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A Framework and Need of ICT Empowered Rural Education: An Indian Perspective

Vandana Shrivastava

Research Scholar, Sai Nath University, Ranchi, Jharkhand

Abstract – Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a faraway not so developed secluded village, according to the Article 45 of Indian Constitution the basic elementary education must be provided to all the children up to the age of fourteen years. Even after 64 years of independence some States in India are still struggling to achieve Universal enrolment, retention and quality education. There are about 1303996 or more than one million rural schools among 6,38,000 villages in India. Schools in rural areas are promoted to raise the level of education and literacy in rural India. The main aim of running these types of schools in India is to increase the rate of literacy in rural areas. More than 40 percent of India's population is illiterate and cannot read or write. Schools in rural areas are inadequate and often equivalent to being non-existent. Thus, government's initiative to set up schools in rural areas came into picture. According to Just Indian Schools the conditions of rural education in India, is improving steadily and the government is also providing full support and providing with many initiatives. The fee structure in these schools is also very low so that every child can study and afford it.

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INTRODUCTION

India, over the past decade, has become a test bed for innovations in information and communication technologies (ICT) serving the rural user. Various reasons explain this emergence. The most obvious is the search for a solution to what has long been an intractable problem: that rural India has remained poor while the rest of the country has moved ahead. The hope that ICT can surmount at least some of rural India's social, political, and administrative challenges and create a viable technology for the provision of health, education, and other social services is thus ICT's strongest calling card. An additional expectation is that ICT can be used innovatively to improve access to the large, underserved market that rural India's 700 million people represent, especially considering that India has the resources to build an ICT infrastructure, i.e., its large, skilled, cost-efficient IT workforce.

It is widely assumed that the benefits of ICT can impact positively on the development of information-poor rural and remote areas. The power of ICT to connect these areas with the world"s information society and to break down barriers to knowledge and information exchange has led to an overall enthusiasm within the iERD debate (Slaymaker and Chapman, 2002). Subsequently, a multitude of projects which use ICT in order to improve the livelihood of rural inhabitants have been launched, seeking to exploit the apparently unlimited potential of ICT in order to tackle challenges related to rural areas (FAO, 2012).

ICT now include computer-based applications and communication tools, such as social media, digital information repositories (online or offline), digital photography and video, as well as mobile phones (Balaji, Meera and Dixit 2007). Through these ICT, a large number of iERD projects seek to provide farmers with the information they need in order to adapt their decision-making to an increasingly knowledge intensive agricultural sector. Furthermore, many projects see in ICT the opportunity to develop rural areas through providing schools with quality education or impart ICT training to rural inhabitants in view of developing their professional perspectives.

However, there is a high amount of inefficient and failing initiatives that could not reach their objectives despite an enthusiast project start and availability of ICT. In this regard, it appears even more important to understand how successful projects have actually achieved to improve the livelihood of rural inhabitants.

As per the 2011 census, 72.2% of the population lives in Rural areas about 638,000 villages and the remaining 27.8% lives in more than 5,100 towns and over 380 urban agglomerations. Among all the above mentioned educations techniques adequate in rural India have to change according to the 21st Century. The main aim of this study is to elevate the Scope, Purpose and Methodology adopted for computer education in Rural India.

Information and Communication Technology (ICT) is one of the rapid development technological fields in the global society. Among the developing countries India reached a significant position in development of ICTs. Particularly in the field of education its development is tremendous. There is no doubt in the near future's development will based on ICTs.

However benefits of ICTs are not reached expected level in the rural areas still the rural population living with minimum level of ICTs facilities especially the poorest of the poor.

Both Central and State Governments and NGOs are allocating huge amount for the development of ICTs and rural education. However the level of improvement in accessibility of ICTs in rural schools did not reached the expected level. This paper gives ideas to improve the rural education through ICTs, especially the computer related technologies. Also provide some suggestions for effective implementation of the national policy for ICT in education in rural areas.

PRESENT SCENARIO

In present scenario, condition of rural education is still very poor. In some villages, there are very few Government schools, children have to travel far away distances to avail these facilities and most schools in these locations do not provide computer education. Once I visited my own village ―Rampur Shyam Chandǁ in Raghopur Block of Vaishali District, Bihar, India. In this Block there are so many Government schools upto primary and upper primary level.

Despite of all these primary schools, only two or three High Schools are there. All of them are from British period. 10+2 level education facility is not available in these schools, because of this reason lots of students have been migrated from this area and settle in Patna or Hajipur for continuing their further education. Once I visited one of the oldest and popular school namely ―Rampur High Schoolǁ situated in Rampur Village, find out lack of building infrastructure, electricity, telephone facilities, experienced and skilled teachers. When I entered in computer room, I was shocked to see the condition of lab. Computers are not installed there in systematic order and basic software is not installed on to them. I talked to the Co-ordinator of that Department, he told me that we had computers, but no any computer teacher and technical person appointed for this by the government. We only avail computer classes through local people by giving some honorarium by our own contribution. The quality of ICT based education facility is very poor. The teachers get very less income so, most of the time the teachers are either absent or they do not teach properly. There are many initiatives taken by the government, but they are not implemented in the schools, so the present scenario remains the same.

