BASELINE STUDY ON SMARTPUR

Linking the SDGs parameters with Smart village in Vizagdistrict, AP

About this baseline study:

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 Bhuvanagiri), Andhra Pradesh (Visakhapatnam Parawada Mandal and Prakasam), Karnataka (Chamrajnagar), and Tamil Nadu (Kanchipruam). 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 Visakhapatnam district in Andhra Pradesh and includes the following villages:

Hub Centre: Gollavanipalem (Hub Centre)

Spoke Centres:

- Kalapaka
- Bharnikam
- Pandivanipalem
- Dharmarayudupeta
- Naidupalem
- Muthyalammapalem
- Thikkavanipalem
- Nunaparthy
- Madakapalem

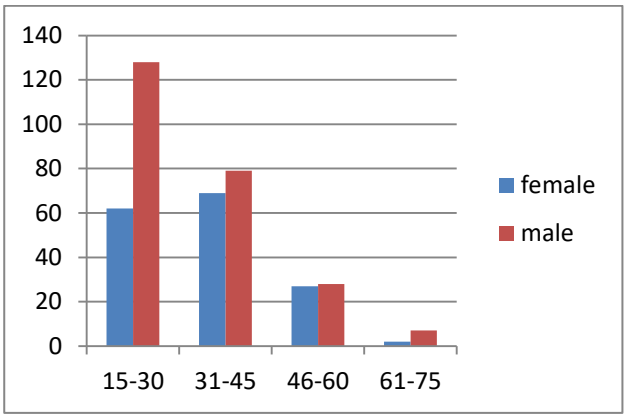
<u>Key findings</u>

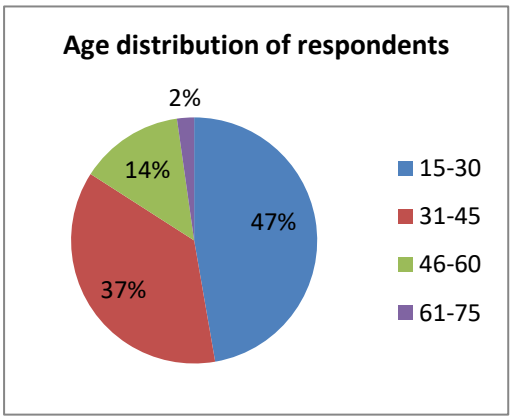
- Common access points like cyber cafes and common service are significant in areas of low connectivity like in terms of registering for higher education courses online where 86 people have registered online but only 44 have an active internet connection
- Despite Gollavanipalem being the Hub, Pandivanipalem has the highest smartphone penetration at 17% with greater access to services like vocational centre, diagnostic labs and telemedicine facility and higher levels of engagement in terms of applying for certificates online, booking appointment online or paying hospital bills online.
- Gollavanipalem, the hub centre has the availability of services like photocopy, digital literacy centre, career guidance centre and 66% of the respondents in the village have 24 hours supply of electricity. Thus, regular supply and availability of electricity and other services would further anchor the spoke centres.
- Only 2 (<1%) respondents have received training in entrepreneurship skills, no other respondents have received any of the other training in livelihood skills

- The desirability for livelihood skills training in financial literacy is at 58%, vocational skills at 43%, entrepreneurship skills at 41%, leadership and life skills at 28% and lastly ICT skills at 10%.
- Training in ICT skills rank the lowest within rural capability development, with only 10% desire for training in ICT skills. This highlights a possibility that ICT skills are not viewed as an important livelihood skill.
- 45% respondents prefer online banking over direct banking (36%) and phone banking (19%)
- 84% of the respondents do not have a telemedicine facility in their village
- Only 6 (1%) respondents reported having a diagnostic lab in their village
- Overall ICT ranks low as a source of information across all the information categories of education, health, governance, health, livelihood and financial inclusion

