলের সাহায্যে আপনি আপনার পছন্দমতো জিনিস ইন্টারনেট থেকে খুঁজে পেতে পারে। এজন্য আপনাকে নির্দিষ্ট কিছু শব্দ জানতে হবে যার দ্বারা আপনি সার্চ করতে পারেন পারেন যেমন কাঁথা স্টিচ শাড়ি বা ডোকরা জুয়েলারি ইত্যাদি

- গুগলের সাহায্যে তথ্য খুঁজে বের করতে গেলে আপনাকে ইংরেজিতে বা বাংলায় আপনি যা খুঁজতে চাইছেন তা লিখতে হবে
  (বাটিক, কাঁথাস্টিচ, Batik Work, Katha Stitch...)
- এরপর গুগল আপনার লেখার ওপর ভিত্তি করে ইন্টারনেট থেকে সার্চ করে প্রয়োজনীয় তথ্য দেখায়
- এছাড়া আপনি লেখার পরিবর্তে গলার ভয়েস এর সাহায্যে সহজে ইন্টারনেট থেকে প্রয়োজনীয় তথ্য খুঁজে বের করতে পারেন

আপনি কিভাবে গুগল এ সার্চ করবেন আমরা এখন তার কিছু উদাহরণ দেখব....

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ইউটিউব (YouTube) এর সাহায্যে পছন্দের ভিডিও খুঁজে বের করা

ইউটিউব হল জনপ্রিয় ভিডিও শেয়ারিং প্লাটফর্ম যেখানে আপনি সহজেই আপনার পছন্দ মত যে কোন ভিডিও [যেমন সিনেমা, গান ইত্যাদি] দেখতে বা শুনতে পারেন

- স্মার্টফোনে সিনেমা বা যে কোন গানের ভিডিও দেখতে হলে আপনাকে প্রথমেই ফোনে ইউটিউব আপ টি খুলতে হবে

- ইউটিউব আপ এর একদম উপরে সার্চ বক্সে আপনি যেই গান বা সিনেমা দেখতে চাইছেন তার নাম লিখতে হবে

- এরপর আপনি যেই গান বা সিনেমা দেখতে চান তার উপরে টাচ করলে সেটি দেখতে পাবেন

আপনি কিভাবে ইউটিউব এ সার্চ করে বিভিন্ন প্রকারের ভিডিও খুঁজে বের করবেন আমরা এখন তার কিছু উদাহরণ দেখব....

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Slide 13:

বাংলা ভাষার সাহায্যে ইন্টারনেট এর ব্যবহার

- ✓ **G-Board Key-Board**
- ✓ **Hi-Translate**

- **GBoard কীবোর্ড সেটিংস এবং ব্যবহার**
  https://www.youtube.com/watch?v=7nKBYQrqtkk

- **Hi Translate অ্যাপ এর ব্যবহার**
  https://www.youtube.com/watch?v=wJCLnDUauEA

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Slide 14:

ইন্টারনেটে কিভাবে কোন একটি নির্দিষ্ট ওয়েবসাইট থেকে আপনি তথ্য খুঁজে বের করবেন

Slide-14 (Finding Content from Website)

https://www.youtube.com/watch?v=ttkcoxa_wSA

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Slide 15:

সোশ্যাল মিডিয়া এবং দৈনন্দিন জীবনে তার ব্যবহার

https://www.youtube.com/watch?v=yO5Dp_6_NOE (Digital Marketing Intro)

- সোশ্যাল মিডিয়ার সাহায্যে আপনারা সহজেই আপনাদের পছন্দের তথ্য নিজের বন্ধুদের সাথে বা পরিবারের লোকজনের সাথে শেয়ার করতে পারেন।

- এছাড়া সোশ্যাল মিডিয়াকে আপনারা আপনাদের ব্যবসার কাজে ব্যবহার করতে পারেন। এখানে আপনারা খুব সহজেই আপনাদের তৈরি করা বিভিন্ন প্রকার প্রোডাক্টের ছবি বা তার বিবরণ আপনার বন্ধুদের সাথে শেয়ার করতে পারেন।

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Slide 16:

ফেসবুকের মাধ্যমে এ ব্যবসার প্রচার এবং প্রসার

ফেসবুকের মাধ্যমে আপনি খুব সহজেই আপনার ব্যবসার প্রচার এবং প্রসার করতে পারেন
-এ জন্য আপনাকে প্রথমে ফেসবুকে একটি অ্যাকাউন্ট খুলতে হবে এবং ফেসবুকে একটি পেজ বানাতে হবে

এক্ষেত্রে বলে রাখা ভালো ফেসবুক পেজ টি হল আপনার একটি নিজস্ব ডিজিটাল দোকান যেখানে আপনি আপনার পছন্দমত প্রোডাক্ট এর ছবি তার বিস্তারিত বিবরণ এবং দাম প্রদর্শন করতে পারবেন

https://www.facebook.com/ArtofBengal

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Slide 17:

ই-বাণিজ্য উদ্যোগে অংশগ্রহণ
এবং
স্মার্টফোনকে ব্যবসার বিজ্ঞাপন এবং বিক্রির সম্ভাবনা প্রসারণ করতে ব্যবহার করা

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Slide 18:

বিভিন্ন প্রকার ই-কমার্স ওয়েবসাইট ও তাদের কার্য পদ্ধতি

https://www.youtube.com/watch?v=JvIw0k4yL7w (E-Commerce Intro)

- ইন্টারনেটের সাহায্যে ব্যবসা করতে অনলাইন বিজনেস বা ই-কমার্স বলা হয়। এই অনলাইন ব্যবসার ক্ষেত্রে ই-কমার্স সংস্থাগুলি (যা মূলত ওয়েবসাইট ভিত্তিক) গুরুত্বপূর্ণ ভূমিকা পালন করে থাকে।

প্রথমে আমরা একটু জেনে নি ই-কমার্স জিনিসটা ঠিক কি?
- **ইলেকট্রনিক কমার্স** বা **ই-কমার্স** বা **ই-বাণিজ্য** একটি বাণিজ্য ক্ষেত্র যেখানে কোনো ইলেকট্রনিক সিস্টেম (মূলত স্মার্ট ফোন বা কম্পিউটার) এর মাধ্যমে এবং ইন্টারনেটের সাহায্যে পণ্য ক্রয়/ বিক্রয় হয়ে থাকে।

পণ্য বিক্রি করতে যেমন দোকান লাগে, ই-কমার্সেও তা-ই। ই-কমার্স ওয়েবসাইট এ প্রতিটি বিক্রেতার একটি করে ডিজিটাল দোকান থাকে যেখানে সমস্ত প্রোডাক্ট, তার বিস্তারিত বিবরণ এবং দাম সহ প্রদর্শন করা যায়।

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ই-কমার্স এর সাহায্যে আপনি আপনার প্রোডাক্ট বিক্রি করতে চাইলে কি কি জিনিস আপনাকে জানতে হবে

- ই-কমার্সের যেহেতু ক্রেতার কাছে সরাসরি প্রোডাক্ট দেখার সুযোগ নেই তাই আপনাকে আপনার প্রোডাক্টের খুব ভালো ছবি দিতে হবে যাতে ক্রেতা সরাসরি আপনার প্রোডাক্ট সম্বন্ধে ধারণা করতে পারে

- আপনাকে আপনার প্রোডাক্ট এর সম্বন্ধে কিছু কথা লিখতে হবে যাতে ক্রেতা সরাসরি সেই লেখা পড়ে আপনার প্রোডাক্ট সম্বন্ধে জানতে পারে

- অর্ডার পেলে প্রোডাক্ট ডেলিভারি করতে কতদিন সময় লাগবে সেটা আপনাকে জানতে হবে

- ই-কমার্স এর ক্ষেত্রে ক্রেতা যেহেতু সারা বিশ্বে ছড়িয়ে রয়েছে সেজন্য আপনাকে ইংরেজিতে লিখতে বা পড়তে জানতে হবে

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স্মার্ট ফোনের সাহায্যে ইন্টারনেটের মাধ্যমে ব্যবসা করার প্রয়োজনীয় ধারণা

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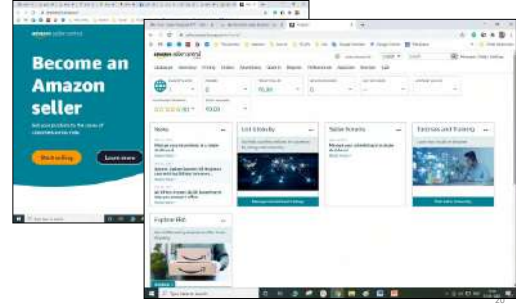
স্মার্ট ফোনের সাহায্যে ইন্টারনেটের মাধ্যমে ব্যবসা করার প্রয়োজনীয় ধারণা

স্মার্ট ফোনের সাহায্যে ইন্টারনেটের মাধ্যমে ব্যবসা শুরুর আগে প্রথমে আপনাকে মার্কেটের হালচাল সম্পর্কে জানতে হবে। আর এইজন্য আপনাকে নিম্নোক্ত বিষয়গুলোতে জোর দিতে হবে।

- মার্কেটে বর্তমানে কোন পণ্য বা কোন নির্দিষ্ট প্রোডাক্ট এর চাহিদা খুব বেশি আছে
- কাস্টমার বা ক্রেতার চাহিদা
- কাস্টমাররা কোন পণ্যগুলো সাধারণত ই-কমার্স সাইট থেকে কিনে থাকে,
- তারা কীভাবে এবং কোন মাধ্যমে পণ্যগুলো ডেলিভারি নিতে পছন্দ করে,
- বিল পরিশোধের ক্ষেত্রে কোন মাধ্যমে তারা স্বাচ্ছন্দ্য বোধ করে থাকে,
- কোন পণ্য কতদিনের মধ্যে ডেলিভারি দেওয়া হয়ে থাকে,
- কোন পরিবহনের মাধ্যমে পণ্য ডেলিভারি করা হয়ে থাকে,

•How to buy from Amazon: https://www.youtube.com/watch?v=OZ6SpM4vKDE
•Amazon Seller Account
(https://www.amazon.in/s?me=A12JKHC2S8V0BE&marketplaceID=A21TJRUUN4KGV)

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ইন্টারনেটের মাধ্যমে অর্থ লেনদেন করা

Online Finance Intro: **https://www.youtube.com/watch?v=L8fOB_IaaAE**

করোনাভাইরাসের কারণে সামাজিক দূরত্ব বজায় রাখতে গ্রাহকেরা ব্যাংক শাখায় যাওয়া কমিয়েছেন। ইন্টারনেট ব্যাংকিং ব্যবহার করে আর্থিক লেনদেন করছেন আগের চেয়ে বেশি গ্রাহক।

ইন্টারনেটের সাহায্যে আপনি সহজেই এক একাউন্ট থেকে অন্য একাউন্টে টাকা পাঠাতে বা গ্রহণ করতে পারবেন

ইন্টারনেটের মাধ্যমে কাউকে টাকা পাঠাতে গেলে আপনাকে আপনার একাউন্টে "ইন্টারনেট ব্যাংকিং" পরিষেবা টি উপলব্ধ থাকতে হবে

এছাড়া আপনি UPI ব্যবহার করে অনলাইন এর মাধ্যমে টাকা আদান প্রদান করতে পারেন। কিছু জনপ্রিয় UPI হলো গুগল-পে (Google Pay), ফোন-পে (Phone Pay), পেটিএম (PayTm) ইত্যাদি

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ইন্টারনেটের মাধ্যমে অর্থ লেনদেন করা

তবে বর্তমানে কিছু জালিয়াতির কারণে আপনাকে অতিরিক্ত সতর্ক থাকতে হবে এই ধরনের কাজ করার সময়, যেমন

▪ডিজিটাল লেনদেনের ক্ষেত্রে প্রত্যেকের উচিত কোনো বিশ্বাসযোগ্য ব্রাউজার ব্যবহার করা।

▪ডেবিট কার্ডের লেনদেনের তথ্যগুলি নিয়মিত যাচাই করুন

▪ডিজিটাল আর্থিক লেনদেনের জন্য 'https' নিরাপদ ওয়েবসাইট ব্যবহার করুন যা স্মার্টফোন এবং ইন্টারনেটের মধ্যে সুরক্ষিত যোগাযোগ নিশ্চিত করে

▪কোনো ব্যক্তির সাথে তার ডিজিটাল ব্যাংকিং পাসওয়ার্ড, OTP বা ওয়ান টাইম পাসওয়ার্ড, পিন, সিভিভি এবং ইউপিআই পিনের তথ্যও কারোর সাথে শেয়ার করা একেবারেই উচিত নয়। এই ধরনের তথ্যের সাহায্যে ব্যাংক ব্যক্তির পরিচয় যাচাই করতে সক্ষম হয়।

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ডিজিটাল মাধ্যম ব্যবহার করে শিল্পীরা কিভাবে নতুন প্রোডাক্ট এবং ডিজাইন এর ধারনা পেতে পারেন

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স্মার্ট ফোনের সাহায্যে ইন্টারনেট থেকে নতুন প্রোডাক্ট আইডিয়া খুঁজে বের করা

এবারে আমরা দেখবো কিভাবে আপনার স্মার্টফোনকে ব্যবসার কাজে লাগাতে পারেন যেমন ইন্টারনেটকে কাজে লাগিয়ে আপনি খুব সহজেই ইন্টারনেট থেকে আপনার প্রোডাক্ট তৈরি করার আইডিয়া পেতে পারেন

আপনি গুগলে সার্চ করতে পারেন বা ইউটিউবে গিয়ে আপনি কি ধরনের প্রোডাক্ট চান সেটি লিখতে হবে,

