THE IMPORTANCE OF ICT FOR IMPROVING THE QUALITY OF HIGHER EDUCATION

P.B.REDDY, G.R. GANGLE

Abstract: To improve the competitiveness in science and technology and to enable the country to make top master it is essential to implement ICT in higher education. The present generation is a multimedia generation. They are not aware of easy access to the information. ICT can be used as a supportive educational tool enabling student's learning by interactive and engaging ways. It also make possible for teachers to engage students in self-paced, self-directed problem-based or constructivist learning experiences. In this paper, we aimed to identify the common problems affecting the quality of higher education in Madhya Pradesh and to examine the possible solutions/recommendations for improvement and to implement the ICT in the higher education system of Madhya Pradesh. In this review, we address the opportunities and challenges posed by integration of ICTs in various aspects of higher education in Madhya Pradesh in the present scenario. The paper also discusses the issues and policies for the integration of ICT to transform higher education in Madhya Pradesh.

Keywords: Madhya Pradesh, Quality of Higher education, ICT, teacher's role

Introduction: Competition in every sector including higher education has emerged as determining factor of economic growth and development. The revolutions in information and communication technologies have reduced national boundaries. At present education has been identified as one of the main services, which need to be opened up for free flow of trade between countries [1]. The knowledge is expected to become a tradable commodity and it will be essential that educators should maintain the pace with the change, or else will be outdated in the face of competition. India's demographic mixture consists of an increasing demand for education. Here, the literacy rate is about 60% and half of the population is below 15 years of age. Seventy five per cent are rural with linguistic break-up of 15 different major languages. The demand for education is much higher but the ability of conventional system cannot meet the demand. Hence integration of ICT is the best alternative to meet this ever growing and changing education system. Since last 30 years there is a revolution in education system. The routine teaching and learning in class rooms were replaced by radio and television in 1980's. [2]. But the rural and the urban-rural deprived by these facilities due lack of resources and skilled staff. Demand for skilled and competent labour is ever increasing in the modern globalised society. In order to increase the access to higher education and improving its reach to the extreme parts of the country is very much essential. The last two decades have witnessed the inclusion of developments in ICTs in higher education systems around the world. Even then the challenge to develop a higher education system that is flexible and dynamic so as to holistically integrate the technology in the primary and higher education in India is discouraging.

Involvement of ICTs in different dimensions of the Indian education system is taking place at a fast pace. Integration and use of audio visual aids, radio, TV to support education and spreading of information in India has already been started in 1990s. The use of satellite in education started as Satellite Instructional Television Experiment (SITE) in 1975-76. This led to the establishment of CIET-SIET studios for production and transmission of school oriented programs, initiation of the country-wide classroom of the UGC with CEC as the nodal agency by creating educational media resource centres (EMRCs) and audio-visual resource centres (AVRCs) in several universities.

The importance of using ICT for improving education has been emphasized for over a decade in India, right from 1992 the National Policy on Education emphasized using educational technology to improve the quality of education. In 2009, the government initiated a stakeholder dialogue on formulating a draft national policy for ICT in Education. This draft policy document proposes various delivery mechanisms to enable ICT literacy and provide ICT infrastructure to ensure ICT enabled teaching learning. It also articulates policies regarding ICT for capacity building, distance education and content development.

India is a vast geography with varying levels of development in different parts of the country, and therefore experiences of using ICTs for education across the country also reflect this diversity. While some interventions have been immensely successful in one area the same interventions in another part of the country have not succeeded. Through the case studies it is clear that states like Karnataka, Andhra

Pradesh, and Delhi which have placed adequate importance on mainstreaming ICTs in the teaching learning processes and proactively initiated efforts to utilize ICTs for education have succeeded more than states that are simply looking to implement central government schemes and create IT labs for their schools.

Methodology: The present research work is based on reviews of previous literature. Information was also obtained from web sites and articles addressing importance of ICT in higher education. Besides, many press reports have been reviewed on a regular basis. Consulting and Meetings with experts and researchers have also been a useful source of information.

Results and Discussion:

Education scenario in Madhya Pradesh: Madhya Pradesh consists of heavy tribal population (ST). Most of the people residing in this state have migrated from the neighbouring states of U.P., Maharashtra, and Gujarat etc. Before independence, there was only one university in the whole state, viz., the Sagar University, and that too was started in 1946, just before independence of the country. After 1956, Madhya Pradesh moved quite rapidly in developing the network of its institutions of higher education. Later on the state Government of M.P. took effective steps in establishing a number of both private and government universities across the entire state.