Socio-economic and infrastructural context

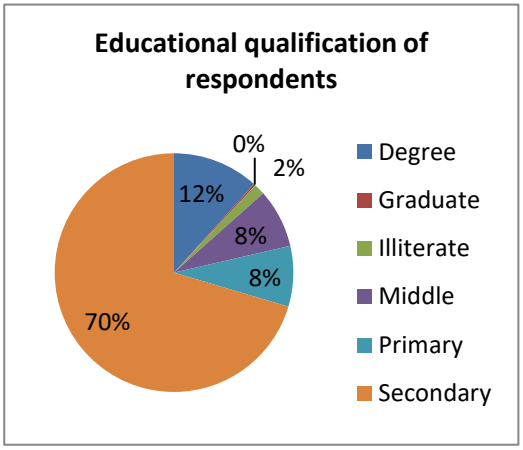
The survey was done in 10 villages of Atchutapuram and Parawada blocks in the Visakhapatnam district of Andhra Pradesh. 402 respondents were surveyed out of which 160 were female (40%), 242 were male (60%). 47% (190) of the total respondents are in the age group of 15-30 years, 37% (148) are in the age group of 31-45 years followed by 14% (55) in the age group of 46-60 years and lastly 2% (9) of the respondents were in the age group of 61-75 years.





70% (283) of the total respondents have secondary education and only 6 (2%) respondents were without basic primary education. All the 6 respondents without basic primary education are males. Out of 402 respondents, 55 (14%) earn less than the minimum wage is approximately Rs. 5000[1].

[1]The minimum wage for Andhra Pradesh is Rs. 5000 for Shops & Establishment (https://www.simpliance.in/minimum-wages/andhra-pradesh)



With regards to patterns of usage of water, 238 out of 402 respondents use tap water, followed by 136 using bore well, 41 using tube well/hand pump and lastly 12 respondents use well. With respect to toilet usage 76% (306) of total respondents are using private toilets, while 64 (16%) still defecate in open and 32 (8%) use community toilets. Out of 64 respondents who are practicing open defecation, 36 respondents use bore wells, 13 use tube wells, 10 use tap water supply and 8 respondents use well as a source of water.

Out of 402 respondents, 343 responded to the question, whether their houses have the supply of electricity. Out of 343, 97% (332) respondents have electricity supply. Of those having access to electricity, 59% (197) respondents has its supply for 24 hours, 31% (101) for 12 hours and 5% each have the supply for 6-8 hours (15) and 1-2 hours (18) respectively. However out of 59% of respondents who replied of receiving 24 hours supply of electricity, 20% respondents are from Bharinikam (40) and Madakapalem (39), 19% (38) are from Mutyalammapalem, 12% each from Nunaparthy (24) and Hub Centre Gorlivanipalem (23) respectively, 11% (21) from Naidupalem, 4% (8) from Kalapaka and lastly 1% (2) each from Pandivanipalem and Thikkavanipalem village respectively. 3% (11) respondents do not have electricity, out of 11 respondents not receiving electricity, 3 respondents each are from Thikkavanipalem (27%) and Naidupalem (28%), 2 (18%) respondents each from Madakapalem and Nunaparthy respectively and lastly 1 (9%) respondent from Gorlivanipalem. 36% of the respondents not receiving electricity have monthly family income equal to and below Rs. 5,000[2] which is approximately the minimum wage for Andhra Pradesh.

In the hub centre, 35 (97%) out of 36 respondents have electricity supply, 23 out of 35 respondents have 24 hours supply (66%), 9 respondents (26%) receive 12-hours supply and lastly 3 respondents (8%) receive electricity for 1-2 hours. Thus, the regular supply and availability of electricity in the hub centre would further help in anchoring the spoke centres.

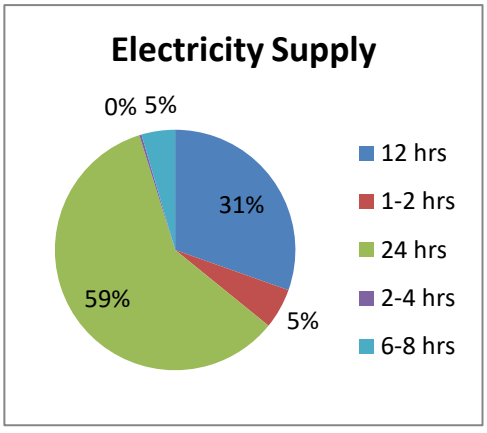
[2] Minimum wage for Andhra Pradesh is Rs. 5000 for Shops & Establishments (https://www.simpliance.in/minimum-wages/andhra-pradesh)

