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Leveraging the growth of the nation by upliftment of its rural counterpart – An ICT based approach

Chitralekha Dwivedi

Dept. of Computer Engineering, Dr. D.Y.Patil Institute of Technology, Pimpri, SPPU ,Pune, India

**Corresponding Author: chitralekha.ujn@gmail.com*

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Abstract— Problems too know, which is the most appropriate location to, dwell in. Rural people mostly believe that, "their destiny is to be in the midst of numerous problems" and that nothing can change their fate. Most of us will agree too, that mostly the urban lot are enjoying the fruits of the tree called "Modernization" ,where as rural people are still engaged in agricultural and small scale industries/business, unaware about what is going on in exterior world . In order to provide the basic necessities and facilities needed to live, the government surely has done a lot but when it comes to making the people of village competent enough to face the fast paced world and its challenges, still a lot has to be done . The most valuable step in this situation would be to modernize the countryside of our nation , so that the population in villages will also be capable enough to leverage the growth of India in every dimension. There are several policies both for the rich and poor, in every country that takes care of its diversified citizens, but whether they are actually implemented or not, is still a mystery. Currently there are some barriers in the development of villages, such as lack of quality education, lack of employment, shortage of resources, non accessible internet etc. This paper is an attempt to cover some of the case studies of the rural people across the globe, who took a step towards transforming their lives. The barriers in the way of rural development, are also highlighted here. Probable and promising solutions based on ICT tools and techniques are also presented.

Keywords— ICT-Information and Communication Technology, Sustainable, Policy Making, Barriers, Patanjali

I. INTRODUCTION

Human race is experiencing and savouring the benefits of a new revolution, driven by the developments of Information and Communication Technologies (ICTs) and the Internet. The pattern of working, living, socializing, producing, marketing, cooperating and interacting, almost everything has changed. The core of this revolution is the convergence of ICT, which enables the collection, processing, storing, transformation, retrieval and finally transmission of information, in whatever form it may take - oral, written or visual. The potential offered by ICT has created large expectations in many groups of the society, for dealing with the challenges and threats in this new era[1].

Before actually beginning the paper, let's understand the meaning of "RURAL". The countryside or rural is a geographical area that's located outside towns and cities , and is an indivisible part of any nation. Typically rural areas have a low population density and small settlements. Mostly rural area is engaged in agricultural activities, and small scale business. Their lives are different and tough as they are not provided enough resources for comfortable living. This paper unfolds the current scenario of rural areas, their existent problems and lastly the proposed solution to upgrade the rural areas is also proposed here.

Current Scenario

With almost about 75% of the land acquisition by rural areas and nearly a quarter of the population, rural sector of the country still continue to face problems of declination and out-migration, ageing of their population, a lower skill base and average labour productivity, etc which strongly affect their competitive position in the new era. The rural–urban distribution is **68.84%** and **31.16%** respectively. The level of urbanization increased from 27.81% in the 2001 Census to **31.16%** in the 2011 Census and the aristocracy of the country hopes to urbanize its rural subdivision too.

To address the above problems and deficiencies, rural development policy needs to be redesigned. The governing bodies of the nation should focus on the modern technologies for improving the condition of rural areas[3].

It should be based on the effective and more sustainable exploitation of available resources and human capital. Also better coordination and interaction among all the different sectors (urban, semi urban and rural), levels of government and public and private is required in order to leverage the rural (countryside) progress.

Sharma and Upadhyay [4] in their paper highlighted the contribution made by MGNREGA in the development of

Indian rural sectors. Increasing accessibility of rural regions to ICTs and their applications seems to be a promising policy option for their future development.

The focus of the present paper is twofold: on the one hand it attempts to shed light on the role of ICTs and their applications as enabling tools, supporting rural development perspectives; while on the other hand it explores the barriers appearing towards the adoption and use of ICTs in rural regions. Exploring the range and potential of ICTs applications that can serve the implementation of the new policy paradigm in rural regions. The steps that are needed in order to develop value-added ICTs applications in rural regions and the barriers appearing in the adoption and use of ICTs in these regions are also presented. New economy has been perceived as " a fundamental transformation of the economy via globalization, new technologies and a noticeable shift to more knowledge intensive activities" . Under these new circumstances, policy making in general, but also rural development policy in particular, needs to readdress its focus and direction in the new era, in order to be able to deal effectively with sustainable rural development objectives, namely social cohesion, competitiveness of the rural productive systems in a globalized world and environmental protection.

