Digitalization of Rural India: Digital Village

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ABSTRACT

Digital revolution has created numerous opportunities in India. Internet penetration rate is very high in India which in turn has created the requirement of making India digitally active. Indian government is working on crucial projects like Smart City, Make in India and Digital India. The internet penetration rate is increasing in rural areas but this increment is less than urban areas' internet penetration rate. The purpose of this paper is to understand the policies launched by the government of India to increase the internet self-efficacy level of people in rural areas. The paper explores the Digital village scheme and Digital Village 2.0 campaign and its impact on villagers after its application in selected villages. There is a strong need to impart digitalization knowledge to rural India for creating balance between urban India and rural India and its success motivates the government for taking the next step for enhancing digitalization in rural India.

Keywords: Digital village; Digital India; Internet; Online payment.

1.0 Introduction

India's economy is growing at a very fast rate. Initially, India is basically known for agricultural activities but, now picture is completely changed. In a last decade of years, India has faced the continuous innovations and information and communication technologies revolution. India has witnessed an annual growth of 18% in the number of internet users in 2018 and expected to grow by 11% in 2019. Smart phone market has a high potential growth in India (Mukhopadhyay and Mandal, 2019). People are using smart phones for conducting their day to day work. People are using internet through their smart phone which is a main reason of development of M-commerce in India. India has different urban areas and rural areas.

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The majority of the population is living in the rural areas. This revolution of information and communication technologies has created a division between urban areas and rural areas. The rate of internet penetration in urban areas is 66% and only 25% in rural areas in 2018 (Bhattacharyee and Pansari, 2018). After inclusion of 4G and 3G networks, the Indian internet user's base is increased and it is expected to double to 600 million users by 2020 from 343 million users at present. The adoption of data-enabled devices is expected to increase with the BharatNet initiative under Digital India. Still, 55,000 villages don't have mobile connectivity because it is not commercially feasible for service providers (ASSOCHAM-Deloitte, 2016). As per the above facts, it is essential to understand the digitalization concept deeply. Digitalization is a kind of process which includes technology which in turn lowers the costs of storing, sharing, and analyzing data. There are various digital tools which makes different sector more efficient. Digitalization benefits the different sector in various ways. Tax administration in India is also get benefited by the digitalization in terms of cost reduction and better compliance (Sury, 2019). People have moved towards online world for conducting their day to day work. People are paying their bills, conducting banking activities, doing chating & video calling. People are spending more time in processing internet through mobile only. This in turn creates an opportunity for the companies. As per the current requirement, companies need to create their online presence so that they can have a direct contact with their customers through internet only. Digitalization also impacts the marketing sector. Companies need to promote their products through online mode because people are spending more time online only. In this way, after digitalization, online marketing has become a significant part of marketing (Mittal and Mohan, 2016).

India as a country includes urban areas and rural areas. The standard of living, education level, internet self-efficacy level, adoption of new technology level, economic growth level are drastically different in urban areas and rural areas. People from urban areas are updated with the new technology, they are able to use internet properly for different online activities. They are comfortable with the online transaction process and they can easily transfer the fund through internet banking. But the picture is little different for the rural areas. Internet penetration in rural areas is low as compared to the urban areas. People from rural areas have low internet-self efficacy factor means they are not aware about the different features of internet and they are not know how to operate internet for various online activities. There is a strong need to introduce schemes or plans for digitalization of rural India.

The Government of India is working very hard in this regards and introduces schemes for making rural India more digitally active. For increasing the efficiency of the public sector, government of India launched a "Digital India Programme", the vision of

this programme is to transform India into a digitally empowered society and knowledge economy. The objective of this programme includes arrangements of high speed internet, citizens of India should be available on cloud, financial transactions should be electronics or cash less, citizens should be digital literate, availability of digital resources in Indian languages and public sector or government departments should be digitally active so that people can submit their government documents/certificates through online mode (Ministry of electronics & information technology, Government of India).

