

BASELINE STUDY ON SMARTPUR

Linking the SDGs parameters with Smart village in Alwar, Rajasthan





INTRODUCTION

The Smartpur project aims to create a digitally integrated sustainable rural ecosystem. It works towards this objective through a rural entrepreneurship model by integrating technology in existing uses and practices across six pillars: education, health, livelihoods, financial inclusion, governance, and entertainment. The programme is implemented across 10 districts in 7 states: Haryana (Nuh), Uttar Pradesh (Barabanki and Ghazipur), Rajasthan (Alwar and Bharatpur), Telangana (Yadadri Budanagiri), Andhra Pradesh (Visakhapatnam Parawada Mandal and Prakasam), Karnataka (Chamrajnagar), and Tamil Nadu (Kanchipuram). This study evaluates the project pillars across 3 broad thematic areas within its ecosystem of work: Access to information, access to services, patterns of digital use.

This particular study relates to the Alwar district in Rajasthan and its 10 spoke centres namely:

1. Ghasoli (Hub),
2. Dongra,
3. Chachaka ,
4. Khanpur,
5. Medabas,
6. Mirzapur,
7. Musakera ,
8. Nayana,
9. Motuka ,
10. Bidarka,

Key findings

- Common access points like cyber cafes and common service are significant in areas of low connectivity
- ICTs rank the lowest in terms of access to information and services
- Despite Ghasoli being the Hub, Ismailpur has the highest smartphone penetration with greater access to services and higher levels of engagement
- Relevant stakeholder play an important role within their respective access to information whether it be school/ college for education, ANM/ health staff for Health, bank officials for financial inclusion
- Levels of digital literacy and digital engagement mirror each other
- Digital financial engagement with individual services are higher than engagement with the entire digital financial ecosystem
- There are substantial gaps between desirability and availability of skills training with the highest being for financial literacy and entrepreneurship skills training at 7% and 4% each respectively
- Training in ICT skills rank the lowest within rural capability development, highlighting a possibility that ICT skills are not viewed as important livelihood skills

Socio-economic and infrastructural context

The survey was done in 8 villages of the Kishangar bas block in the Alwar district of Rajasthan. Out of 365 respondents surveyed, 166 were male (46%), 197 were female (54%), and 2 were transgender (< 1%). Most of the respondents (38%) are in the age group of 31-45 years, followed by 37% who are in the category of 15-30 years and lastly 19% who are in the age group of 46-60 years. Only 6% of the total respondents were 61-75 years of age.

Nearly 37% of the respondents were within the age range of 31-45 while 36.7% were within the age range of 15-30 and 19% were within the age range of 46-60 with the remaining belonging to 61-75 (6%) and above 76 age range (less than 1%).

More than half of the respondents (52%) were without even the basic primary education, 75% of this number was minorities belonging to Other Backward Caste (OBC) category and 63% were OBC minority women highlighting the high degree of intersectional marginalization. Moreover, 81% of those without even basic formal primary education (comprising 42.1% of the total respondents) are over the age of 30 and above, indicating high levels of adult illiteracy. Exclusionary barriers on access to education acts an indicator for entrenching the vicious cycle of poverty with 69.56% of those being illiterate or having primary education had their monthly income equal to and below Rs. 6000.

35% and 20% are daily wagers and farmers respectively. Out of the total number of 197 female respondents 69% are housewives comprising 37% of the total. Further, 15% and 10.6% of the female respondents are employed as daily wagers and farmers respectively. 62.7% of the respondents earn between Rs. 1000 – 5000. There were only 20 (5.4%) respondents who have monthly income equal to or above Rs. 20,000.

Though 81% responded to having electricity, the availability of electricity is patchy and available for only certain hours within a given day. Of those having access to electricity, 40% respondents has its supply for 6 to 8 hours, 39% for 12 hours, 5% for 2-4 hours, with 16% having it for 24 hours. This can be because electricity in Alwar comes in two phases during the day with a stronger stream current for a certain portion of the day and a weaker stream for the other. The latter phase is not conducive for running heavy electrical machinery like farm motors and even household electrical appliances like lights also glow dim.

With regard to the availability of photocopying facility, about 79.4% of the respondents have to travel more than 3 km to get this facility whereas only 15.8% avail this service within 1 km. Among those availing this service within 1 km, a majority, around 86.2%, belongs to Ismailpur and the remaining belong to Medabas and Ghansoli. Moreover, among those travelling 3 km for Xerox, around 33.1% of the respondents were daily wagers and 44.1% were housewives where imputed costs, like travelling cost and loss of wages of daily wager, would further go against the affordability factor.

