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JOURNAL OF INFORMATION TECHNOLOGY AND EDUCATION SYSTEM

Aims and Scope

Journal of Information Technology and Education System aims to provide a platform for the analysis of the latest theories, applications, and services related to developing, managing, using, and evaluating information technologies in administrative, academic, and research, as well as other educational technologies.

Publishing research articles detailing the new uses of technology in education, case studies detailing examples of technology applications in higher education; and in-depth analyses of the latest theories, applications and services in this field. The journal provides wide-ranging and independent coverage of the management, use and integration of information resources and learning technologies.

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Contents

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EDUCATION WE WANT: YOUTH VISION

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Abstract

Education has become today an essential aspect of the society. It is more regarded as an agent of social change than an instrument of social control. All the nations of the world are investing huge amount of money on education for it has become an essential condition of advancement.

Today's education system in India is challenging but needs some changes. Youth are not satisfied with the educational system that they are receiving. The educational system in India puts more emphasis on theoretical knowledge rather than practical. In our educational system education is only to get good scores. Not any extra knowledge for future Endeavour. Even teachers and parents put pressure on students to get maximum marks. Students have judge on the basis of their scores, not the knowledge.

Education has been a problem in our country and lack of it has been blamed for all sorts of evil for hundreds of years. Even Rabindranath Tagore wrote lengthy articles about how Indian education system needs to change.

If we see the secondary educational system of India- Youth are not satisfied with the CBSE Board they believe that CBSE Board is playing with the future of students by creating low standard N.C.E.R.T. Text books which do not have proper information and students have to go for other reference books. The child hood is becoming hell now a day due to excessive pressure of academic burden which are not use in our practical life.

Education should be conceptual focusing more on concept. There are various problems with the Indian educational system ,So the Educational system required reform .The following reforms should be implemented in new education system- Focus on skill based education, Reward creativity, original thinking, research and innovation ,Implement massive technology infrastructure for education, Re-define the purpose of the educational system Personalized education –one size does not fit for all, , Change the C.B.S.E. Board System, Make education conceptual base, More practical curriculum in syllabus, sports should be compulsory part of curriculum. Syllabus/synopsis should be updated periodically according to the need of modern Society.

Teachers should make teaching interesting by use of Projectors, Presentation or

Smart board etc. The visual learning is far better than bookish learning. If the government will take action against some of the challenges mentioned above then future of Indian Youth may be improve.

KEY WORD: Education, youth vision, academic burden, low standard, skill base education

Introduction:

"Education is the most powerful weapon which you can use to change the world"-Nelson Mandela The sharpness of Education Develops proper understanding in man. Education is the process of facilitating learning, or acquisition of knowledge, skill, values beliefs and habits the term education is derived from Latin" educare 'which literally means to 'bring up", and is connected with verb "educare" which means to" bring forth "The idea of education is not merely to impart knowledge to the pupil in some subjects but to develop in him those habits and attitudes with which he may successfully face to the future. Plato was of the opinion that the end of education was to developing the body and in the soul (of Pupil) all the beauty and all the perfection of which they are capable."(1)

Education in its general sense is a form of learning in which the Knowledge, Skills, and habits of a group of people are transferred from one generation to next through teaching, training, or research. Education is "preparing a person to face everyday life. Education for him means that process by which character is formed, strength of mind is increased, and intellect is sharpened, as a result of which one can stand on one's own feet .(Vivekananda views on education)(2)

Importance of Education

Education has become today an essential aspect of the modern society. It is more regarded as an agent of social change than an instrument of social control. It has become increasingly secular. All the nations of the world are investing huge amount of money on education for it has become an essential condition of advancement.(Hindustan times 17 sep 2016 "Education for all goal may elude world by fifty years: UN" according to UN report universal primary education will be achieved in 2042.Universal lower secondary education in2059and upper secondary in 2084.according to UN educational body Unesco.It said aid to education need to increase Six fold to achieve the goal of Quality Universal education by 2030" (3)

Problems In Current Education System\disatification of Youth

Education has been a problem in our country and lack of it has been blamed

for all sorts of evil for hundreds of years. Even Rabindranath Tagore wrote lengthy articles about how Indian education system needs to change. Funny thing is that from colonial times, few things have change. We have established IITS, IIMS,LAW Schools and other institution of excellence, students now score 90%marks so that even students with 90+%find difficult to get into the colleges of their choice; but we do more of the same old stuff. The colonial masters introduced education system in India to create clerks and civil servants, and we have not deviated much from that pattern

Education, modernization, advancement in science, technology and industry normally go together. Formal professional education has become an absolute necessity today Education is needed just to read, write and do simple calculations but, it is essential to earn one's living. It is the main source of supply of trained and technical persons to industry. The job that one gets today depends largely on the type of education that one has secured.

Modern schools, colleges and universities do not give much emphasis upon transmitting a way of life to the students as was given by the earlier forms of education. this is due to the fact that traditional education was meant for an unchanging society, a society not marked by rapid changes associated with industrialization. Modern society on the other hand, is a changing society. In such a society education aims at communicating empirical knowledge.

Changes Required In Our Present Education System.

Today's education system in India is challenging but needs some changes. Youth are not satisfied with the education they are receiving. The education system in India puts more emphasis on theoretical knowledge than practical. In our education system education is only to get good scores. Not any extra knowledge. Even teachers and parents put pressure on student to get maximum marks. Students have judge on the basis of their scores, not knowledge. The Quality of education must be improved rather than the Quantity According to Herbert Spencer Sociologist "The great aim of education is not knowledge but action "Rabindranath Tagore put emphasis on naturalism for framing educational Model. He attached great importance to fine arts, music, dance etc. Student should take active part in these finer aspect of human life for these are very essential .to enrich soul. He rejected book centered education for student. in his views teaching should be practical not artificial and theoretical. He believed that practicality of education increases creative skill in student that creativity will bring perfection in learning processes. he was not in favor of

making slave to theoretical knowledge.

Mahatma Gandhi was also a critic of traditional education and viewed that Education, I mean an all-round drawing of the best in child and man in body, mind and spirit"" he was in favor of giving skill education (JA TELINE, DEC 10 2010, Shiya "What were Mahatma Gandhi's views on education) (4)

Oneindia.com article by Reetu Sharma published July 23,2014: 'Sound education system is the foundation of sustained growth of a country. But if the education system is full of loopholes and. does not provide any quality. Such a state of education in our country. When former U.S president Bill Clinton Visit to Luck now just to impress him a convent school student was made to sit in primary school allegedly by authorities There are many more examples which raises question over the education system in our country'(5) . Youth are not satisfied with the senior secondary board they believe that board is playing with the future of students of India by creating low standard NCERT books which do not have proper information and students have to go for another help books/reference books The child hood is becoming hell now a day due to excessive pressure of many subjects which are not use in our real life. Board exams should be abolish as there are competitive exams enough for judging the ability of students. Education should be conceptual focusing more on concept. there are various problems with the Indian education system So the education system required serious reform (Teaching Times Google site Andy Powel topic we need an Education system that excites children)" The nation need an education system that excites and stimulates children, providing them with the learning, they need and deserve…to fulfill their potential. This means providing a curriculum of practical and vocational learning alongside theoretical study" (6)

What Should Change In Indian Education System

Education system in India is falling because of more intrinsic. There are systemic faults that do not let our demand for good education. How we can make present education system stronger and more beneficial for society. What reform to be included they are as following:

1 Focus on skill based education

Our education system is general towards teaching and testing knowledge. We should make skill education so that he can utilize his education and get good job it more effective. Today's youth are intelligent they do not want the old education system they want changes in it, so that their growth is not going to hamper. They want Skill based

education system. They want their original thinking to be respected and reward. They want purposeful education, so that they can use it to earn lively hood. With changing in education system their natural Talent can take shape and they can naturally grow and bloom into flower along with the change in education system today's youth also want that parents should spend some Quality of time with them

2) Reward and creativity, original thinking, research innovation.