ICT Uses and Practices

Digital media (smartphone/computer/laptop) penetration stands at 48%. Out of respondents owning digital media, 63% (120) respondents also own a basic phone. Pandivanipalem has the highest digital media penetration standing at 17% followed by Dharmarayudupeta and Thikkavanipalem at 14% each respectively, Bharinikam at 12%, Madakapalem, Mutyalammapalem and Naidupalem at 11% each respectively, Nunaparthy at 6%, Kalapaka at 3%. Gorlivanipalem being the hub centre has digital media penetration at just 1%.

Calling remains the primary function for which mobile phones are used followed by Text/ SMS and communication (Email & WhatsApp). 36% of the total respondents own a memory card; which were primarily used for storing entertainment content like songs, photos, and movies/ videos. 40% of the total 402 respondents have an internet connection. Among those having internet connectivity, the most preferred network is Jio, followed by Airtel and Idea. Out of 159 respondents who have an internet connection, 59% of the respondents found the connection quality good, 23% found it satisfactory and 18% found the quality of the connection bad.

With regard to the availability of photocopying facility, about 43% of the respondents avail this service within 1 -2km, 42% get this facility in the range of 2-5 km and 15% travel more than 5km to avail the service. Among those availing this service within 1-2km, 25% belong to Naidupalem, 23% belong to Pandivanipalem, 20% from Dharmarayudupeta and 19% from the hub centre village Gorlivanipalem.
50% responded paying Rs. 2 as Xerox charges and 34% pay Rs. 5 for printing. Thus, most of the respondents are able to avail the facility in a reachable range of 1-2 km, making service of photocopying accessible and saving the loss of wages of the respondents.