ICT Uses and Practices

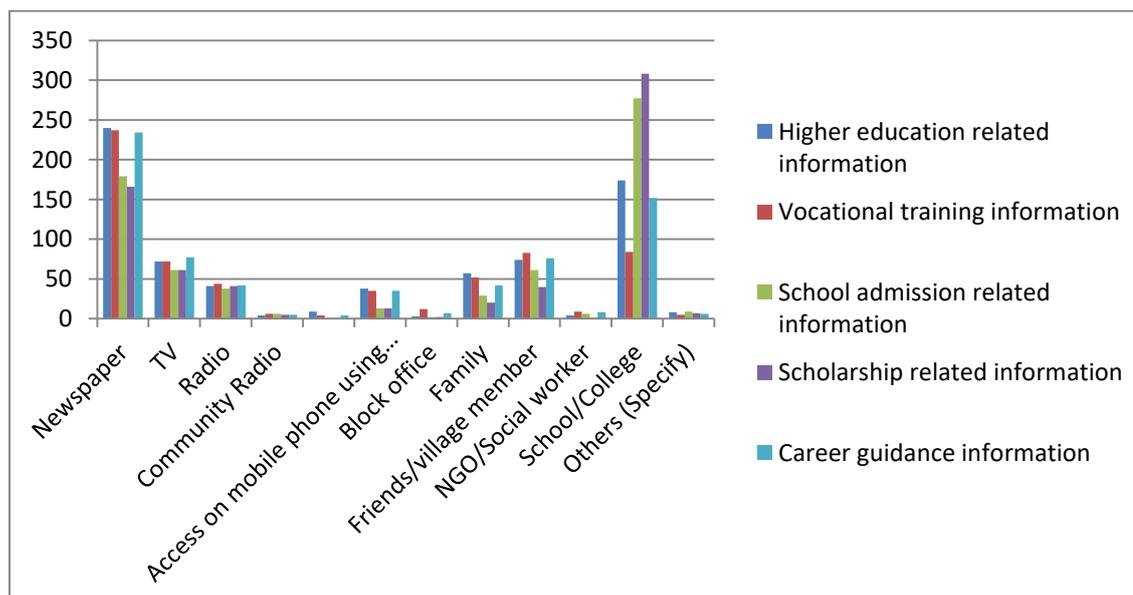
Smartphone penetration stands at 32% with 78% owning basic phones. Ismailpur has the highest smartphone penetration standing at 25% followed by Mirzapur at 24%, Medabas at 16%, and Khanpur Mewan & Bidarka at 15% each. Out of those owning basic phone 67% of respondents have monthly income below Rs. 6000 and 57% of 287 were farmers or daily wagers. Calling remains the primary function for which mobile phones are used followed by Text/ SMS and social networking. Out of the respondents who have memory cards, it was primarily used for storing entertainment content like songs, movies/ videos, and photos. An overwhelming 96% responded to having no internet connectivity. Among the 245 respondents with no smartphones, majorly about 244 respondents have no internet connectivity. Among those having internet connectivity, almost 57% have Jio connections; the next preferred connections are Idea and BSNL. Vodafone has 7% subscriber share. Reliance Jio Infocom Ltd was the first telecom operator in the country to get a unified license for all 22 service areas in the country with discounted lease on 4000 BSNL mobile tower infrastructure.

Out of the 89 respondents who have a prepaid or postpaid connection, around 41% of the respondents found the connection quality satisfactory, followed by 37% respondents who said they find it bad. While only 21% found the quality of the connection Good.

Access to information

Education:

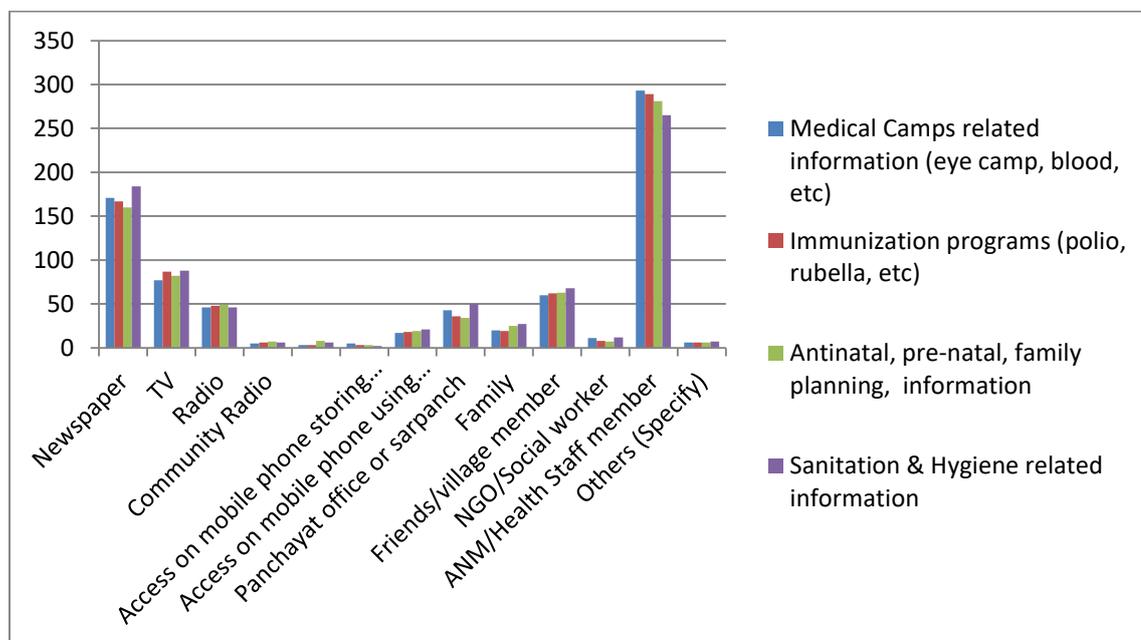
Newspapers are the highest source of information across all education related information categories except information related to school admission and scholarships in which schools/colleges rank the highest. Overall, Newspapers and Schools/Colleges rank as the first and second sources of information respectively. Comparing across information categories with Newspapers and Schools/Colleges as a source of access to information, Newspapers are more likely to be the source for higher education related information than scholarship related information while schools/colleges are more likely to be the source of scholarship related information compared to information on vocational training, on which information category it ranks below TV, Family and Friends/ Village members as a source of information. Access to information on mobile phone through SMS and internet rank the lowest among bottom four along with community radio, block office, and NGO/ Social Worker as a source of information. However, among the bottom five sources of information, access to information via mobile phone ranks the highest overall outranking the other four across all information categories.



Health:

With regard to access to information related to health, ANM/ Health Staff rank as the highest source of information followed by Newspapers. Though ANM/ Health Staff rank high across all information categories, they are more likely to be the source of local area information like those related to medical camps, immunization programs, and ante-natal/ pre-natal/ family planning information rather than information on sanitation and hygiene. There are limited intra-category variation within given sources of access to health information. Given the importance of personal network within this intimate information category, it is important to note that Friends/ Village Members rank higher than Family as a source of

information across all information categories. Access to information via mobile phones, whether through SMS or video content storage, or internet, rank among the bottom five as a source of information along with Community Radio and NGO/ Social Worker. This underscores the importance of local health staff as an important stakeholder in facilitating access to local health information and services.