A. Problems Faced in Rural Education in India -

- Teachers of rural schools in villages and small towns receive low income so there is a possibility that teachers give less attention to children.
- Most of the schools do not have proper infrastructure. So they do not get most of the facilities such as computer education, sports education and extra-curricular activities.
- There are no proper transport facilities so children don't like to travel miles to come to school.
- There is no excess to supplemental education.

B. Need based ICT Education in Rural Areas -

Due to various developmental activities in education department, rural schools have improving its infrastructure facilities. But the development is not uniformly in all rural areas; still many areas are neglected from even basic infrastructure facilities. Though, governments are providing ICT facilities to rural schools. Many of them are not working properly. The reasons such as, lack of accessibilities of the facilities by the beneficiaries, beyond the level knowledge of users and not full fill their needs or beyond their level of needs. Thus, whenever implement the ICTs related programmes in the rural areas, should be assess local conditions and priorities needs of rural students. The assessment of needs should be following the methods of dialogue, survey and discussion with beneficiaries in rural areas. First they have to understand the real benefits of the programmer then only it will sustain in long term and perform effectively in rural areas.

C. Create Awareness on ICT Education -

Before provide knowledge through computer related technologies, should have to create knowledge on ICT education and its usage to the rural school students. Due to their lack of awareness in the field of ICTs, rural students are not paid interest in the computer based education, some of them initially paid their interest later they are not follow, this because majority of rural ICT related programme failure even in initial period. The making awareness and motivation are not only to the students also the instructors of the ICT programme in rural schools.

D. Infrastructure Facilities -

Infrastructure facilities are one of the important factors for the implementation of ICT programmer in rural areas. Existing Infrastructure in schools needs to be improved for the successful and unhindered implementation of ICT. Without proper infrastructure facilities like power, place of the centre, connectivity and computer related materials and human support the programmer will not success. So before start the

ICT education programme should make sure all these facilities.

E. Community Participation -

Involvement/ interest of rural students are one of the significant aspects of ICT education programme. The attitude and behaviour of rural students, accessibilities in ICTs are different from urban students. The urban areas students might have some basic knowledge in the usage of computer and its usages through their method of education and living condition, whereas the rural students may not have much awareness about the benefits of ICT to their educational improvement. So education and motivation of rural students about usages and benefits of ICT programme is an important aspect. Here, the role of teacher is vital. So, first, clear knowledge should be provided to teachers working in rural schools on the ICTs.

ICT IN SCHOOL EDUCATION

The United Nations' Millennium Development Goals (MDGs) two and three are about achieving universal primary education and promoting gender equality, respectively. The MDGs in education are defined in terms of participation and completion of primary education by all children and the elimination of gender discrimination in education. Despite the continued efforts of the various Governments on universalizing the primary and elementary education, through a wide range of programmes and schemes, access to quality education continues to be an obstacle in the achievement of the education goals.

ICTs act as and provide students and teachers with new tools that enable improved learning and teaching. Geographical distance no longer becomes an insurmountable obstacle to obtaining an education. It is no longer necessary for teachers and students to be physically in proximity, due to innovations of technologies such as teleconferencing and distance learning, which allow for synchronous learning.

ICTs in schools provide an opportunity to teachers to transform their practices by providing them with improved educational content and more effective teaching and learning methods. ICTs improve the learning process through the provision of more interactive educational materials that increase learner motivation and facilitate the easy acquisition of basic skills. The use of various multimedia devices such as television, videos, and computer applications offers more challenging and engaging learning environment for students of all ages. A study conducted by the International Institute for Communication and Development (IICD) indicated that 80 percent of its participants felt more aware and empowered by their exposure to ICT in education, and 60 percent stated that the process of teaching as well as learning were directly and positively affected by the use of ICT.

Although ICTs do offer many beneficial opportunities for education, they are no substitute for formal schooling. The role of technology is to support school education and not replace it, though the technology may play an appreciable part in meeting the needs of children who cannot go to a conventional school. Access to ICTs ensures enhancement of traditional or formal education systems, enabling them to adapt to the different learning and teaching needs of the societies.