Our education system should respect, admire the creative idea or thought of children, welcome the innovative ideas Our system need to be built to recognize original contributions, If we could do this our system will become a better system

3 Implement massive technology infrastructure for education.

India need to embrace internet and technology. If we invest in technological infrastructure that will make knowledge accessible on line education has become an important mode of education. Since regular courses in India are getting very expensive and highly competitive, distance and on line education is fast developing as an amazing option for students

4 Re-define the purpose of the education system

We are still following Britisher system of education that is now irrelevant that can only produce clerk or babu.now its high time to re define the purpose of education. More focus to be given skill base

education. The education should be job oriented. Today youth are intelligent they do not want the old education system they want changes in it .so that their growth is not going to hamper. They want Skill based education system. They want their original thinking to be respected and reward. They want purposeful education .so that they can use it to earn lively hood. With changing in education system their natural talent can take shape and they can naturally grow and bloom into flower along with the change in education system today's youth also long that parents should spend some quality of time with them rather than watching T.V.

5 Personalized education –one size does not fit for all

If one massive monolithic education system has to provide education to everyone then there there is no option but to assume that one size fits to all. This is happening in India. Here students have to study the same syllabus though they differ in I.Q Level.

6 Make reservations irrelevant

Reservation is not good for Indian education system. It Lower the standard of education. People should

come on their talent. Compete the exam and prove your talent .it should be fully based on merit

7 Allow private capital in education

To improve the standard of education this is very essential that government should encourage the people those are rich to contribute in education sector. For this government should make some motivational schemes.

8 Change the cBSE board System

The education system should surely be reformed in our country because now a day's education is all about passing exams instead of gaining knowledge. Definitely our education system really need concerns. Grading system prevented the knowledge and application of studies. it should be end up because students are easily getting the number

9 Make education conceptual base

Education system need to be reformed education which the colleges, schools are imparting that is irrelevant. Just to get promotion in school's teachers give very difficult assignment .at last parents have to complete .it by taking the help of internet. knowledge should be conceptual so that student can complete the assignment themselves

10 More practical curriculum in syllabus

There is need to change syllabus .it should be very light. whatever students are learning or studying in school or colleges they should learn to co relate. Students learn things more quickly by doing the things themselves .so syllabus should be containing more practical knowledge.

11 Sports should made compulsory part of curriculum. Children are of bubbling energy

They easily learn anything while playing.

12 Syllabus should be updated periodically acc. To the need of the hour

Conclusion

Our education system must focus equally on knowledge and skills. this will induce a shift from “telling what I know “to showing what I can do”. the idea is to demonstrate learning' rather than “vocalize knowledge”

Like any form of education or training, it is best if Vocational education starts early in school .The appreciation for skill alongside knowledge must be developed in the formative years. Hence vocational courses must be introduced in main stream school curricula across all school boards.

Teachers should make teaching interesting by use of projectors, presentation or smart board etc. The visual learning is far better than bookish learning. The concept of Naturalism is not new it is old but not implemented in education system

properly. Rousseau concept of education was also naturalism. According to him education should be given through activities .Emile Durkheim was also in favor.(Dr V.K Maheshwari 9 nov,2011,article naturalism –as a philosophy of education) "Rousseau's aim is to show how a natural education, enables Émile to become social, moral, and rational while remaining true to his original nature. For it he is educated to be a man, not a priest, a soldier, or an attorney, he will be able to do what is needed in any situation.

The main purpose of education is empowerment enabling one to earn ones livelihood and live a life of dignity Skill based education, if taken and promoted seriously, can provide this empowerment to Youth." Present education system is not sufficient. It is mainly bases on the theoretical knowledge rather than practical knowledge.

The students play no active role in attainment of knowledge. Things are loaded on his mind which he cannot digest; he only crams and therefore they never become his own. Our educational system according to Dr. Annie Besant is just "Filling students head with lot of disjointed facts poured into the heads as into a basket; to be emptied out again in examination hall and empty basket carried out again into the world." This is the reason why a student who succeeds well in his college examination fails miserable in the examination of life"'(7)

If the government takes action at least against some of the challenges mentioned above than future of student can be improved to a better successful person

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EMERGING ISSUES IN INDIAN HIGHER EDUCATION SYSTEM

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Abstract

Education, as you are aware, is vital to the human resources development and empowerment in the stages of growth of a nation. India has one of the largest higher education systems in the world, with 25.9 million students enrolled in more than 45,000 degree and diploma institutions in the country. It has witnessed particularly high growth in the last decade. India's growth in recent years has been led by the services sector. The present paper is an attempt to find out the various issues in Indian Higher education System. No doubts, there is a great need of value based higher education system which empowers youth for self sustainability by inculcating employment skills and reducing poverty. This can be done only if we address the different issues effectively after reorganization of those issues. The study use secondary data including reports, articles and discussion held in conferences. The study found that quality, accessibility, cost and student teacher ratio are major issues in Indian higher education system. In order to improve the skills and talent of our large population, there is a need for raising the quality and standards of our education system. The study reveals that current GER which is about 17 per cent stands very low when compared to the world average. The access to higher education for all eligible in the country will be a major issue before the policy makers. Lack of availability of faculty is also a big challenge for higher education sector to sustain in future. In nutshell, the present study highlighted the emerging issues to be focused to ensure that our education system is sustainable and meets global standards.

Keywords: Higher Education, Gross Enrolment Rate (GER), High-Quality Research, Inequitable Access.

Introduction

Education, as you are aware, is vital to the human resources development and empowerment in the stages of growth of a nation. In any education system, higher education encompassing Management, Engineering, Medicines etc., plays a major role in imparting knowledge, values, and developing skills and, in the process, increase the growth and productivity of the nation. While the Government is committed to providing primary education and certain facilities/subsidies for higher education, given the higher cost involved in the establishment of higher education institutes, we are witnessing the entry of private sector to run educational institutions. India has one of the largest higher education systems in the world, with 25.9 million students enrolled in more than 45,000 degree and diploma institutions in the country. It has witnessed particularly high growth in the last decade, with enrollment of students increasing at a CAGR of 10.8% and institutions at a CAGR of 9%. The private sector has played an instrumental role in this growth, with private institutions now accounting for 64% of the total number of institutions and 59% of enrollment in the country, as compared to 43% and 33%, respectively, a decade ago. The Government has also given the required thrust to the sector in its Five Year Plans. During the Eleventh Plan period (2007–2012), India achieved a Gross Enrollment Ratio (GER) of 17.9%, up from 12.3% at the beginning of the Plan period. Various legislative actions were also taken during this period, including the introduction of the Higher Education and Research Bill, the Educational Tribunal Bill and the Foreign Educational Institutions Bill, to enhance transparency and quality in the sector.

India's growth in recent years has been led by the services sector. The most noticeable aspect has been the recent big boom in the BPO/KPO sector. This off-shoring trend is certain to continue and India faces the challenge of generating an appropriate supply response to retain its existing advantage. It should be noted that Indian's spend nearly $4 billion annually to send their children abroad for higher studies and technical training while there is no reason for Indi a not emerging as a global hub for higher education and technical training. The real challenge therefore, is to expand capacities in higher education to keep ahead of the curve of rising domestic and global demand. However, this poses a well known policy dilemma. India has a huge population of uneducated children and the Constitution provides for free and compulsory education up to the age of 14. The country also has the dubious distinction of one of the highest levels of illiteracy in the world. The system of public education at all levels is in

advanced stage of disrepair and disarray. Clearly, governments both at the Center and in the States need to allocate far more resources and attention on ensuring that future generations are equipped sufficiently to operate in a knowledge economy. Thus , India has to find a strategy that will en able it to effectively address the multiple challenges in the education sector of improving literacy, universalizing access to quality basic and secondary education and at the same time ensuring an adequate supply of higher skills and technically trained manpower.

