Challenges on Implementing Computer Education for Rural Schools- A Case Study of Banka District Bihar

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Abstract:

There is now widespread recognition that rural development in the 21st century will be closely tied to the effective use of new and emerging information technologies. Within the educational context, these new technologies can also offer unique solutions to persistent problems in declining enrollments, limited course offerings, limited Advanced Placement opportunities, and data collection. Many developing countries continue to face the challenge of how to increase the computer education in rural and remote areas. There is poor information accessibility among developing nations, a phenomenon creating the so called information gap. Various alternatives have been thought as solutions to minimize the information gap. There is a strong positive relationship between computer education, information flow, meeting information needs and socio-economic development. The computer Education improving information flow and accessibility, satisfying information needs, reducing students drop out ratio, promoting Students drop in into school and bringing about socio-economic development in most marginalized communities. Despite the fact that computer education is potential services that can improve information accessibility in Banka District of Bihar. There are also limited studies aimed at finding out the challenges facing into the computer education for rural area and how to overcome the challenges. The basic aim of this research is to identify the main issues and challenges facing in to the Computer Education in Banka District of Bihar and how they come out from these challenges.

Keywords: - *Requirement of Computer Education in Rural Area,Support and Enhancements of Computer Education, Challenges of Rural Area's in Computer Education, Upcoming and Future Trends of Computer Education.*

INTRODUCTION

India is one of the oldest literate civilizations on earth, rooted in traditions which are quite different from the philosophical roots of Western thought. The time is ripe for us to deepen our understanding of the ideals that underpin Indian civilization and to investigate

their practical application. We wish to advance these pursuits with the help of students of Banka district in an educational setting. In this context, scholarship on topics of a practical, philosophical, comparative and methodological nature can be supported.

India is a country of villages and about 40 percent of the villages have very poor socio-economic conditions. Since the dawn of independence constant efforts have been made to emancipate the living standard of rural masses. The five-year plans of the central government also largely aim at Rural Development. The Ministry of Rural Development in India is the apex body for formulating policies, regulations and acts pertaining to the development of the rural sector. Agriculture, handicrafts, fisheries, poultry, and diary are the primary contributors to the rural business and economy. Serva Siksha Abhiyan (SSA) has been envisioned to give benefit of interactive education to children of classes VI-VIII through computers. Currently 619 middle schools, are taking the benefit of this scheme. This will be extended to total 1000 schools in 3 to 5 years in phased manner. Under the aegis of ICT at School, all Government and Govt. aided Secondary and Higher Secondary Schools will provide basic computer literacy courses through a computer lab with broadband internet connectivity. Presently being implemented in 1000 schools and expected to be launched in 1350 schools by 2012. All Government and Govt. aided Secondary and Higher Secondary Schools will be covered through ICT at School project by 2013.

The Bihar Government shall take up intensive computer training of at least 25% of teachers in Higher Secondary Schools and progressively train at least 2-5 teachers in all other schools. Courses on IT would be introduced in all branches of study starting from Higher Secondary Level. Specific courses would be launched to provide project management, project development and software skills. School and College curriculum will focus on soft skills like communication skills and personality development. The Bihar government shall identify knowledge partners to develop the content for the new curriculum. Special preference in terms of admission to IT courses started in Government Schools and Colleges will be given to the Girls and to the differently enabled persons. Also Govt. of Bihar will consider the requirement of special infrastructure and other special facilities for various categories of differently enabled persons to be made available.