ডোকরা জুয়েলারি, কাঁথা স্টিচ শাড়ি

স্মার্টফোনের সাহায্যে আপনি খুব সহজেই নতুন নতুন ডিজাইন আইডিয়া পেতে পারেন

https://www.youtube.com/watch?v=Uosm-cF1URM

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স্মার্ট ফোনের সাহায্যে ইন্টারনেট থেকে নতুন ডিজাইন আইডিয়া খুঁজে বের করা

স্মার্টফোনের সাহায্যে আপনি খুব সহজেই পুরনো কাপড় ব্যবহার করে নতুন প্রোডাক্ট তৈরি করার আইডিয়া পেতে পারেন, যেমন

https://www.youtube.com/watch?v=t_l9HAgcw7M (From 2:49)

Pen Stand   Beer Mug
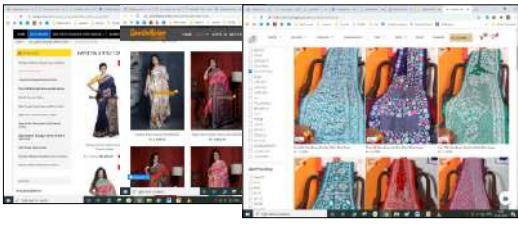
26

স্মার্ট ফোনের সাহায্যে আপনি খুব সহজেই আপনার তৈরি করা পণ্যের বাজার দর সম্বন্ধে ধারণা করতে পারেন

আপনার তৈরি করা বিভিন্ন প্রোডাক্ট বাজারে কি দামে বিক্রি হয় তা আপনি সহজেই জানতে পারবেন
বিভিন্ন ওয়েবসাইট থেকে একটি নির্দিষ্ট ধরনের প্রোডাক্টের দাম যদি আপনি খেয়াল করেন তাহলে আপনি খুব সহজেই আপনার প্রোডাক্টের বাজারদর অনুমান করতে পারবেন

https://www.banglarsare.com/women-s-sarees/silk-cotton-sarees/maheshwari-sarees.html
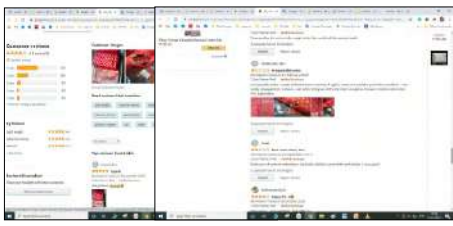
27

ক্রেতার প্রয়োজনীয়তা/ মতামত জানা

বিভিন্ন প্রোডাক্ট সম্বন্ধে ক্রেতা কি ধরনের মতামত পোষণ করে সেটি জানা আপনার জন্য খুবই প্রয়োজনীয়
ইন্টারনেটের সাহায্যে আপনি খুব সহজে এই কাজটি করতে পারবেন

https://www.amazon.in/GoSriKi-Georgette-Blouse-Piece-
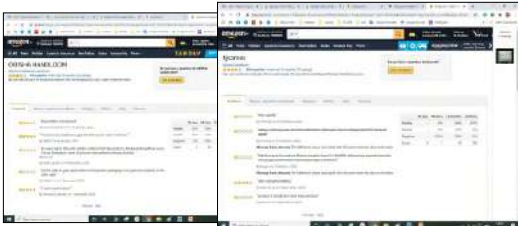
28

মার্কেটে প্রতিযোগীদের সম্বন্ধে ধারণা রাখা

ব্যবসা করার অন্যতম শর্ত হলো আপনার প্রতিযোগীদের সম্বন্ধে আপনাকে বিস্তারিত জ্ঞান রাখতে হবে যেমন,   তারা কি ধরনের প্রোডাক্ট তৈরি করে;
কত দামে বিক্রি করে;
কাদের কাছে বিক্রি করে ইত্যাদি

https://www.amazon.in/sp?_encoding=UTF8&asin=&isAmazonFulfilled=1&isCBA=

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NCoRe: A Social e-Commerce

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5

পণ্য প্রদর্শনের জন্য ফটোগ্রাফি এবং ভিডিওগ্রাফি তোলার প্রশিক্ষণ

TRAINING PRESENTATION
ON
PHOTOGRAPHY & VIDEOGRAPHY FOR PRODUCT DISPLAY

আলোচনার বিষয়সমূহ

- ভূমিকা
- পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়
- মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম
- সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ, বিভিন্ন পণ্যের আকর্ষণীয় ছবির উদাহরণ এবং তার বিস্তারিত আলোচনা
- শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি,
- ইউ টিউব মার্কেটিং এবং নিজের প্রোডাক্টের ভিডিওগ্রাফি
- App প্রদর্শন এবং তার বিস্তারিত আলোচনা

ভূমিকা

অনলাইনে পণ্য বাজারজাত এবং বিক্রয়ের জন্য ভালো ছবির ভূমিকা

- ক্রেতারা যেকোনো পণ্যের বিবরণ পড়ার চেয়ে পণ্যের ছবি দেখতে বেশি পছন্দ করেন।
- যেহেতু ক্রেতারা সরাসরি পণ্যটি দেখতে বা হাতে স্পর্শ করতে পারছেন না, ছবির ব্যবহার সেই শূন্যস্থান পূরণ করে।
- যেকোনো পণ্যের ছবি তার বিবরণের চেয়ে পণ্যের বিষয়ে বেশি তথ্য বহন করে।
- যেকোনো পণ্যের সমস্ত বিশেষত্ব, বিবরণে প্রকাশ করা সম্ভব নয়, সেক্ষেত্রে ছবি একমাত্র মাধ্যম।
- আপনার তৈরি পণ্যটি দেখতে কতটা সুন্দর সেটি বিবরণে প্রকাশ করা সম্ভব নয় ক্রেতাদের কাছে।
- পণ্যের ছবি ক্রেতাদের সাথে বিক্রেতাদের বিশ্বাস স্থাপন করতে সাহায্য করে।

আকর্ষণীয় ছবির ক্রেতাদের ওপর প্রভাব

- পণ্যের ভালো ছবি ক্রেতাদের মধ্যে কেনার ইচ্ছা তৈরী করে।
- উচ্চ রেজল্যুসন এবং পরিষ্কার ছবি ক্রেতাদের পণ্য কেনার সিদ্ধান্ত নিতে সাহায্য করে।
- পরিষ্কার ব্যাকগ্রাউন্ড ব্যবহার করে তোলা ছবি সবসময় পণ্যের প্রতি ক্রেতাদের দৃষ্টি আকর্ষণ করে।
- সঠিক আলোতে তোলা ছবি সবসময় ক্রেতাদের পণ্যের বিশেষত্বগুলি বুঝতে সাহায্য করে এবং তাতে ক্রেতাদের মধ্যে কেনার ইচ্ছা তৈরী হয়।
- পণ্যের আকর্ষণীয় ছবি ক্রেতাদের ওই পণ্যের আনুষাঙ্গিক অন্যান্য পণ্যের দিকে আকৃষ্ট করে, ফলে পণ্য ক্রয় করার সম্ভাবনা বেড়ে যায়।

কিছু ওয়েবসাইটের উদাহরণ

গয়নার জন্য
https://gocoop.com/collections/jewellery
https://www.fabindia.com/jewellery/women-earrings

শাড়ির জন্য
https://shop.gaatha.com/women/buy-handloom-Sarees-sari/Online-ajrakh-chanderi-cotton-silk-saree-29
https://www.indiansilkhouseagencies.com/sarees/kanthastitch

ব্যাগের জন্য
https://www.jaypore.com/pink-handcrafted-vintage-brocade-potli-p637954

একটি ভুল ছবির উদাহরণ
https://pinkwinkgirl.com/kantha-stitch-saree/#

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

একটি গল্প তৈরী করুন

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

আপনার সংগ্রহের সবথেকে ভালো মানের পণ্য ব্যবহার করুন

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

পণ্যটিকে আরো আকর্ষণীয় দেখানোর জন্য সঠিক আনুসঙ্গিক সরঞ্জাম নির্বাচন করুন।

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

পণ্যের সাথে সামঞ্জস্য রেখে সঠিক ব্যাকগ্রাউন্ড ব্যবহার করুন

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

পর্যাপ্ত আলোতে পণ্যটি রেখে ছবি তুলুন

Slide 1:
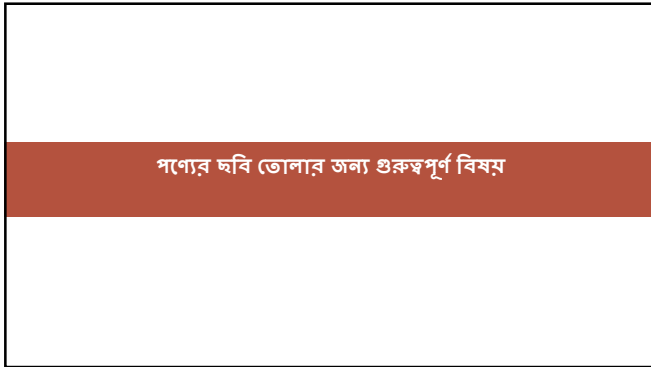
পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

মোবাইল ক্যামেরাটির অ্যাঙ্গেল সঠিক ভাবে ব্যবহার করুন যাতে পণ্যের বিশেষত্বগুলি ফুটে ওঠে

Slide 2:

পণ্যের ছবি তোলার জন্য গুরুত্বপূর্ণ বিষয়

পণ্যটি সাজানোর সময় উপযুক্ত আবহ/থিম ব্যবহার করুন

Slide 3:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

Slide 4:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

ছবি তোলার সময় মোবাইলটি ধরার নিয়ম।
(ছবি তোলার সময়ে মোবাইল টাকে আড়াআড়ি ধরুন, যাতে ছবিটা ল্যান্ডস্কেপ মোডে ওঠে)

Slide 5:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

পণ্যের ওপর ক্যামেরা ফোকাস করার পদ্ধতি

নিজের স্মার্ট ফোনে ফোকাস করে আকর্ষণীয় ছবি তোলার জন্য, নিচের ভিডিও টা দেখুন:-
https://www.youtube.com/watch?v=2Ded05G5WJ8

Slide 6:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

- রুল অফ থার্ড
- রুল অফ থার্ড এক ধরণের ফটো তোলার পদ্ধতি, যার ফলে ছবি নান্দনিক হয়ে ওঠে. রুল অফ থার্ড কি এবং তা ব্যবহার করে কি করে আকর্ষণীয় ছবি তোলা যায়, সেটা জানতে চলুন আমরা এই ভিডিও টা আগে দেখে নি

  https://www.youtube.com/watch?v=fyMOXST5Wdk

Slide 1:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

রুল অফ অড এর ব্যবহার

Slide 2:

মোবাইল ক্যামেরার ব্যবহার এবং ছবি তোলার নিয়ম

ভালো ছবির জন্য দরকারি ওপেন ক্যামেরা অ্যাপের ব্যবহার

ওপেন ক্যামেরা হলো একটা মোবাইল অ্যাপ্লিকেশন, যার দ্বারা অনায়াসে বাড়িতে বসেই আকর্ষণীয় ছবি তোলা যায় . কিভাবে মোবাইল এ ওপেন ক্যামেরা ইনস্টল করবেন এবং তার দ্বারা কিভাবে নান্দনিক ছবি তুলবেন, সেটা জানার জন্য চলুন আমরা আগে নিচের ভিডিও টা দেখে নি.

https://www.youtube.com/watch?v=xaqQxw1oVd4&feature=youtu.be

Slide 3:

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ, বিভিন্ন পণ্যের আকর্ষণীয় ছবির উদাহরণ এবং তার বিস্তারিত আলোচনা

Slide 4:

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

শাড়ীর ছবি তোলার নির্দেশাবলী:-

❖ শাড়ীর প্রতিটা অংশ ছবি তে পরিষ্কার ভাবে দেখা যাবে
❖ পুরো শাড়ীটা নিয়ে একটা ছবি তুলুন
❖ শাড়ীর ওপরে করা ডিজাইন টার একটা সামনে থেকে ছবি তুলুন
❖ শাড়ীর ছবি গুলো তোলার সময়ে সোজা করে পরিষ্কার করে তুলবেন
❖ শাড়ীর ছবি গুলো তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
❖ শাড়ীর ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ডটা হালকা রং এর থাকবে
❖ ছবি তোলার সময়ে মোবাইল টাকে আড়াআড়ি ধরুন, যাতে ছবিটা ল্যান্ডস্ক্যাপ মোডে ওঠে

Slide 5:

কিছু আকর্ষণীয় শাড়ীর ছবির উদাহরণ

Slide 6:

কিছু আকর্ষণীয় শাড়ীর ছবির উদাহরণ

কিছু আকর্ষণীয় শাড়ীর ছবির উদাহরণ

কিছু আকর্ষণীয় শাড়ীর ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

কুর্তার ছবি তোলার নির্দেশাবলী:-

❖ পুরো কুর্তা টার ছবি তুলুন, সামনে এবং পিছন থেকে
❖ কুর্তার ওপর করা ডিজাইন টার একটা সামনে থেকে ছবি তুলুন
❖ কুর্তার গলা টার একটা সামনে থেকে ছবি তুলুন
❖ কুর্তার হাতা দুটোর সামনে থেকে ছবি তুলুন
❖ কুর্তার ছবি গুলো তোলার সময়ে সোজা করে পরিষ্কার করে তুলবেন
❖ কুর্তার ছবি তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় কুর্তার ছবির উদাহরণ

কিছু আকর্ষণীয় কুর্তার ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

টি-শার্টের ছবি তোলার নির্দেশাবলী:-

❖ পুরো টি-শার্ট টার ছবি তুলুন, সামনে এবং পিছন থেকে
❖ টি-শার্ট এর ওপরে করা ডিজাইন টার সামনে থেকে ছবি তুলুন
❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
❖ টি-শার্ট টার ছবি তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