Review of Literature

Jaraiedi and Ritz(1994) applied QFD to two processes, 'advising' and 'teaching', in a colleges. Here, they considered students as the main customers. Student's requirements were studied and compared with some 'design' requirements developed for each process. On the basis of calculated importance ratings and target values for the design requirements, conclusions were made on the ways that quality could be improved.

Gibbs (1989) has also observed that the demand for such know-how is becoming acute while it remains a key to improve productivity and competitiveness. But data and information processing are major services being outsourced to service providers in developing countries. In addition, many companies are divesting themselves of expensive operations and transferring them to low cost economies or simply closing them and relying on cheaper service suppliers from developing and transition countries. On the other hand, in these host economies, there is growing demand for high-level skill s required to tap these emerging opportunities. As a result, education and for that matter higher education, have become attractive avenues for investment.

Lam and Zhao (1998) Paper addresses the issue of improving quality of teaching with the use of QFD and AHP. **Owlia and Apinwall (1998)** applied QFD for the improvement of quality in an engineering department.

Fiorenzo Franceschini and Marco Terzago(1998) Applied QFD to industrial training courses and identified the two major differences between the application of QFD for product development and for education.

Bouchereau and Rowlands (2000) article explores the integrated use of techniques like fuzzy logic, artificial neural networks, and the Taguchi method with QFD to resolve some of its drawbacks, and proposes a synergy between QFD and these three

techniques.

Hwarng and Teo (2001) In this paper they demonstrated how an institution in higher education can apply the three-phased, service-based quality function development (QFD) methodology to translate the voices of customers (VsOC) in stages into operations requirements.

Chan and Ming-Lu (2002) review paper highlighting the historical development of QFD, methodological development of technique, applications under the classification of different industries, working of some QFD organizations, and key readings – publications on QFD.

Objective of the Study

The present paper is an attempt to find out the various issues in Indian Higher education System. No doubts, there is a great need of value based higher education system which empowers youth for self sustainability by inculcating employment skills and reducing poverty. This can be done only if we address the different issues effectively after reorganization of those issues. The study use secondary data including reports, articles and discussion held in conferences to find out the emerging issues in higher education in India after Globalization.

Issues and Concerns

However, in spite of the significant progress made during the past few years, India's higher education sector is still plagued with several challenges, e.g., its relatively low GER, inequitable access to higher education by community, gender and geography, and lack of high-quality research and education institutions, resulting in sub-optimal outcomes. Although Higher Education has expanded several times since independence, issues of access, equity, and quality still continue to be the areas of concern.

Access: The Gross Enrolment Rate (GER), measures, the access level by taking the ratio of persons in all age groups enrolled in various programs to total population in age group of 16 to 23. For Higher Education GER has risen from 0.7per cent in 1950-51 to 1.4 per cent in 1960-61, and 8per cent in early 2000. The current GER which is about 17 per cent stands very low when compared to the world average. The access to higher education for all eligible in the country will be a major issue before the policy makers.

Quality: Maintaining standard of education in more than 45000 colleges and diploma institution nationwide, offering training programs to teachers, and keeping good balance with education system worldwide is a big challenge. Colleges and universities vary in size and resources and are forced compromise in the all round development opportunities they must

provide to students. In order to improve the skills and talent of our large population, there is a need for raising the quality and standards of our education system. It is well-known that many of our professionals (engineers/doctors/management professionals) remain unemployed despite lot of opportunities being open in the globalised world. We need to introduce/activate the mechanism for rating and ranking universities/ colleges. At present, there is no compulsion for institutions/colleges to get accreditation in India. Government has already mooted a proposal to introduce accreditation. We, therefore, require standard rating agencies to give accreditation to universities/ colleges/schools. In a recent ranking of Business Schools by Financial Times at global level, in the top fifteen, only two of the Indian premier Business Schools appeared at rank no. 11 and 13 for the year 2011. Most of the top ranking business schools were from the U.S. In this ranking, even China was ahead of India. In the same reporting, in respect of value for money of these two Schools, it is observed that it is not that high when compared with some of the best U.S. Schools. However, a positive development is that these high ranked Indian Schools possess faculties with doctoral qualifications and of global standards who can deliver quality education to the students. NASSCOM-MacKinsey Report-2005 has said that not more than 15per cent of graduates of general education and 25-30per cent of Technical Education are fit for employment. The various regulatory bodies regulating higher education have constituted autonomous bodies for monitoring quality standards in the institutions under their purview. For example, National Assessment and Accreditation Council (NAAC), by UGC. National Board of Accreditation (NBA) by AICTE, Accreditation Board (AB) by ICAR, Distance Education Council (DEC) by NCTE etc.

Equity: On one hand GER stands low for the overall population, while on the other hand there are large variations among the various categories of population based on gender, urban or rural habitation and rich and poor. Due to regional disparity in economic development and uneven distribution of institutions of higher education, the higher education is not equally available to the different sections of the society. To overcome the deep rooted problem of social inequity, successive governments have introduced caste based reservations in higher education. At present the caste-based reservation is applicable in only government funded institutions, which includes institutions of excellence and amount to approximately 49per cent of the total seats. Due to the cast based

reservation, better talent coming from non-reserved category is deprived of the admission in good institution, which creates social unrest and used as a tool to make vote bank by the political parties.

Cost of Education: Government funding on higher education has been diminishing on a year to year basis for more than one decade. In terms of expenditure incurred on education, particularly on higher education, during the year 2010–11, the government spent around Rs.15, 440 crore which is about 85 per cent of the revised budget estimates for the year. The recent 66th round of NSSO survey reveals that between 1999 and 2009, spending on education in general jumped by 378 per cent in rural areas and 345 per cent in urban areas of the country. The survey further reveals that spending on children's education underlines sharp increase – 63 per cent for rural and 73 per cent for urban families. However, if we measure the expenses on education as a percentage to GDP, India lags behind some developed/ developing nations. We recognize that the gap in investments in education in India can perhaps be filled by private sector playing a crucial role. In the view of withdrawal of government support to finance higher education private institutions has been allowed to take over the responsibility of imparting education to all. Further, in government aided universities the model of self financing and self sustaining institutions has been introduced. All these developments have added to the cost of education significantly. Though, the education loan has been made easy to facilitate higher education still the terms and conditions imposed by banks in terms of guarantee and criteria of minimum income of family restricts the talent coming from the poor families to go for higher education.

Student-teacher ratio: Another challenge for improving the Indian education system is to improve the student-teacher ratio. In India, this ratio is very high as compared to certain comparable countries in the world. For example, while in developed countries this ratio stands at 11.4, in case of India, it is as high as 22.0. It is even low in CIS (10.9), Western Asia (15.3), and Latin America (16.6) (Annex 3). This brings the necessity to recruit quality teachers and strengthen the teachers required to handle classes. Economic growth led by industrial and service sector during the last decade has created more opportunities and faster career growth for the young talent. Further, the lucrative salaries and glamour has acted as catalyst in attracting talent to such fast growing sectors. Higher education in India which has been passing through transition on account

of privatization and withdrawal of financial support from the government has been finding it difficult to attract adequate number of young talent to teaching job. It is a big challenge for higher education sector to sustain in future due to lack of availability of faculty.

Conclusion:

In India, higher education was traditionally looked after by the government, but in view of lack of resources to meet the increasing demand, private sector has been allowed to share the responsibility. The study found that quality, accessibility, cost and student teacher ratio are major issues in Indian higher education system. To sum up, we need to recognize that the knowledge, skills and productivity of our growing young and dynamic work force forms the backbone of our economy. To reap the benefits of such a young work force, we need to implement the reforms in the education system. The study found Higher education institutions managed by public and private sector lack in creation of knowledge which leads to deterioration of quality of education. The councils and government bodies responsible for quality assurance do not have internationally match able quality norms on one hand and an effective system to monitor and control violation of the existing norms by the institutions on the other. The present study highlights the emerging issues to be focused to ensure that our education system is sustainable and meets global standards.