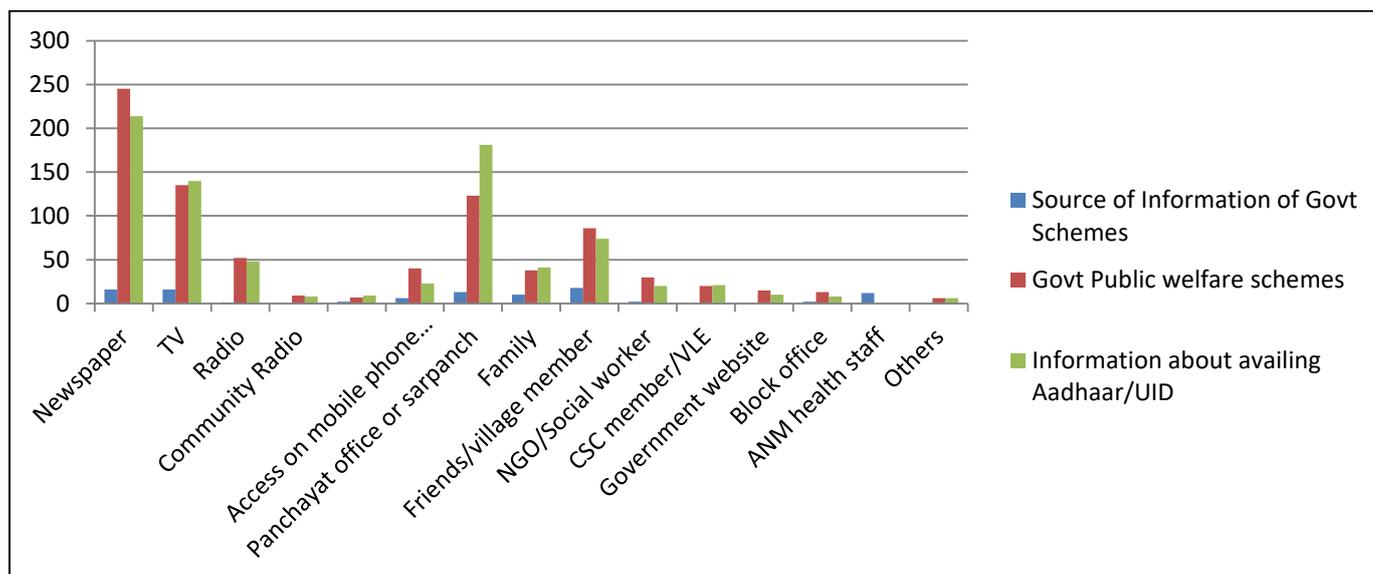


Governance:

Out of 365 people only 8% people are aware of any social protection schemes. Out of the 28 respondents who are aware of government schemes, majority get the information from newspaper (19%) and television (19%). Though ANM / Health staffs rank as highest source of health information, they rank below mass media like newspaper and TV as a source of information on health related social protection schemes.

Majority of the people receive information related to government public welfare scheme (like pensions, PMAY, JSY etc.) and Aadhaar/ UID from newspaper. Television also has a significant share of 37% for public related information and 38% for aadhaar/UID. Mobile phones through SMS as well as Community Radio have the lowest contribution. Panchayat office has a 49% share in providing information but this can be seen only with respect to aadhaar/UID related information. This highlights the important role that Panchayat, as a local governance unit, has within providing information on social protection and entitlements.

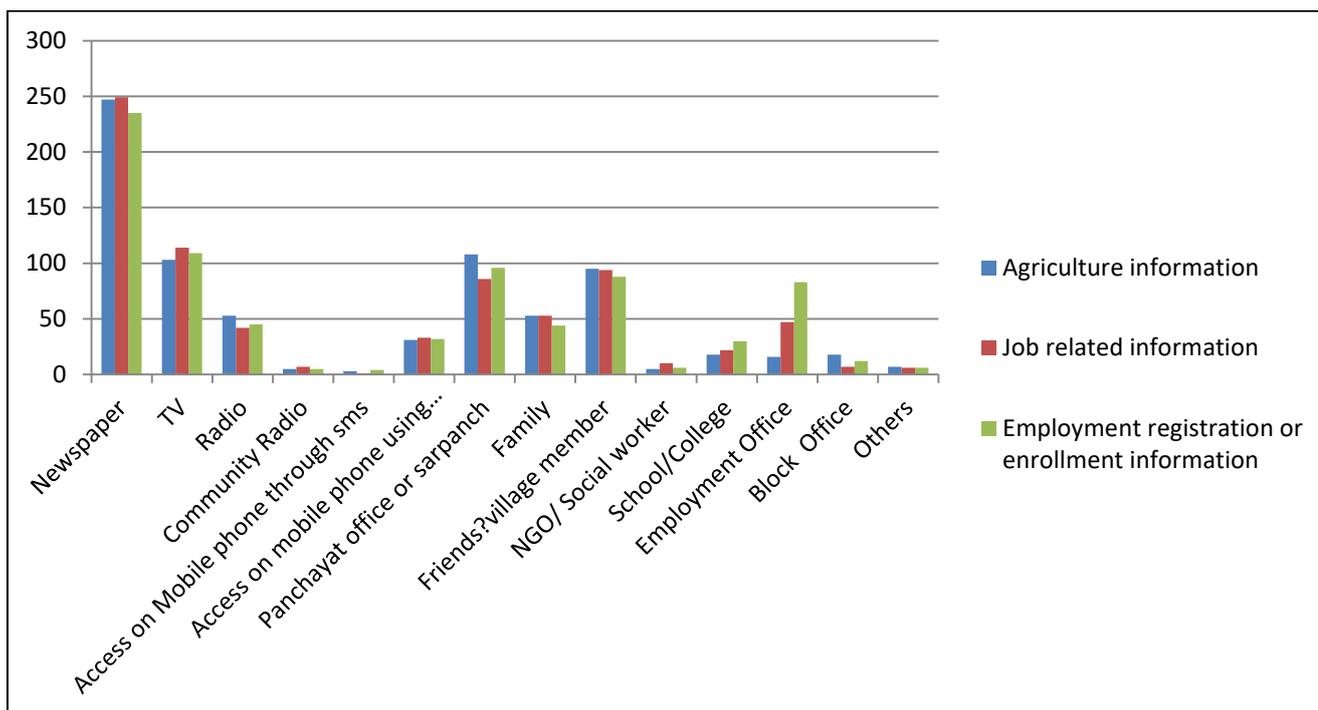
For information related to health schemes the highly used source is ANM/Health Staff member followed by Newspaper. Access through SMS, Phone Storage and internet is very low. NGO/Social Worker has the least contribution and Community Radio also have a minimal role in providing information regarding health schemes.