17-04-2021

কিছু আকর্ষণীয় টি-শার্টের ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

ব্লাউজ পিসের ছবি তোলার নির্দেশাবলী:-

- ❖ বডি পপ্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ বর্ডার প্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ ম্যাটেরিয়ালটার একটা কাছ থেকে ছবি তুলুন যাতে ব্লাউজ পিস টা কোন
- ❖ ফ্যাব্রিকের তৈরী সেটা পরিষ্কার ভাবে ছবির মাধ্যমে বোঝা যায়
- ❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
- ❖ টি-শার্ট টার ছবি তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
- ❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় ব্লাউজ পিসের ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

পালাজোর ছবি তোলার নির্দেশাবলী:-

- ❖ পুরো পালাজো টার একটা ছবি তুলুন
- ❖ বডি পপ্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ বর্ডার প্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ ম্যাটেরিয়ালটার একটা কাছ থেকে ছবি তুলুন যাতে পালাজো টা কোন ফ্যাব্রিকের তৈরী সেটা পরিষ্কার ভাবে ছবির মাধ্যমে বোঝা যায়
- ❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
- ❖ টি-শার্ট টার ছবি তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
- ❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় পালাজোর ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

ওড়নার ছবি তোলার নির্দেশাবলী:-

- ❖ পুরো ওড়না একটা ছবি তুলুন
- ❖ বডি পপ্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ বর্ডার প্রিন্টের একটা ক্লোজ আপ ছবি তুলুন
- ❖ ম্যাটেরিয়ালটার একটা কাছ থেকে ছবি তুলুন যাতে ওড়না টা কোন ফ্যাব্রিকের তৈরী সেটা পরিষ্কার ভাবে ছবির মাধ্যমে বোঝা যায়
- ❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
- ❖ টি-শার্ট টার ছবি তোলার সময়ে ঠিকঠাক আলোতে রেখে তুলবেন
- ❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

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কিছু আকর্ষণীয় ওড়নার ছবির উদাহরণ

কিছু আকর্ষণীয় ওড়নার ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

ব্যাগের ছবি তোলার নির্দেশাবলী:-

❖ ব্যাগের সামনে এবং পিছন থেকে ছবি তুলুন
❖ ব্যাগের সাইড থেকে একটা ছবি তুলুন'
❖ ব্যাগের ওপর করা ডিজাইন এর সামনে থেকে ছবি তুলুন
❖ ব্যাগ এর হ্যান্ডেল এর ছবি তুলুন
❖ ব্যাগ টা খুলে, ব্যাগের ভিতরের ছবি তুলুন
❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
❖ ছবি গুলো ঠিকঠাক আলোতে রেখে তুলবেন
❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় ব্যাগের ছবির উদাহরণ

কিছু আকর্ষণীয় ব্যাগের ছবির উদাহরণ
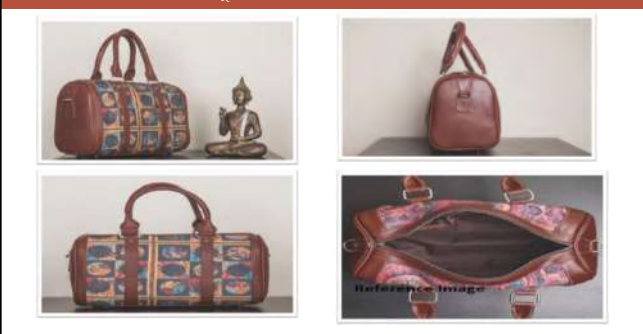
সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

শো পিস্ এর ছবি তোলার নির্দেশাবলী:-

❖ পুরো জিনিস টার ছবি তুলবেন
❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
❖ ছবি গুলো ঠিকঠাক আলোতে রেখে তুলবেন
❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় শো পিস্ এর ছবির উদাহরণ

সঠিকভাবে পণ্যের ছবি তোলার কিছু নির্দেশ

গয়নার ছবি তোলার নির্দেশাবলী:-

❖ পুরো গয়না টার ছবি তুলুন
❖ ছবি গুলো সোজা করে পরিষ্কার করে তুলবেন
❖ ছবি গুলো ঠিকঠাক আলোতে রেখে তুলবেন
❖ ছবি গুলো তোলার সময়ে ব্যাকগ্রাউন্ড টা হালকা রং এর থাকবে

কিছু আকর্ষণীয় জুয়েলারি সেটের ছবির উদাহরণ

কিছু আকর্ষণীয় নেকলেসের ছবির উদাহরণ

কিছু আকর্ষণীয় কানের দুলের ছবির উদাহরণ

কিছু আকর্ষণীয় হাতের চুড়ি / বালার ছবির উদাহরণ

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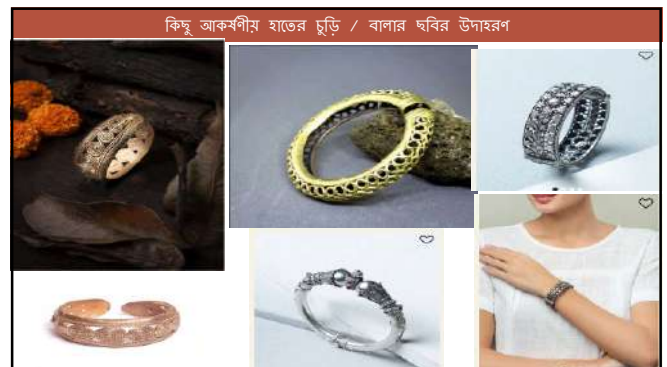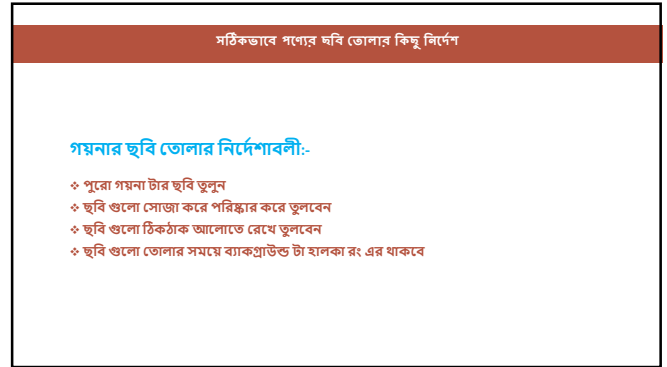
শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি

শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি

ভিডিও তোলার সময় মোবাইলটি ধরার নিয়ম।
(ভিডিও তোলার সময়ে মোবাইল টাকে আড়াআড়ি ধরুন, যাতে ভিডিও টা ল্যান্ডস্ক্যাপ মোডে ওঠে)

শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি

ভিডিও তোলার সময় পরিষ্কার ব্যাকগ্রাউন্ড ব্যবহার করুন।
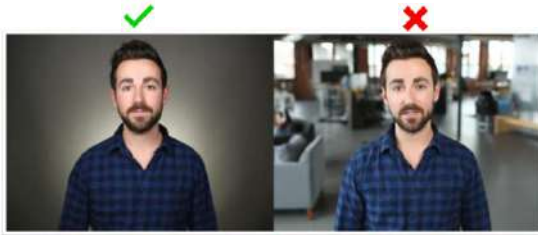
শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি

- ভিডিওটি তোলার সময় যথাযথ আলোতে তুলুন।

- ভিডিওটি তোলার সময় অপ্রয়োজনীয় শব্দ যাতে না হয়, সেদিকে লক্ষ্য রাখবেন। সশব্দ পরিবেশ এবং নিশ্চুপ পরিবেশে ভিডিও তোলার পার্থক্য বোঝার জন্য চলুন আমরা নিচের ভিডিও টা দেখে নি

  https://www.youtube.com/watch?v=WBkZkKXIRrA&feature=youtu.be

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শিল্পীদের প্রোফাইল তৈরি করার জন্য ভিডিও তোলার পদ্ধতি

- ভিডিও কিভাবে তুলতে হয়ে এবং কি করে নিজের মোবাইল ফোন সেট করে বাড়িতেই অনায়াসে আকর্ষণীয় ভিডিও তোলা যায়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন।
  https://www.youtube.com/watch?v=dROuia9balg

নিজের ভিডিও করার সময়ে কি করে সুন্দর ও বিস্তৃত ভাবে নিজের পরিচয় দেওয়া যায়, নিজের শিল্প এবং শিল্পকর্মর ব্যাপারে দর্শকদের জানানো যায়, তা শেখার জন্য নিচের ভিডিও টা দেখুন।
  https://www.youtube.com/watch?v=2kSas9_jDPk&feature=emb_logo
  https://www.youtube.com/watch?v=0y0zCV6P-nU&feature=emb_logo

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ইউ টিউব মার্কেটিং এবং নিজের প্রোডাক্টের ভিডিওগ্রাফি

ইউ টিউব মার্কেটিং এবং নিজের প্রোডাক্টের আকর্ষণীয় ভিডিও তোলার পদ্ধতি

- নিজের ভিডিও তোলার সাথে সাথে জরুরি হলো নিজের প্রোডাক্টের ভালো ভিডিও তোলা।
- আপনার প্রোডাক্টের বিশেষত্বগুলো ভালো ভাবে দেখিয়ে ভিডিও তুললে, সেটা দেখে ক্রেতাদের প্রোডাক্ট টা কেনার ইচ্ছে বাড়বে।
- ইউ টিউবে নিজের চ্যানেল তৈরী করে, তাতে নিজের তৈরী প্রোডাক্টের ভিডিও আপলোড করলে, আপনি খুব অনায়াসেই আপনাকে এবং আপনার শিল্পকর্ম কে হাজার হাজার ক্রেতাদের কাছে পৌঁছে দিতে পারবেন।
- ইউ টিউবে নিজের প্রোডাক্টের ভিডিওগ্রাফি ক্যাটালগ বানালে, হাজার হাজার অনলাইন ক্রেতাদের দৃষ্টি আকর্ষণ করার সম্ভাবনা বাড়ে।
- কি করে ইউ টিউবে নিজের চ্যানেল বানাবেন (1) এবং কি ভাবে তাতে নিজের তৈরী ভিডিও রাখবেন (2), সেটা জেনে নেওয়ার জন্য নিচের ভিডিওগুলো দেখুন:-
    1. https://www.youtube.com/watch?v=DxQuHDf1nfM
    2. https://www.youtube.com/watch?v=VIziFJaNluU

নিজের তৈরী প্রোডাক্টের আকর্ষণীয় ভিডিও তোলার কিছু নির্দেশ

- ❖ইউ টিউবে চ্যানেল বানানো এবং নিজের তৈরী ভিডিও আপলোড করার পদ্ধতি জানার পর, কি করে নিজের প্রোডাক্টের আকর্ষণীয় ভিডিও তুলতে হয়, সেটা জেনে নেওয়া খুব ই প্রয়োজনীয়
- ❖প্রোডাক্ট ভিডিওগ্রাফি করার সময়ে নিজের ফোন টা আড়াআড়ি ধরুন, যাতে ভিডিও টা ল্যান্ডস্ক্যাপ মোডে ওঠে.
- ❖প্রোডাক্টের ভিডিও করার সময়ে একটা শান্ত নিস্তুপ ব্যাকগ্রাউন্ড বেছে নিন.
- ❖প্রোডাক্টের ভিডিও যেন পর্যাপ্ত আলোতে তোলা হয়
- ❖ভিডিওতে প্রোডাক্টের সাথে যেহেতু আপনাকেও দেখা যাবে, তাই ভিডিও তোলার সময়ে একটু পরিপাটি এবং প্রস্তুত হয়ে বসুন. এরফলে আপনার ভিডিও টা অনেক বেশি নান্দনিক ও উপস্থাপনযোগ্য হবে.
- ❖ভিডিও তোলার সময় যেই ফোন ব্যবহার করে ভিডিওটা তোলা হচ্ছে, সেটা একটা স্থির আয়গা, বিশেষ করে একটা উঁচু প্ল্যাটফর্মে রাখুন. এর ফলে ভিডিও টা পরিষ্কার ভাবে উঠবে এবং ভিডিও তোলার সময় অবাঞ্ছিত ঝাঁকুনি এড়ানো যাবে।

প্রোডাক্ট ভিডিওগ্রাফির কিছু উদাহরণ

বিভাগ	লিংক
শাড়ী/ সালোয়ার-কামিজের পিস / ওড়না	• https://www.youtube.com/watch?v=W7RXIK-g55s • https://www.youtube.com/watch?v=cKYzcBRv4Yw • https://www.youtube.com/watch?v=XSdYkbB-fog • https://www.youtube.com/watch?v=5KcrFn_IqXk&feature=emb_logo
ব্যাগ	• https://www.youtube.com/watch?v=qOmSJiaJID4 • https://www.youtube.com/watch?v=SuBrHUfZCTI
ব্লাউজ	• https://www.youtube.com/watch?v=YoFcjgqoIgM
গয়না	• https://www.youtube.com/watch?v=Nil0k8V_csw • https://www.youtube.com/watch?v=S4EAF7czMZ4

প্রোডাক্ট ভিডিওগ্রাফির কিছু উদাহরণ

- ➢আগের স্লাইডের ভিডিওগুলো প্রত্যেকটিই আড়াআড়ি ভাবে ক্যামেরাটা ধরে, অর্থাৎ ল্যান্ডস্ক্যাপ মোডে তোলা হয়েছে। তাই চালালে, ভিডিওটা পুরো স্ক্রিন জুড়ে চলছে, যেটা নান্দনিক এবং উপস্থাপনযোগ্য। লম্বালম্বি, অর্থাৎ পোর্ট্রেট মোডে ভিডিও টা তুললে , ভিডিওর ছবিটা পুরো স্ক্রিন জুড়ে আসবে না; স্ক্রিনের দু পাশে কালো দাগ থাকবে, যেটা খুব একটা নান্দনিক নয়
- ➢পোর্ট্রেট মোড এবং ল্যান্ডস্ক্যাপ মোডে ভিডিও তোলার মধ্যে পার্থক্য বুঝতে পোর্ট্রেট মোডে তোলা কয়েকটা ভিডিও দেখে নিন:-
    - ➢ https://www.youtube.com/watch?v=jc_O6B2rwLk&feature=emb_logo
    - ➢ https://www.youtube.com/watch?v=12TBJNk3h40&feature=emb_logo

