

International Multidisciplinary Research Journal

Golden Research Thoughts

Chief Editor
Dr.Tukaram Narayan Shinde

Publisher
Mrs.Laxmi Ashok Yakkaldevi

Associate Editor
Dr.Rajani Dalvi

Honorary
Mr.Ashok Yakkaldevi

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Regional Editor

Manichander Thammishetty

Ph.d Research Scholar, Faculty of Education IASE, Osmania University, Hyderabad

International Advisory Board

Kamani Perera
Regional Center For Strategic Studies, Sri Lanka

Mohammad Hailat
Dept. of Mathematical Sciences,
University of South Carolina Aiken

Hasan Baktir
English Language and Literature
Department, Kayseri

Janaki Sinnasamy
Librarian, University of Malaya

Abdullah Sabbagh
Engineering Studies, Sydney

Ghayoor Abbas Chotana
Dept of Chemistry, Lahore University of
Management Sciences[PK]

Romona Mihaila
Spiru Haret University, Romania

Ecaterina Patrascu
Spiru Haret University, Bucharest

Anna Maria Constantinovici
AL. I. Cuza University, Romania

Delia Serbescu
Spiru Haret University, Bucharest,
Romania

Loredana Bosca
Spiru Haret University, Romania

Ilie Pintea,
Spiru Haret University, Romania

Anurag Misra
DBS College, Kanpur

Fabricio Moraes de Almeida
Federal University of Rondonia, Brazil

Xiaohua Yang
PhD, USA

Titus PopPhD, Partium Christian
University, Oradea, Romania

George - Calin SERITAN
Faculty of Philosophy and Socio-Political
Sciences Al. I. Cuza University, Iasi

.....More

Editorial Board

Pratap Vyamktrao Naikwade
ASP College Devrukh, Ratnagiri, MS India Ex - VC. Solapur University, Solapur

Iresh Swami

Rajendra Shendge
Director, B.C.U.D. Solapur University,
Solapur

R. R. Patil
Head Geology Department Solapur
University, Solapur

N.S. Dhaygude
Ex. Prin. Dayanand College, Solapur

R. R. Yaliker
Director Managment Institute, Solapur

Rama Bhosale
Prin. and Jt. Director Higher Education,
Panvel

Narendra Kadu
Jt. Director Higher Education, Pune

Umesh Rajderkar
Head Humanities & Social Science
YCMOU, Nashik

Salve R. N.
Department of Sociology, Shivaji
University, Kolhapur

K. M. Bhandarkar
Praful Patel College of Education, Gondia

S. R. Pandya
Head Education Dept. Mumbai University,
Mumbai

Govind P. Shinde
Bharati Vidyapeeth School of Distance
Education Center, Navi Mumbai

G. P. Patankar
S. D. M. Degree College, Honavar, Karnataka

Alka Darshan Shrivastava
Shaskiya Snatkottar Mahavidyalaya, Dhar

Chakane Sanjay Dnyaneshwar
Arts, Science & Commerce College,
Indapur, Pune

Maj. S. Bakhtiar Choudhary
Director, Hyderabad AP India.

Rahul Shriram Sudke
Devi Ahilya Vishwavidyalaya, Indore

Awadhesh Kumar Shirotriya
Secretary, Play India Play, Meerut (U.P.)

S. Parvathi Devi
Ph.D.-University of Allahabad

S. KANNAN
Annamalai University, TN

Sonal Singh,
Vikram University, Ujjain

Satish Kumar Kalhotra
Maulana Azad National Urdu University

Golden Research Thoughts

GRT

STATUS OF ICT IN INDIAN HIGHER EDUCATION - PROBLEMS AND PROSPECTS

**R. H. Ramesh**

Assistant Professor Of Commerce Smyk Govt First Grade College Telsang,
Athani Belgun (Dist)