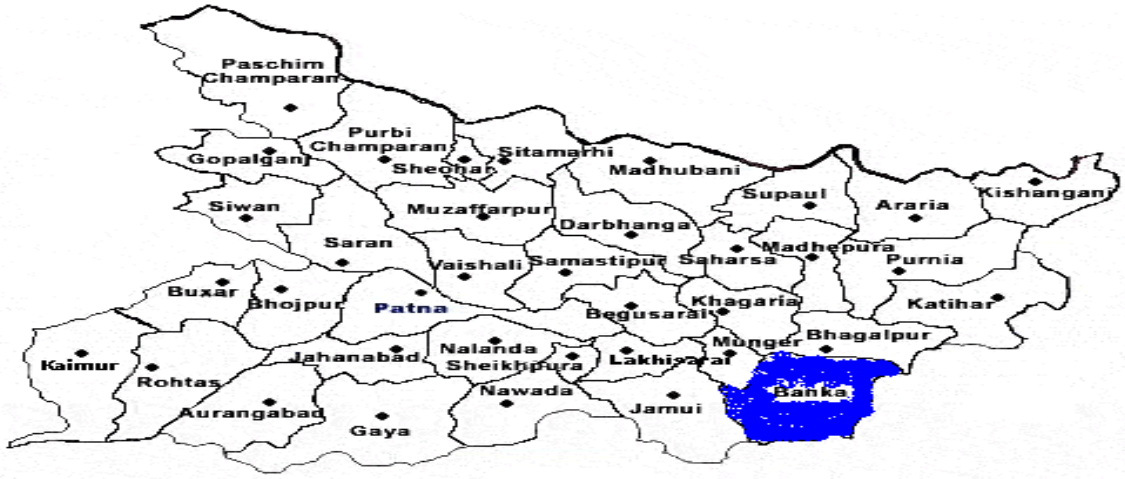

Fig: 1 Banka Bihar's District

One of the major components and driving force of rural development is communication. Conventionally, communication includes electronic media, human communication & now information technology (IT). All forms of communications have dominated the development scene in which its persuasive role has been most dominant within the democratic political frame work of the country. Persuasive communication for rural development has been given highest priority for bringing about desirable social and behavioral change among the most vulnerable rural poor and women. Initially, the approach lacked gender sensitivity and empathy of the communicators and development agents who came from urban elite homes. Added to these constraints is political will that still influences the pace and progress of rural development. Technological changes further compounded the direction of rural development as Information and Communication Technology (ICT) has been thought by communication and development workers as a panacea for other ills that obstructs the development process. It has lead to indiscriminate applications and use of ICT in every aspect of information dissemination, management & governance of development.

Through Bihar Knowledge Society (BKS) the Government of Bihar will endeavor to develop 5 IT Training centre per district for imparting computer literacy and other short-term (6 months) certificate courses for training the unemployed educated youth in various IT skills in PPP Mode. These centers would receive appropriate grants/ concessions from the Government. Government of Bihar is well aware with its environmental responsibility and hence committed for Promotion of Green IT by:-

- Reducing e-waste by recycling of IT hardware and providing incentive for project Reports in compliance to gain carbon credit.

- Use of Renewable energy resources like solar, wind etc for solving power crisis of State.
- Promotion for Energy Efficient IT Hardware/Software/ Network Architecture

REQUIREMENT OF COMPUTER EDUCATION IN RURAL AREA

Since the dawn of independence, concerted efforts have been made to ameliorate the living standard of rural masses. So, rural development is an integrated concept of growth, and poverty elimination has been of paramount concern in all the five year plans. Rural Development (RD) programs comprise of following:

- Provision of basic infrastructure facilities in the rural areas e.g. schools, health facilities, roads, drinking water, electrification etc.
- Improving agricultural productivity in the rural areas.
- Provision of social services like health and education for socio-economic development.
- Implementing schemes for the promotion of rural industry increasing agriculture productivity, providing rural employment etc.
- Assistance to individual families and Self Help Groups (SHG) living below poverty line by providing productive resources through credit and subsidy.

Fig2. Infrastructure of Institute

Communication has been seen by a large number of development planners as a panacea for solving major social evils and problems. Apart from development, the introduction of communication in the educational process for open and distance learning is

seen as step towards improving the quality of education and bridging the social and educational gap. ICT can be used towards betterment of education, social awareness and health and hygiene.