Present scenario: At present there are 353, government, 77 aided, and 636 private colleges are (total 1066) exisisting in the state. There are about 2 lakh students are enrolled in these colleges for various courses and most of the students are from rural areas and that too from weaker sections.

Integrating Information and Communication Technology (ICT): Recently the higher education department of Madhya Pradesh integrated ICT into project in various colleges. On the basis of available literature and information, we here describe few common dimensions of change in learning environments that emerged across the country

- changes in teachers'attitude,beliefs and knowledge.
- changes in students to engage with content, relationships with teachers, parents and among other students.
- and changes in the use of ICT tools to promote students' learning. These three dimensions relate to shifts in educational paradigms that appear to be prerequisites to effectively using ICT to support students' learning. Our findings indicate that these shifts must not just occur at the teacher level, but must take hold throughout the educational system. For this investment in infrastructure skilled human resources and well designed curriculum is required.

The Challenges:

- **Access to education:** Infrastructure, socio economic, linguistic and physical barriers are found to be main hurdles to access the education[5
- **Quality of education:** It includes infrastructure, teacher's quality and the processes quality.
- **Resources allocated-** Central and State Governments reserve about 3.5% of GDP for education as compared to the 6% that has been aimed [7].
- **Informative tool:** It provides vast amount of data in various formats such as audio, video, documents.
- **Situating tool:** It creates situations, which the student experiences in real life. Thus, simulation and virtual reality is possible.
- **Constructive tool:** To manipulate the data and generate analysis.
- **Communicative tool**: It can be used to remove communication barriers such as that of space and time.

Like all innovations that we have come to accept, ICTs also have strengths and weaknesses. We should list these because it is important to know what they are especially if we are to plan and use them effectively.

Strengths

- It eliminates the time and geographical barriers in education for students and teachers.
- A synchronous interaction is made possible leading to thoughtful and creative interaction
- Collaboration with foreign universities can be made possible via ICT.
- Information can be provided and speeded rapidly.
- Balance with family life and work life can be maintained.
- It enhances the international dimension of educational services.
- It can also be used for non-formal education like health campaigns and literacy campaigns
- Low per unit cost
- Distance and climate insensitive
- Can serve multiple teaching functions and diverse audiences
- Uniform quality

Weakness

- High infrastructure and start up costs
- Tend toward centralized uniform content in economies of scale
- Are not ideally location and problem sensitive:

Address problems in a general way, but cannot, without special effort, solve local and culturally sensitive problems?

- Problems of reach, access, remain
- Tend to create new class of knowledge rich/knowledge poor
- Hard to assess impact
- Officers, Principals, trainers need reorientation and retraining

Obstacles

- Most of the students are from rural area with low percentage
- Political interference
- Lack of infra structure
- Establishment of computer laboratories
- Effects of ageing on Adoption of New Technologies
- Filling up of the vacant teaching positions

Resources required: The staff and students have access to technology and information retrieval on current and relevant issues. Teachers take initiative to learn recent techniques, to innovate and continuously seek improvement in their work and visualize and carry out curriculum transactions according to the nature of the enrolled student groups. Teachers seek to gain professional development through participating in seminars and work shop discussions and professional platform [6].

- The teaching-learning material, Teaching kits
- Well established Computer lab
- Financial assistance
- Conduction of frequent technical work shops

Conclusion: Improving the quality of education still remains a dream. Traditional forms of teaching and learning are increasingly being converted to online and virtual environments. There are infinite possibilities with the integration of ICT in the education system. The use of ICT in education not only improves classroom teaching learning process, but also provides the facility of e-learning. [7]. ICT has enhanced distance learning. The teaching community is able to reach remote areas and learners are able to access qualitative learning environment from anywhere and at anytime. It is important that teachers or trainers should be made to adopt technology in their teaching styles to provide pedagogical and educational gains to the learners. Effective implementation of ICT can bring the change among the teachers and students and also can ultimately lead to the democratization of education.

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PG Department of Zoology, Govt.PG College, Ratlam
PG department of Economics, Government PG College, Shujalpur
reddysir@yahoo.co.in

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