II. LITERATURE SURVEY

The issue of rural development will rise every now and then, by means of such research papers until and unless the "rural" word becomes extinct and everywhere we look at is all urban and modernized. The problems in rural areas are of different types, here are a few research papers that addressed them from time to time. Ghavifekr etal [5], brought out the various challenges faced by the teachers of Melaka state , Malaysia in using ICT tools . Limited accessibility , network connection problems, limited technical support in case of grievances, lack of effective training on how to use the tools effectively and at last lack of competency in teachers were the main causes behind less usage of ICT tools in education system.

It was observed during the survey done in schools and colleges that percentage of male teachers that use ICT tools and techniques in day to day lecturing was greater than their female counterpart.

Sharmila devi etal [9] in their study based in ICT for quality education in India have given following important points to brood over. The paper said that , practical use of ICT tools specifically in education sector can do wonders . The education or teaching can be classified broadly as traditional, online , distant and part time. All these categories can have specifically designed ICT tools , that cater to the needs of concerned teaching approach.

Moslem Savari etal [10] gave an insight on barriers coming in the way of sustainable rural development, from perspective of experts. A questionnaire was prepared for the teachers and public concerned of Kermanshah, which was focused on issues arising in successful implementation of ICT tools in today's education. The result of the questionnaire can be summed up in terms of five factors – a)Physical and Structural b) Investment Problems c) Weak Policymaking d) Agricultural Production Risk e) Lack of skilled manpower.

The complete education system staring from admission of a candidate to the convocation of the batch can be modernized for better results. Anastasia Stratigea(2011)[11] in his paper entitled " ICTs for rural development : Potential Applications and Barriers involved", did an intensive and vigorous survey on every single dimension of rural development of any nation based on ICT tools and technologies. There are several other web pages and images /photographs were in I have taken the idea of writing a paper on this topic.

III. SOLUTION UNFOLDED(TECHNICAL PERSPECTIVE)

The basis of development is a planned and persistent effort with a vigour to bring out some change in the world. Gone are the days when humans used mobile phones only for communication, today's era is of information and knowledge. Rural people too need an awareness on how to accelerate the pace of self development by embracing the modern technologies gradually in all walks of life.

The problems faced today by our village people are lack of education(basic and advanced) , lack of proper nutrition and drinking water , poverty , ever increasing debts , improper electric supply, poor quality wireless communication and transmission etc.

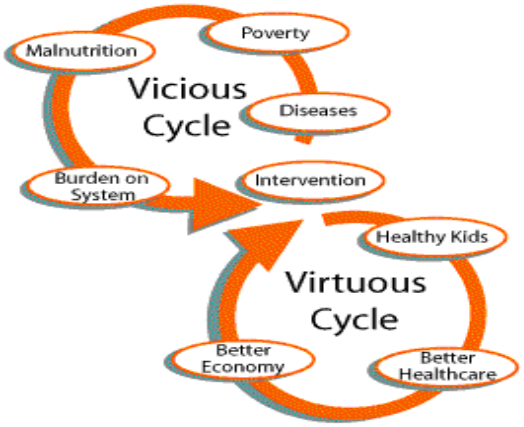

Fig:1 Transforming from Vicious to virtuous

The present scenario compels us to adapt the better means of livelihood . The villages also should open heartedly learn and accept these technologies in their day to day life. All sorts of problems will vanish , when quality education will be provided to one and all without any discrimination.

Basic and small things such as transferring the money urgently to somebody is more convenient through paytm rather than tearing a cheque and waiting for it to get credited , going from one place to another can be done in many ways such as by bullock carts or by fast ola , uber auto, cabs , bringing food from a far away restaurant can be replaced by online food delivery options such as swiggy, zomato etc .

One of the relevant example which can be quoted here to encourage the rural people of India is of Swami Ramdev (born as Ramkrishna Yadav). He has worked rigorously day and night for the upliftment of rural masses , with his brilliant ideas of modernization of traditional agriculture and ayurveda. Today "Patanjali", needs no introduction worldwide, specially in India. Swamiji has also revolutionized the education by founding the Patanjali Yogpeeth , which is an education hub that promotes yoga and ayurved.

Fig:2 Baba Ramdev in one of his tetra pack plant.