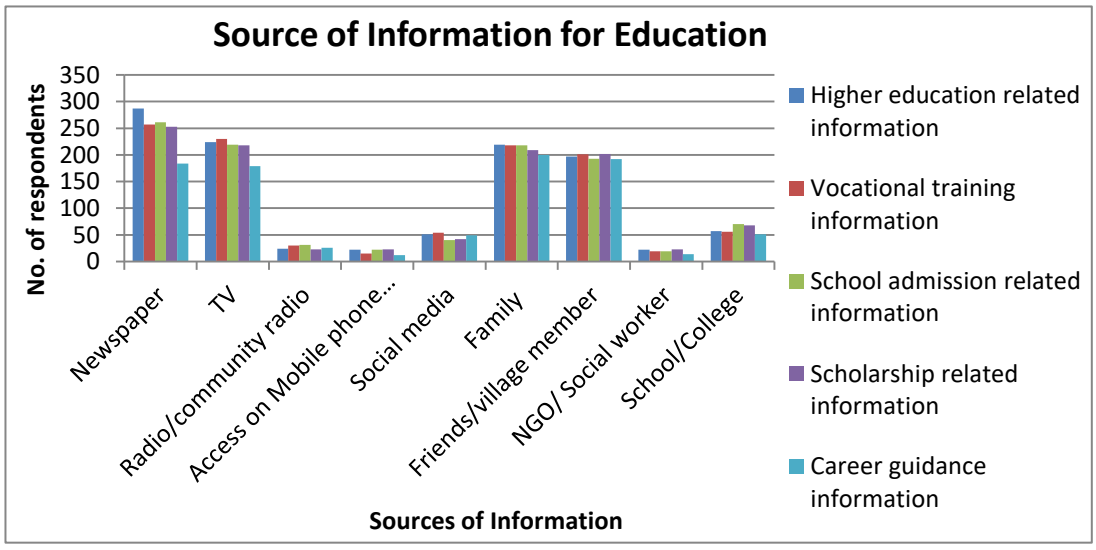
Access to information

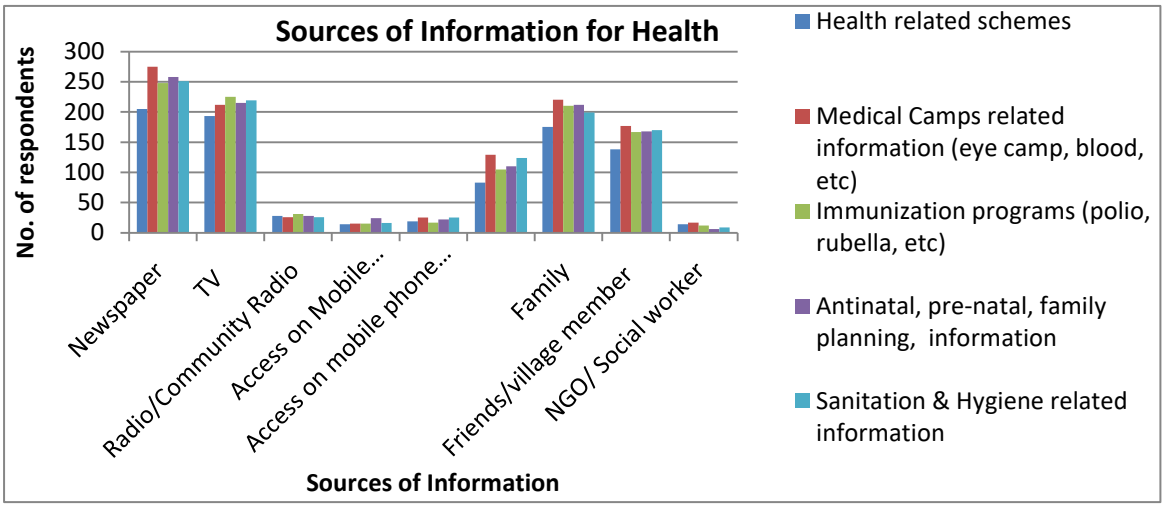
Education:
Newspaper ranks as the most preferred source of information across all information categories. Overall, newspapers and television rank as the first and second most preferred sources of information overall Comparing across information categories newspaper is more likely to be the source of information for higher education than career guidance related information and television is more likely to be the source of vocational training information than career guidance related information. Radio is most likely to be the source of school admission related information; mobile phones are more likely to provide information related to scholarship while social media provides information related to vocational training. Family is more likely to be the source of information for higher education, vocational training and school admission while village community is more likely to provide information regarding scholarship, vocational training and higher education. NGO is more likely to provide information regarding scholarships and school and college provide information related to school admission and scholarship.

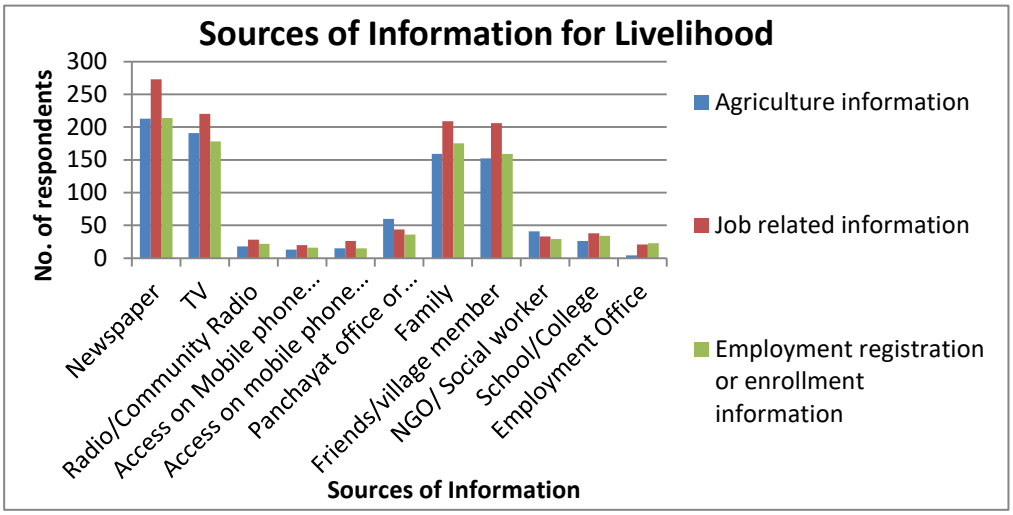
Access to information on mobile phone through SMS and internet rank the lowest among bottom four along with NGO/Social worker and radio as a source of information. Amongst the bottom four sources of information, access to information on mobile by SMS ranks the lowest. However, among information through mobile by SMS and mobile by internet, mobile phone by internet ranks higher. Mobile phone by internet is more likely to be the source of information about vocational training, higher education, career guidance and scholarship related information.

