

Indian education with special reference to ICT

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Abstract

Education is a dynamic force in the life of every individual influencing his physical, mental, emotional, social and ethical development. In ancient India, during the Vedic period most education was based on the Veda and later Hindu texts and scriptures. It extended from 1500 to 600BC. At the same time Buddhist system of education also originated. In the Buddhist system has pappaja and ubasambantha. Monks of Buddha only taught them. After the entry of British Raj (1800), the earlier system to be changed. The current system of education, with its western style and content, was introduced and founded by the British during the British Raj, following recommendations by Lord Macaulay. Information Technology is textual mode of transmission of information with ease of use and fast access. It has opened new avenues like, online learning, e-learning, e-coaching, e-education, e-journal, virtual university and so on. In India, use of ICT in education goes back to the colonial era of the British government. India aired its first radio broadcast in June 1923 by Radio Club of Mumbai. In India, using computers related to education first started in 1984. Now in most of the schools used smart classroom for pedagogic purpose. This is healthy aspect of our country. This causes indirect improvement of our country.

Keywords: Information and communication technology, Electronic learning, Electronic coaching, Electronic education

Introduction

According to Vivekananda, "Education is the manifestation of the divine perfection, already existing in man." Education is a dynamic force in the life of every individual influencing his physical, mental, emotional, social and ethical development. Indian education system starts from Gurukula system of education. Ubanayana followed in this system. It contributes the role of guru (Teacher) in the education process. It is teacher centered education system. After that buddhist and Islamic school contributes more in Indian education. Macthab and matharasa followed in Islamic school of education. Pappaja and ubasambantha followed in buddhist education. At the time of British Raj, the current system of Education is recommended by Lord Macaulay. After that education system crosses different levels. The different education commissions contributed to improve the level of Indian education system. Particularly, woods commission, hunter commission, Dr. Radhakrishnan commission, Kothari commission and so on. Now the new trend of education followed. ICT opens new learning environment in the classroom. From the beginning up to this ICT contributes more in learning process.

Ancient education system of India

In ancient India, during the Vedic period most education was based on the Veda and later Hindu texts and scriptures. It extended from 1500 to 600BC. Vedic education means proper pronunciation of the Veda, the rules of sacrifice, grammar, reasoning, the sciences, understanding of secrets of nature and the skills necessary for an occupation. Some medical knowledge existed and was taught and education freely available in Vedic society. The oldest of the Upanishads - another part of Hindu scriptures - date from around 500 BC. The Gurukula system of education supported

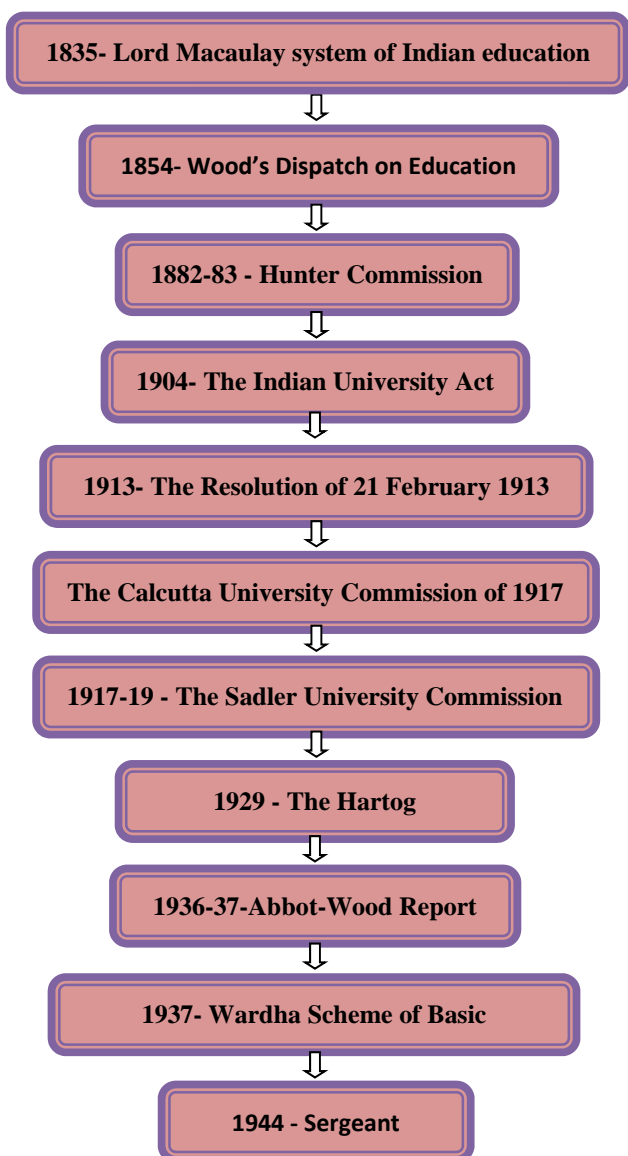
traditional Hindu residential schools. Education was free, but students from well-to-do families paid "Gurudakshina," a voluntary contribution after the completion of their studies. It is a teacher centered education. Ubanayana is the way to enter in gurukula education. Ubanayana did in the age of 8. Samskritham was a medium of instruction. At the same time Buddhist system of education also originated. In the Buddhist system has pappaja and ubasambantha. Monks of Buddha only taught them. They taught 3Rs (Reading, Writing and Arithmetic) with medicine, Astronomy, drawing in pali language. On the 5th century, Taxila (also known as Takshashila), which taught the three Vedas and the eighteen accomplishments. Buddhist centre of learning from the 6th century BC to the 5th century AD. Nalanda was a Buddhist center of learning founded in Bihar, India around the 5th century and conferred academic degree titles to its graduates, while also offering post-graduate courses. It has been called "one of the first great universities in recorded history. Vikramasila University, is a another important center of Buddhist learning in India. Islamic system has two stages. One is Makthab and another is madarasa was located near masjid. Madarasa is school for taught basic things like reading, writing, numerical ability, unani, astronomy and languages like Persian, Urdu, Arabian also taught by monks of mosque. This school was developed and more popular in mughal samraj means 11th to 17th century.