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App প্রদর্শন এবং তার বিস্তারিত আলোচনা

App প্রদর্শন এবং তার বিস্তারিত আলোচনা

- ❖ আপনাদের এতক্ষন ধরে সঠিকভাবে ছবি ও ভিডিও তোলার পদ্ধতি শেখানোর পিছনে আমাদের প্রধান উদ্দেশ্য হলো আপনাদের ডিজিটাল দোকান তৈরী করার প্রশিক্ষণ দেওয়া।
- ❖ আমরা আপনাদের জন্য একটা ওয়েবসাইট তৈরী করেছি যার নাম NCoRe (www.ncore.co.in)। NCoRe এ আমরা আপনাদের মতো আরো অন্যান্য বীরভূমের হস্তশিল্পীদের ডিজিটাল দোকান তৈরী করেছি, যেখানে প্রতিটা শিল্পীর দোকানে সেই শিল্পীর সম্বন্ধে ভিডিও, তার ব্যাপারে দু-চার কথা এবং তার তৈরী বিভিন্ন প্রোডাক্টের ছবি আছে.
- ❖ আপনারা যাতে NCoRe এ অনায়াসে ডিজিটাল দোকান খুলতে পারবেন, সেই কারণে আমরা আপনাদের জন্য একটা app তৈরী করেছি, যার মাধ্যমে আপনারা আপনাদের সম্বন্ধে তথ্য এবং আপনার প্রোডাক্টের ছবি NCoRe এ আপলোড করতে পারবেন।
- ❖ App টাকে কি করে পরিচালনা করতে হয়, সেটা জানার জন্য নিচের ভিডিও টা দেখুন:-
    - https://www.youtube.com/watch?v=G56-LXk04O8

উদ্ভাবনী পণ্য ডিজাইন এবং পণ্যের বাজার সম্পর্কে প্রশিক্ষণ

TRAINING PRESENTATION
ON
INNOVATIVE PRODUCT DESIGN & DEVELOPMENT

আলোচনার বিষয়ঃ নতুন ডিজাইনের প্রোডাক্ট ও তার নকশা

হস্তশিল্পে নতুন ডিজাইনের পণ্য তৈরি করার বা ডিজাইনের আধুনিকীকিকরনের কেন দরকার সেইটা আজ আমারা আলোচনা করব।

চিরাচরিত ডিজাইন

হাল ফ্যাশান অনুযায়ী পন্যের আধুনিকীকরণ

আলোচনার বিষয়

নতুন ডিজাইনের প্রোডাক্ট ও তার নকশা

কারণ...

প্রতিযোগিতায় টিকে থাকতে সাহায্য করে।

বাজারে নিজেদের স্বতন্ত্র পরিচয় প্রতিষ্ঠা করতে সাহায্য করে।

উদ্ভাবনী পণ্য ব্যাবসায় দ্রুত উন্নতি ঘটায়।

ক্রেতারা সাধারণত গতানুগতিক পণ্যের চেয়ে উদ্ভাবনী পণ্য কিনতে বেশি পছন্দ করে।

হস্ত শিল্পে উদ্ভাবনী পন্যের উদাহরণ

ক্রেতাদের আকর্ষণ করার মত পণ্যসম্ভার

হস্তশিল্পীদের বহুল প্রচলিত পন্যসম্ভার কে আধুনিক করতে হবে ও বাজারের চাহিদামত পন্যসম্ভার তৈরি করতে হবে

এতে পণ্যের বিক্রয়যোগ্যতা বাড়ে

বাজারের চাহিদা অনুযায়ী নতুন পন্য তৈরি করা

বাজারের চাহিদা অনুযায়ী পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

উদ্ভাবনী পন্য ডিজাইন করতে গেলে কি কি দিকে নজর দিতে হবে?

নান্দনিকতা
কার্যকারিতা
ব্যবহারকারীর সুবিধা/ প্রয়োজনীয়তা
খরচ ও মূল্য

আধুনিক নকশা উদ্ভাবন করতে গেলে কি করতে হবে?

হস্তশিল্পীদের দেশ বিদেশের বিভিন্ন নকশার কাজ দেখার সুযোগ পাওয়া দরকার
আপনার স্মার্ট ফোনের ইন্টারনেট ব্যবহার করে আপনি নতুন ফ্যাশন সম্পর্কে জানতে পারবেন

বাজারের চাহিদা অনুযায়ী পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

বাজারের চাহিদা অনুযায়ী পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

বাজারের চাহিদা অনুযায়ী পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

বাজারের চাহিদা অনুযায়ী পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

ক্রেতার চাহিদা অনুযায়ী টেরাকোটা পন্যের আধুনিকীকরণ ও নতুন প্রোডাক্টের আইডিয়া

চামড়ার ব্যাগের চিরাচরিত ডিজাইন

হাল ফ্যাশান অনুযায়ী **চামড়ার ব্যাগের শেপ ও নকশার** আধুনিকীকরণ

লেদারের নতুন ধরনের প্রয়োজনভিত্তিক পন্য

ইন্টারনেট থেকে নতুন প্রোডাক্ট তৈরি করতে শেখা যায়

কাঠের বালা তৈরির ভিডিও
https://www.youtube.com/watch?v=_EMQqyO3I_Q

কোস্টার তৈরির ভিডিও
https://www.youtube.com/watch?v=RpTtiki3KRs

কাপড়ের বালা তৈরির ভিডিও
https://youtu.be/IurUWp91ZIc

কাপড়ের দুল তৈরির ভিডিও
https://www.youtube.com/watch?v=ETTEuyvqbk4&feature=emb_err_woyt

মাটির গয়না তৈরি
https://www.youtube.com/watch?v=iCVZTG-DqlU

নকশা ডিজাইনের পরিকল্পনা ও কিছু পরামর্শ

ডিজাইন করতে গেলে কোন কোন বিষয়ের উপর নজর দেওয়া উচিত

রেখা (Line)

ফর্ম/ ভর (Form)
দৈর্ঘ্য , প্রস্থ, উচ্চতা, আয়তন

নকশা (Pattern)

আকার (Shape)

টেক্সচার (Texture)
মসৃণতা

মোটা ও বাঁকা লাইন দিয়ে তৈরি নকশা

একটি ফুল বা বিন্দু কে সোজা বা কোনকুনি বা বাঁকাচো লাইনে পর পর বসিয়ে তৈরি নকশা

ব্যাক গ্রাউন্ডে সোজা লাইন দিয়ে আলাদ মুলের নকশাটির আউটলাইন তৈরি হয়েছে

একগুচ্ছ লাইন একসাথে ব্যবহার করে ডিসাইনের ঘনত্ব বা টেক্সচার বোঝানো যায়

রঙ

রঙ এবং এর প্রকারগুলি

- মৌলিক রং
- দ্বিতীয় পর্যায়ভুক্ত রং
- তৃতীয় পর্যায়ভুক্ত রং

মৌলিক রঙ স্কিম

মৌলিক রং
PRIMARY COLORS

দ্বিতীয় পর্যায়ভুক্ত রঙ স্কিম

দ্বিতীয় পর্যায়ভুক্ত রং
SECONDARY COLORS

তৃতীয় পর্যায়ভুক্ত রঙ স্কিম

তৃতীয় পর্যায়ভুক্ত রং
Tertiary Colors

Primary + Secondary = Tertiary

অন্যান্য রঙ স্কিম

অ্যাক্রোমেটিক রঙ

নিরপেক্ষ রঙ স্কিম

মনোক্রম রঙ স্কিম

উপযুক্ত রঙ নির্বাচন

ধন্যবাদ
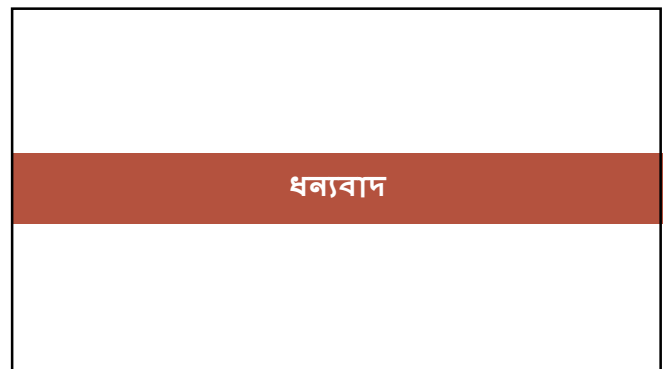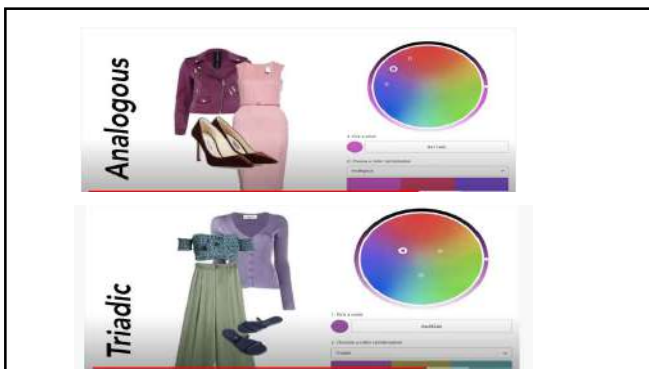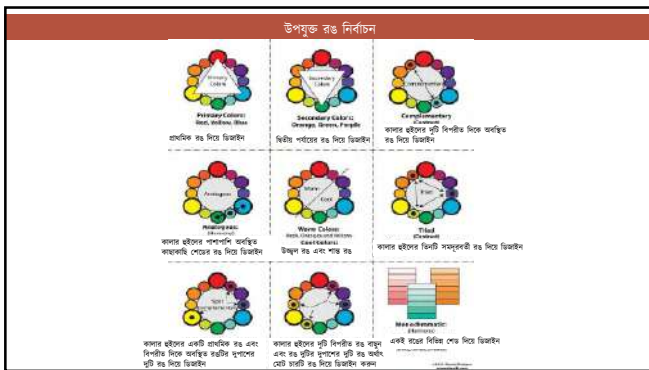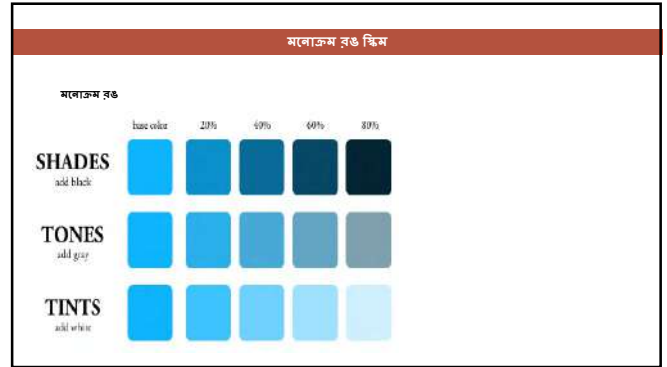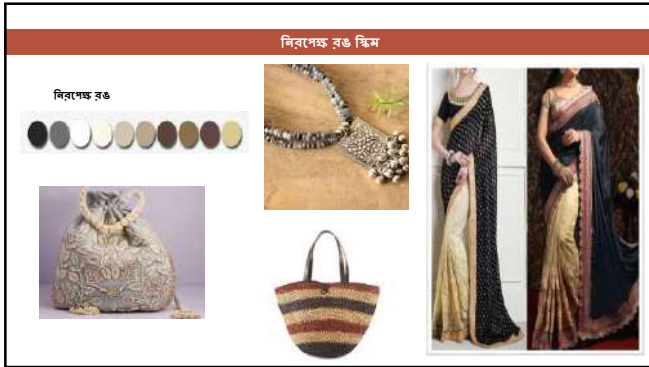
উদ্ভাবনী পণ্য ডিজাইন এবং পণ্যের বিকাশ প্রশিক্ষণ

TRAINING PRESENTATION
ON
INNOVATIVE PRODUCT DESIGN & DEVELOPMENT

আলোচনার বিষয়সমূহ

- পণ্যের ট্রেন্ড

- পণ্যের বহুমুখীকরণ

- পণ্যের প্রচার, পণ্যের উপস্থাপনা এবং পণ্যের মূল্য নির্ধারণ

হস্তশিল্প পণ্যের ট্রেন্ডের সম্পর্কে ধারণা তৈরী করা

- বাজারের চাহিদা সম্পর্কে ধারণা তৈরী করা।

- ক্রেতাদের রঙের এবং ডিজাইনের পছন্দ সম্পর্কে ধারণা তৈরী করা।

- কোন কোন পণ্যের চাহিদা ক্রেতাদের প্রয়োজন অনুযায়ী বাড়তে পারে তার সম্পর্কে ধারণা তৈরি করা।