Livelihoods:

Newspapers, TV, family and friends and village community members rank among the top sources of access to livelihood related information. Amongst them, newspaper rank the highest across all information categories and remains the widely used medium to access information regarding agriculture, jobs and employments although it is more likely to be the source of job-related information. Television is more likely to be the source of job-related information followed by agriculture related information and employment registration or enrolment information. Between mobile by SMS and mobile by internet, mobile by internet ranks higher as a source of information. Access to information via mobile phone through internet is mostly used for availing job-related information followed by agriculture related information and employment registration or enrolment information. Radio is preferred over mobile phone and is used for availing job-related information followed by employment registration or enrolment related information and agriculture related information. Both family members and friends and village community are more likely to be the source of job-related information over other information categories. Panchayat office is more likely to provide agriculture related information while employment office ranks the lowest across all information categories and is more likely to provide job related information and employment registration or enrolment related information.





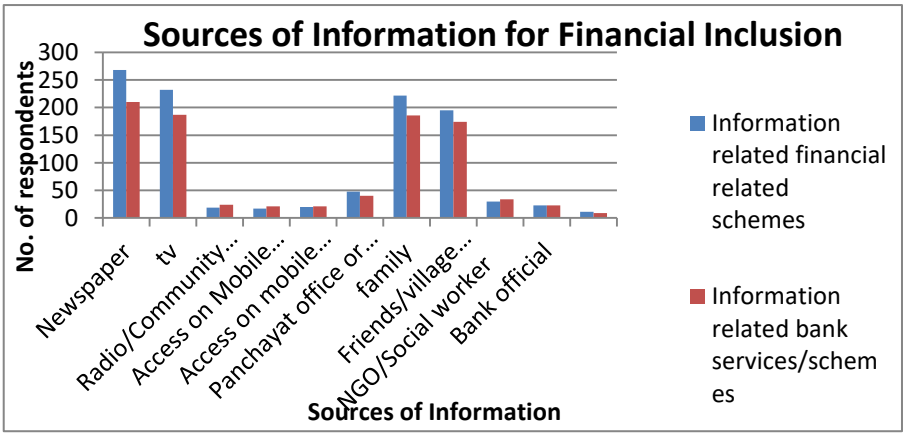


Financial Inclusion:

Newspaper ranks high among all sources of information on financial inclusion, while television ranks the second highest. Both television and newspaper are more likely to be the source of financial related schemes rather than bank services/schemes. Family ranks thirds and is more likely be the source of financial related schemes rather than information related to bank services/schemes. Mobile phone by SMS ranks second from bottom and mobile phone by internet ranks third from bottom for providing information related to financial inclusion. Mobile phone by internet and mobile phone by SMS are likely to provide information related to financial schemes. Mobile phone by internet ranks higher than mobile phone by SMS for providing financial related schemes and bank schemes/services. Banking correspondent and bank official, both ranks lower on finance related schemes and bank service/schemes than panchayat office. Among bottom five sources, access to information via banking correspondent ranks lowest and banking official ranks the highest.

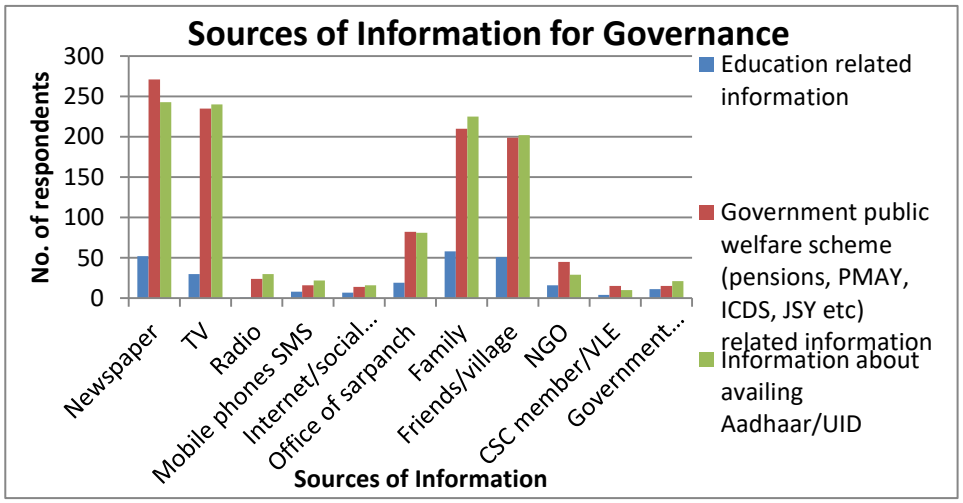
Health:

With regard to access to health-related information, newspaper ranks as the highest source of information followed by television. Comparing across information categories newspaper is more likely to be the source of medical camps related information rather than health related information related information and television is more likely to be the source of information for immunization programs rather than health related information. Among bottom four sources, access to information via NGO/social worker ranks lowest and radio ranks the highest. Overall mobile phone by SMS ranks second from bottom and mobile phone by internet ranks third from bottom as a source of health related information. However among information through mobile by SMS and mobile by internet, mobile phone by internet ranks higher.



Governance:

Out of 402 people only 18% (71) people are aware of any social protection schemes. Out of 71 respondents, 64 responded to the various sources from where they receive the information about government schemes. Out of 64 respondents who are aware of government schemes, majority get information from newspapers and family. Newspaper is more likely to provide information related to government public welfare schemes and television is more likely to be the source of information about availing Aadhaar/UID. Overall family ranks third in providing information related to availing Aadhaar/UID and government public welfare schemes (like pensions, PMAY, JSY etc.). Access to information of government schemes related to education remains low overall. Overall Mobile phone by internet ranks second from bottom and mobile phone by SMS ranks third from bottom in providing information related to governance. Mobile phone by internet and mobile phone by SMS are more likely to provide information about availing Aadhaar/UID. Among access to information through mobile by SMS and mobile by internet, mobile by SMS ranks higher across all the information categories. Among bottom five source of information, CSC ranks the lowest and radio ranks the highest for providing information across all information categories.



Access to services

Education:

17 out of 402 (4%) respondents reported having a digital literacy centre in their village. Of all the 17 who reported having a digital literacy centre 7 (41%) were from Naidupalem village, 5 (29%) from Nunaparthy, 4 (24%) from Kalapaka and 1 (6%) respondent from Gorlivanipalem. Further out of 17 respondents who reported having a digital literacy centre, only 1 (6%) respondent has taken up a digital literacy course. The 1 respondent who responded of taking digital literacy course is a male from Kalapaka village, thus indicating that there is a need to create awareness regarding digital literacy centres in the villages. Only 1% (i.e. 6) of the total 402 respondents reported having a vocational centre in their village. Out of 6 respondents that reported having a vocational centre, 2 respondents each are from Kalapaka (34%), Nunaparthy (33%), and Pandivanipalem (33%) village respectively.
6% (19) of the total respondents reported having a career guidance centre in their village. Out of 19 respondents, 10 respondents who have a career guidance centre belong to Nunaparthy village, 4 are from Thikkavanipalem, 3 from Naidupalem and 1 respondent each from Gorlivanipalem and Kalapaka village respectively.

Livelihoods:

Out of the total respondents, 8 (2%) reported that women from their families go for vocational training and they have to travel 1-12 kilometres to attend it. Out of 8 respondents, 5 (63%) are from Kalapaka, 2 (25%) from Nunaparthy and 1 (12%) from Gorlivanipalem village. Distance of vocational training centers is potentially a significant barrier to women's capability development and barrier to low levels of women's participation in vocational and skills training. 89% of the respondents said that they would like to attend the life skills training in their panchayat

When the respondents were asked about the skill area in which they have received support or training, 2 (<1%) respondents replied of receiving training in entrepreneurship skills, no other respondents had received training in any of the other skills. Although when asked about the skill areas in which the respondents require training, 58% (233) of total respondents wanted in Financial literacy, 43% (174) in Vocational skills, followed by 41% (166) in Entrepreneurship skills, 28% (113) wanted in Leadership and life skill, and lastly 10% (39) require training in ICT skills. The

training requirement in ICT ranks the lowest; this highlights a possibility that ICT skills are not viewed as important livelihood skills despite technology assuming centre-stage within economy, governance, and society.