ICT TOOLS:

There are various ICT tools available which can be utilized for the knowledge creation and dissemination in the modern world. Tools include Radio, T.V, Internet, Mobile phone, Computer, laptop, tablets and many other hardware and software applications. Certain ICT tools like laptops, PCs, mobile phones, and PDAs have their own implication in Education. These devices can be used in imparting education and training for teachers and students. Many of the ICT tools are much hyped but have not given fruitful results till now. Use of radio for pedagogical practices has been very much popular in past and is still in use in India by IGNOU. But One-to-many broadcast technologies like radio and television are seen as less ‗revolutionary' ICTs in education, as their usage is seen as reinforcing of traditional instructor-centric learning models, unlike computers, which many see as important tools in fostering more learner-centric instructional models. Successful ICT initiatives meet three intertwined objectives: availability, access, and demand. Educational ICT tools are not for making educators master ICT skills themselves, but for making educators create a more effective learning environment via ICT. Teachers can utilize ICT tools to get benefits from using these tools in the areas of content, curriculum, instruction, and assessment. ICTs include fixed-line telephony, mobile telephony, newspapers, radio, television, radio trunking, very small aperture terminal (VSAT), computer, and internet must be accessible to rural public as per their demand.

NEED FOR ICT EDUCTION IN RURAL SCHOOLS

The Indian Education System is one of the largest in world. Planning and Management of ICT based education has primarily the matter of State but Central Government in this area. The large size and complex structures across Indian States makes the matter of policy, planning and monitoring is highly complex. In order to improve the quality and effective ICT education, planning and management is needed in-time and in a format conforms to the requirement

of the user operating agencies at various administrative hierarchies. The complexities of the multi-level decision making process and control mechanism increases due to wide geographical institutional network representing variety of school locations and endowment. Further due to the large variation in school structures, endowment and availability of teaching learning resources, the matter become more complicated.

ICTs are a potentially powerful tool for extending educational opportunities, both formal and non-formal, to previously underserved constituencies—scattered and rural populations, groups traditionally excluded from education due to cultural or social reasons such as ethnic minorities, girls and women, persons with disabilities, and the elderly, as well as all others who for reasons of cost or because of time constraints are unable to enroll on campus.

Anytime, anywhere feature of ICTs is the ability to transcend time and space. ICTs make possible asynchronous learning, or learning characterized by a time lag between the delivery of instruction and its reception by learners. Online course materials, may be accessed 24 hours a day, 7 days a week. ICT-based educational delivery (e.g., educational programming broadcast over radio or television) also dispenses with the need for all learners and the instructor to be in one physical location. Additionally, certain types of ICTs, such as teleconferencing technologies, enable instruction to be received simultaneously by multiple, geographically dispersed learners (i.e., synchronous learning).

Access to remote learning resources feature help teachers and students no longer have to rely solely on printed books and other materials in physical media housed in libraries (and available in limited quantities) for their educational needs. With the Internet and the World Wide Web, a wealth of learning materials in almost every subject and in a variety of media can now be accessed from anywhere at any time of the day and by an unlimited number of people.

POLICY GUIDELINES FOR ICT

High-level policy guidelines for ICT are typically derived keeping in mind the national need of critical thinking, entrepreneurially spirited future leaders. The following key points can help in defining the policy guidelines:

- Actualize the role of education and training in the strengthening of an equitable, imaginative and economically strong knowledge society
- Improve and increase quality, accessibility and cost-efficiency of the delivery of education
- Support education and training specialists to acquire and maintain the skills needed to take advantage of ICT and to transform learning
- Create high quality digital content, services and applications
- Work with partners and agencies for content, delivery and training and technology
- Promote connectivity and access to ICT in schools
- Upgrade teacher competencies.
- Integrate ICT into curriculum.
- Improve quality of teaching and learning
- Develop a cadre of citizens who can contribute to the workforce and economy globally

It is important to understand that – in the name of ICT in schools – it is not enough to equip schools with personal computers and train teachers in their use. ICT in itself is not going to radically change education systems. But it does give an opportunity to re-visit what education and its system should be seeking to achieve. ICT can be a great enabler.

ICT ENABLED PROGRAMMES

For the last few years the state governments, NGOs and some pioneering companies have tried to crack the technology barrier by developing pilot projects to showcase the marvels of IT in a rural setting. Kiosk based approaches to delivering e-governance have received considerable attention and funding. Bhoomi is a kiosk based project of Karnataka and holds millions of records of land ownership. It is widely successful as there are almost 8 lakh people in various talukas of Karnataka that use the system every month. The system called e-seva in the Ranga Reddy district of Andhra Pradesh, including the twin cities of Hyderabad and Secunderabad, is also very successful with thousands of citizens using the system for paying bills, getting motor permits and licenses and for various other government services. There are other successful projects such as CARD (Computer Aided Administration of Registration Department) in Andhra Pradesh; Saurkaryan operational in Port City of Vishakhapatnam to facilitate payment of property tax online, view details of schemes and projects of the government and local bodies, etc. The information kiosk set up by entrepreneurs with help from government of Kerela named Akshay Kendras that was first implemented in Mallapuram district with 600 kiosks help citizens make payment of electricity bills, get birth certificates and contact police stations by e-mail. Another project launched by the state government of Kerela is the Friends project which serves more than 13 million people in 12 districts of Kerela.