বাজার পর্যবেক্ষণ করে, কী চলছে জানা

- বাজারে বিজনেস ম্যান/ট্রেডারদের সাথে আলোচনা করা

- বিভিন্ন ম্যাগাজিন, নিউজ পেপার ইত্যাদি পড়া

- শহরের ডিজাইনারদের সাথে যোগাযোগ রাখা

- সরকারি/ বেসরকারি এজেন্সিগুলির সাথে যোগাযোগ করে

- ফ্যাশন এবং ব্যবসায়ের প্রবণতা সম্পর্কিত বিভিন্ন সম্মেলন/প্রদর্শনীতে অংশ নেওয়া

কি কি বিষয় জানতে হবে

- নতুন পণ্য
- নতুন ডিজাইন
- নতুন চাহিদা
- ফিউশন ডিজাইন

নতুন পণ্য

https://www.youtube.com/watch?v=pFVbhfHzh70

নতুন পণ্য

নতুন ডিজাইন

নতুন ডিজাইন

https://www.youtube.com/watch?v=pEMQYIDYq90

নতুন চাহিদা

নতুন চাহিদা

ফিউশন ডিজাইন

ফিউশন ডিজাইন

setufairtrade.com

আপনি কীভাবে আপনার পণ্যগুলিকে প্রচার করতে পারেন

অফলাইন উপস্থাপনা

অনলাইন উপস্থাপনা

অফলাইন উপস্থাপনা

- ব্যক্তিগত দোকান
- জাতীয় এবং আন্তর্জাতিক এক্সপোর্ট বাজার।
- পাইকেরি বাজার।
- খুচরো বাজার।
- প্রদর্শনী

অনলাইন উপস্থাপনা

- অনলাইন বাজার।

Flipkart   amazon

- সোশ্যাল মিডিয়া যেমন ফেসবুক, ইনস্টাগ্রাম, ইউটিউব, হোয়াটসঅ্যাপ ইত্যাদি।

সঠিক ক্রেতাদের চিহ্নিতকরণ

- সঠিক পণ্যের জন্য সঠিক বয়সের ক্রেতাসমষ্টি চয়ন করতে হবে।
- দেখে নিতে হবে চিহ্নিত ক্রেতারা যেন হস্তশিল্প সম্পর্কে অবগত থাকেন।
- যে সকল ক্রেতারা হস্তশিল্পের মূল্য সম্পর্কে ধারণা রাখেন তাদের বেছে নিতে হবে।
- সঠিক পণ্যের জন্য সঠিক আয় ক্ষমতাসম্পন্ন ক্রেতাদের বেছে নিতে হবে।
- সবসময় হস্তশিল্পের প্রতি আগ্রহী ক্রেতাদের কাছে পণ্য পৌঁছে দিতে হবে।

পণ্যের মান নির্ধারণ

পণ্যের মান নির্ধারণের উপাদানসমূহ

- স্ট্যান্ডার্ড পরিমাপ চার্ট
- আকার/ ফর্ম
- ফিনিশিং
- গুণমান

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পণ্যের উপস্থাপনা - প্যাকেজিং

পণ্যের উপস্থাপনা - প্যাকেজিং

ভালো প্যাকেজিং এর উদাহরণ

https://www.youtube.com/watch?v=ge2jx80ryxU

আমাজন এ ব্যবসা করতে হলে কি ভাবে প্যাকেজিং করবেন

https://www.youtube.com/watch?v=42eMMQnUz1s

পণ্যের মূল্য নির্ধারণের জন্য প্রাথমিক ধারণা

মূল্য নির্ধারণের জন্য প্রয়োজনীয় বিষয়গলো

- কাঁচামালের দাম
- মজুরি
- প্যাকেজিং এর খরচ
- উচ্ছিষ্ট কাঁচামালের দাম
- ট্রান্সপোর্টেশন এর খরচ
- পণ্য তেরির খরচের উপরে লভ্যাংশ

ধন্যবাদ

Artisan Profiling App (Functional Flow)

[Slide-1]

[Slide-2]

Instructions for Slide-2:

1. Put general voice over like "এইবারে আপনার নাম, বয়স, ঠিকানা, জাতি ইত্যাদি প্রদান করুন"

2. Change the font style (use Kalpurush) so that it looks nice throughout the entire app

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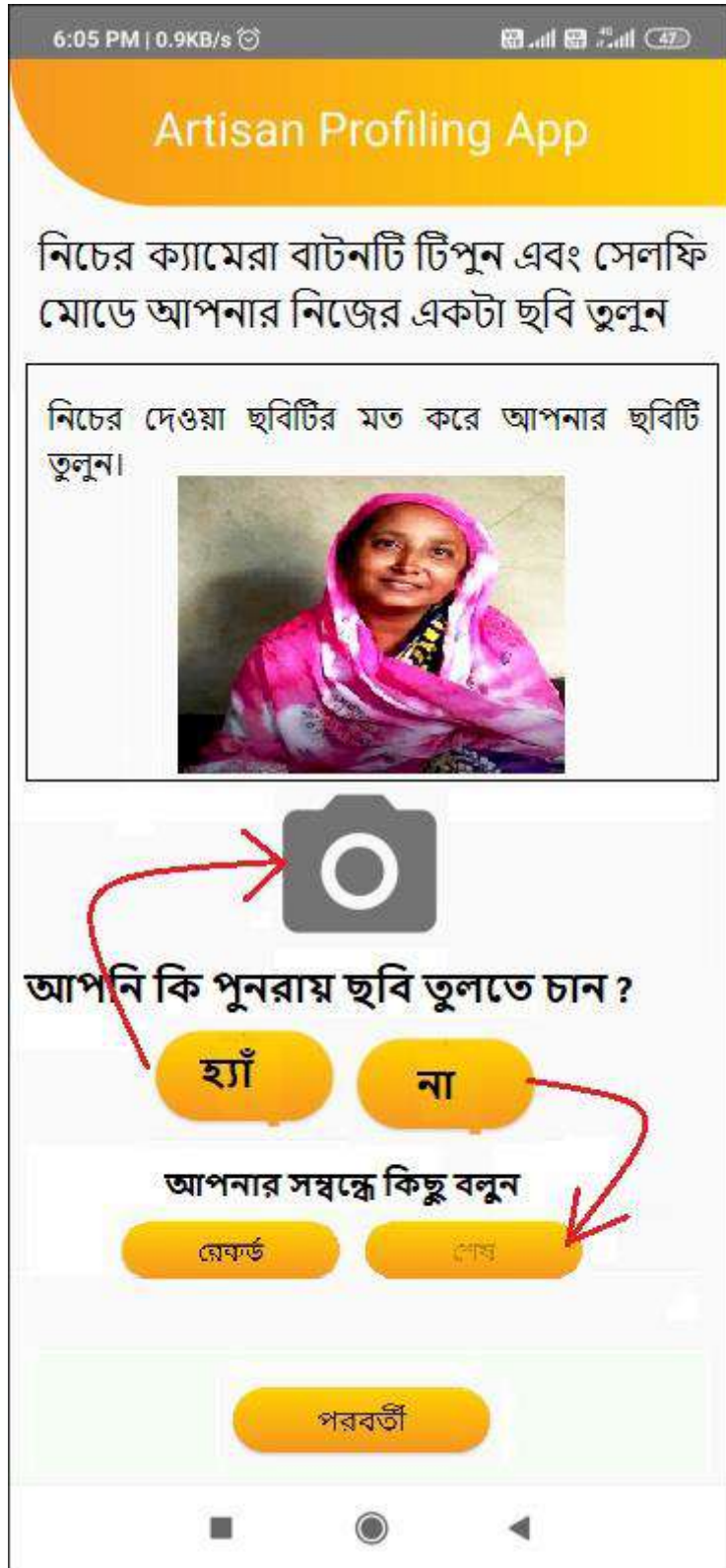
[Slide-3]

Instructions for Slide-3:
1. The demo image will be replaced by the artisan image
2. Open front camera of the mobile phone once the artisan clicks on the Camera button.

[Slide-4]

আপনার প্রোডাক্টের ছবি সুন্দরভাবে তোলার জন্য কিছু পরামর্শ

- ছবি তোলার সময় ছবির পেছনের ব্যাকগ্রাউন্ড সবসময় পরিস্কার দেওয়াল বা সাদাসিধে রাখবেন যেমন মাদুর চাটাই এসব রাখতে পারেন

- সবসময় খেয়াল রাখবেন আপনি যে প্রোডাক্ট এর ছবি তুলছেন সেটি যেন আপনার ক্যামেরার সাথে সমান্তরালভাবে থাকে

- ছবি তোলার সময় খেয়াল রাখবেন যেন আপনার প্রোডাক্টের ছবি ফটোর বেশিরভাগ অংশ জুড়ে থাকে

- ছবি তোলার সময় ক্যামেরাটি স্থির ভাবে ধরবেন

- এমনভাবে ছবিটি তুলেছেন যেন প্রোডাক্ট এর উপর পর্যাপ্ত আলো পড়ে এবং ছবিটা পরিস্কার আসে

- ছবি তোলার সময় আপনার মোবাইল ফোনটি আড়াআড়ি ভাবে ধরবেন

প্রাথমিক ধারণার জন্য নিজের ছবি গুলো লক্ষ্য করুন

পরবর্তী

[Slide-7.1]

[Slide-7.2]

6:08 PM | 6.0KB/s
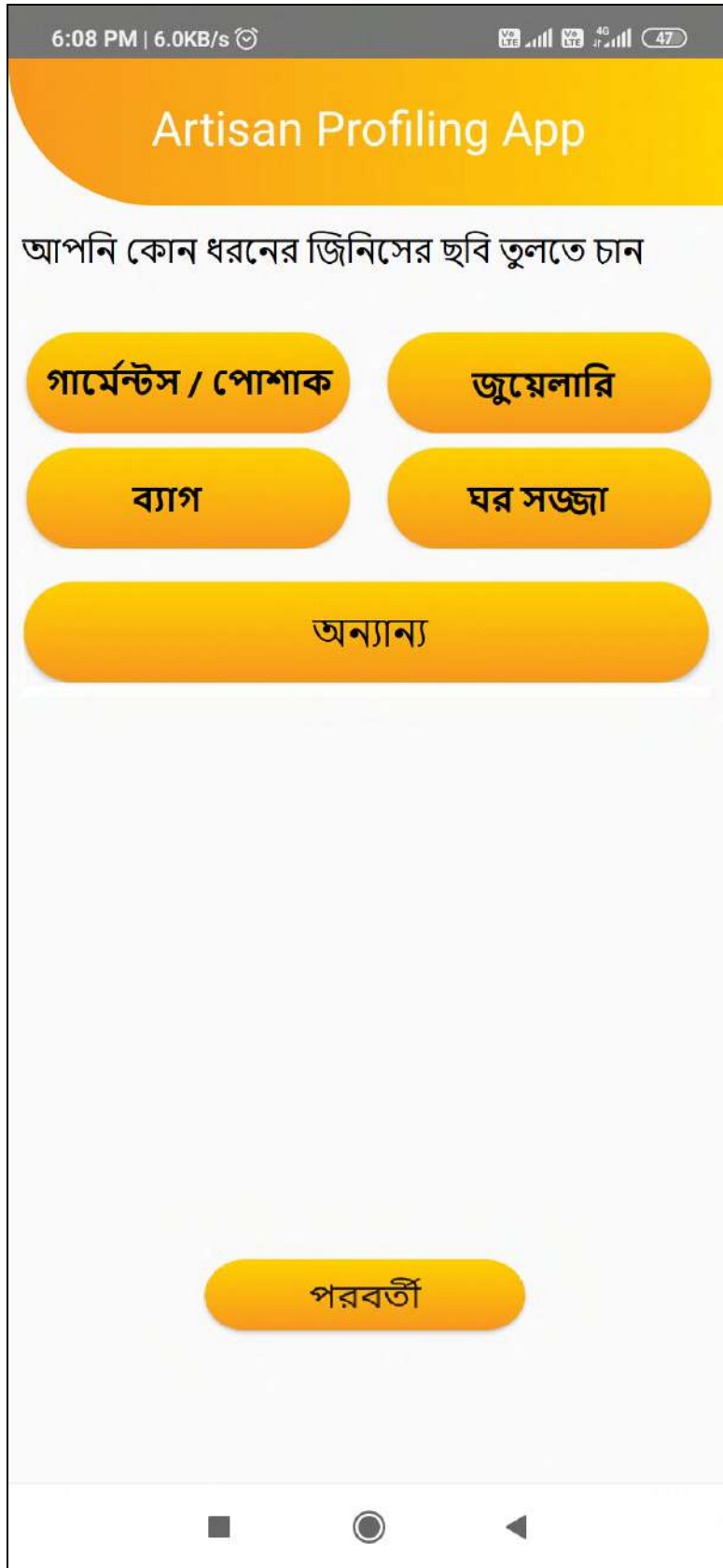
Artisan Profiling App

আপনি আপনার যে প্রোডাক্টের ছবি তুলবেন সেটি নির্বাচন করুন

স্লিং ব্যাগ	হ্যান্ড ব্যাগ
শপিং ব্যাগ	বটুয়া ব্যাগ

ওয়ালেট

অন্যান্য

পরবর্তী

[Slide-7.3]

স্লিঙ্গ ব্যাগের ছবি তোলার কিছু প্রাথমিক ধারণা

- স্লিঙ্গ ব্যাগটির একটি সম্পূর্ণ ছবি তুলুন।
- ব্যাগটির কাছ থেকে ছবি তুলুন।
- ব্যাগটির মুখটি খুলে একটি ছবি তুলুন যাতে ভেতরটা বোঝা যায়।
- ব্যাগটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিস্কার করে তুলুন।

নিচে স্লিঙ্গ ব্যাগের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
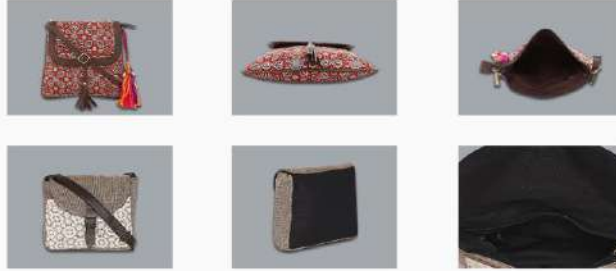
পরবর্তী