IMPORTANT ROLE OF COMPUTER EDUCATION IN RURAL AREA

Communication has been seen by a large number of development planners as a panacea for solving major social ills and problems. Apart from development, the introduction of communication in the educational process for open and distance learning is seen as step towards improving the quality of education and bridging the social and educational gap. However, experience indicates that those rich who could afford to have access to private resources have hogged the advantage whether development or education. In this respect it seems that communication technology has, in no way has helped the poor for improving their socio-economic condition. Primarily the responsibility of rural development remained with the government. In the pre-economic liberalization period, i.e. before 1992 broadcast media were used to reach the large rural population or target groups for the rural development projects. In the post economic liberalization period, rural development projects added information and communication technology (ICT) to provide individual need based information in broad development areas through Internet.

SUPPORT AND ENHANCEMENTS OF COMPUTER EDUCATION

Several states have initiated the creation of State Wide Area Networks (SWAN) to facilitate electronic access of the state and district administration services to the citizens in villages. The Information and Communication Technologies (ICT) are being increasingly used by the governments to deliver its services at the locations convenient to the citizens. The rural ICT applications attempt to offer the services of central agencies (like district administration, cooperative union, and state and central government departments) to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions.

Fig 3. Students flow in Institution

Computerization of land records have been a great success in application of ICT in rural development. Land records are great importance to contemporary socio economic imperatives and their revision and updating are necessary for capturing the changes in rural social dynamics. Land records are an important part of rural development. The govt. of Bihar started the centrally sponsored scheme of Computerization of Land Records in 1988-89 with main objectives of:

- Creating database of basic records.
- Facilitating the issues of copies of records.
- Reducing work load by elimination of drudgery of paper work.
- Minimizing the possibilities manipulation of land records, and
- Creating a land management information system

To Endeavour for rapid expansion and growth of knowledge based economy in the state. To bridge the digital divide which separates the citizen in urban areas from those in rural areas by creating an unparalleled IT infrastructure & deliver online services to every citizen in the state? To make Bihar the next destination of investment in the IT/ITES/EHM industries and fuel the development of the state. To make Bihar the frontrunner state in good governance through ICT (Information and Communication Technology) enablement.

CHALLENGE OF RURAL AREA'S IN COMPUTER EDUCATION

ICTs alone can't bring about rural development. Education is one of the basic problems for application of ICT as 55% of Banka's district population is illiterate. All

modern economies have demonstrated in the past that education is the first step to building the capacity which people can then use. If the Bihar economy grows at 12-13 per cent per annum as it has been growing over last 2-3 years, then over 7-8 years the size of the Banka's economy would have doubled. Even with this level of growth it cannot by any means bridge disparities and eradicate poverty. Therefore introducing ICTs alone will not meet the development challenge. For ICTs to succeed in Banka, education for all must be the first priority. The basic challenges that usage of ICT for rural development faces are-

- Illiteracy amongst the vast multitude of people.
- Major power-cuts and 'brown-outs' affecting the district -side ranging from 5 to 12 hours every day. Even though uninterrupted power supply systems are used; yet they prove insufficient to cope up with the power breakdowns.
- Serious band-width issues and connectivity problems. Even though technology is available to upgrade the band-width; not enough resources have been budgeted by the Government to change this scenario. However once a few projects for the upgradation of the band-width on the anvil get commissioned, there should be a significant improvement in the connectivity.
- Financing difficulties encountered by the local grass root level institutions as well as by the state governments. Drastic steps are needed to inject funds for the development of the ICTs in the rural areas; increasingly by the participation of the private sector.
- Acute shortage of project leaders and guides who could ensure implementation of the ICTs at the grass root levels. Unfortunately most professionals want to work in the urban areas where there are ample opportunities available to them for growth as well as prosperity. In the absence of these 'techno-catalytic' resources; development of ICTs in the rural areas will always be very slow.

To fulfill the ICT vision of the state by 2016, the following objectives need to be attained

- **Human and Intellectual Capital Resource**: Create a talented pool of Human Resources by promoting computer literacy at the school level and IT enablement of employable youth by providing them appropriate training.
- **Employment:** To create jobs for the local youths by attracting investments from IT/ITES/EHM units in the district.
- **IT Infrastructure**: To create a world class IT infrastructure in the district.