ABSTRACT

Education is the stepping stone for every human to build a successful life and career and this applies to every-one the Indian Higher Education system is said to be the world's third largest, preceded by the ones in China and United States. Since the constitution of the Education Commission (1964-66) it has been nationally recognized and acknowledged that education is a powerful instrument of social transformation and nation building. Education is seen critical for poverty alleviation, reduction of inequalities, and promotion of social harmony and strengthening of national unity. Education is seen imperative for increasing productivity, consolidating democracy, modernizing the

country and developing scientific, moral and spiritual values. However higher education in India, in itself stands for a great contradiction. On one side, the Indian Institute of Technology ranks among the best universities in the entire world, and on the other there are numerous schools which lack proper infrastructure for basic student needs. In the midst of all these problems is a nation that is working towards ensuring equal access and education for all. This paper tries to addressing the various issues like linkages between ICT and higher education, emergence of ICT in higher education in India, impact of ICT in education in general and problems and prospects of ICT in higher education in particular.

KEYWORDS :ICT, Higher education, NPHRDI, UNESCO, FICCI, AICTE, UGC etc.,

INTRODUCTION:

India has one of the biggest systems of education with a total enrolment of 189.2 million, with 81.1 million girl students and 5.45 million teachers in schools, nearly 10 million students in 350

universities and 15,000 colleges and 420,000 teachers. This includes 11 open universities and 104 distance education institutions of dual mode; and the Open University system has an enrolment of about 20 percent of the total. The rate of growth since Independence is quite high, coverage has increased, dropout rate has reduced, and the percentage of girl students in education is increasing. The introduction of Information and Communications Technology (ICT) in education reflects and responds to present and future needs of people functioning in an intensely changing and challenging intellectual environment. Since the advent of the computer, the internet and the web numerous changes have occurred. The presence of IT has actually transformed the teaching, learning and administrative environment in post-secondary education worldwide and in order to keep pace with the rapidly changing landscapes it has become inevitable to implement technology integration. At the beginning of the 21st century, global changes in demography and economy have had their impact on India as well. Employment opportunity patterns are changing and there is the challenge of providing skilled human power, which is confident, flexible and equipped with the knowledge and technical skills needed to effectively face the socio-economic realities of the new century. In nearly two decades from now, 45% of Indians would be in their twenties. This would lead to a need for trained persons who can compete at the national and global level.

LINKAGES BETWEEN ICT AND HIGHER EDUCATION

ICT and Changing Mindsets in Education While ICT promises huge potential for education, there is also a cautionary aspect to it. Experts believe that policies should be formulated with extreme care at all levels regarding its implementation, especially in a developing country like India which suffers terribly from “digital divide”. “However, new technologies such as Internet and Computers are often introduced and sometimes even parachuted into schools in ways that do not enhance learning, that promote automated thinking instead of critical thinking, that encourage dependency rather than autonomy. Too often, the emphasis is on equipment, on making profits from schools, or on promises of modernity than on opportunities for teachers to learn and experiment effective use of technologies to enhance teaching and learning processes. Ministries of education have been all too eager to import computers into schools, without putting in place a policy environment and curriculum that supports the integration of technology into teaching and in ways that ensure equitable access.” Access to ICT by students and teachers has begun, yet its use supports traditional teaching rather than the shift to new roles and pedagogical practices. Policy implications include the need to develop expertise within the nation, provide training opportunities and encourage initiative and innovation on the part of the teachers.

EMERGENCE OF ICT IN HIGHER EDUCATION IN INDIA

With ICT revolution all across the world during the end of millennium, the year 2000 saw a remarkable development in the application of ICTs in India. In order to boost e-commerce in India, the government of India passed the Information Technology Bill in May 2000 that propelled the use of ICTs not only in the corporate world but the education sector also became aware of its potential. Government of India has realized the relevance of technology in classrooms. For example, National Mission on Education through ICT was launched in 2009 to bring sustainability in education. The main aim of the mission is to provide high quality personalized and interactive knowledge modules over the Internet for all the learners in higher education institutions in 'Any-time Any-where mode'. The scheme seeks to bridge the gap in skills needed for the use of computing devices