Livelihoods:

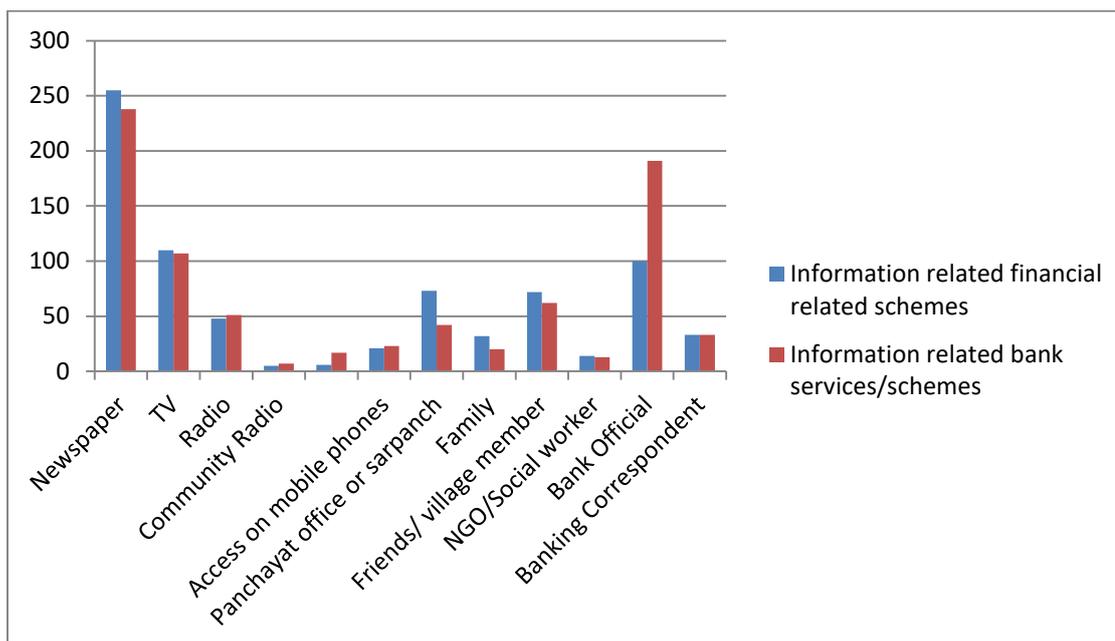
Newspapers, TV, Panchayat Office and Village and friends are the most sought out sources for accessing information related to livelihoods. Amongst them, newspapers rank the highest for all information categories remains the widely used medium to access information regarding agriculture, jobs and employments, although it ranks the highest for seeking job related information.

However, comparative intra-category analysis shows that TV is more likely to be the source of job related information. The employment information is again sought from Panchayat and Employment office. As far as mobile is concerned, their use remains fairly low across all the sources. Access to information via mobile phone through internet is mostly used for availing job related information (9%) followed by employment registration (8.7%) and lastly agriculture (8.5%). Radio is used mostly for availing agriculture related information (14%) and for employment registration or enrolment information (12%). NGOs and social workers also have a very limited role in providing livelihood related information. 22.73% people have access to information on employment registration and enrolment information from the employment office with a comparable role played by Friends/ village etc. with the latter accounting for 24%.



Financial Inclusion:

As noticed in other pillars above, the relevant stakeholder plays a significant role in providing access to information. Like ANM/ Health Staff in case of health-related information, schools/ colleges in case of education-related information, and panchayat office/ sarpanch in the case of governance-related information bank officials rank the second highest with respect to providing information related to financial inclusion. However, bank officials are more likely to be the source of information related to bank services and schemes rather than financial related schemes. This indicates that the potential role played by a stakeholder within an ecosystem is likely to be limited by their operational mandates and interests thereby highlighting the need for anchoring sustainable community-owned last mile access to information ecosystems that are able to serve the diverse needs of the community in moving towards equitable and inclusive development. The information ecosystem in relation to financial inclusion is dominated by mass media like newspapers and TV and stakeholders like bank officials and banking correspondents.



Access to services

Education:

Only 33 out of 365 (9%) respondents reported having a digital literacy centre in their village. All the 33 who reported having a digital literacy centre were from Ismailpur village. These 33 respondents from Ismailpur represent 64% of the total number of respondents from Ismailpur indicating that despite presence of a digital literacy centre in the village not all might be aware of it. Further, out of 33 respondents only 6 have taken up a digital literacy course out of which most of them are daily wage labourers. Given the increasing importance of the internet in full digital participation, a constraint in limiting full participation in digital literacy courses could be the lack of internet connectivity, where only 4 out of the 33 respondents had reported having internet connectivity.