Another important rural information network project is Gyandoot in Dhar district of Madhya Pradesh, where every village has an information kiosk that provides

information on crop, forests, water resources, etc. There are many more e-governance and related projects set up in various states like the UNDP supported Jana Mitra Scheme in Rajasthan, Choice in Chattisgarh, Lokmitra in Himachal Pradesh, Rajnidhi in Rajasthan, Lokvani in U.P., Setu in Maharashtra, Jai Kisan in Uttaranchal. There is a community focused projects like CIC project that enables localized governance in North-Eastern states of India through VSAT connectivity to 478 blocks for providing internet access and information relevant to local needs. The government of West Bengal has taken up a project of setting up about 1500 community library and information centers (CLIC) in the villages for providing normal library services relating to career and vocational opportunities.

CONCLUSION

Quality in education through ICT and its awareness among stakeholders will have positive impact on the society. ICT can be helpful in quality and standards of education by implementing it in various phases of education. ICT can be employed in formal and Non-formal types of education and would eventually make the learners employable and socially useful part of the society. By employing ICT in teacher training can save a lot of money of the Government. Moreover a lot of qualitative improvement can be seen as resource persons for the training can be best of the world.

In order to more effectively prepare students to participate in ICT-driven education, greater commitments and willingness to share and adopt innovative solutions are needed from all aspects of society—from Governments, the private sector, communities, donors, parents, and students. Schools should be transformed into active learning environments open to their communities; telecommunication and power infrastructure policies should focus on schools as starting points for rural transformation; teachers and students must be empowered to be creative agents for change in their schools; and leaders must embrace a vision that will prepare their youth for tomorrow's challenges.

Despite the challenges outlined in the paper, ICTs are being increasingly used in education in both the developed and developing world, in order to reach out to children from poor and remote communities, provide them with a quality education, and in general equip both teachers and students with a wider range of educational resource and enable them with greater flexibility. However, the growth and success of ICTs in education depends on the extent to which the issues and challenges outlined in this paper are addressed.

In the rural settings, various successful e-governance models, the digital library initiatives, the improvement of IT infrastructure and many ICT projects for development are giving hope for the digital unite opportunity for India, though the pace of their development is quite slow. What is required to sustain these projects is adequate financial support, support of the government, industry and community participation, encouraging private participation on a mutually beneficial basis, collaboration amongst researchers, social scientists, librarians, technologist, etc, stable and corruption free government, massive campaign on e-governance involving rural people, etc.

Through this conclusion of the position paper would like to emphasise that in the national policy of ICT for education, the policy makers paid more attention in rural areas and its student education standard while implement ICT for education programme. It is a great opportunity to rural students to improve their educational, employment and knowledge on world technological developments.

REFERENCES

- Ahmed M Iqbal , Lentz Erin C. ,‖ Enhancing the livelihoods of the Rural poor through ICT: A knowledge map‖ Bangladesh Country Study , working paper no. 10 (2008)
- Balaji, V. Meera SN., Dixit, S. 2007. ICT-enabled knowledge sharing in support of extension: Addressing the agrarian challenges of the developing world threatened by climate change, with a case study of India. *SATe Journal*, Vol. 4, Nr.1, p.18.
- Center for Knowledge Societies (2003), Rapid Assessment of ICTs for Education. EDC. Education for All: National Plan of Action, India.
- Chapman R., Slaymaker T. 2002. ICT and rural development: Review of the literature, current interventions and opportunities for action. London, Overseas Development Institute. Working Paper 192.
- De, Rahul (2006). ICT for Development and Web-based Information Systems, Inaugural address at the 4th International CALIBER at Gulbarga University, Karnataka, 02 Feb, 2006.
- FAO.2012. *Mobile technologies for food security, agriculture and rural development* Role of the public sector.
- J. Stiemen. Managing Director, IICD. (November 2007). *ICT for Development and Education*, pp. 16-21.

- M.Ali and D. A. Mission, —ICT Education Case Study, ‖ *Research on Information And Communication Technology*, 2003.
- S. Kaushal and S. S. Patra. (2009). *Elementary Education in Bihar: Some Reflection of DISE Data*. pp. 3-4.
- Wong, P.K. & Singh, A.A. (2002). ICT Industry Development and Diffusion in Southeast Asia, In: Chia Siow Yue and Jamus Jeorme Lin (eds). Information Technology in Asia: New Development Paradigms, Institute for Southeast Asian Studies, Singapore., 2002