THE FOCUS ON 'RURAL DIGITIZATION': FROM INDIAN PERSPECTIVE

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ABSTRACT- *"Digital India" is a flagship program taken prestigiously by the Indian Union government in order to empower and transform India into digital economy and knowledge society. This program will be succeeding not only with the act of digitization of urban areas in the country, but focusing on the rural empowerment with digital synchronization. It is possible but not easy as we discuss. This paper encompasses the methods by which rural empowerment is possible. This article mainly focuses on establishment of internet facilitation in remote rural areas, so that the people living there could be able to grab the incredible advantages with it. Along with the internet facilitation other aspects of rural digitization are discussed in suggestions.*

Keywords-digitization, digital literacy, semi-literate, illiterate, internet

I   INTRODUCTION

From the forecasting statistics of World Population Review Forum India will be the largest populated country on the earth around the year 2030. From current statistics, each birth of a new child happens for every second and each death happens for every 3 seconds.[1]

Census is the official record in India since 1872, carries population calculation for every 10 years. As per the above statistical trend projections the population will increase to 138.00 crore in the year 2020 from 121.00 crore in the year 2011.

Table 1: Population Growth in India from 2001-2011

	2001	**2011**	**Growth rate**
India	102.9	121.0	-3.9%
Rural	74.3	83.3	-5.9%
Urban	28.6	37.7	+0.3%

Source: Census India 2011

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From Table 1, it is clear that the urban area population in India has been increasing continuously and can be observed this phenomenon since 1991. The reason is the open debatable fact that poor infrastructure, poor employment sources, lower and inconsistent income patterns, some dominating traditions and cultures over the poor and illiterate are the some of the main reasons for migration of the villagers towards Urban places far from them. Even at this COVID lockdown situation the unfortunate migrants are moving by walking mode even from country capital to Tamilnadu remote areas. These people have migrated for finding their livelihood to the urban areas.

According to Census, 2011 India has 6,00,000 villages. Even migration of people has been happening since 1991, still majority of the population resides in rural India only. From the Census, it is notified that rural population is of 68.84% over the urban population with 31.16%.

In India literate means 'a person with at least ability of reading something in their regional language and having the ability to sign on any of the documents. From the Census, 2011 it is notified that over total literate people in India (778.5 million), rural literacy occupied with 493.0 million, means to dream digital India, there is much more to focus on rural India over the urban India.

The digital literacy is the next stage of general literacy rate for betterment of life and for the faster synchronization with changing world. But it is never discountable issue of general literacy rate has definite impact on digital literacy. According to a research report by Boston Consulting Group, expanding digital knowledge in rural areas tend to influence of purchasing patterns of rural households by comparing cost, quality and variety of products and services undoubtedly following the trend in urban areas. In fact, in several categories like mobile devices, laptops and PCs, the digital influence in rural areas is approaching the same levels as in district headquarters.

II OBJECTIVES OF THE STUDY

- ➢ To study the role of 'digitization' in the context of development of rural India.
- ➢ To exploit the suggestions to the current existing patterns of 'rural digital India'.

III REVIEW OF LITERATURE

Asheeta Bhavnani et.al, in their research have highlighted the role of mobile phone utility synchronization in rural households for strengthening their position financially. They stretched out about developing the mobile phone technologies especially in such a way that even minimum literate farmers can be understood the utility of mobile phone without any complications. They have recommended the development of technology to educate them from all-round view of creating daily awareness about their farming procedures, schemes, banking transactions and many more.[2]

Eric M. Meyers et.al, in their research paper contemplated that new technologies are to be developed in such a way that they are always user accessible and limit the boundaries of usage, so that nothing to be damaged to their utility

matters. They have highlighted the safety and privacy perspectives in order to expand the usage of technologies around the widely spread geographical territories in India.[3]

Indrani Medhi et.al, in their research have tried to address the knowledge and accessibility levels of the semi literate people who shows interest in using the computer technology for their necessities. They found that mostly text-free designs are preferable by the respondents. From their research they strongly recommend the user free interfaces especially in rural areas which consist of illiterate and semi literate people in India.[4]