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ICT IN EDUCATION: POSSIBILITIES AND CONCERNS

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Abstract

Information and communication technology have revolutionized almost every aspects of our life by making things easier, faster, cheaper and more efficient than the past. Teaching cannot be the exception either. With this view we can observe that teaching is becoming one of the most challenging professions in our society where knowledge is expanding rapidly and modern technologies are demanding teachers to learn how to use these technologies in their teaching. As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners. Recent developments of innovative technologies have provided new possibilities to teaching profession but at the same time have placed more demands on teachers to learn how to use these technologies in their teaching. Information and communication technology, in this context, provide more flexible and effective ways for professional development of teachers and has become an important part of today's educational pattern that can transfer the present isolated, teacher centered and book centered learning environment into a healthy, thought provoking and student centered environment. Learning is no longer a mere collection of facts; it is now a process of active construction of knowledge & skills through collaboration of modern techniques. As well the role of teacher in the present circumstances largely depends upon his proficiency in academics, teaching technology & emerging vision of a global society. In this context the present paper highlights the role of ICT in teacher education.

Key Words: ICT, teaching, teacher education, teachers, education.

Introduction

Globally, educational systems are under great pressure to adopt innovative methodologies and to integrate Information and Communication Technologies (ICT) in the teaching and learning process to prepare students with the knowledge and skills they need in the 21st century. Apparently teaching profession is moving from a teacher-centered, lecture based instructions to student-centered interactive learning environment. Today a variety of ICTs can facilitate not only delivery of instruction but also learning process itself. Moreover ICTs can promote collaboration and networking in education at both national and international level. There is a wide range of ICTs options from Videoconferencing through multimedia delivery to websites which can be used to meet the challenges teachers face today. Not only this but also ICT provide more flexible and effective ways for the life-long professional development of teachers. Undoubtedly ICTs has brought about many challenges and opportunities for today's education pattern. The educational system needs to be reformed to cope with these new challenges and to take full advantage of the opportunities. If educational institutions have to ensure that their students leave the institutions as confident individuals capable of using new technology creatively and productively then their teachers should have the competence to integrate the emerging technologies and the digital content with all their operations. Therefore challenge for teacher education has been to create a new generation of teachers capable of employing a variety of technologies into all aspects of education i.e. academic, administrative, research and extension functions. A teacher being a pivot in the process of teaching-learning, skills to use ICT in teaching learning has gained immense importance for today's teacher. This knowledge development during pre-service training has gained much importance with the notion that exposure to ICT during this time is helpful in increasing student teachers' willingness to integrate technology for classroom teaching.

It is self-evident that teachers play a pivotal role in the society. It is they who changes the attitudes of younger generation and prepare them for assimilation of new knowledge, skills and values.

Due to acquisitive and riotous atmosphere existing in the society, the teacher does not enjoy the status, which he deserves. The examination based system has converted the teacher into so called tutors who has the duty to finish the syllabus on time. Undue workload of duties compels them to pass information formally without touching the heart of students. Now they are no longer the sole 'fountain of information' but the facilitator and pointers toward information (Francis, 2000). However, in multicultural and multilingual as well as dense society

like India, teachers need to be enabled and empowered with the modern techniques of delivering the instruction. He should also peep into past history of teaching profession and carefully follow the teachers' professional ethics. However, the scientific and technological changes demand for the desirable.

Vital Elements of ICT in Education

When a university, teacher education unit, state or region adopts a set of standard for determining how technology will be infused throughout their programmes, it is critical that faculty be included in the planning effort. And a number of essential conditions must be met to successfully integrate ICTs into education programmes. ISTE has also compiled a list of the most commonly cited conditions necessary to create learning environments conducive with powerful uses of technology. When we are planning for implementation of ICTs in education, then we should consider each essential condition and note whether, and to what extent, it is present. Each of these conditions are explained below:

Shared Vision: Shared vision means the commitment to technology is systematic in the presence of proactive leadership and administrative support. From the administration to the ground level, there should be an understanding, commitment and sense of advocacy for the implementation of technology. The integration of technology may requires a change in policy or rules and the decision makers have to be willing to look at the situation, forge compromises when necessary, and ensure communication among all parties. The collaborative environment necessary for creating a shared vision is also needed to sustain that vision.

Accessibility: The teachers should have access for the current technologies, software, and telecommunications networks. This access must be consistent across all environments that are part of the preparation of teachers. The access to funding and other resources may very greatly among the entities of various education programmes but it should be adequate and consistent throughout the educational experience of students. Access must be in classrooms as well as lab settings and special provisions must be made for special children. In addition to ICT access in their course work, pre-service teachers must have technology access in their student teaching environments and in their classrooms in the induction year and beyond.

Skilled Educators: The educators who work with pupil teachers must be skilled in the use of technology for learning. They must be able to apply technology in the presentation and administration of their course work and facilitate the appropriate use of

technology by their teacher candidates. Pre-service teachers should participate with and observe their mentors using technology effectively from starting stage to collaborative stage at school site.

Professional Development: The word 'Professional Development' carries so many potentialities and competencies in itself. "Consensus is growing among the school reformers that teachers are the most important school related determinant of student achievement" (Killion, 2000). Harr (2001) emphasized that quality, ongoing professional development is a must for every school system to succeed. If teachers stop growing, its students cease to grow, too. In order for educators to be competent they should be provided with high quality professional development training. It is also important to provide consistent access to professional development as the technology constantly changes. Louie and Hargrave (2006) stated that there are three different forms of staff development:

- Formal Professional Development: technology workshops, summer institutions, credit courses and study groups etc.
- Ongoing or Informal Professional Development: coaching, mentoring and co-teaching.
- Online Professional Development: online courses and online workshops.

Technical Assistance: Teachers need technical assistance to use and maintain technology. The focus of the faculty member, teacher, and pre-service teacher should be on teaching and learning, not on maintaining and repairing the technology beyond basic troubleshooting procedures. When the technology does not function well, a learning opportunity is lost and faculty frustration grows. Timely technical assistance is imperative for faculty and candidates to feel confident that they can use technology in their teaching and learning.

Vast Variety of Study Material Traditional system provides limited knowledge through text books/printed material only. But ICT facilitates us to get a variety of study material using Internet any time anywhere.

Effective Teaching Practices:ICT can provide teachers access to more and better educational content, and provide models and simulations of effective teaching practices. Teachers' learning experiences may be linked directly with instruction going on in their own classroom.

1. International society for Technology in Education (ISTE) is the premier membership association for the educators and education leaders engaged in improving learning and teaching by advancing the effective use of technology in P-12 and higher education.

Range in delivery mechanism: Different types of technologies provide alternate for the teachers, when he is absent, to ensure that learners still receive quality instruction. Multimedia approaches can be utilized for the on-going professional development of teachers. They provide for a diversity of delivery mechanisms and a diversity of results.

Content Standards and Curriculum Resources: Educators should have mastery over content and teaching methodologies of their disciplines. Teacher candidates must learn to use technology in powerful, meaningful ways in the context of teaching content. Technology brings resources from the real world to subject area content and conveys it through a variety of media and formats.

Pupil-Centered Teaching: Technology should not be used only as a tool for demonstration; rather the use of technology by students should be an integral part of instruction. In students-centered approaches, students become the source for problems investigated. Students and teachers candidates must have opportunities to identify problems, collect and analyze data, draw conclusions and convey results using electronic tools to accomplish these tasks. Faculty should model the use of ICTs to demonstrate their usefulness and appropriateness.