- **E-Governance**: Promote the e-Governance initiatives under NeGP and State Department of IT to bring maximum Government departments citizen services in interactive online mode.
- **Investment:** Promote investment in the IT/ITES/EHM Units by Private industry to accelerate the pace of IT enablement of the district.
- **Environment:** To provide a conducive environment of business for the IT/ITES/EHM Units by extending support from the Government and increasing opportunities in the district.
- **Regulations:** Devise appropriate legal and regulatory framework for efficient administration of IT/ITES/EHM Units and prevent the misuse of IT and protect intellectual property rights, patents & trademarks.

UPCOMING AND FUTURE TRENDS OF COMPUTER EDUCATION

Since Computer Education is meant for provision of information services in rural and marginalized areas, it is expected that they will be located in relevant areas. Location consideration is important for computer education to meet their objectives. So as to enable computer education in Banka district of Bihar meet their objectives better, the following are recommended:

- For better performance of computer education, the quality existing services provided should be improved. This is a strategic process which involves the improvement of human resource and facilities at the computer education. Moreover; financial stability is equally important in the process of improving such services. It is therefore, recommended that the number of computer education services should be improved so as to provide a variety of services among users. This will help to attract many students and provide opportunities to learn the computer.
- When a specific area has many information sources; the computer education which for sure must have started before the other information sources should provide information services not provided by the rest of the information sources. The computer education should assess the importance each information service provided from time to time; those considered to be redundant should be eliminated.

- Some of computer institute in Banka are not located in rural areas per se; they are located in urban areas. As there are many areas in Banka which are marginalized, and are information-deserted despite their agricultural production potentials. It is recommended that computer institute should be located in appropriate areas.
- The computer institute owners should strive to market their services intensely to create awareness to as many people in the community as possible so as to improve the viability of their services. If possible the existing institute should form a consortium to increase their lobbying capacity to approach donor community communities. This will also help them to eliminate possibilities of service redundancy.
- The computer institute should collaborate with institutions dealing with research in different areas in the state and country for requirements of a particular district in the state.
- Lastly, it is important to consider the students catchment area whenever starting an institute project, with financial difficulties a mobile institute can be the best alternative due to its ability to reach a wide area and serve more people.

Government of Bihar has amended the rules and has made computer skills compulsory for promotion & upgrade in higher scale for Class I to III cadres in State. Government of Bihar would endeavor to develop High standard Incubation centre with state-of-the-art computation facilities and services of experts and facilitate the same on cost basis to the prospective IT entrepreneurs to begin with. This facility will be developed by district on its own or through PPP initiatives. Government of Bihar recognizes the importance of using digital certificates for ensuring the legal validity of e-transactions. They are also recognizes the importance of the digitization of public library and record room data of almost all the departments; this will be initiated in a phased manner based on criticality & priority of data. All the departmental data such as employee records, citizen specific records, financial details, etc. would be digitized over a phase manner completing the whole activity by 2016.

DIT will contribute Rs.10 Lakhs per annum in the district for creation of Library and making available material on trends in technology, market intelligence, research reports and analysis etc. Government of Bihar will take effective steps to create “Brand Equity” for state by participating in National and International Seminar. A particular day will be earmarked as

the IT day for Bihar, when DIT, GoB will organize Seminar, conference / conclave etc. to invite IT visionaries to guide the district and state and future road map for Growth.

Government of Bihar will constitute a CM Task Force comprising noted non-political leaders from IT industries comprising noted figures. Government of Bihar will target paperless office by 2016.

CONCLUSION

There are also a number of factors influencing the use of computer institute such as the type of services offered, the number of services and the quality of education services provided. Other factors like distance from the computer institute to the user's resident, occupation, cost of services provided and level of education of users influenced too the use of the institute.

So as to meet their objectives, computer institute should provide information relevant to people's need. Information packages should be in different formats that different groups of information seekers can be able to access information. As different students prefer different information services, the number of information services provided should base on user preference, moreover; student's fee should be relevant to the average income of the institute users, this can optimize the use of information services by a majority of farmers who are financially poor. Consideration of computer institute catchment area is of an equal importance towards an information rich society.

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