Indrani Medhi et.al, have encompassed the importance of audio-visual tools in order to transform the digital literacy in rural and deep remote areas, where most of the population are either illiterate or semi literate. From their research, they found that rather using just only visual basis technological tools, using audio-visual tools results best outcomes.[5]

Kanwal Ameen and G.E. Gorman have stated that the libraries and childhood education systems still not giving priorities to digital literacy education. There is a big gap between utility of digital technologies and real life cases. In order to fulfill the gap and bring into reality of practices many initiatives need to be drafted from rural perspective. They suggested forming clusters of population from different demographics to seed the computer literacy, information literacy, cultural literacy, mobile phone literacy etc.[6]

Madalyn Cohron, in her study has narrated that there are so many aspects that impacts the digital divide in a country like socioeconomic causes, cultures and beliefs. She stated that the digital divide shift started from accessibility to literacy & knowledge. It means that initially rural areas were lagging from timely establishment of technological resources. Later they are facing the issues of rural literacy rate and knowledge of usage.[7]

Michael Haight et. al., have tried to elevate the reasons backboned to digital knowledge at the edge of total population. According to their investigation, the learning ability of the people mainly depends on the demographic characteristics of the people. Here the age groups, income levels, existing education standards, people's migration rate towards urban areas and existing gender percentage plays a vital role in type of tools to be used in digitization of areas.[8]

Mohd Uzair and Sameera Khanam, in their study have explored the major role of youth proportion in total rural population of India. All the initiatives should be centered on the youth population in the context of digital knowledge accessibility. They have found that the gender gap and income instability in rural households are playing major role in differences between digital knowledge accessibility.[9]

Neil Patel et.al, in their investigation about most essential instruments required in order to improve the digital literacy in rural India, have discovered that the social groups' formation and creating environment of internal communication with each other about their agricultural practices are very important in every village. In these interactive forums, farmers become habitat to ask questions and answer the questions of other farmers continuously about their farming practices.[10]

Paul T. Jaeger et. al., from their investigations have discovered the importance of public libraries in the context of making digital literacy knowledge available to everyone especially in the developing countries. The major responsibility of the governments is to make policy changes of library facilitating services to promote the usage of

internet via libraries is essential. To facilitate such policy modeling, the local governments must collaborate with private agencies in order to improve such infrastructure facilities to cut the initial funding burdens.[11]

Renee Kuriyan et. al., have tried to address the gap between the financial strength and social goals of the government in Indian Scenario. In Indian context, with minimum assured financial strength a self financing computer kiosk can cater minimum services only at rural level. For make them convert into great sources of digital literacy transferring agents, the government needs to take initiation to facilitate subsidies and other encouraging aspects to boost the entrepreneurs.[12]

Seamus Grimes has tried to investigate the major reasons for the poor accessibility of digital knowledge in rural remote villages. They have stated that the far distance between remote villages to big markets, knowledge hubs and nodal centers is one of the major bottlenecks of poor digital synchronization. The second reason is that unequal infrastructure facilitation due to lack of sufficient financial strength in local governing bodies.[13]

Thomas Apperley and Catherine Beavis have explored about introduction of digital games in school level to improve confidence levels of students from their childhood to use digital technologies in their lives. They discovered a problem with designing such games without using text words in English to improve the usage of technology. In order to involve every student and make them free hands of usage of such technologies, definitely the technology developers' focus on designing some recognizable things in such games rather than using huge literature in English while game is in progress.[14]

IV IMPORTANCE OF DIGITIZATION IN RURAL DEVELOPMENT (INDIAN CONTEXT)

Technology heights are climbing faster than other growth aspects, which finally results bringing betterments in common man's life (time saving , secured payments and receipts, timely information and knowing benefits of alternatives). Every part of society is getting benefit from these faster technological developments. In India a major portion of the country still far from absorbing such benefits from those technological heights. This loosing section is none other than but 'rural India'. Many problems of the villages can be sorted easily with the full utilization of this technology and in some places with Internet introduction. The importance of internet facility in rural development cannot be under estimated. In this paper everything is focused around the 'rural digitization'. The following are the benefits with rural digital knowledge occurrence-

a. *Secured Business Development*

With the facilitation of internet connection in remote areas, specific cropping farmers can have the scope of knowing the new procedures; information related to the particular crop till the end of the crop will be possible. The farmer can have the scope of selling their crop to the party which pays reasonable rates appropriately. The farmers can connect with existing farmers who are having same crop at that time to discuss about crop seed to final outcome.