The Government of India specially working for making rural India digital literate. The Government of India launched different schemes for making strong base for farmers so that farmers of India can get the benefit of digital world in their farming business. The rural India has various panchayat. It is important to provide high speed internet connectivity to all panchayat so that all rural areas of India can have high speed internet connectivity. The central and state government of India set up a Core ICT infrastructure and the objective is to taking the digital literacy to the remotest locations of the India. The Department of Telecom (DoT) has established Bharat Broadband Networks Ltd. (BBNL) to spread out the National Optical fiber Network (NOFN). BBNL spread the optic fibre cable terminating in each of the 2,50,000 gram panchayats. In this way all panchayats in the India can have high speed internet connectivity. This will provide digitalization and connectivity to the local institutes like panchayat office, schools, health centre etc. After connecting the local institutes of the rural India with the internet, now the requirement is making the rural India digital literate. National Institute of Electronics and Information Technology [NIELIT] has identified more than 5000 facilitation centers across India for training on courses which literate the rural India about basic online activities. Under the umbrella of Digital India scheme, Department of Electronics and Information Technology [DeitY] launched Mobile seva through which government departments/agencies deliver public services to the people through mobile only. DeitY collaborated with NSDL Database Management Limited (NDML) for providing PayGov, It is a centralized platform for processing all government departments & services to collect online payments from people for public services. It provides transactional experience for citizens and people can opt different payment options. For making the cash less India, it is required that every citizen of India should have bank account. For achieving this goal, the "Pradhan Mantri Jan-Dhan Yojana [PMJDY]" launched in India on 28 August 2014 by the Prime Minister of India Narender Modi. As per the department of financial services, total 33 crore accounts were opened under the PMJDY scheme till December, 2018 (Business standard, 2019). Government of India is working on different schemes for enhancing the level of digital literacy of rural India. There are various grey areas which need to be take care while

formulating policies for accelerating the e-commerce such as security issues, trust on online payments and financing route for e-business (Jain, 2019)

2.0 Objective of the Study

The objective of this study is to explore the Digital village scheme launched by the Government of India. This paper aims to study all changes made by Digital village schemes in rural areas. The attempt is made for understanding the need of Digital Village scheme for rural India and what all benefits villagers are getting through this scheme. This paper also aims at to find out the outcome of Digital village scheme in rural India and what is the next probable step of Government of India towards increasing the digitalization of rural India.

3.0 Research Methodology

This paper has a conceptual nature for identifying the facts related to the subject under study. This paper utilized secondary data for understanding the facts, execution and outcome of the Digital village scheme. Secondary data were taken from different journals, government website and newspapers for the study. Data is also used from ASSOCHAM reports for understanding the subject under study clearly.

4.0 Digital Village

Under the digital India initiative, the most crucial plan on which Government of India is working is "Digital Village". Under this plan, selected villages will transform to digital active village, less cash village so that rural people can perform their most of the activities through online mode only.

The main objective of Digital Village scheme is to make village digital active. Under this scheme, the work of different local institute of rural areas can be processed through internet only; every rural person will become digital literate.

5.0 Digital Village Schemes

Services: The main goal of the Digital Village programme is to support techno economic viability of digital technology, introduce the projects for efficient applications in village areas and capacity building activities on information technology systems. CSC e-Governance Service India ltd. has started working for this Digital Village schemes.

CSC e-Governance Service India ltd. is providing different facilities to the rural India for making them digital active. Different services like solar power, education services, digital health service, awareness campaign, training campaign, and skill services are given by CSC e-Governance service India ltd. to the rural India. Under the umbrella of Digital Village schemes,

Solar power: Installation of solar panel powered street light in the villages.

Education schemes: Basic computer courses (BCC) providing in different villages.

Digital health services: Villagers can seek the doctor's advice at digital village centers, veterinary tele-communication centers are also provided in the villages so that villagers can come with their cattle/pet in the CSC centre (Common service centre), here doctor connected with the cattle owner through video conferencing and medicine are prescribed by the doctors through video conferencing only and prescribed medicines are easily available in the centers.

Skill services: Rural India is trained for executing the automotive service technician (two wheelers) like mechanic, vehicle technician, automotive mechanic, repair and maintenance service technician. These technicians are responsible for repairing and servicing of two wheeler vehicles. Different skill trainings are giving to the rural India to make them skill full for the job. Trainings are given for adding the knowledge for different skills like handset repairing, automotive service technician and field technician to the rural India.

Awareness campaigning and training programs: Different training programs are provided to the rural India for making them digitally active. These programs help them to use the internet in day to day life. More than 400 awareness programs conducted in the digital village and approx. 80,000 villagers attended these programs.

