



**RESEARCH ARTICLE**

**ICT INTEGRATION IN HIGHER EDUCATION: TRANSFORMING CONVENTIONAL TEACHING**

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**ABSTRACT**

In the contemporary world; Information and communication technology plays a vital role in enlargement of knowledge, skills and talent of youth of this 21<sup>st</sup> century. Now a day, Modern Technologies become more affordable, accessible in the larger section of country and serve as the mediator to form interactive learning with students' participation. Therefore, technology is to be treated as learning process which unlocks the value of time and providing information to a facilitator where students are encouraged to explore for more information. India actively encourages the use of ICTs in higher education with some initiatives for instances NME-ICT project of MHRD, Massive Open Online Courses and so on. This paper describes the utility of the ICT in the higher education and exploring the factors which convert the traditional teaching into the modern teaching.

**INTRODUCTION**

India is today ranked as the 3<sup>rd</sup> largest higher education system in the world followed by US and China. There are 14.6 million students undergoing Higher Education in India as of 2011. Nowadays ICT is all pervasive, be it higher education or educational dissemination at primary school level. Higher education with ICT in India, is improving steadily and the government is also providing full support with many initiatives. During last few years, world has witnessed a rapid usage of Information and communications technology in almost all walks of life. Field of higher education is not an exception to its prevalence. Today ICT plays pivotal role in educational dissemination; it includes any communication or application either through satellite systems or cellular system for content relating to higher education (Hernard and Leprince-Ringuet, 2008). It also encompasses dissemination through radio, television, hardware and software, computer network and cell phones. The above cited modes have become affordable, accessible and integrated in large sections of the learners throughout the higher education arena. ICT opens up opportunities for learning because it enables learners to access, extend, transform & share ideas and information in multi-modal communication styles and format. The omnipresence of these communication systems, their ease of use, the power and diversity of information transfer allow teachers and students to have access to a world beyond the classroom.

**Shifting from Teacher-Centred Approach to Learner-Centered Approach**

Learner-centered learning is focused on each learner's interests, abilities, and learning styles, placing the teacher as a guide and inventor of learning environment (DeDeWohlfarth *et al.*, 2009). The conventional teaching method acknowledges student voice as central to the learning experience for every learner, and differs from many other learning methodologies (Huet *et al.*, 2008). ICT in higher education supports the shift from Teacher-Centred to Learner-Centred paradigm. The major shifts have been described below.

<b>Changes in Teachers' Contribution</b>	
From	To
Disseminator of Knowledge	Guide & Facilitator of Knowledge
Head Honcho of Learning	Inventor/Developer of Learning Environment
Always Expert	Collaborator, Teammate & Co-learner
Learning ICT tools	Using ICT to Enhance Learning
Expository/ Explanatory	Interactive/Experiential/Analytic
<b>Changes in Learners' Contribution</b>	
Reluctant learner	Enthusiastic/Active learner
Dependent learner	Autonomous learner
One side learner	Collaborative learner
Solely learning Content	Learning to think/create and Communicate

Above tabular description of paradigm shifts under the umbrella of ICT enabled learning environment shows importance of teacher but role has been changed from knowledge transmitter to knowledge facilitator. ICT can facilitate a shift of focus from local resources to global resources. It helps the learner to share learning resources and

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spaces, promote learner centered and collaborative learning principles and enhance critical thinking, creative thinking and problem solving skills (Weimer, 2002). The web and the Internet is the core ICTs to spread education through e-learning. The components include cyber infrastructures, e-portfolios, digital libraries and online learning object repositories (Rovai, 2003). All the above elements create a digital identity of the learners and connect all the participants in the education. Teachers used to be the main authority before ICTs integration in the higher education and their primary goal was to disseminate information and knowledge into their limited set of students and who used to passively receive information. But with the advent of ICT in higher education, there came a tangible transformation the way the coherent and effective communication can take place (Ozdemir and Abrevaya, 2007). Contour of higher education and its reach has been enhanced to even those who are remotely circumstanced and are bereft of quality higher education as it now helps teachers and learners to communicate and collaborate without boundaries, make learners autonomous and allow teachers to bring the whole world into classroom activities and beyond (Rutkauskiene *et al.*, 2009).