Financial Inclusion:

Out of 402 respondents only 20 said that they have Point of Sale (POS) access centre in their area. The villages that reported POS availability are Mutyalammapalem, Kalapaka and Nunaparthy. 79 and 28 people have access to banking correspondent and banking kiosk respectively. 61% people know how to use an ATM machine and 77% people have access to debit or credit cards. 84% of the people are not aware of different types of banking available. Out of 65 (16%) people who are aware of the different types of banking 45% prefer online banking, 36% prefer direct banking and19% phone banking.

Governance:

77% of the total respondents 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 80% who were unable to apply for certificates online. Only 9% 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. Only 50 (12%) out of 402 people know about RTI. Among the respondents who availed the schemes and entitlements, National Rural Employment Guarantee Act helped 40% people, followed by social security pension with 19% and lastly Pradhan Mantri Awas Yojana benefitting 6% respondents. 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.

Health:

Only 6 respondents reported having a diagnostic lab in their village. These include 3 from Pandivanipalem, 2 from Kalapaka and 1 from Naidupalem. These 3 respondents represent 8% of the respondents from Pandivanipalem, 7% from Kalapaka and 2% from Naidupalem. 49% of the respondents reported visiting hospital at least once a month and 28% reported having visited a hospital once in a quarter. 340 out of 402 i.e. 84% of the respondents do not have a telemedicine facility in their villages while 47 people did not know what telemedicine was. Out of 15 (4%) people who reported as having a telemedicine facility in their villages 5 belonged to the village of Kalapaka, 4 belonged to the village of Nunaparthy, 2 from Pandivanipalem and 1 respondent each from Bharinikam, Gorlivanipalem, Naidupalem and Thikkavanipalem. Given that only 4% of the respondents reported to having a telemedicine facility in the village shows the lack of coverage by the available facility and lack of information on the same

Entertainment:

When it comes to availing the local options for entertainment, people mostly prefer going to cinema hall (224), followed by movie theatre (138) and lastly to community hall (30). 56 people prefer going to both cinema and movie hall.

Patterns of online usage

Education:

Out of the 17 respondents who reported having a computer/ digital literacy centre in their village, 11 have not availed a digital literacy course and 5 respondents did not respond. Out of 11 respondents who have not availed the digital literacy course, 5 (45%) of them belong to Nunaparthy, 3 (27%) from Naidupalem, 2 (18%) from Kalapaka and 1 (9%) respondent from the hub centre Gorlivanipalem. Only 1 person from Kalapaka reported as having a digital literacy centre in their village and availed digital literacy course. This underscores a greater need for engagement with the local community with regard to availing digital literacy. 28% of the respondents have registered for higher education course online. However, among the 86 people who register online, 44 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.

Livelihoods:
23 (6%) out of 402 people registered themselves on job portals, out of them 9 (39%) were from Thikkavanipalem, 4 (17%) from Kalapaka, 3 (13%) each from Nunaparthy and Bharinikam respectively and 1 (4%) respondent each from Mutyalammapalem, Naidupalem and the Hub centre Gorlivanipalem. Out of 23 respondents that registered themselves on job portal, 13 respondents own digital media and 11 reported having internet connectivity. 13 (3%) people reported as using Skype for online job interviews. Out of those who used Skype, modes of access reveal a mix of computer café and computer cafe as well as mobile phones. This reiterates the importance of common access points for areas with limited internet connectivity.