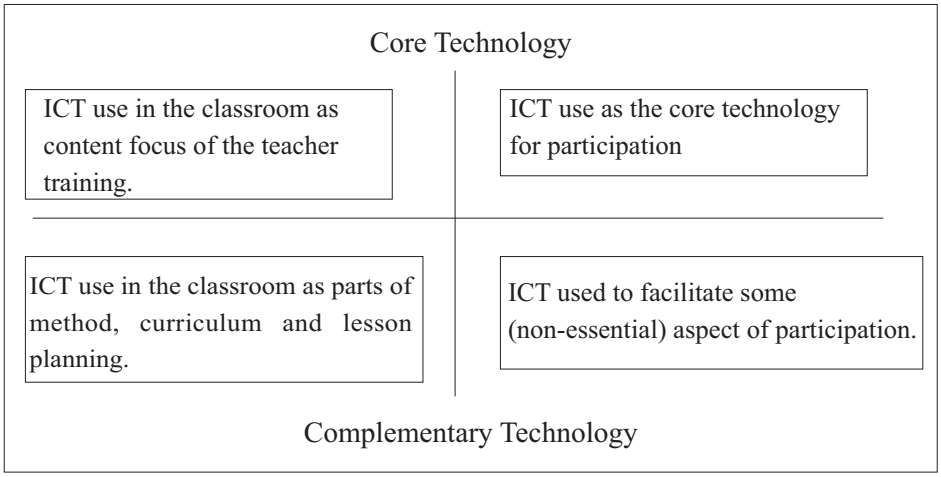
Assessment: With assessment of teaching and student outcomes, institutions should continuously assess the effectiveness of technology for learning throughout the entire teacher preparation environment. The data obtained from this continuous assessment will provide information of learning strategies used, pinpoint potential problems and provide data for modifying policies & instructional strategies.

ICT and Professional Improvement

In this age of information technology and knowledge explosion, there has been a rapid change in all walks of human life, particularly in the field of education. Now teaching-learning process in class room is not as easy as in ancient times. Today's teacher has to keep certain things in mind during his lecture in class i.e. psychological level of students, individual differences prevailing among them etc. to cop up with all these new problems, a teacher should be well trained and aware of all the modern techniques and psychological principles of learning. For this certain strategies i.e. workshops, seminars, refresher courses, orientation programmes have been used from time to time to keep the teachers up to date and awake about their professional needs. Along with these strategies, a 21st century teacher should integrate models of teaching with technology 7 need to acquire 'media competencies or 'ICT competencies' in addition to the usual

instructional skills.

The integration of ICT in teachers professional development involves two roles: (i) training teachers to learn about ICT and its use and (ii) role of ICT as a means of providing teacher education, either as a core component of programme, or playing a supplementary role with in it (Perraton, 2001, cited in Andorson & Glen, 2003). This type of ICT integration can be shown through figure given below:



Source: Collis and Moonen 2001, cited in Kirshner and Davis, 2003.

Concerns of ICT Integration in Education

Education for All

There is a big challenge before all the school systems throughout the world of providing quality education for all children & young people which will prepare them for inclusive participation in the workplace, social environment, political sphere & sports (UNESCO, 2003). Countless millions more are dropping out of school systems due to the seeming irrelevance of education to their lives (Ainscrow & Miles, 2008). In India, remarkable, provisions have been made for free & compulsory education for each and every child in age group of 6-14 years under RTE Act, which came into force on April, 2010. Leach (2008) together with many experts believes that the evidence makes clear the incapacity of existing institutional structures to cope with scale & urgency of the issues. So she believes that the thoughtful use of new forms of ICTs can be exploited to strengthen& enhance TPD programmes and improve the quality of education in general (Cawthera, 2001Dhanaranjan, 2001; Evoh, 2007).

Acquaintance for All

There is a commonly accepted statement that education system needs to affect the people to prepare them for life long learning in a 21st century knowledge based society. Therefore there is a need of strong reformations in the educational set up so that it can lead us to the right path of living in this globalized society. Thomas Kuhn suggests that when old theories and methods do not solve new problems, 'revolutions' in the form of 'paradigm shift' towards new theories and change can come about. Many educators & government leaders believe that creating a paradigm shift in views of learning, coupled by applications of new information technologies can play a key role in renewing educational systems to bring them into alignment with the needs of a knowledge society for all (Resta & Semenove, 2002). It is a view that has influenced a concomitant paradigm shift in the evolution of teacher professional development as the pivotal role of teachers, especially in the effective use of new technologies, is being recognized globally (Davis, 2000).

Current Scenario of ICT in Schools

It is obvious that emphasis on ICT is the need of hour as it acts as a capacity builder for educational institutions without compromising with quality. A number of steps have been taken up both at central and state level institutions to integrate teaching learning with new & innovative use of technology. For example the concept of 'Smart Class' is introduced in schools affiliated by CBSE board which enables teachers to instantly assess and evaluate the learning achieved by their students in class with an innovative assessment technology-smart assessment system. On the part of state government the concept of EDUSAT has been introduced by Haryana government at primary level which is being implemented to College students, students in Technical Education Institutes, students in Senior Secondary Schools in all streams and for this purpose, an amount of Rs. 41.19 crore was given to Antriksh Corporation Ltd. (A unit of ISRO) for installation of SITs/ROTs/DTH in the schools. As we have seen that all the private as well as public machineries are doing their best for making ICT a part and parcel of today's education system, but still there is a need of serious efforts and commitment on the part of teachers as well as administrators.

2. Smart Class is a digital initiative of Educomp, which is rapidly transforming the way teachers teach and students learn in schools with innovative and meaningful use of technology. Powered by the world's largest repository of digital content mapped to Indian School Curriculum, smart class brings in technology right next to the blackboard for teachers in the classrooms. Students learn difficult and abstract curriculum concepts watching highly engaging visuals and animations. This makes learning an enjoyable experience for students while improving their overall academic performance in school.

Suggestions

ICT is spreading rapidly in schools not just in developed countries, but increasingly in India as well. But there are a number of barriers such as mind set of old teachers, lack of resources, which hinders the path of successful implementation of ICT in schools as well as professional development of teachers. If we seriously want to improve the situation, then some of the suggestion given below may be followed:

- Our objective should be to make the teacher a technopedagogs, wherein teacher should be in a position to integrate technology in teaching-learning process as well as to develop skill of webogogy 9i.e. to make use of internet, exploring it, accessing information from it0.
- For professional development of teacher, knowledge regarding location of websites, new software and hardware should be developed for time to time.
- In a country like India, it is essential to have proper use of available resources. A teacher should know how to get maximum from the minimum available.
- There should be a proper balance between the traditional method and new innovations so that all the teacher community (whether old or new) can accept the change easily and insecurity prevailed in their minds can be removed. Only then we can develop 21st century skills in our teachers.
- There should be congruence between school curriculum and teacher-training curriculum at secondary level otherwise teacher will not be able to utilize the knowledge of students in designing teaching-learning processes, project work and assignments.
- There is a need of collaboration among institutions at state, national & International level: Universities, Colleges & schools should establish an integrated strategic planning process.
- Last but not least, teachers should be made aware about the new ICTs being used in the field of education. Because awareness is the first requisite for any desirable change or modification and an aware teacher can keep his students aware in the classroom.