for the purpose of teaching and learning among urban and rural teachers in the Higher Education domain and empower those, who have not been able to reap the advantages of the digital revolution. "Information and Communications Technology (ICT) is one of the most potent forces in shaping the twenty-first century. Its revolutionary impact affects the way people live, learn and work and the way government interacts with civil society. ICT is fast becoming a vital engine of growth for the world economy. It is also enabling many enterprising individuals, firms and communities, in all parts of the globe, to address economic and social challenges with greater efficiency and imagination. Enormous opportunities are there to be seized and shared by us all". (G8 charter, 2000)

In particular, re-engineering of the technical education and training system of the country, with a focus on ICT education, was proposed under the umbrella of a National Program for Human Resource Development in IT (NPHRDI). Actions emerging from the policy include creating public awareness; documenting best practices through a clearinghouse; identifying and developing institutions of excellence; promoting technology-mediated learning; supporting capacity-building initiatives for faculty, curriculum and content development, research; and promoting private-public partnerships. (Reddy and Sinha, UNESCO Meta Survey on Use of Technologies in Education in India, 2003)

Some of the 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 the open courseware initiative of MIT. It uses Internet and television technologies.
- Eklavya initiative: Uses Internet and television to promote distance learning.
- 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.

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 centers have been started to promote e-learning throughout the country (Bhattacharya and Sharma, 2007). Moreover, over the years Information and Communication Technology (ICT) has been emerging as a potential alternative to ensure greater accessibility to higher education beyond geographical and political boundaries with all its advanced tools like teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counseling, interactive voice response system, and CD ROMs and it can also facilitate many such academic and administrative activities with e-orientation (Sharma, 2003; Sanyal, 2001; Bhattacharya and Sharma, 2007). Through broadening the international dimension of educational services to greater and expanding meaningful collaborations with internationally acclaimed institutions in higher education, e-learning vis-à-vis ICT can really make higher education easily accessible, affordable and qualitative leading to up-liftment of the socio-economic status of people and eradicating social inequality.

IMPACT OF ICT IN EDUCATION

The discourse on knowledge-society education has occupied paramount importance as the

prime contributor to the development of a knowledge society. The Information Technology Task Force has come out with 18 recommendations out of the 45 on development with respect to education. Interestingly the ATR notes just two of them as implemented and the rest as ongoing, which includes providing internet access to all schools, colleges, polytechnics, and public hospitals by 2003. At the higher technical education level especially in IT, multiplicity of agencies is the norm. UGC and the respective universities control M.Sc/ M.A courses while as MCA/ MBA have been controlled by AICTE. No coordination is visible between these two agencies with respect to launch and control of degree programmes and contents resulting in proliferation of degrees with new nomenclatures like BIT/MS e-commerce etc, which confuse the student as well as the recruiters simultaneously. Even though an All India Board on Information Technology Education is constituted by AICTE (All India Council For Technical Education), it is yet to come out with a model curriculum, which is binding upon institutions. The Chairman of AICTE, Rame Gowda, states that there are a number of challenges brought by liberalisation and globalisation, therefore the need for technical education has to be strong enough to face these challenges, otherwise it will result in failure to compete in world markets thus driving economic ruin to the country (Jaychandran 2000). However, contrary to such statements no attempt is made by AICTE either to examine the current status of higher education both at the professional and continuing education level. The AICTE by transferring the question of academic quality assurance to universities has abdicated its responsibility for ensuring education quality. No progress is yet made on the proposal to set up an institute for computer professionals of India as well as on the creation of a 'National Qualification Framework', which would enable seamless integration of credits earned from different institutions and systems. The boom in the IT sector is because of investment in higher education especially elite institutes only. There is not much emphasis on the other technical education infrastructure, which includes polytechnics, engineering colleges, etc. The public spending on higher education is skewed towards privileged sectors, which receive 61% of resources in government-financed education while as majority of the technical institutions suffer from poor quality infrastructure and facilities generating graduates at the technical level who join unemployable rolls. The government has to enhance the literacy as individuals who will be literate will be ready to learn high skills and participate in knowledge economy. In order to halt the brain drain of students to abroad overhauling of our education system to make it market-oriented and on its part the government develops domestic market for ICT-based services which in turn ensure job opportunities for students coming out of institutes of engineering, technology rather than being obsessed by software industry and its export-orientation strategy (Narasimhan 2000). The government has failed to meet the demand for technical educational which has resulted in a rapid growth of private institutions in the IT sector which are un-recognized and generating students, which are being added to ranks of unemployed youths even in the technical sectors (Rai 1998). The number of students enrolling for IT courses has slumped due to US slowdown in 2002. On its part government, industry and educational institutions must review and totally revamp IT education in India. The content of graduate and postgraduate courses needs to be standardized and effective industry, institute linkage need to be developed to provide training to the students. Bureaucracy hurdles in universities have to be overcome to ensure substantive changes in the curriculum. Industry can contribute to its role by participating as sponsors and framing the curriculum, providing visiting faculty and hands on training (Jayanth, 2001). The IT education has been commercialized e.g., NIIT, APTECH with high fee structure and with their employment oriented qualifications as a result growing number of "Have Not's" who cannot access to computer education is increasing (Abimanayu, 2000). UGC with AICTE are framing guidelines to regulate the entry of the foreign Universities and with respect to technical education a committee has