b. Regional development

The prime of our Indian Constitution is that development should be spread equally around the country. Every place of India has its own recognition in the sense of variety of crop or holiday spot or with its own characteristics. By establishment of internet connection, such places can be connected with rest of the world easily. With that, a scope is generated to develop (schools, hospitals, road transport and banking system) by consistent revenue generation with that advantage over other places.

c. Reduces dislocation and migration

The major issues of Indian context since 1991 are dislocation and migration. If these problems can be overcome by internet facilitation in the rural areas which results in job creation, consistent income generation, then rural empowerment will be happened.

d. Better communication means

In general, the remotely located farmers have not scope to communicate with others from the view point of their agri-issues. They all are living like in other planets. Inappropriate information, unavailability of information in a timely basis manner are causing huge damages even to their life patterns. With the facilitation of internet access in villages, if a farmer gets the relevant information at an appropriate time, it will become so helpful.

e. Digital mastery and banking

The prime objective of Indian government is to empower the common man (farmer) by introducing digital literacy in rural India. The diversion of people from physical involvement in banking system to e-banking system is still an important and challenging task. As transparency of monetary transactions increases, the rural people tend to continuously believe in banking system, such that a greater scope for loans and liabilities will be occurred.

f. Hike in Literacy rate

Still most of the rural areas in India are lagging with quality education due to so many reasons. By introducing internet connection to such areas there will be a greater scope to educate the rural people with quality education at a time several places. It opens the doors for a tremendous increase in literacy rate even to minimize the digital divide between the gender differences.

g. Agricultural assistance

Internet connection facilitates the scope to the farmers to get the knowledge continuously about their crop yield, kind of precautions taking by the similar farmers around the globe. They can create market for their products at a reasonable price. They can have an opportunity to interact with government and other representative authorities to gain knowledge about how to improve soil fertility and preservation of water resources and kind of pesticides to be used to improve their crop yield.

h. Community Development

To make digital India, it is very important to minimize the traditional beliefs (myths) related to girls and evil eye etc. These types of false things are generally present mostly in rural India. Internet facilitates a good platform to

avoid such false beliefs. As forming a community living far from each other, two groups can have the scope to share and take better decisions.

V SOME IMPROVEMENTS TO BE TAKEN BY THE GOVERNMENT IN THE RURAL DIGITIZATION CONTEXT

➢ The mobile phone app developers to be insisted to generate applications by considering lower level and even illiterate villagers, without texts.

➢ The government needs to focus on 100% controlling fraudulent activities of hackers and creating strong firewalls in order to protect the interests of village basis people.

➢ The government needs to change the curriculum of government schools from primary level by introducing digital literacy subject.

➢ Creating digital games, so that the gap between the rural basis students and computers can be gradually minimized.

➢ The local governments needs to tie-up with private agencies in order to introduce infrastructure facilities in rural areas and promote digitization continuously.

➢ The rural libraries should be empowered with internet facilities, so that the people come there to read news papers and magazines can go through the internet utilization.

➢ Even rural people are aware about using digital technology, they are feared about how to start and utilize those technologies. It is the major responsibility of the government to facilitate audio-visual programs in order to improve the confidence levels of the rural people.

➢ In order to realize the concept of digitization into reality, rural literacy expansion plays vital role. To evacuate the drawbacks of rural areas and to foster the digital literacy, general literacy also plays important role. As literacy rate expands, digital literacy expands exponentially.

➢ To arrest the migration rate towards urban areas from rural areas, the government must create opportunities at the door step of the rural households. If digitization impacts positively, it will create different opportunities to the people to earn their livelihood consistently.

➢ Still Indian economy is largely dependent on agricultural products. So to empower the farmer, it is very important to create healthy environment from seeding to selling phases. By creating social groups locating at different places with similar activities around the country, they can solve their issues relating to their agriculture problems easily.

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