Conclusion:

ICT works as a key for unlocking new possibilities to envision modern education. It offers a great opportunity for teachers as well as institutions to raise their educational standard. It closes the gap of 'digital

3. EDUSAT or GSAT-3 was launched on 2004-09-20 by the Indian Space Research Organisation. EDUSAT is the first Indian satellite built exclusively to serve the educational sector. It is mainly intended to meet the demand for an interactive satellite-based distance education system for the country

divide' but at the same time it demands for the involvement of teachers as well as all the professionals linked with education system. In this changing era of modern education, ICT can work as a boon for todays education system. As we have already discussed in the paper that it caters two most burning issues of world education i.e. Education for All and acquaintance for All. To solve these issues, it is essential to provide learning experiences to the teachers by following the models of complementary technology to core technology. There is no aspect of education, which is untouched by ICT. There is second side of coin also i.e. challenges proposed by ICT in its implementation for e.g. resistance to new ideas, experimentation, provision of finances, infrastructure facilities, lack of competent teachers and transparency etc. It is important that serious planning & implementation should be done at both higher & grass root level to make the dream of 'ICT Integration' a ground reality

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INFORMATION & COMMUNICATION TECHNOLOGY – A POSITIVE INVASION IN HIGHER EDUCATION

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Abstract

Information and Communication Technology (ICT), with in a very short time, has become an important part of today's educational pattern that can transfer the present isolated, teacher centered and book centered learning environment into a healthy, thought provoking and student centered environment. All exports and practitioners in the Education sector increasingly recognizing the importance of ICT in supporting educational system at all levels i.e. Primary, Secondary and Higher. Also the world of higher education- more especially the University community feels the need to engage in the process of change, adaptation and modernization. In the present paper an attempt has been made to study the role of ICT in Higher Education. To study the objectives in systematic manner, the paper has been divided into five sections. First section discuss about the importance of Higher Education and ICT. 2nd section discuss about the opportunities of ICT in Higher Education. 3rd section discuss about the recent steps taken by the Govt. in the field of ICT and Education. 4th section describes the key challenges in integrating ICT in Higher Education. The last i.e. fifth section describes some practical suggestions to illuminate the path of ICT in the field of Higher Education. Finally the concluding section summaries the idea and its usefulness.

Key words: Information and Communication Technology, Higher Education, Educational policy and planning, Capacity building.

Introduction

The education systems around the World are under increasing pressure to use new Information & Communication Technology (ICT) to enhance the knowledge and skills of the students. The 1998 UNESCO World Education Report insisted on implementing ICT immediately in Higher Education to pave the way for quality education. To know the role of ICT in Higher Education, we need to know two basic things: ICT & Higher Education

The information & Communication technology (ICT) is an umbrella term that includes any communication device or application encompassing: radio, television, cellular phones, satellite system and so on. When such technologies are used for educational purposes, namely to support and improve the teaching-learning process, ICT can be considered as a subfield of Education Technology.

On the other side, there is no simple definition of higher education. the international definition of tertiary (post school) Education divides it into two parts. Type A (Higher education) and type B (further Education). A higher education qualification at degree level takes a minimum of three years to complete, more typically four. It will have a theoretical underpinning; it will be at a level, which would qualify someone to work in a professional field. Shortly higher education mainly an generally means University level education. It offers a no. of qualifications ranging from Higher National diplomas & foundation degrees to Honors Degrees & as further step, Post-Graduation programmes such as Master's Degree & Doctorates. Here are definitions of most frequently used terms related to Higher Education:

Bachelor Degree: It is usually an U.G. academic degree awarded for a course or major that generally lasts three or four years.

Masters: It is an academic degree usually awarded for completion of a P.G. or graduate course of one to three years in duration. In the recent system of Higher Education diploma, it corresponds to a two year graduate programme to be entered after three years of U.G. studies.

Doctorate: Traditionally, the award of a doctorate implies recognition of the candidate as an equal by the university faculty under which he or she has studied. It is an academic degree of highest level.

In view of ICT, education can be classified in three main categories- E-learning, Blended Learning and Distance learning.

- **E-learning:** It is a general term used to refer to computer enhanced learning. It can be "On demand". It overcomes timing, attendance & travel difficulties.
- **Blended Learning:** It is usually used define a situation where different

delivery methods are combined to deliver a particular course i.e. face to face class rooms, self-paced learning etc.

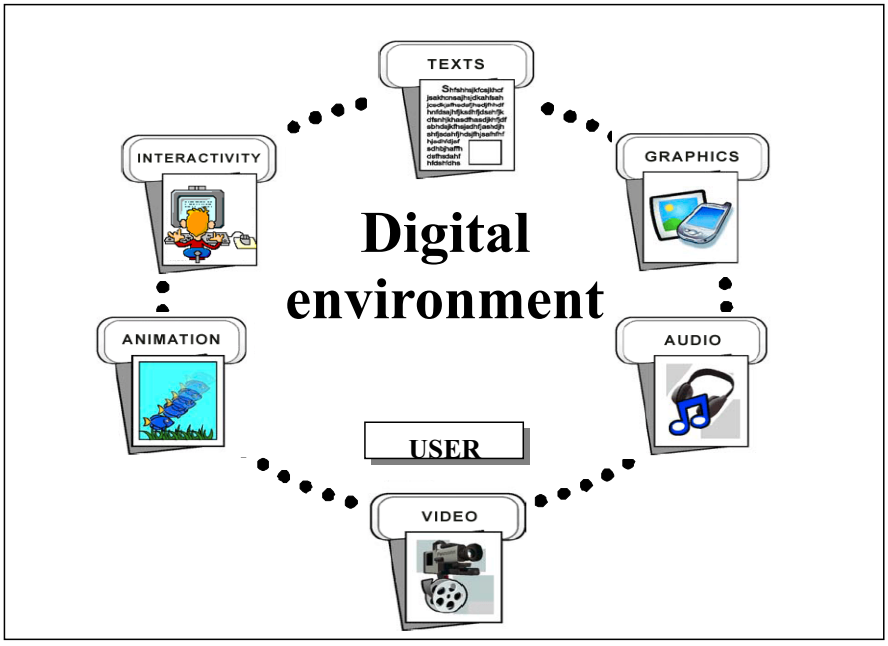
- **Distance Learning:** It is a type of education, where students work on their own at home or at office & communicate with other students via E-mail, video conferencing, chat rooms etc.

Opportunities of Ict In Higher Education:

Educationists have begun to realize that personal computers, with their convenient parts i.e. LCDs, pointing device with multimedia capabilities and ability to link with note books & laptops of others have evolved into personal media which can facilitate effective learning environments.

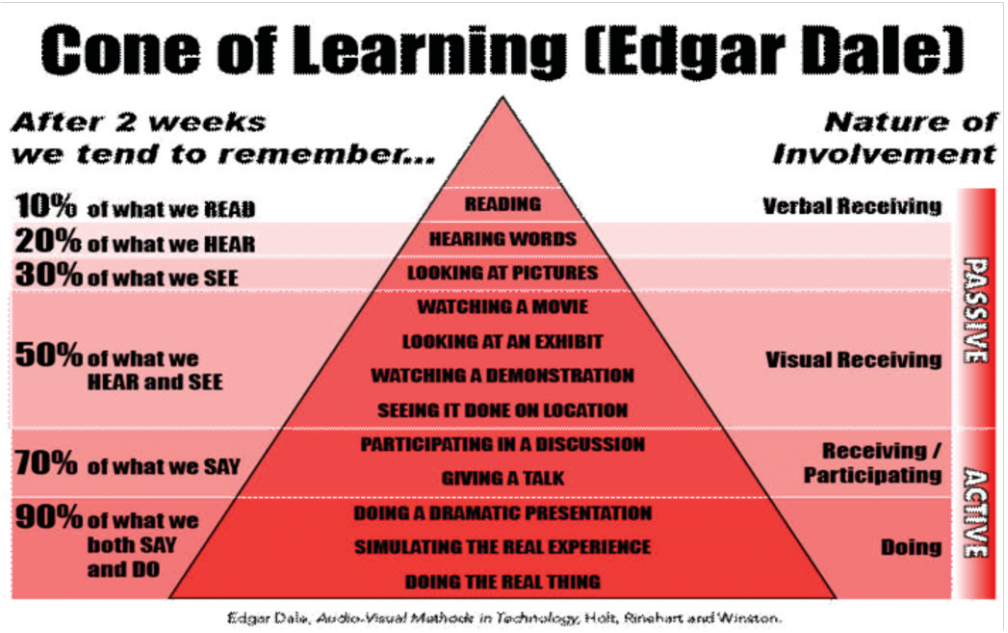
Side by side universities and institutes of higher education have a mission to a make teaching-learning process effective and interesting. Study of use of ICT in Higher Education reveals the following opportunities.