Only 1% (i.e. 5) of the total 365 respondents reported having a vocational centre in their village. Out of these 5, 3 belong to Ismailpur and 2 to Musakheda. 1 out of 365 respondents reported having a career guidance centre in their villages. The one respondent who has a career guidance centre belongs to Ismailpur village. This indicates that even if the career guidance centre in the village it might not be functional or operating, which is why a significant proportion of the population is not aware of its presence.

Health:

Only 5 respondents reported having a diagnostic lab in their village. These include 2 from Ismailpur, 1 from Musakheda, 1 from Khanpur Mewan, and 1 from Mancha. These represent 3.9% of the respondents from Ismailpur, 5% of Musakheda, 1.3% from Khanpur Mewan, and 50% from Mancha. 49% of the respondents reported visiting hospital at least once a month and 30% reported having visited a hospital once in a quarter. 329 out of 365 i.e. 90% of the respondents do not have a telemedicine facility in their villages while 20 people did not know what telemedicine was. Out of 16 people who reported as having a telemedicine facility



in their villages, 14 belonged to the village of Mancha, 1 to Bidarka and 1 to Musakheda. Given that 100% of the respondents from Mancha reported to having a telemedicine facility in the village shows the strong presence and availability of the service there.

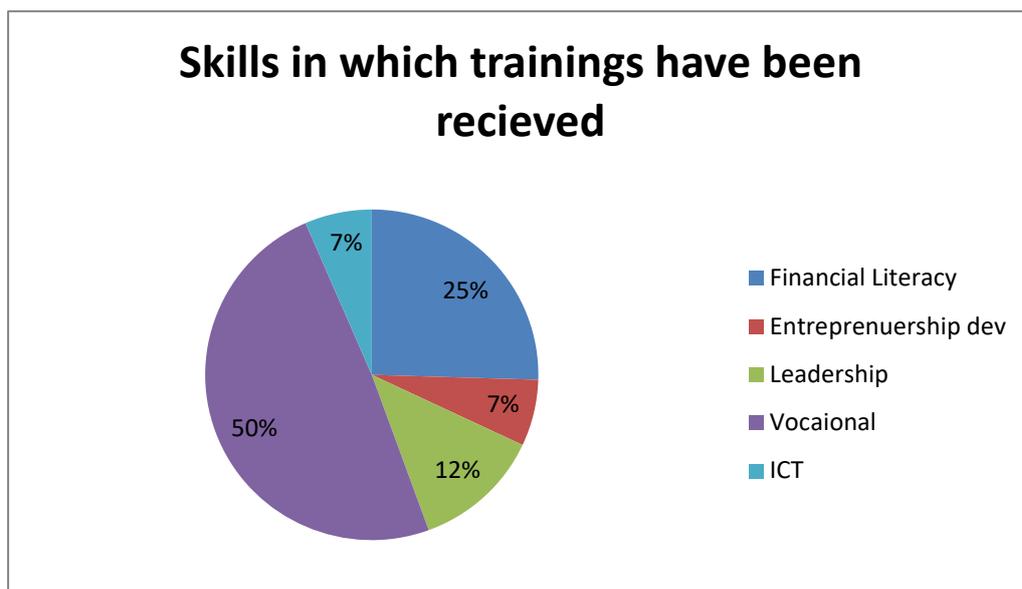
Governance:

Despite people responding positively with regard to access to information, an overwhelming majority (83%) have not availed any schemes and entitlements. This can be as a result low levels capability with regard to interfacing with e-governance as indicated by 97% who were unable to apply for certificates online. Only 2% people have reported any type of grievances related to government schemes. This may be because of the low access to information about basic rights and entitlements. It is evident from the fact that only 15 out of 365 people know about RTI. Among the respondents who availed the schemes and entitlements, NREGA helped 40% people followed by social security pensions with 29% people benefiting from it. Given, a large section of the population lacks access to information about governance schemes which curtails their ability to avail social protection that they are entitled to, this provides scope for intervention with regard to providing last mile access to information through programmatic intervention like the DEF flagship SoochnaSeva and SoochnaPreneur model using designated access points and ICT enabled community members to provide last mile access to information on social protection schemes that have managed to expand coverage to approx. 20-25% of eligible populations in intervention locations.