6.0 Focus of Digital Village Scheme

The main focus of digital village scheme is to provide connectivity to every rural area with the digital world. Strong network can be provided by improving the internet infrastructure in rural India. The effect of digital village scheme on different sectors is explained below.

6.1 Agriculture

In rural India, agriculture is a main occupation of the villagers. By connecting the rural India with the digital world, villagers can get information about weather, agricultural inputs, sowing and harvesting methods. Even with the help of 'Prime

Minister Jan-Dhan Yojana', small villagers can have bank accounts and with these bank accounts, villagers can learn about online transaction through Digital Village Scheme. In this way, rural India can also become cash-less.

6.2 Education

The main advantage of Digital Village scheme is villagers can perform online activities over the internet. With the help of internet, students can access lots of educational videos which are available free of cost on different online portals. Students can access a digital classroom in which a computer is attached to a projector and they can learn different subjects from different teachers living in different urban areas whose educational videos are available free of cost over the internet.

Teachers can prepare the lesson plan more effectively and they too can learn new teaching techniques over the internet.

6.3 Health

Digital village scheme also help the villagers to improve or maintain their health. Villagers can discuss their health issues or their cattle/cow heath issues with the doctors over the video call. Medicine prescription of the doctors can be shared by the internet only and records can be managed and shared digitally. Rural India can watch different videos about different diseases and learn how to cure the disease or how to stop the spreading of disease.

7.0 Application of Digital Village Schemes

The 'Pradhan Mantri Jan-Dhan Yojana' is an influencing step taken by Government of India to uplift the financial connectivity of the rural India with the digital world. The main objective of this scheme is to connect every house in India with the bank. Only 84,000 CSCs were available in 2014 but these centers increased and reached up-to more than 3 Lakhs. Majority of the centers have been set up in village panchayats (Gupta, 2019).

Google India signed a Memorandum of Understanding (MoU) with the Telangana Government on 21, August, 2019 for making the Telangana digitally active, get more local language content online using Google's digital publishing tool, Navlekha. Google will provide services like digitalise the government's content in Telugu and services on government sites in their local languages. Google will also work with the government to increase the digital literacy in the Telangana state (IANS, 2019).

Akodara village is located in Sabarkantha district of Gujarat. This village is known as "Digital Village" on 2, January, 2015. Akodara village was adopted by ICICI Bank under the Digital Village schemes in 2015. Akodara is known as Digital village and Cashless village. This village is known as the first Digital village of India. All mobile banking activities are done in Hindi, English and Gujarati languages. ICICI bank also provides training to the villagers about the processing of financial activities over the internet. The majority of the villagers are using electronic payment methods or digital methods for making payments. The majority of payments are done through SMS only and the payments are directly goes to the shopkeeper's accounts. The gram panchayat rented out the premises of village to ICICI Bank's rural branch. People in Akodara are using mobile phone for making payments of their different purchases. The village has their own website (http://akodara-digitalvillage.in) and people are using this website for different purpose. This village has wi-fi facility and people are using wi-fi for different online activities.

Every household has bank accounts. Most of the household has account with ICICI bank and bank made compulsory for the user to activate the SMS service. ICICI bank provided the customized SMS banking platform and software specially customized for the villagers. With this SMS banking software, villagers are using basic function like balance enquiry, mini-statement, fund transfer and prepaid mobile phone charges. With a single SMS transactions proceeded by the villagers. ICICI bank placed three micro-ATM-based solutions to the local people of the villages for facilitating the local mandi commission agents for making payments to farmers and used for making payments of services/products (Sen, 2016). There is another village where this Digital Village scheme is implemented in a proper manner. Dhasai village located in Thane district of Maharashtra are on the way to become Digital Village. The Swatantryaveer Savarkar Rashtriya Smarak (Mumbai based NGO) worked very hard for this village. This NGO contacted Bank of Baroda with a request to provide facilities to the Dhasai village. People of this village have to cover long distance to deposit cash in the banks. Approx. 400 traders are there in the village and they need to transact with the bank on the daily basis. The bank has provided swiping machines in the village and installation security deposit was not taken from the traders. The traders have been given concessions as they are motivated by the banks to open current accounts for Rs 2,000, instead of Rs 10,000 (Goswami, 2016).