1. Extended Interaction: integration of ICT have beneficial implications on extended interaction between Teacher & student, opening up new opportunities in educational methods. It caters not only teacher-learner interaction but to learner-learner & teacher-teacher interaction



as well.

2. Improved Teaching-Learning Process: The conventional way of teaching-learning process can be made more effective & interesting by using ICT. For eg. When a teacher uses multimedia in his lecturer, the whole classes become more attentive and lecture becomes more interesting & which automatically helps in maximum understanding. In psychological bases of earning, Edgar Dale's Cone of Learning also clarifies this point:



3. Vast Variety of Study Material: Traditional system provides limited knowledge through text books/printed material only. But ICT facilitates us to get a variety of study material using Internet any time anywhere.

4. Support to Admission & Examination System: Using ICT universities can improve admission process by downloading all information, forms on their websites. They can conduct entrance/semester/annual exam. Online. This will provide a great support to admission & Examination system.

5. Useful in Research Activities: Research can get information about recent developments in different fields; collect variety of information on a particular topic and with the help of new & innovative ideas can obtain

new findings.

6. Professional Developments of Teachers: ICT provides opportunities to access a wide range of resources that helps in many ways in professional developments of teachers.

Initiative Taken By Government

• National Mission of Education through ICT (NMEIT): HRD Minister Arjun Singh launched NMEIT at Sri Venkateswara University. The main aim is to address the goal of access, equity and quality in Higher Education. And attempt to bridge the digital divide between rural & urban as well as in rich & poor strata of society. Rs. 4612 crore is allotted for this project.

• In early 1999, Tamil Nadu state government announced its intention to establish virtual university designed to promote Tamil language, literature & culture integration through medium of Internet linked computers.

• National Programme on Enhanced Learning (NPTEL): Launched in Sept., 2006 and funded by MHRD to pave the way between multimedia & web technology to enhance learning of basic science and concepts.

• E-Learning Network of Amrita Vishwa Vidyapeetham: This programme was launched on May 15, 2004. This initiative uses satellite technology to seamlessly four Amrita Campuses at Amritapur, Banglore, Coimbatore and Kochi. This project has transformed Amrita University into a full multi-disciplinary, multimedia, virtual campus without geographical limitations.

Key Challenges In Integrating Ict In Higher Education

While considering the opportunities associated with the ICT-integrated education, we also let to know the second side of coin i.e. Challenges faced by policy makers and educators while implementation of ICT in Higher Education. Some of the key challenges related to different aspects of education are discussed below:

A. Challenges related to the Educational Policy & Planning:

I. The total approach of integrating ICT at higher level is not serious.

ii. There is lack of clear and specific objectives, guidelines and time bound targets which are helpful in advancement of education.

iii. Technology, pedagogy & Content integration is not there. All are taught separately creating confusion among students.

B. Infrastructure related challenges:

I. Non-availability of appropriate rooms or buildings to house the technology.

ii. Non-reliable supply of electricity & telephonic facilities in developing

countries.

iii. Access to computers in universities, communities 7 as well as affordable Internet services.

C. Challenges related to capacity Building:

I. Lack of competent & professional teachers.

ii. Change in role of teacher and integration of ICT in existing curricula.

iii. Confusion among teachers' community to understand why they should use ICT & how exactly they can use ICT to help them teach better.

iv. Lack of support from Educational Administrators.

D. Challenges related to language & Content

I. Dominance of English language on internet, which is not so proficient in developing countries.

ii. Lack of ICT material in countries like Singapore, Malaysia & India in local language.

E. Challenges related to Finance

I. Difficulty of balancing educational goals with economic realities.

ii. ICTs in education require large capital investments & developing countries need to be prudent in making decisions about use of economic model of ICT.

Suggestions

Here are some practical suggestions by following which the path of ICT in Higher Education can be illuminated.

- In the light of far-reaching potential impact of the new ICT technologies on learning experience, the Government of India should develop a charter for E-learning in Indian context.
- There is a need of collaboration among institutions at state, national & International level: Universities, Colleges & schools should establish an integrated strategic planning process.
- Problem of funds can be removed by using following measures:

  - ❖ Grants
  - ❖Public subsidies
  - ❖Community Support (e.g. rent free buildings)
  - ❖Membership fees
  - ❖Revenues earned from business like connectivity, direct computer access to users.

- Additional resources to facilitate research & experimentation in E-learning should be continuously made available.
- It is suggested that the institutions relieve the teachers of some of their duties so that they will have more time to devote to E-content development.
- Teachers should be empowered with easy access to wide range of instructional designs & technical

support tools.

- Two fold strategy: Government support and local community mobilization can be the key to integrate ICT in Higher Education System.

Concluding Remarks

Information & Communication technology is an important instrument that can transfer the present isolated, teacher-centered & Book-centered environment into student-centered, thought-provoking and healthy environment. There are infinite opportunities of integrating ICT into Higher Education.

ICT has rendered convenience of online learning to thousands of people throughout the World who cannot avail the benefits of Higher Education due to some barriers like poor socio-economic condition, time, geographical location, age etc. Now teaching community is able to reach in remote areas to teach the ignorant community of students. it is important that serious planning & implementation should be done at both Higher & grass root level to make the dream of 'ICT Integration' a ground reality.

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ISSUES IN DIGITISED EDUCATION AND CURRICULUM TRANSACTION: ROLE OF TEACHER

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Abstract:

Information and communication technologies are playing a vital role in transforming the mode of imparting education. Hence, it is hardly surprising that digitisation of education is increasingly gaining importance in India. (Dr Rajeev Shorey, 2011). Ready availability of multimedia, computers and Internet has opened up several interesting teaching-learning possibilities hitherto considered very difficult. As a result the importance of IT-enabled education has increased many folds. Digitized education is currently playing the major factor in shaping the new globalised education and transformation of information. The 1998 UNESCO World Education Report, Teachers and Teaching in a Changing World, describes the radical implications the new information and communication technologies have for conventional teaching and learning. Driven by globalization and pressures to frame and transact curriculum is also a challenging issue in front of a teacher. To be a skilled and competitive in today's world, teachers face a huge challenge to increase access to quality education. Hence forth present topic is mainly based on the concept of digitization of education followed with the discussion on the concept about easiness of curriculum transaction. This discussion further will lead to the quality issue for teacher education and role of teacher to face these challenges.

Keywords: Digitization, Transformation of Information, Curriculum, Transaction

Introduction:

We are living in an age where technology has touched every aspect of our lives including how we access information, the way we communicate with each other, and how we carry out research and development. Hence, it is hardly surprising that digitisation of education is increasingly gaining importance in India. (Dr Rajeev Shorey, 2011). Ready availability of multimedia, computers and Internet has opened up several interesting teaching-learning possibilities hitherto considered very difficult. As a result the importance of IT-enabled education has increased many folds. Digitized education is currently playing the major factor in shaping the new globalised education and transformation of information. In this the radical transition of learning environment from conventional way to constructivism influences the teacher to gather new information sources for learning. At present mastery over digital education is the new challenge for teachers. The 1998 UNESCO World Education Report, *Teachers and Teaching in a Changing ,World* describes the radical implications the new information and communication technologies have for conventional teaching and learning. It predicts the curriculum transaction the way teachers and learners gain access to knowledge and information. Use of digital education has helped the teachers to make the students understand the concepts better and apply them in practical life. Driven by globalisation and pressures to teach recreation of knowledge is also a challenging issue in front of a teacher. To be a skilled and competitive in today's world, teachers face a huge challenge to increase access to quality education.