been set up under the supervision of former Vice Chancellors N.V. Vasani and Billange (Jayanth, 2001). UGC with AICTE are of view that it is not practical approach to ban their entry but what could be done is to "rationalization" of standards so as to prevent students from being cheated (Mittal, 2001). UGC has come with revised guidelines to facilitate the role of private players in higher education. In this regard the "de novo Institutions" in emerging areas with promises of excellence, are likely to get deemed university status. This status is subject to review every five years. These deemed universities under stipulated guidelines of UGC on course structure, admission procedures and fee structure can open centres in the country and can even open centres in foreign countries with due permission from UGC and the host country (Hindu, 2001).

The role of social variables i.e. education and health as enabling factors, fostering economic progress has recently received much attention in the development literature. However, the way elementary education has been neglected is striking given the importance provided in contemporary world and its importance for economic development (Dreze and Sen, 2002: 38). The operation and success of market mechanisms can be deeply influenced by the nature of governmental arrangements and actions that go with it. The market is an essential vehicle for realizing economic potentials, the long-run active policy for example in initiating particular industries and in providing a wide base of public education is also important (ibid.: 49). The development itself opens new opportunities for social cooperation. At an early stage of development, the focus of human activity has to satisfy basic needs associated with relatively simple commodities, as the horizon of human concerns and social interdependence expands so does the realm of cooperative action. Technological progress also paves the way for more complex forms of cooperative action involving large number of persons. This cooperative action plays a crucial part in formulating organized public demands on which state depends in identifying its priorities and actions in democratic society. The development of basic education was significantly more advanced in all the high performing Asian economies with successful growth mediated progress at the time of their economic breakthrough as compared to India. Moreover, in the educational expansion of these countries, the state has played a major part. In India by a contrast there has been a remarkable apathy towards expanding elementary and secondary education and certainly 'too little' government action rather than 'too much' is the basic failure of Indian planning in this field, in spite of all the policy initiatives in this regard. Therefore, an essential goal of public policy must be to ensure that bulk of growing population had the capability to read and write, communicate and interact in modern economy. The Government must invest heavily on basic education as in view of complementarity between education and effectiveness of economic reforms (Das, 2000). By ensuring basic quality improvement, remove barriers against women's education, utilizing of funds for education properly. The government motto of economic liberalization should be accompanied by massive investments in social services (Aarti, 2001)

