

Creating Equality of Educational Opportunity by Using Information and Communication Technology (ICT) In Education

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Abstract: We are all aware that Education smoothen the path of equal opportunity. But as we know due to different constraints it is yet not possible to reach education the periphery of every community. This requires a shift in the delivery and pedagogy used in the current education system. The main aim of this paper is to promote integration of Information and Communication technologies (ICT) in education for imparting easily accessible, affordable and quality education leading to the equality of educational opportunity for the downtrodden community of India and hence a sustainable development The focus of the paper is on the benefits that ICT integration in education that can provide, distance barriers to facilitating collaboration and knowledge sharing among geographically distributed students. ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. ICT also allows the academic institutions to reach disadvantaged groups . Thus ICT enabled education will ultimately lead to the democratization of education.

Keyword: Equality of Educational opportunity, Main barriers ,ICT in Education

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I. Introduction

Equalization of educational opportunities was recognized as one of the major goals of Indian educational policy. The National policy resolution (1968) calls for strenuous efforts to correct regional imbalances and minimise inter-group disparities in the educational sphere. The national policy on education(1986) lays special emphasis on the removal of disparities and equalization of educational opportunity by attending to the specific needs of those who have been denied equality so far (Shah and Shah).Indian society is one of the most in egalitarian society, the basis of disparities being mainly caste, gender, ethnicity and place residence (ibid) .The article 46 of Indian constitution states that “The state has the right to promote the educational interest of the weaker sections of the country and that ,through free ship and scholarship ”. In general equal opportunity means, opportunity of healthy leaving ,pollution free environment ,safe drinking water ,place for living safe ,secure with peace .To grab all the above fundamental facility education is the best weapon to be used .But the alarming fact is that after the 60 years of independence we not yet able to create equality of educational opportunity . Innovative use of Information and Communication Technology can potentially solve this problem.

Education is the driving force of economic and social development in any country (Cholin, 2005; Mehta and Kalra, 2006). Considering this, it is necessary to find ways to make education of good quality, accessible and affordable to all, using the latest technology available. The last two decades have witnessed a revolution caused by the rapid development of Information and Communication Technology (ICT). ICT has changed the dynamics of various industries as well as influenced the way people interact and work in the society (UNESCO, 2002; Bhattacharya and Sharma, 2007; Chandra and Patkar, 2007). Internet usage in home and work place has grown exponentially (McGorry, 2002). ICT has the potential to remove the barriers that are causing the problems of low rate of education in any country. It can be used as a tool to overcome the issues of cost, less number of teachers, and poor quality of education as well as to overcome time and distance barriers (McGorry, 2002).

India has a billion-plus population and a high proportion of the young and hence it has a large formal education system. The demand for education in developing countries like India has skyrocketed as education is still regarded as an important bridge of social, economic and political mobility (Amutabi and Oketch, 2003).

The challenges before the Equality of Education opportunity in India

Access to education- Access has two aspects, physical and social. Physical access has to do with the availability of a school in the vicinity i.e. if 20 per cent of the habitations are without schools their children are denied access to primary schooling .This problem is compounded in the hilly areas or in different terrains where the official norm of one km.distance may not actually be walk able especially for girls if they have to walk through thick forest ,lonely or uninhabited areas .

Quality of education- This includes infrastructure, teacher and the processes quality. Quality of education differ in case of metro city in compare with remote village .Private enterprises establishing school ,college ,university never extend their hands for enlighten the remote areas .

Discrimination with girl children –Discrimination in terms of state and household expenditure on girls the distinction between the production and reproduction function of education further complicates the situation because families reinforce this discrimination by using daughter as domestic help .thereby preventing them from enrolling in schools.(S Rao,2007)

Backward community taboo - Early marriage for the girl child in the backward community also create discrimination for achieving education .Also tribal community people thought that expenditure for educating girl child is wastage of money.

There exist drawbacks in general education in India as well as all over the world like lack of learning materials, teachers, remoteness of education facilities, high dropout rate etc (UNESCO, 2012).

Table 1 : The four main rationales for introducing ICT in education:

Rationale	Basis
Social	Perceived role that technology now plays in society and the need for familiarizing students with technology.
Vocational	Preparing students for jobs that require skills in technology
Catalytic	Utility of technology to improve performance and effectiveness in teaching, management and many other social activities.
Pedagogical	To utilize technology in enhancing learning, flexibility and efficiency in curriculum delivery

(Source: Cross and Adam ,2007)

ICT can be used as a tool in the process of education in the following ways:

- 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 (Lim and Chai, 2004).

The following mediums are used for the delivery and for conducting the education process:

- Voice** – Instructional audio tools that include interactive technologies as well as the passive ones.
- Video** - Instructional video tools that include still images, prerecorded moving images, and real-time moving images combined with audio conferencing.
- Print** – instructional print formats that include textbooks, study guides, workbooks and case studies.