Livelihood:

According to the data collected, only two villages of Musakheda and Ismailpur have vocational training center. Only 6 respondents reported that women from their families go for vocational training and they have to travel 1-10 kilometers to attend it. Distance of vocational training centers is potentially a significant barrier to women's capability development and low levels of women's participation in vocational and skills training. 81% of the respondents said that they would like to attend skills training in their panchayat. Though 181 people have received training in vocational skills and only 24 people have received training in ICT. Training in ICT skills rank the lowest along with Entrepreneurship skills within rural capability development. This highlights a possibility that ICT skills are not viewed as important livelihood skills despite technology assuming centre-stage within economy, governance, and society. Only 2 % people have received any agriculture related training or support over last one year. Despite the fact that 74 out of 365 (20%) are farmers, training and support related to it is overwhelmingly low.

When the respondents were asked about the skill area in which they have received support or training, it's found that 50% of the total 365 respondents have received training in vocational skills followed by 25% who have received training in financial literacy. Although when asked about the skill areas in which the respondents require training, 57% (209) of total respondents wanted in vocational skills, while 32% (117) wanted in financial literacy. There's a gap of 7% each that can be seen in terms of availability and deliverability of training specifically for financial literacy and vocational training, followed by 5% gap in ICT skills training with 7% of 365 respondents who have received it while 12% of 365 who desire it. While 7% and 12% of the total respondents have received training in the areas of entrepreneurship and leadership development, the need for a further training in these two areas remains at 4% with 38 respondents requiring for entrepreneurship and 60 for leadership training out of total number of respondents (365) respectively.



Financial Inclusion:

Out of 365 respondents only 4 said that they have Point of Sale (POS) access centre in their area. The villages that have POS centre are Khanpur Mewan and Ismailpur. 17 and 3 people have access to banking correspondent and banking kiosk respectively. Only 15% people know how to use an ATM machine and 15% people have access to debit or credit cards. 94% of the people are not even aware of different types of banking available. Majority of the people who are aware, prefer direct banking. This is because in the absence of access to information and infrastructure relating to alternatives like internet/ mobile/ online banking this is the only form of interface they have had with banks. Out of 365 respondents around 20% prefer online banking.

Entertainment:

69.8% of the respondents reported not going out for entertainment at all. However, when it comes to availing the local options for entertainment, people mostly prefer going to movie theatre (189), followed by cinema hall (99) and lastly to community hall (85). 231 people prefer going to both cinema and movie hall..

Patterns of online usage

Education:

Out of the 33 respondents who reported having a computer/ digital literacy centre in their village, 27 have not availed a digital literacy course and all of them belong to Ismailpur. Out of the remaining 6 people who reported as having a digital literacy centre in their village and availed a digital literacy course, also belong to Ismailpur.. This underscores a greater need for engagement with the local community with regard to availing digital literacy. Only 14% of the respondents have registered for higher education course online. However, among the 51 people who register online, only 6 reported as having internet connectivity. The gap between low internet connectivity and comparatively higher levels of engagement show that people might potentially be using common access points like cyber cafes, CSC, and schools.

Health:

Only 1% of the respondents are able to book appointment online while 98% are not able to book an appointment online. Out of the 5 respondents who reported being able to book appointment online one each is from Musakheda, Medabas, Mirzapur, Ismailpur and Ghansoli. Cash remains majorly the mode of payment for hospital bills amongst the respondents with 97% (361) preferring it over 2% who opt for online mode (6) and mere 1% (3) use card as a mode of payment. Out of 365 respondents, 33% (120) are owners of a smartphone and 12% (14) out of 120 have an active internet connection, but only 7% (1) of these 14 of the respondents pay their hospital bills online, which signifies that there's a gap between ownership and online engagement, i.e. even though people are reported to be using internet connection, still they have a limited online engagement. Thus more information regarding the various other usage of internet in arena of accessing healthcare can be provided to the population at large and providing better quality of internet can help reducing the gap that has been identified above.

Only a negligible proportion of the respondents (1%) purchase health related items online whereas an overwhelming 97% do not. Out of the 23 respondents who have health insurance, only 8 renew it online corresponding to less than 2% of the total number of respondents. However, out of these 23 respondents 16 are from Ismailpur and from these 23 respondents, 13 have smartphones (with 10 people owning smartphones in Ismailpur itself). Out of the 13 respondents who have smartphones and renew health insurance, (77%) 10 of 13 reported as not having internet connectivity, while (23%) which is 3 of 13 respondents do have an internet connection. 2 out of these 3 respondents with internet are actually renewing their health insurance online. The gap between higher digital engagements with low smartphone ownership highlights the practice of sharing connections as smartphone functionality increasingly penetrates rural populations.