The scenario of basic education is sad according to S.K Somiya Chairman Educational Committee (FICCI) (Das, 1999). The elementary education must be provided to every one as only one fifth of the population reaches secondary education; therefore about 80% of country's human capital goes waste. On the other hand, there exists a paradox of country's achievements in nuclear technology, space technology, IT ignoring elementary education that also suffers from lopsided growth if it is analysed on urban-rural trends (Kumar, 1995). The above scenario is further highlighted by government failure to achieve universalisation of elementary education, in spite of Ramamurthy panel recommendations that was put forth by V.P Singh's government to review the National Policy on Education 1986 brought by Rajiv Gandhi (Rajagopalan, 1991). Government's concern of providing in computer facilities in state schools seems to have run into major difficulties as there is lack of

awareness on part of school administrators about IT usage in the rural areas. Anil Sadgopal, Head of Department Education Faculty, University of Delhi, attributed to sorry conditions of education to anti-people and anti-child education policies rather than the poor implementation of governmental policies. "Knowledge has become patentable commodity in the emerging knowledge society," this has been observed by Prof. R. Govinda, Head School and non-formal education NIEPA (Sharma, 2001).

PROBLEMS AND PROSPECTS OF ICT IN HIGHER EDUCATION

Problems

- Implementation of ICT in educational institutions is one of the big challenge due to high cost incurred for acquiring, instilling and replace of latest software and addition to that various opportunity cost to institutions for infrastructure development. This is not possible to tire 3 or self financing institutions until unless they have financial aid from government and sponsors etc.
- Speed of change reduces the comprehensive planning and researches the effects of new technologies in the education and society. And it is one the drawback for the successful implementation of the ICT in education in the initial periods because the stakeholders are not trained to accept the change
- Establishment of ICT infrastructure is not sufficient to achieve the goals of successful integration of ICT in educational institutions. However the development of e-content, its dissemination, selection and evaluation requires large scale networking among the users and producers and intellectual property rights among the stake holders is the major concern for the holistic integration ICT in education
- Besides the lack infrastructure to accommodate the technology ,problems in electricity , network availability, lack of awareness towards technology and utilization technology with improper knowledge were adding complexities for the successful implementation of ICT in educational institutions
- Despite of increase access the availability of advance technology and various opportunities to educational institutions to move forward in a competitive environment but many institutions are still in a nascent stage in the integration of ICT in education because many institutions are still accustomed with traditional learning practices and lack of motivation and knowledge among teachers to adopt ICT in teaching tool are the other challenging factor for the potential benefit of the ICT in higher education

Prospects

- The increasing use of information and communication technologies (ICTs) has brought changes to teaching and learning at all levels of higher education systems (HES) leading to quality enhancements.
- ICT change the concept of learning within the four walls as the introduction of technology learning breaks the boundaries of universities and colleges and offers the learners can learn irrespective of place and time. The individuals can accesses the data whenever they want and from where ever they may be learning occurs.
- The change in professional practice in which teachers are now enabled to design to incorporate the more complex real world projects by using ICT tools and resources and develops new educational approaches
- It provides a new concept of learning environment in the institutions and enhances the quality of education to produce a quality products . During the last decade, higher education has gained importance in India's changing policy landscape as the government realizes that India's strength lies in

education. The gap between demand and supply of higher education has necessitated the governments and institutions to formulate the policies for the better use of ICT. And, in order to bridge the gap, it is necessary to evolve the cooperation between the public and private sectors for the successful implementation of ICT in higher education (R.Nayak Indian Express, 2011)

- The evolution of ICT into universities clearly changes the way education is conducted. Not only is it possible to work with distance learning and achieve a closer collaboration between different universities, but also paving the way for a new pedagogical approach where there is unparallelability to spread knowledge and disseminate information. The pace of change brought about by new technologies has had a significant effect on the way people live, work and play worldwide (Rev. Dr. Obiora Nwosu)