Health:

Only 14% of the respondents are able to book appointment online while 86% are not able to book an appointment online. Out of the 46 respondents who reported being able to book appointment online 15 are from Bharinikam, 5 respondents each from Dharmarayudupeta, Kalapaka and Nunaparthy respectively, 4 respondents each from Mutyalammapalem, Thikkavanipalem and Naidupalem, 3 from Madakapalem and lastly 1 respondent from Pandivanipalem. Cash remains majorly the mode of payment for hospital bills amongst the respondents with 74% (298) preferring it. Only 11% (44) opt for card payment and 8% (33) use the online mode of payment.
Out of the total 402 respondents, 48% (191) are owners of a digital media device. Out of the 191 digital media device owners, 76% (145) have an active internet connection, but only 17% (25) of the respondents pays their hospital bills online. This signifies that there are different patterns of online use and engagement.
Only 2% of the total respondents purchase health related items online whereas an overwhelming 98% do not. Out of the 26 respondents who have health insurance, 14 responded of owning a digital media device along with internet. Out of 14 respondents who have a health insurance and have reported owning digital devices with internet, 4 renew health insurance online. More information regarding the various other usage of internet in arena of accessing healthcare can be provided to the population at large to ascertain whether they have an effect on online use and engagement patterns.

Governance:

37 (9%) out of 402 reported grievances related to government schemes, 8 (22%) of those who reported grievances, preferred the online method. Out of 20 people who filed RTI, 35% (7) filed it online. Around 80% respondents were not able to apply for the certificates like birth/death certificate, Aadhaar card, and voter ID etc. online. Out of the 82 respondents who were able to apply for certificates online, 25 were from Naidupalem, 11 each from Bharinikam and Pandivanipalem respectively, 9 from Dharmarayudupeta, 7 from Mutyalammapalem, 6 from Thikkavanipalem, 5 respondents each from Nunaparthy and Kalapaka respectively, 2 from Madakapalem and lastly 1 respondent from the hub center Gorlivanipalem. Out of these 82 respondents who were able to apply for certificates online, 49 (77%) owned a digital media device along with an active internet connection.

Financial inclusion:

Only 16% of the total respondents are aware about different types of banking. Out of 65 respondents who are aware about different type of banking, online banking (45%) ranks the highest in terms of preferred mode of banking followed by direct banking (36%) and phone banking (19%). Out of 402 respondents, 62 (15%) prefer online mode of money transfer, whereas majority of the people i.e. 235 (58%) still prefer direct banking for financial transactions.

Out of 402 respondents, 191 own a digital media device. Out of 191 owning digital media device, 145 respondents access internet. Out of the 145 respondents that have digital media device along with an active internet connection, 23 (16%) respondents have activated internet banking, 22 (15%) are using online banking and 46 (32%) do financial transaction online. Out of 402 respondents, 29 (7%) have activated internet banking and out of 29 who have activated internet banking, 17 (59%) respondents pay their utility bills online. With 76% of the total respondents owning a digital media device with internet, more awareness on digital financial literacy and different types of banking methods and safety protocols can be generated.

Entertainment:
Keeping in line with the patterns of online usages and practices mentioned above, only close to 7% (23) pay for entertainment online. Out of these 23 people who pay for online entertainment, 6 people use apps for online transaction and have activated internet banking. 83 (21%) respondents in total responded to using online entertainment. However, when asked about the type of online entertainment used, 72 respondents (87%) answered YouTube. Out of 72 respondents who responded to using YouTube, 65 have digital media devices, 58 have memory cards, and 66 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
- Identity 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
- Generating more awareness amongst villagers regarding available services like digital literacy centres and vocational centres in their villages, its benefits and outcomes.
- Providing training to villagers owning smartphones about the various uses of internet for educational purposes
- Promoting use of digital media for accessing information related to education

Health:

- Recognise the importance of local area camps and drives and the significant awareness component that it holds
- More emphasis can be given in terms of access to information related to healthcare through mobiles and internet facility, along with availing the services of healthcare which are online.
- Increasing awareness regarding telemedicine and diagnostic lab facility in village and encouraging villagers to utilize the same whenever required.
- Understand the multi-faceted issues in health delivery including but not limited to information, infrastructure, access, and governance

Governance:

- Raising awareness about government welfare schemes, and promoting the use of digital media for accessing information about welfare schemes and services.
- 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:

- Making people aware about the banking facilities over digital media and strengthening the capacities of banking correspondent for providing information related to financial services and banking schemes.
- Conducting awareness sessions regarding different types of digital banking available, in the community along with safe practices of using online banking

Entertainment:

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