শপিং ব্যাগের ছবি তোলার কিছু প্রাথমিক ধারণা

- শপিং ব্যাগটির একটি সম্পূর্ণ ছবি তুলুন।
- ব্যাগটির কাছ থেকে ছবি তুলুন।
- ব্যাগটির মুখটি খুলে একটি ছবি তুলুন যাতে ভেতরটা বোঝা যায়।
- ব্যাগটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

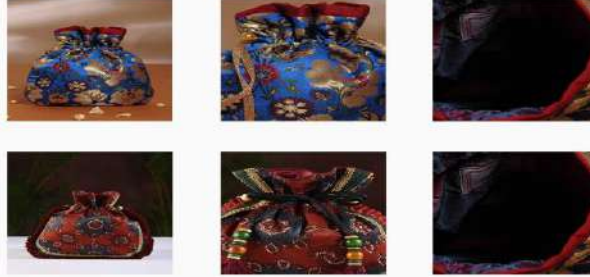## নিচে শপিং ব্যাগের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
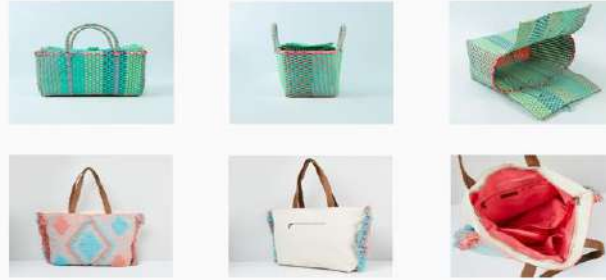
পরবর্তী

Artisan Profiling App

শালের ছবি তোলার কিছু প্রাথমিক ধারণা

- শালটির ঝুলিয়ে রেখে পুরো শালের সামনে থেকে একটি ছবি তুলুন।
- শালটির উল্টাদিকের একটি ছবি তুলুন।
- শালটি সুন্দর করে ভাঁজ করে কাছ থেকে একটি ছবি তুলুন।
- শালের ওপরে কারুকার্যের খুব কাছ থেকে একটি ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে শালের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

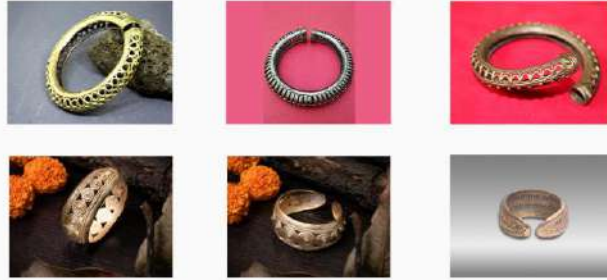পরবর্তী
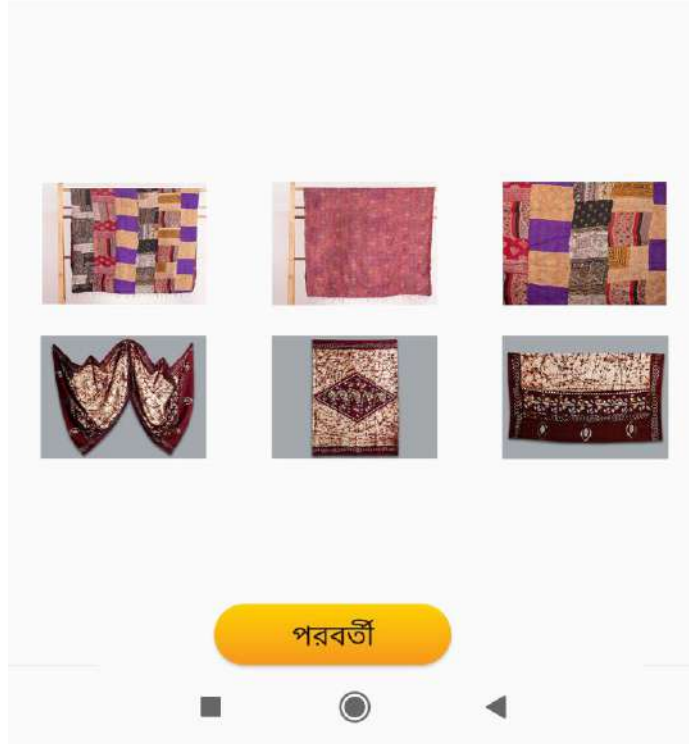
Artisan Profiling App

সালোয়ার কামিজ এর ছবি তোলার কিছু প্রাথমিক ধারণা

- সালোয়ার কামিজ টি সমতল মেঝেতে রেখে সামনে থেকে একটি ছবি তুলুন।
- সালোয়ার কামিজ এর গলার কাছের একটি ছবি তুলুন।
- সালোয়ার কামিজ টি সুন্দর করে ভাঁজ করে কাছ থেকে একটি ছবি তুলুন।
- সালোয়ার কামিজ এর ওপরে কারুকার্যের খুব কাছ থেকে একটি ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে সালোয়ার কামিজ এর কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
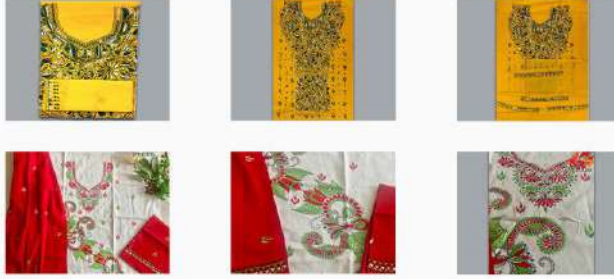
পরবর্তী

পাঞ্জাবির ছবি তোলার কিছু প্রাথমিক ধারণা

- পঞ্জাবিটি ঝুলিয়ে রেখে পুরো পাঞ্জাবির সামনে থেকে একটি ছবি তুলুন।
- পঞ্জাবিটির গলার কাছের একটি ছবি তুলুন।
- পঞ্জাবিটি সুন্দর করে ভাঁজ করে কাছ থেকে একটি ছবি তুলুন।
- পাঞ্জাবির ওপরে কারুকার্যের খুব কাছ থেকে একটি ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে পাঞ্জাবির এর কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

Artisan Profiling App

হারের ছবি তোলার কিছু প্রাথমিক ধারণা

- হারটির ছবি তোলার সময় ফুল, পাতা ইত্যাদি আনুসঙ্গিক সাজসজ্জার সামগ্রী ব্যাবহার করুন।
- হারটির ছবির এমন অ্যাঙ্গেল থেকে তুলুন যাতে সব কটি গয়না এবং তাদের ওপরের কারুকার্য স্পষ্ট বোঝা যায়।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে হারের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

লাইফস্টাইল প্রোডাক্টের ছবি তোলার কিছু প্রাথমিক ধারণা

- লাইফস্টাইল প্রোডাক্টের একটি সম্পূর্ণ ছবি তুলুন।
- লাইফস্টাইল প্রোডাক্টের কাছ থেকে ছবি তুলুন।
- লাইফস্টাইল প্রোডাক্টের বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে লাইফস্টাইল প্রোডাক্টের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
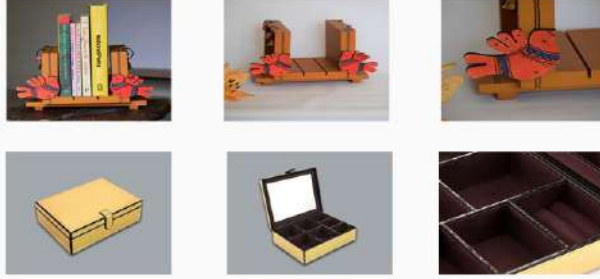
পরবর্তী

Artisan Profiling App

গয়নার সেটের ছবি তোলার কিছু প্রাথমিক ধারণা

- গয়নার সেটটির ছবি তোলার সময় ফুল, পাতা ইত্যাদি আনুসাঙ্গিক সাজসজ্জার সামগ্রী ব্যাবহার করুন।
- গয়নার সেটটির ছবির এমন অ্যাঙ্গেল থেকে তুলুন যাতে সব কটি গয়না এবং তাদের ওপরের কারুকার্য স্পষ্ট বোঝা যায়।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে গয়নার সেটেরকয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

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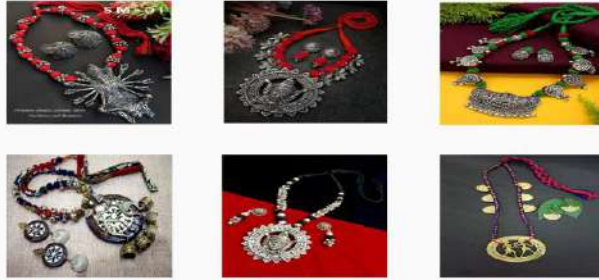
Artisan Profiling App

ফুলদানির ছবি তোলার কিছু প্রাথমিক ধারণা

- ফুলদানির একটি সম্পূর্ণ ছবি তুলুন।
- ফুলদানির কাছ থেকে ছবি তুলুন।
- ফুলদানির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে ফুলদানির কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
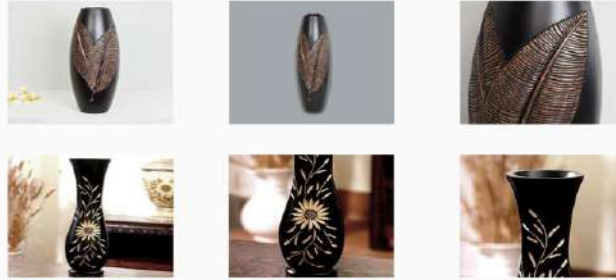
পরবর্তী

Artisan Profiling App

প্রাত্যহিক গৃহে ব্যাবহৃত প্রোডাক্টের ছবি তোলার কিছু প্রাথমিক ধারণা

- প্রোডাক্টের সেটটির অথবা প্রোডাক্টটির একটি সম্পূর্ণ ছবি তুলুন।
- প্রোডাক্টের সেটটির অথবা প্রোডাক্টটির কাছ থেকে ছবি তুলুন।
- প্রোডাক্টের সেটটির অথবা প্রোডাক্টটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে প্রাত্যহিক গৃহে ব্যাবহৃত প্রোডাক্টের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
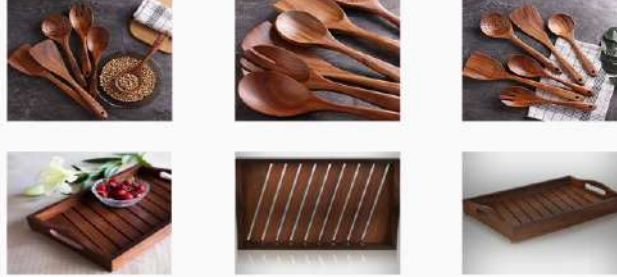
পরবর্তী

Home Appliances

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Artisan Profiling App

হ্যান্ড ব্যাগের ছবি তোলার কিছু প্রাথমিক ধারণা

- হ্যান্ড ব্যাগটির একটি সম্পূর্ণ ছবি তুলুন।
- ব্যাগটির কাছ থেকে ছবি তুলুন।
- ব্যাগটির মুখটি খুলে একটি ছবি তুলুন যাতে ভেতরটা বোঝা যায়।
- ব্যাগটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে হ্যান্ড ব্যাগের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

Artisan Profiling App

কানের দুলের ছবি তোলার কিছু প্রাথমিক ধারণা

- কানের দুলটি বিভিন্ন ব্যাকগ্রাউন্ডে ঝুলিয়ে ছবি তুলুন।
- কানের দুলটির কাছ থেকে ছবিটি তুলুন।
- দুটি দুল বিভিন্ন উচ্চতায় সাজিয়ে নিয়ে ছবিটি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে কানের দুলের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

Artisan Profiling App

বটুয়া ব্যাগের ছবি তোলার কিছু প্রাথমিক ধারণা

- বটুয়া ব্যাগটির একটি সম্পূর্ণ ছবি তুলুন।
- ব্যাগটির কাছ থেকে ছবি তুলুন।
- ব্যাগটির মুখটি খুলে একটি ছবি তুলুন যাতে ভেতরটা বোঝা যায়।
- ব্যাগটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে বটুয়া ব্যাগের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

ব্যাঙ্গেলের ছবি তোলার কিছু প্রাথমিক ধারণা

- ব্যাঙ্গেলটির বিভিন্ন অ্যাঙ্গেল এর ছবি তুলুন।
- ব্যাঙ্গেলটির ছর্বিটি আরও আকর্ষণীয় করার জন্য ফুল, পাতা ইত্যাদি ব্যাবহার করুন।
- ব্যাঙ্গেলের ওপরে কারুকার্যের খুব কাছ থেকে একটি ছবি তুলুন।
- ছর্বিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছর্বি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে ব্যাঙ্গেলের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

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Artisan Profiling App

ওয়ালেটের ছবি তোলার কিছু প্রাথমিক ধারণা

- ওয়ালেটটির একটি সম্পূর্ণ ছবি তুলুন।
- ব্যাগটির কাছ থেকে ছবি তুলুন।
- ব্যাগটির মুখটি খুলে একটি ছবি তুলুন যাতে ভেতরটা বোঝা যায়।
- ব্যাগটির বিভিন্ন দিক থেকে ছবি তুলুন।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে ওয়ালেটের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
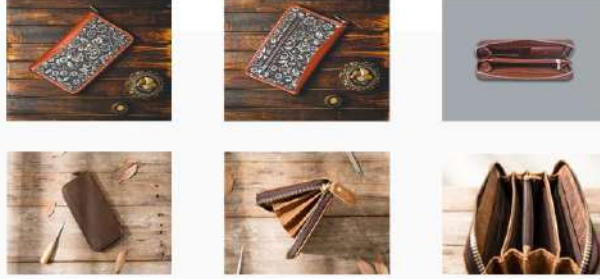
পরবর্তী