There are different companies who are also working for developing the rural India. Cisco and BT have established Life lines India. This is a telephone-based help line. This helpline provides advice and guidance to rural India about farming. Farmers call on this helpline and discuss the problem related to farming, cattle, crop, cow etc and experts are giving advice to the farmers.

Under the e-governance plan –agriculture (NeGP-A), different facilities of e-services were provided to the farmers. These e-services include internet, touch screen kiosks, agriclinics, mass media, common service centres, kisan call centres and integrated platforms. This project designed and developed within the Department of Agriculture & Cooperation so that services can be provided to the farmers directly through their mobile only. SMS Portal was inaugurated by the Hon'ble President of India on July 16, 2013 and since its inception nearly 50 crore messages or more than 152 crore SMSs have been sent to farmers throughout the length and breadth of the country. These messages includes information related to the farmer's need and farming. Kisan call centres received number of calls from the farmers and they were asked specific information regarding the farming. SMS portal services also provided to the farmers. Farmers can send SMS for getting the specific information regarding farming, cattle and their pets in their languages. Different value added services provided to the farmers like USSD (Unstructured Supplementary Service Data), IVRS (Interactive Voice Response System) and Pull SMS and farmers can receive messages and can also get web-based services on their mobile without internet. Semi-literate and illiterate farmers are also targeted to be reached by voice messages (Ministry of Agriculture Government of India. 2013).

8.0 Future Implication of Digital Village

The Government of India worked hard for Digital India programme. Under this programme, Digital Village scheme launched by Prime Minister of India Narendra Modi for making digitalized rural India. The ministry of electronics and information technology worked with CSC E-Governance Services India Limited for making this scheme successful. CSC SPV selected six villages as a pilot under the Digital Village Campaign where the objective is to provide e-governance services to the rural India. CSC centers were created to facilitate the e-governance services for the villagers. After seeing the success of Digital Village campaign in initial stage, the Government of India will scale up the 'Digital village project'. The government of India is planning to expand the DigiGaon in 700 villages in coming future. Initially, six villages was considered for the pilot project. The Digital Village scheme is monitored by the Ministry of Electronics and Information Technology (MeitY). These villages are Piyala and Dayalpur in Haryana, Chandankiyari East and Shivbabudih in Jharkhand and Dhanauri Kalan and Sultanpur in Uttar Pradesh. Now, the Government of India scaled up the Digital Village campaign and worked on "Digital Village 2.0". The objective of this campaign is expanding the reach of social schemes such as Ayushman Bharat and Pradhan Mantri

Shram Yogi Maan-dhan (PM-SYM), financial services, basic health care, and skill development in rural India. Various common service centers will form under IT Ministry, which deliver different welfare schemes to 700 villages of India. In 2019 Budget, government of India planning for opening more than 300,000 common service centers (CSCs) and 1.2 million people are digitally delivering various services to rural India. These CSCs are expands in different villages and will create digital infrastructure in the villages with the aim of converting village into Digital village (Arakali, 2019). The Government of India still working very hard in making rural India digitally active. With the success of Digital Village campaign, government has taken a next step further in this direction. It is highly profitable for the country if the rural India connected with the digital world and utilized the various services online only.

9.0 Conclusion

Digitalization of village will create the balance between rural India and urban India. The majority of people are living in rural areas so it is required to make rural India digitally equipped. The knowledge of internet for processing different services online will proved highly beneficial for the villagers. Digitalization of village can create employment opportunities, increase the standard of living, ease the work and increase the knowledge regarding internet. Through internet, rural India can connect with urban areas of India/world. Digitalization of village will prove highly beneficial for the farmers. Farmers can have knowledge about their different issues related to farming, cattle, crop etc. through the internet only. From last five years, government of India was working on the Digital Village campaign. Six villages selected for pilot campaign and this campaign was successful. Akodara and Dhasai village becomes digitally active village after implication of this campaign. Government of India planned all government process re-engineering, electronic databases, complete workflow automation & IT-based public grievance redressal in all government departments. There are lots of difficulties/challenges in executing the Digital Village scheme like internet infrastructure, speed of internet, education of villagers. The future of rural India is bright after the proper implication of Digital Village campaign. The same result is expected from the Digital Village 2.0.

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