Governance:

9 out of 365 who reported any grievances related to government schemes preferred the offline method. Only 6 out of 9 people filed an RTI, out of which only 2 people filed it online. Around 97% respondents were not able to apply for the certificates like birth/ death certificate, Aadhar card, voter ID etc. online. Out of the 12 respondents who were able to apply for certificates online, 7 were from Ismailpur, 3 from Musakheda and 1 each from Medabas and Ghansoli respectively. Out of these 12 respondents who were able to apply for certificates online, 10 had smartphones and only 3 of them reported as having internet connectivity. This can potentially indicate that it is highly likely that they access these services through shared connections and common access points like cyber cafes and CSCs. This highlights the low levels of digital engagement and interface of citizens in accessing government services.

Livelihoods:

21 out of 365 people registered themselves on job portals, out of them 15 (71.4%) were from Ismailpur, 15 own smartphones, and only 3 reported as having internet connectivity (all the 3 respondents belonged to Ismailpur). Only 7 people reported as using Skype for online job interviews. Out of those who used Skype, modes of access reveal a mix of mobile phones, own laptop/ computer, CSC, and cyber-café with CSC and cyber cafes ranking the highest in terms of access points. This reiterates the importance of common access points for areas with limited internet connectivity.

Financial inclusion:

Only 6% of the respondents are familiar with different types of banking. Out of that direct banking ranks the highest in terms of the preferred mode of banking followed by online banking and phone banking respectively. Out of 365 respondents only 11 use online mode of money transfer, whereas majority of the people i.e. 176 still prefer direct banking for financial transactions. Out of 356 respondents, 120 own a smartphone out of which 14 respondents access internet, as a result the extent of digital financial inclusion remains fairly low in terms of using online banking (2 respondents), activated internet banking (5) and online financial transaction. The low penetration of digital financial inclusion is not just the result of few people using internet but also the quality of service, which plays an important role with only 12 out of a total of 15 respondents who have an internet connection, found the internet quality as good while 3 out of 15 found the quality as satisfactory. Only 15 respondents out of 365 pay their utility bills online irrespective of the fact that only 10 people have activated internet banking facility.

Entertainment:

Keeping in line with the patterns of online usages and practices mentioned above, only close to 7% pay for entertainment online. Out of these 26 people, only 5 people use apps for online transaction and have activated internet banking. However, when asked about the type of online entertainment used, an overwhelming majority (216 respondents – corresponding to 70%) answered YouTube, out of which only 79 have smartphones, 67 have memory cards, and 203 do not have internet connectivity. This can indicate practices of shared connection and devices usage and downloading and storing content on memory cards to be accessed later, a practice that is not uncommon in areas of low connectivity.

Key Recommendations

Cross-cutting recommendations:

- Understand individual and institutional access requirements that can act as barriers to realising key development objectives across programme pillars
- Develop a strategy to integrate available capacities and institutional and infrastructural presence when defining programme outcomes
- Focus on developing an integrated access to information and access to services ecosystem that takes into account current patterns of online uses and practices with steps to leverage and augment them through sustained and targeted programme intervention
- Identify gaps between available capacities, aspirations, and uses and practices to define horizontal cross-cutting targets required for the overall success of the programme
- Identify how digital media can be used to democratise access to information and access to services
- Identify local institutions and stakeholders to act as nodes to disseminate information and awareness as well as serve to anchor the programmatic intervention in moving towards a sustainable model
- Re-examine relationships between Hub and Spokes

Education:

- Understand and define the functional aspects of digital literacy as per pillar wise requirements and define concrete parameters of measurement
- Identify different learning needs for different demographics with a focus on developing future capabilities in the village by integrating STEM education in classrooms



- Identify key success factors, gaps, and challenges in Ismailpur driving higher digital literacy and engagement in the village

Health:

- Recognise the importance of local area camps and drives and the significant awareness component that it holds
- Harness the capacity of local ANM/ Health staff as important partners in the process
- Understand the multi-faceted issues in health delivery including but not limited to information, infrastructure, access, and governance

Governance:

- Understand in a comparative perspective with DEF's SoochnaSeva and SoochnaPreneur model what are the last mile service delivery constraints
- Mapping beneficiaries through the entitlement survey

Livelihood:

- Map opportunities for training and capacity-building and potential livelihood opportunities available in the village
- Identify and evaluate potential livelihood opportunities in terms of local viability, feasibility, and sustainability

Financial Inclusion:

- Define parameters of evaluating financial inclusion and digital financial inclusion
- Outline programme intervention and strategy within the framework of parameters

Entertainment:

- Examine individual and community needs for entertainment
- Identify practices for accessing entertainment content online