(Bhattacharya and Sharma, 2007; National Programme on Technology Enhanced Learning, 2007).

ICTs also allow for the creation of digital resources like digital libraries where the students, teachers and professionals can access research material and course material from any place at any time (Bhattacharya and Sharma, 2007; Cholin, 2005). Such facilities allow the networking of academics and researchers and hence sharing of scholarly material. This avoids duplication of work (Cholin, 2005). Use of ICT in education develops higher order skills such as collaborating across time and place and solving complex real world problems (Bottino, 2003; Bhattacharya and Sharma, 2007; Mason, 2000; Lim and Hang, 2003). It improves the perception and understanding of the world of the student. Thus, ICT can be used to prepare the workforce for the information society and the new global economy (Kozma, 2005).

E learning has the following advantages:

- Eliminating time barriers in education for learners as well as teachers (Sanyal, 2001; Mooij, 2007; Cross and Adam, 2007; UNESCO, 2002; Bhattacharya and Sharma, 2007);

- Eliminating geographical barriers as learners can log on from any place (Sanyal, 2001; Mooij, 2007; Cross and Adam, 2007; UNESCO, 2002; Bhattacharya and Sharma, 2007);
- Asynchronous interaction is made possible leading to thoughtful and creative interaction (Sanyal, 2001; UNESCO, 2002; Bhattacharya and Sharma, 2007);
- Enhanced group collaboration made possible via ICT (Plomp et al., 2007; Sanyal, 2001; Bhattacharya and Sharma, 2007);
- New educational approaches can be used. (Sanyal, 2001);
- It can provide speedy dissemination of education to target disadvantaged groups (UNESCO, 2002; Chandra and Patkar, 2007);
- It offers the combination of education while balancing family and work life (UNESCO, 2002; Bhattacharya and Sharma, 2007);
- It enhances the international dimension of educational services (UNESCO, 2002);
- It allows for just in time and just enough education for employees in organizations (UNESCO, 2002).
- It can also be used for non-formal education like health campaigns and literacy campaigns (UNESCO, 2002).

Table :2Benefits of ICT in education to enhance equality of educational opportunity:

Stakeholder	Benefits
Students Community	<ul style="list-style-type: none"> <input type="checkbox"/> Increased access, <input type="checkbox"/> Flexibility of content and delivery, <input type="checkbox"/> Combination of work and education, <input type="checkbox"/> Learner-centred approach, <input type="checkbox"/> Higher quality of education and new ways of interaction
Government or Education provider	<ul style="list-style-type: none"> <input type="checkbox"/> Increase the capacity and cost effectiveness of education and training systems, <input type="checkbox"/> To reach target groups with limited access to conventional education and training, <input type="checkbox"/> To support and enhance the quality and relevance of existing educational structures, <input type="checkbox"/> To ensure the connection of educational institutions and curricula to the emerging networks and information resources, <input type="checkbox"/> To promote innovation and opportunities for lifelong learning

Source: (UNESCO, 2002)

India is making use of powerful combination of ICTs such as open source software, satellite technology, local language interfaces, easy to use human-computer interfaces, digital libraries, etc. with a long-term plan to reach the remotest of the villages. Community service centres have been started to promote e-learning throughout the country (Bhattacharya and Sharma, 2007).

Notable initiatives of use of ICT in education in India include:

- Indira Gandhi National Open University (IGNOU) uses radio, television, and Internet technologies.
- National Programme on Technology Enhanced Learning: a concept similar to
- National Programme on Technology Enhanced Learning: a concept similar to the open courseware initiative of MIT. It uses Internet and television technologies (National Programme on Technology Enhanced Learning, India, 2007).
- Eklavya initiative: Uses Internet and television to promote distance learning (EKLAVYA Technology Channel, India, 2007).
- IIT-Kanpur has developed Brihaspati, an open source e-learning platform (Bhattacharya and Sharma, 2007).
- Premier institutions like IIM-Calcutta have entered into a strategic alliance with NIIT for providing programmes through virtual classrooms.
- Jadavpur University is using a mobile-learning centre (Bhattacharya and Sharma, 2007).
- IIT-Bombay has started the program of CDEEP (Centre for Distance Engineering Education Program) as emulated classroom interaction through the use of real time interactive satellite technology (Centre for Distance Engineering Education Programme, India, 2007).
- One Laptop Per Child (OLPC) in Maharashtra (One Laptop Per Child, 2007).

II. Conclusion

During the 7th five year plan ,the focus of planning shifted from equipping woman for their traditional role as housewife and mothers to recognised their worth as producer and major contributor to family and national development (Devadus,Ramathilagam and Aruselvam .1990) Though woman education in India is not

get the proper dimension .So it is the time to incorporate technology in education and accelerate the progress of Indian education system .ICT will increase flexibility so that learners can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It would enable development of collaborative skills as well as knowledge creation skills .

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