Fig:3 Patanjali Yogpeeth at Haridwar, U.P

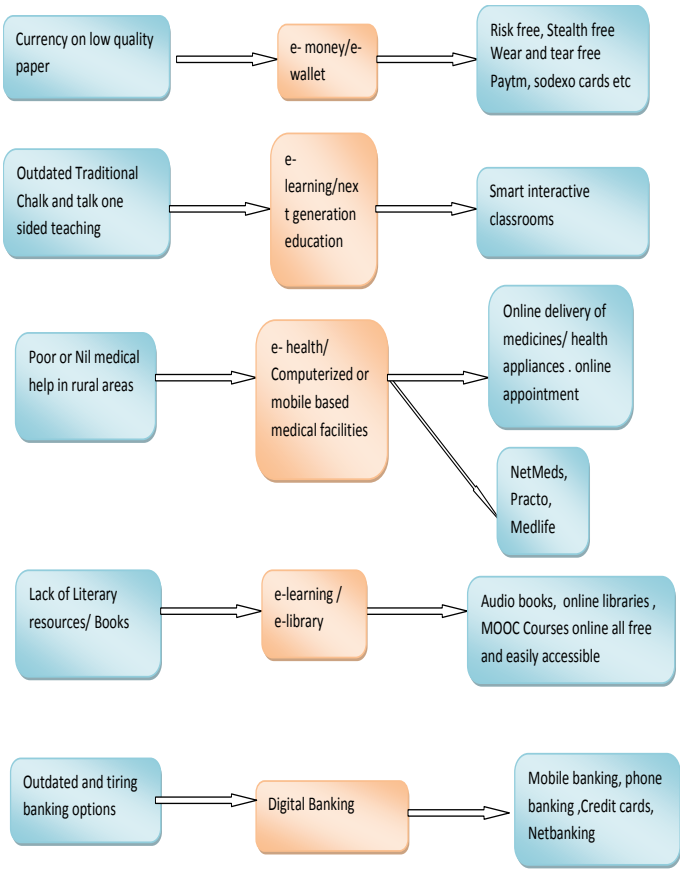

Fig :4 Improved Technologies for replacement of old ones

Global Outlook on Rural Development based on ICT

The world is changing at a very tremendously fast pace. Recent years have undoubtedly acknowledged the advancements in agricultural and small scale industrial revolution. In this context, it is worth mentioning that the Spanish and Portuguese-speaking countries of Latin America and the Caribbean underwent a vast rural transformation in the second half of the 20th Century. By the year 2000, some 75 per cent of people lived in towns and cities, and agriculture's share of GDP had fallen by 40 per cent since 1980 to little more than five per cent of the region's economy.

In some countries in the region, large estates have become corporate farms that are often big rural employers. They generate the majority of agricultural GDP, and control almost all food processing.

IV. LIMITATIONS

Like everything in this world , ICT too has got its own set of limitations like hardware limitations as the state of the art hardware required is at times unavailable in the geographical location in the context, limitations from the software side that are poorly coded and incompatible types. Communication hurdles too will pose problem like low data speed, difficulty in transferring the information from one place to another, data sharing and many more. The solutions to the above problems are also existing but not easily accessible to one and all.

V. CONCLUSION

Challenges that come in the way of rural development are undoubtedly many, but the solutions are also not few. The phenomenal ICT tools and modern digital techniques are worth mentioning in this context, as they definitely help in leveraging the growth of any sector of the society. This paper was an attempt to highlight the need to embrace the digital tools and techniques for better living. The stagnant position of the rural areas in the attainment of employment, food and other basic necessities of life ,can only be accelerated through embracing the Information and Communication Technology(ICT) in daily life.

The use of ICT tools help in strengthening social networks, empowerment and participation, as well as fostering productive processes at the local level through the provision of employment and skills, as well as support services for micro-enterprise activities. Need of the hour is to educate the rural masses about the non ending advantages of the ICT techniques in every field of their concern, such as increasing the production of the crops by implementing the best practices and advertising their home made local products , so that they too can become global brands. The examples of personalities like Swami Ramdev was quoted here, just to underline the fact that "nothing is impossible if there is a will". The future of rural people is certainly bright as the government is also taking measures to help them in all walks of life.

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Author Biography

Mrs. Chitralekha Dwivedi is currently serving, as an assistant professor in Dr. D.Y. Patil Institute of Technology, Pimpri, Pune in the Computer Engineering Department. She has an experience of 7 years in technical education, to her credit. Her areas of interest includes Digital Image Processing, Advanced Data structures, Computer Graphics and Multimedia , Information Security, Copyrights and Intellectual Property Rights etc.