Artisan Profiling App

শাড়ির ছবি তোলার কিছু প্রাথমিক পরামর্শ

- পুরো শাড়িটা নিয়ে একটা ছবি তুলুন
- শাড়ির উপরে ডিজাইনের একটা ছবি তুলুন
- শাড়ির আঁচলের ডিজাইনের সামনে থেকে ছবি তুলুন
- শাড়ির ব্লাউজ পিস থাকলে তার একটা ছবি দিন
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলবেন
- ছবি গুলো ঠিকঠাক আলোতে রেখে তুলবেন
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে
- ছবি তোলার সময় আপনার মোবাইল ফোনটি আড়াআড়ি ভাবে ধরবেন

নিচে শাড়ির কয়েকটা স্যাম্পল ছবি দেখুন

পরবর্তী

[Slide-8.1]

[Slide-8.4]

[Slide-8.5]

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Artisan Profiling App

ব্লাউস পিস এর ছবি তোলার জন্য কিছু প্রাথমিক পরামর্শ

- পুরো ব্লাউস পিসটির ছবি তুলুন
- ব্লাউস পিস এর ওপর আঁকা বা নকশার একটি কাছ থেকে ছবি তুলুন
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ডটা হালকা রঙের থাকবে
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন
- ছবি তোলার সময় আপনার মোবাইল ফোনটি আড়াআড়ি ভাবে ধরবেন

নিচে ব্লাউস পিস এর কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

[Slide-8.8]

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[Slide-8.9]

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[Slide-8.12]

[Slide-8.13]

[Slide-8.14]

Artisan Profiling App

রুমালের ছবি তোলার জন্য কিছু প্রাথমিক পরামর্শ

- পুরো রুমালটির ছবি তুলুন
- রুমালটির বিভিন্ন দিক থেকে ছবি তুলুন
- রুমাল এর ওপর আঁকা বা নকশার একটি কাছ থেকে ছবি তুলুন
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ডটা হালকা রঙের থাকবে
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন
- ছবি তোলার সময় আপনার মোবাইল ফোনটি আড়াআড়ি ভাবে ধরবেন

নিচে **রুমাল** এর কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন

পরবর্তী

[Slide-8.15]

227
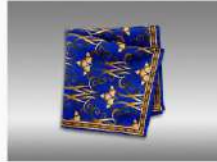
Artisan Profiling App

অন্যান্য প্রোডাক্টের ছবি তোলার কিছু প্রাথমিক ধারণা

- অন্যান্য প্রোডাক্টের ছবিটি বিভিন্ন অ্যাঙ্গেলে তুলুন।
- ছবিটি তোলার সময় প্রোডাক্টের সাথে ফুল, পাতা ইত্যাদি আনুসঙ্গিক সাজসজ্জার সামগ্রী ব্যাবহার করার চেষ্টা করুন।
- এমন ভাবে ছবিটি তুলুন যাতে প্রোডাক্টটির মূল বিশেষত্ব গুলি ছবিতে ধরা পড়ে।
- ছবিগুলা ঠিকঠাক আলোতে রেখে তুলবেন।
- সবুজ পাতা বা ফুল ইত্যাদি সামগ্রী ব্যাবহার করা যেতে পারে।
- ছবিগুলো তোলার সময় ব্যাকগ্রাউন্ড টা হালকা রঙের থাকবে।
- ছবি তোলার সময় ফোন টি আড়াআড়ি ভাবে ধরুন।
- ছবিগুলো সোজা এবং পরিষ্কার করে তুলুন।

নিচে অন্যান্য প্রোডাক্টের কয়েকটি স্যাম্পল ছবি লক্ষ্য করুন
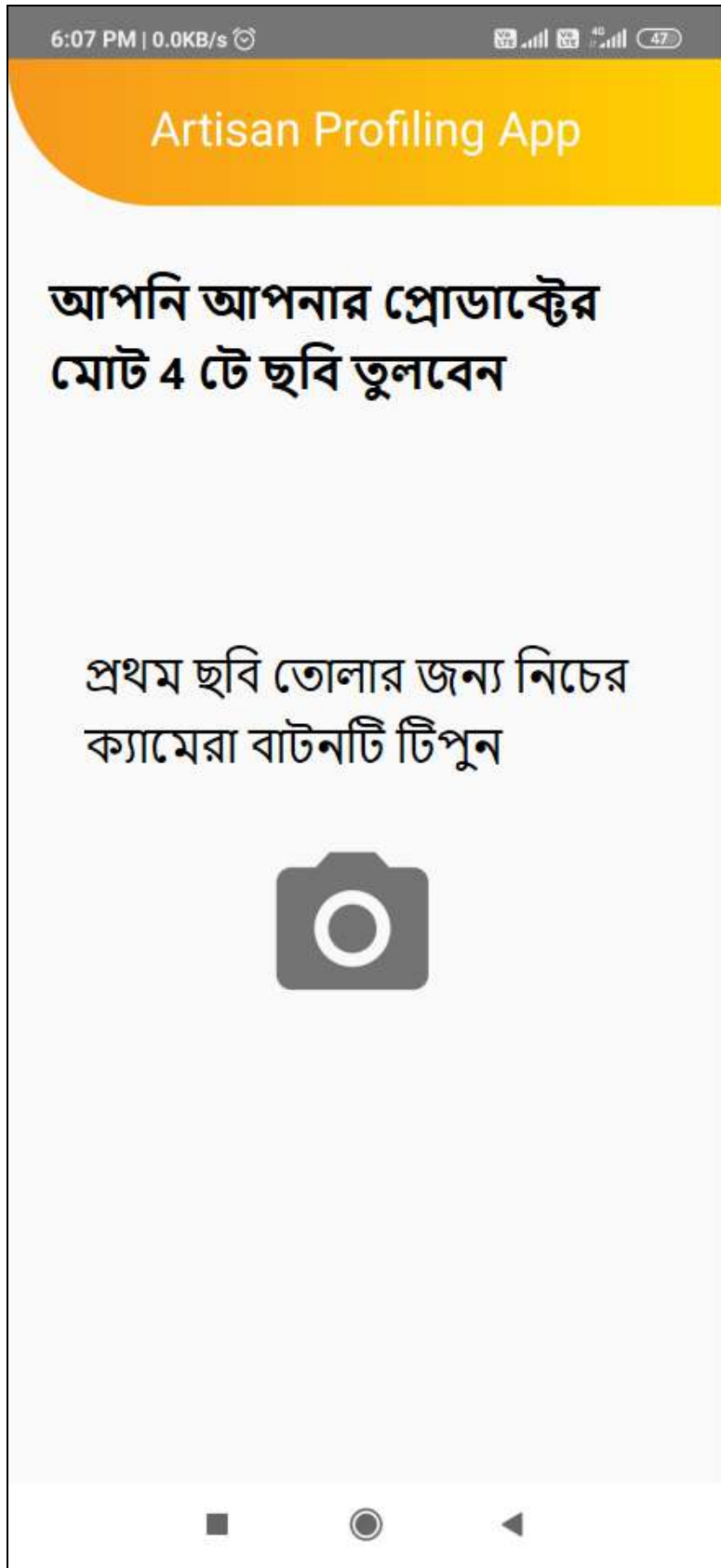
পরবর্তী

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[Slide-9]

[Slide-10]

[Slide-11]

[Slide-12]

232
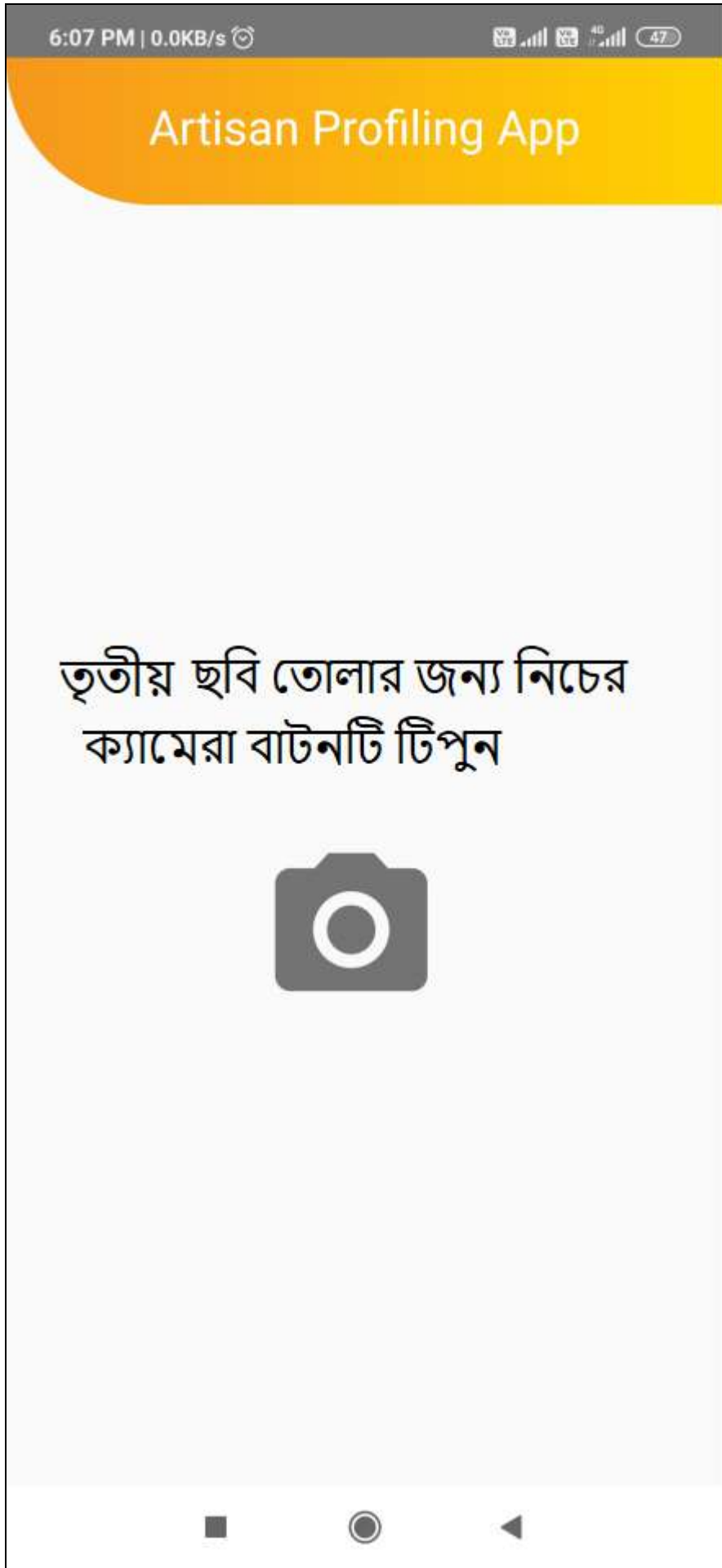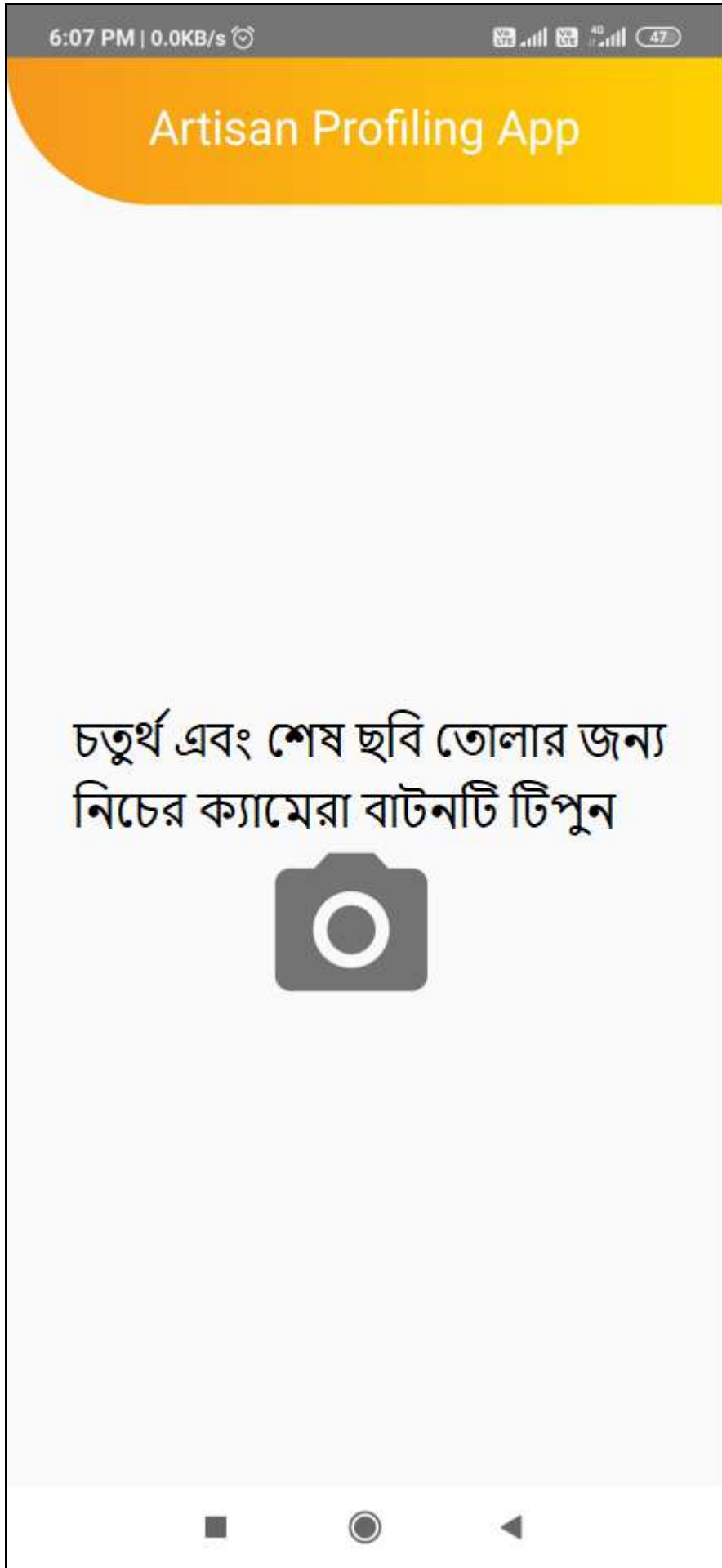
Artisan Profiling App