CONCLUSION

over the years Information and Communication Technology (ICT) has been emerging as a potential alternative to ensure greater accessibility to higher education beyond geographical and political boundaries with all its advanced tools like teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counseling, interactive voice response system, and CD ROMs and it can also facilitate many such academic and administrative activities with e-orientation. Collaboration of all stakeholders in the universities and colleges by sharing the information for mutual benefit. Thus the successful integration of ICT in higher education depends on the collaboration of national policies and institutional policies. The actions taken for the implementation of ICT needs to be a proper action plan and training to all stakeholders involved in the integration and bring change on them. In addition to this there should be proper controls and licensing, quality assurance and accreditation of technology must be compulsory to reduce the complexities of implementation.

REFERENCES:

- 1.Aarti (2001) "Need to Accelerate Literacy", News Time, 12 September.
- 2.Abimanayu, A. (2000) "Don't Shut the Door", Hindustan Times, 7 September
- 3.Alestalo, M. H. (2001) "Is knowledge based society a relevant strategy for civil society" Current Sociology 49, 4: 209
- 4.Azad, J.L. (2000) Changing Complexion of Higher Education –A study of the Impact of Emerging Socio-economic Configuration, University News, AIU, New Delhi, March 13,
- 5.Assie-Lumumba, N'Dri Therese. Cyberspace, Distance Learning, and Higher Education: Old and Emergent Issues of Access, Pedagogy, and Knowledge Production, Brill Academic Publishers, 2004.
- 6.Ballal, H.S. (2009). FICCI-Higher Education Summit, Nov 6, 2009, New Delhi.
- 7.Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Analytical Reports in International Education, 2(1), 29-48.
- 8.Bhatnagar, S. and R. Schwere (2000) Information and Communication Technology in Development: Cases from India. New Delhi, Sage Publications.
- 9.Bhatia, S. (1998), "Commendable Step", Pioneer, New Delhi, 9 July.
- 10.Bhattacharya, I., & Sharma, K. (2007). India in the knowledge economy – an electronic
- 11.Chauhan, S. P. C. (2008). Higher Education: Current Status and Future Possibilities in Afghanistan,
- 12.Chauhan, C.P.S. (2000) Contemporary Issues in Higher Education, University News, AIU, New Delhi, Dec. 4,

13. Chauhan, C.P.S. 2004 Modern Indian Education, Kanishka Publishers, New Delhi, Cross,
14. Adam, F. (2007). ICT Policies and Strategies in Higher Education in South Africa: National and Institutional Pathways. Higher Education Policy, 20(1), 73-95.
15. Deshmukh, K.G. (1998) Universities and Higher Education in the 21st Century, University News, AIU, New Delhi, July 13,
16. Das, D. (2000), "Great Digital Divide", Hindustan Times, 29 June.
17. Das, M. (1999) "India Most Illiterate", News Time, Hyderabad 17 February.
18. Dreze J. and A. Sen. (2002) India Development and Participation. New Delhi, Oxford University Press.
19. Meenakumari.J, Krishnaveni.R, (2010) "ICT based and learning in higher education-A study", International Journal of Computer Science and emerging technologies,
20. Paradigm. International Journal of Educational Management, 21(6), 543-568.
21. Rajagopalan, T. (1991) Looking for Right Education Policy, The Hindu, 13 January.
22. Sharma, R. (2001) "Focus on E- education", News Time, Hyderabad, 23 March.
23. Shaikh Saleem, (2012) Role of ICT as a quality teaching tool, An International multidisciplinary journal,.
24. Sukantha Sarkar, "Role of ICT in higher education for the 21st century, Science Probe, Vol 1, 2012. ISSN-2277-9566.

Publish Research Article

International Level Multidisciplinary Research Journal

For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Book Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ International Scientific Journal Consortium
- ★ OPEN J-GATE

Associated and Indexed, USA

- EBSCO
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database
- Directory Of Research Journal Indexing

Golden Research Thoughts
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.aygrt.isrj.org