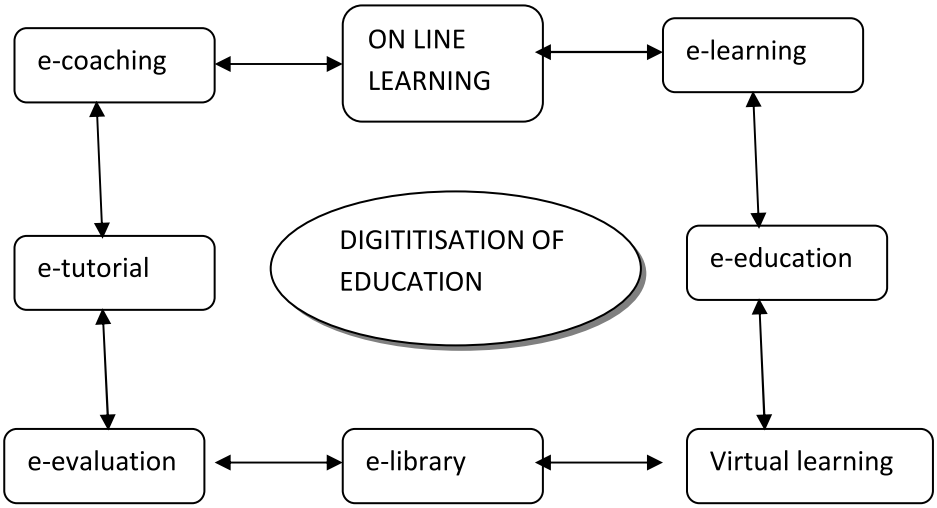
Hence forth present topic is mainly based on the concept of digitization of education followed with the discussion on the concept about easiness of curriculum transaction. This discussion further will lead to the quality issues for teacher education and role of teacher to face these challenges.

Digitization of Education:

Digitization of education otherwise means the use multimedia and technology in education. Information and communication technologies are today playing a very important role in transforming the mode of imparting education. Use of the interactive white boards are increasingly becoming common in the school classrooms, popularity of online courses are helping the countries in improving access and quality of education. Application of technology in the mode of imparting education is thus not only helping a lot in bridging the rural urban

divide but also in improving the quality of life. Indrajit Bhhattacharya, Additional Director, DOEACC & Kunal Sharma, Programme Assistant, DOEACC Talking of e-Learning and academic bodies in India it is imperative to mention the UGC-INFONET. The chairman of the University Grants Commission (UGC) in 2002 decided that the universities and colleges should also reap the benefits, which ICT had in store for them. The traditional model of 'Transmit- Receive' which when applied to multimedia learning, has so far failed to engage learners in meaningful learning (Scardamalia and Bereiter, 1993). In contrast, this hybrid learning model (Tsoi et al. 2003) for the design of multimedia aims not only to enhance concept learning but also to cater to different learning styles. e-Learning for Small Groups**.**

Digitization of education widely known by different terms:



Curriculum Transaction:

Curriculum means all the learning which is planned or guided by the school, whether it is carried on in groups or individually, inside or outside the school (Kerr; 1968).Curriculum plays an important role in the field of teacher education. Curriculum is the planned interaction of pupils with instructional content, materials, resources, and processes for evaluating the attainment of educational objectives. It always focussed on following points:

- WHAT should children learn
- HOW should children learn and

teachers teach?

- WHY should children be educated in this way?
- WHAT is an educated person?

Digitisation And Curriculum Transaction:

Curriculum transaction is major aspect in teacher education sector. Suitable use of ICT at suitable time and place is major concern for curriculum transaction. Teachers' subject knowledge is rather more important to frame curriculum. Use of different ICT based Pedagogical practices by the teacher and access to ICT resources are some of the concerns in digitisation and curriculum transaction.

Following points should be considered while transacting curriculum in digitisation form:

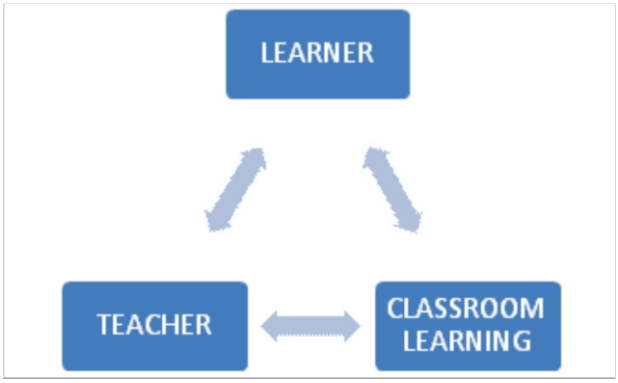
- Teachers' knowledge of the potential of ICT in education
- Teachers' confidence in using ICT
- Connecting with each other
- Interacting with technology
- Creating with ICT
- Possibilities in Education
- Reaching out and bridging the divide school, whether it is carried on in groups or individually, inside or outside the school" school, whether it is carried on in groups or individually, inside or outside the school".

Quality Issues For Teacher Education:

Different researches have been conducted on the quality issues for teacher education. Although teacher education is considered important to the quality of teachers, very little is known about the professional quality of teachers (Buch berger & Byrne,1995; Howey & Zimpher ,1990; Korthangen,2000). We define teacher educators as someone who provides instruction or who gives guidance and support to student teachers, and who thus renders a substantial contribution to the development of students into competent teachers (Koster B, Brekelmans & et.al., 2005). Increase in formal qualification of teacher educators might contribute to substantial improvements of teacher education (Buchberger, Campos, Kallos, & Stephenson, 2000). Teachers have been found to have high demands of themselves as professionals and able to document professional competence for appraisal purposes (Smith & Van der Westhuizen, 2000). The study of teacher characteristics and teaching styles reveals that the presence of effective classroom practices can be explained by a learner centered teaching style and by good class management skills (Opdenakker M.C. & Damme J.V. 2006). Part of the weakness of teacher education has been its relatively weak knowledge

base and the paradigmatic differences that have led to weak socialization effects (Zeichner & Core, 1990; Puk & Haines, 1999). Much have been written about the need to better prepare teachers for the demands they will meet to face the classrooms (Griffin, 1999; Pushkin, 2001). It is not unusual for only a minority of teachers to fully adopt and implement new programmes. Innovations come and go in part because they never become widely or deeply implemented in a school (Cuban & Usdan, 2003; Datnow et al., 2002).

After reviewing the research studies, it can be said that the improvement of quality of a teacher and effective curriculum transaction has been concerned not only to the education field but also other fields. In this regard the digitization of education is a process which can make teacher education more success. For curriculum transaction, in digitized education system three main components should be considered. The below figure indicates the learner as the autonomous thinker whereas teacher as the facilitator and classroom learning as the environment to develop the competencies



Role of Teacher:

In-spite of development in technology, teacher's role is always important in the field of education. Technology cannot be a substitute to teacher rather a helping hand to the teacher to provide better education. In this digital world, for effective curriculum transaction, the teacher's role is more important as a guide who guides the students to use the digital technology for better knowledge and innovation.

The curriculum transaction process can be improved by following ways:

Need based analysis of curriculum,

· What is the requirement of a

learner/ an institution?

· Which types of skills we want to incorporated in the student?

· How can we bridge the gaps between the theory and real life situation?

So, in contemporary world, teacher plays the role of a facilitator, a guide, an instructor rather simply as lecturer. For better knowledge recreation and curriculum transaction the teacher can take the help of digital technology for:

- Teaching
- Diagnostic testing
- Remedial teaching
- Evaluation
- Psychological testing
- Virtual instruction
- Online tutoring
- Development of reasoning and thinking
- Instructional material development

Conclusion:

Teacher education institutions are faced with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices and efficient curriculum transaction. To conclude, we can say effective curriculum transaction needs efficient digitization of education. In this new globalised educational era the teacher should be well aware of all these skills for better teaching and professional development. S/he should innovatively use technology or digitized modes to offer quality education and knowledge resurrection.

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