আপনি আপনার শাড়ির ছবির কিছু বিস্তারিত বিবরণ আমাদেরকে জানান জানান

শিল্পকর্ম

- ⭕ এপ্লিকের কাজ ⭕ বাঁশের কাজ
- ⭕ বাটিকের কাজ ⭕ কাঁথাস্টিচ
- ⭕ লেদার

ক্যাটাগরি

- ⭕ কাঁথা সেলাই ⭕ খেশ ⭕ হ্যান্ডলুম ⭕ বাটিক/ হ্যান্ড পেইন্টিং
- ⭕ অন্যান্য

ফ্যাব্রিক

- ⭕ সুতি ⭕ তসর ⭕ আর্ট সিল্ক ⭕ বেঙ্গালুরু সিল্ক ⭕ খাঁটি সিল্ক
- ⭕ ভাগলপুর সিল্ক ⭕ অন্যান্য

মাপ

- ⭕ 5.5 মিটার ⭕ 6.5 মিটার

ব্লাউজ পিস

- ⭕ হ্যাঁ ⭕ না

পরবর্তী

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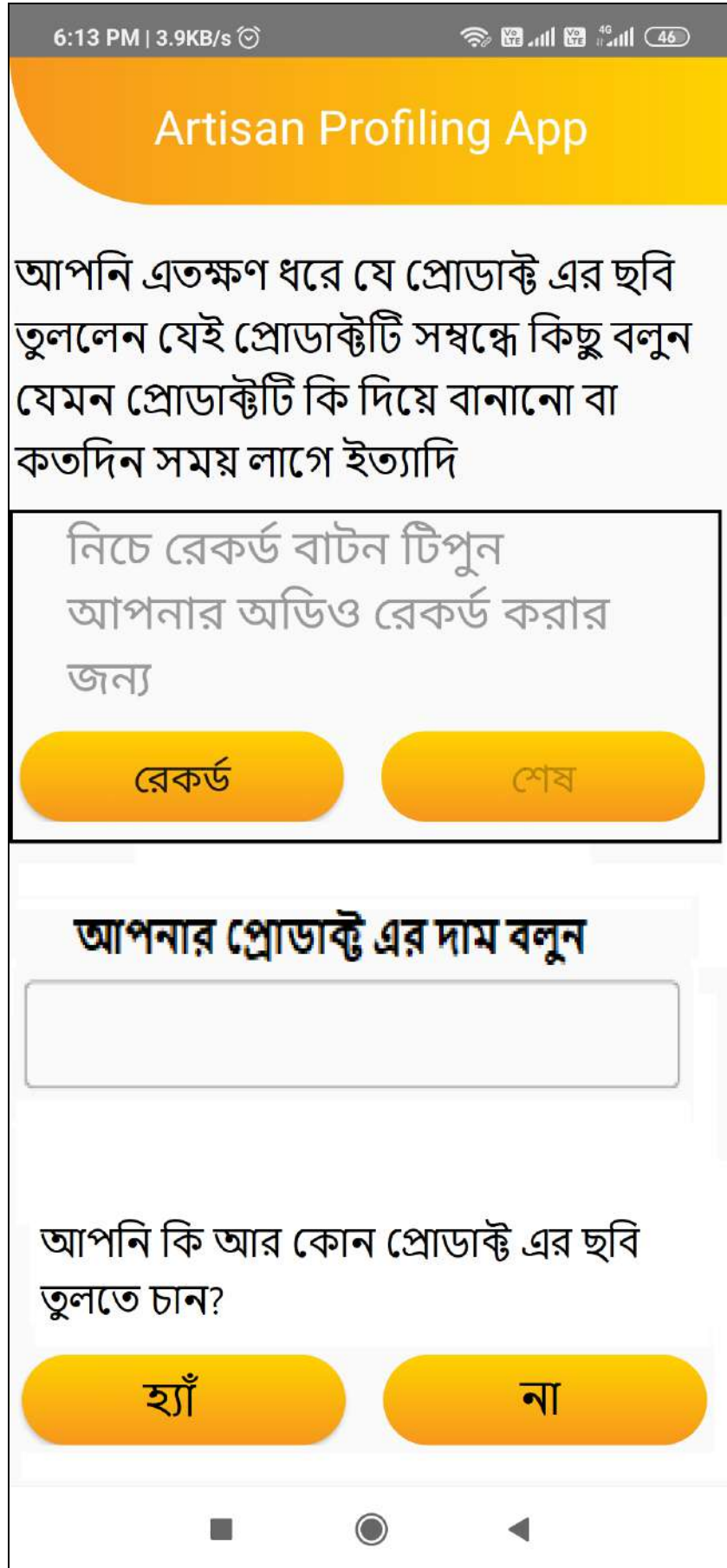
[Slide-13]

Instructions for Slide-13:
1. If Yes then GOTO Slide-7 else GOTO Slide-14

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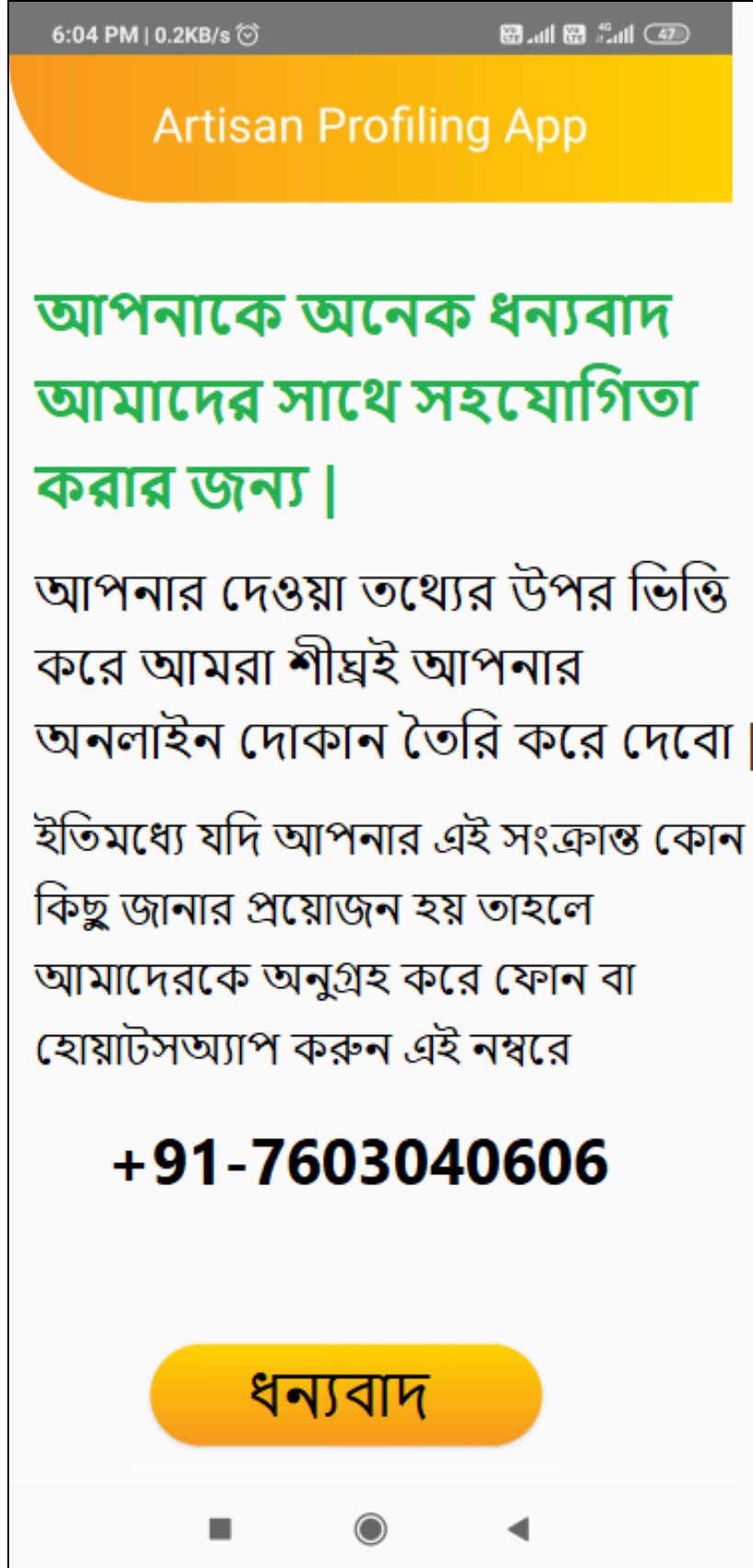
Instructions for Slide-14:

After clicking "ধন্যবাদ" button, the app will closes automatically.

[Slide-16: Artisan Dashboard]

Instructions for Slide-15:

1. Once Artisan reopens the app, it will directly redirects to dashboard of the App.
2. If artisan clicks on the "আমার প্রোফাইল দেখবো" then GOTO Slide-17
3. If artisan clicks on the "আমার তথ্য আপডেট করব" then GOTO Slide-18

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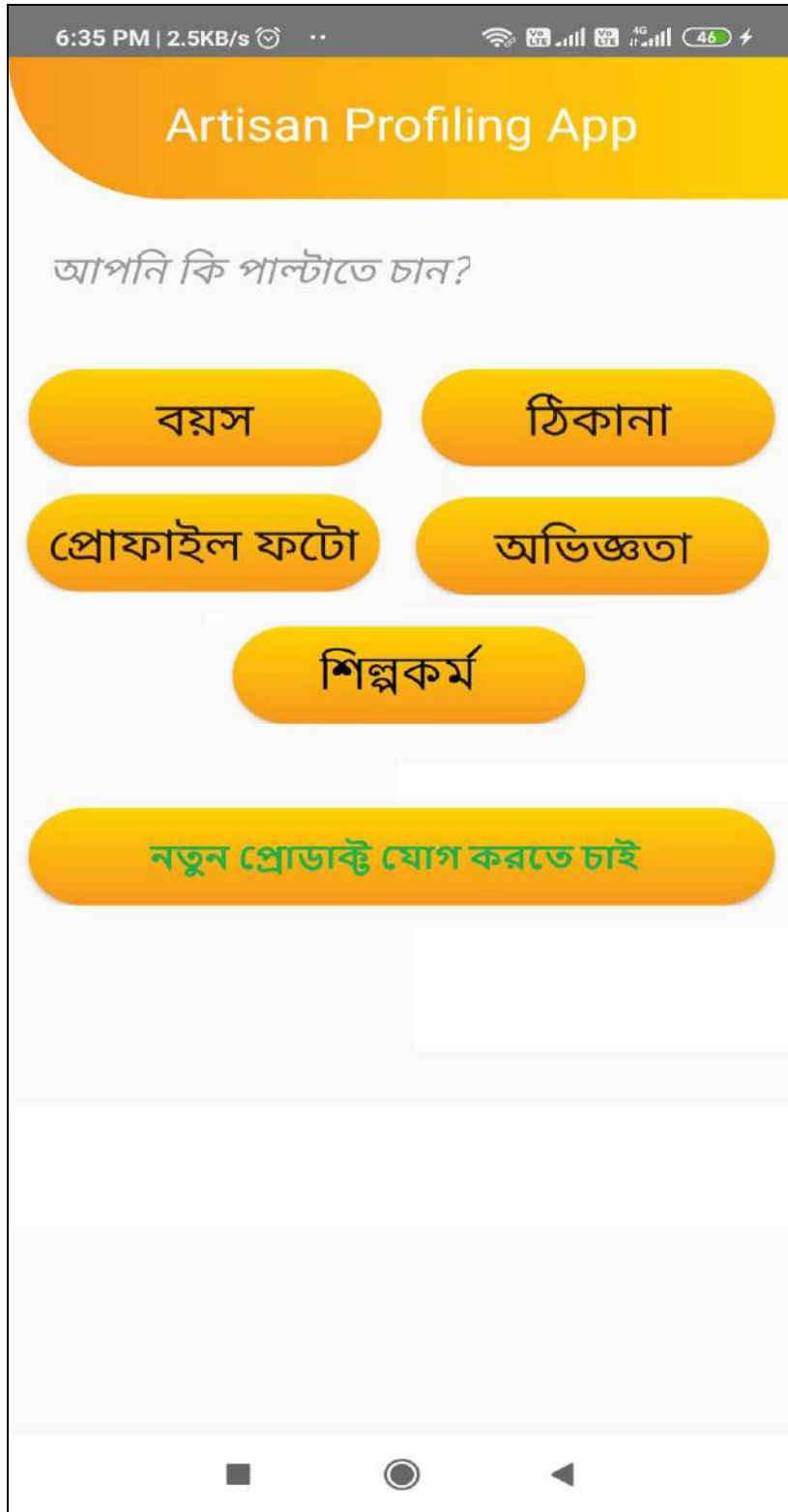
Instructions for Slide-18:

1. If artisan clicks on the "**নতুন প্রোডাক্ট যোগ করতে চাই**" then GOTO Slide-7

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