### ICTs integration in Rural Areas of India

The major part of India is comprised of rural areas, which are underdeveloped and have lack of facilities as compared to their urban counterparts. Census report 2011 of Ministry of Home affairs noted that the level of urbanization increased from 27.81% in the 2001 census to 31.16% in the 2011 Census, while the proportion of rural population declined from 72.19% to 68.84%, still around 70% of India's total population lives in the rural areas (Census of India, 2011). Of the 121 crore Indians, 83.3 crore live in rural areas while 37.7 crore stay in urban areas, they all have the right to acquire information; but it is almost impossible to expect that people at grass root level, living in rural areas, and those who have only elementary education, to participate actively in the world of information and communication which is solely based on computers and the Internet. India actively encourages the use of ICTs in education sector. There has been a significant rise in enrollment from rural population in Higher Education. The Gross Enrollment ratio in rural areas have been rising rapidly and expected to reach 12.84% by 2020. Given this steep rise, it seems that the dream of India having large portion of its youth possessing higher education does not look distant anymore. The national policy for integrating ICT into education by MHRD is laid down in the Five Year Development Plan. MHRD-12th Five-Year-Plan focuses on empowering rural poor and marginalized women in educational processes. Parents are well aware about higher educational prospects today. Max New York Life has conducted NCAER Survey which noted that approximately 55% of the Indian middle class households have started saving for higher education of their children. Rural information systems have traditionally focused on supplying information to the rural poor and supplying information about rural areas to policy makers, but it is now recognized that past systems have been largely ineffective in addressing the needs of the rural poor. The extension of agricultural information in particular is evolving beyond merely transmitting messages. It is becoming more open, more participatory and more demand-driven, involving interactivity, negotiation and two-way information exchanges. There is a new emphasis on the acquisition of information and enabling the rural poor to request information.

According to National Sample Survey Office (NSSO) survey under the MSPI Ministry of Statistics and Programme Implementation noted that literacy rate in rural areas was pegged 71% last year, compared to 86% in urban areas. For reducing the differences between urban and rural literacy rate in education, Information and Communication Technology (ICT) may be used to a much greater extent. Distance Education facilities using ICT may be of great help in improving the education scenario in the rural areas. UGC has also launched its Digital Library Consortium to provide access to peer reviewed journals and bibliographic databases covering subjects such as arts, humanities, technology and sciences. The National Mission on Education through ICT is now be used for bridging the gap between urban and rural. Conventional distance education may also be extended to home makers in the urban and rural areas with some more flexibility.

### Indian Government Initiatives for Higher Education through ICT

A National Mission in Education through Information and Communication Technology (NMEICT) was launched to cover 378 universities and 18,064 colleges, with the aim of digitization and networking of all educational institutions, develop low cost and low power consuming access to ICT, making larger bandwidth available for educational purposes. Expected outcome of the Mission was supposed to be e-book including digitization of video contents of teaching-learning materials, EduSat Teaching Hub, 2,000 broadband internet nodes in 200 central institutions, satellite interactive terminal for network connectivity to all 18,000 colleges. The National Knowledge Network (NKN) was also simultaneously launched to cover 1,000 institutions besides providing digital campuses, video-conference classrooms, wireless hotspots, laptops/desktops to all students of professional/science courses, and Wi-Fi connectivity in hostels. A sustainable progress in this direction has been made, but much more needs to be done. The launch of EDUSAT brought satellite connectivity to large parts of rural India. Indira Gandhi National Open University (IGNOU) is leveraging satellite, television, and Internet technologies to offer online courses. India Announced Official MOOC Platform 'Swayam'. With the implementation of these initiatives which are either fully funded by the government of India or by non-government institutes, the rural community can get maximum benefits to improve their education, knowledge, skills, earnings and living standard. People in rural areas have only a limited awareness of the education or career options, and this is becoming a major obstacle in rural development, particularly as education opportunities are changing rapidly. Therefore, more emphasis of rural people should be to get familiar with e-learning and other educational options.

### Conclusion and Suggestion

ICT integration in higher education is enhancing Knowledge, skills and talent of youth of 21<sup>st</sup> century. The Government of India has been taken many initiatives which can definitely benefit us; for instances Massive Open Online line Courses, National Mission in Education through ICT and many more. For enhancement of knowledge and skills; there is a need to make the use of the rich and exciting opportunities provided by new technology. Malala Yousafzai, (Nobel Peace Prize winner, 2014) is true inspiration for youth, if she could fight for education rights at the age of 14, irrespective of her milieu and

depravity, at least we can be aware enough of literacy options in the contemporary world and educate ourselves through ICT or other means and develop our country. Once, this aspiration of reaching out to the people of rural areas will be realized, the “Modern India” with “More Educated and empowered youth” with myriad employment avenues, economic prosperity and sound political wisdom will prevail as a corollary.

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