Indigenous education was widespread in India in the 18th century, with a school for every temple, mosque or village in most regions of the country. The subjects taught included Reading, Writing, Arithmetic, Theology, Law, Astronomy, Metaphysics, Ethics, Medical Science and Religion. The schools were attended by student's representative of all classes of society. The current system of education, with its western style and content, was introduced and founded by the

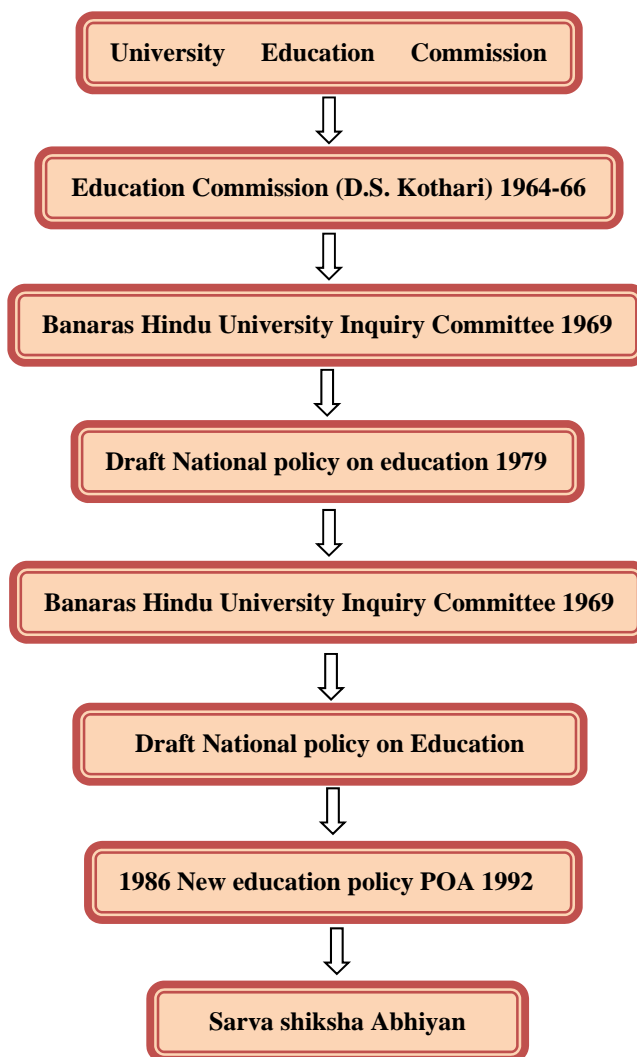
British during the British Raj, following recommendations by Lord Macaulay. Traditional structures were not recognized by the British government and have been on the decline since. Public education expenditures in the late 19th and early 20th centuries varied dramatically across regions with the western and southern provinces spending three to four times as much as the eastern provinces. Much of the inter-regional differential was due to historical differences in land taxes, the major source of revenue [6, 8].

Lord Curzon, the Viceroy 1899-1905, made mass education a high priority after finding that no more than 20% of India's children attended school. His reforms centered on literacy training and on restructuring of the university systems. They stressed ungraded curricula, modern textbooks, and new examination systems. Curzon's plans for technical education laid the foundations which were acted upon by later governments.

Before Independence period



After Independence period



Information and Communication Technology

Information Technology is textual mode of transmission of information with ease of use and fast access. The information is not only in textual form but may be in audio, video or any other media also transmitted to the users. It has opened new avenues like, online learning, e-learning, e-coaching, e-education, e-journal, virtual university and so on. The ICT brings more rich material in the classrooms and libraries for the teachers and students. It has provided opportunity for the learner to use maximum senses to get the information. It has broken the monotony and provided variety in the teaching – learning process (Agashe, L, 1995).

The ICT being latest, it can be used both at school and higher education levels in the following areas:

- Teaching
- Diagnostic testing
- Remedial teaching
- Evaluation
- Psychological testing
- Development of virtual laboratory

- Online Tutoring
- Development of reasoning & thinking
- Instructional material development

History of ICT in Indian education

In India, use of ICT in education goes back to the colonial era of the British government. India aired its first radio broadcast in June 1923 by Radio Club of Mumbai. In the 1930s, British Broadcasting Corporation (BBC) aired educational and cultural programs in India through broadcast radio. In 1937, All India Radio (AIR) broadcasted educational programs for school children (Agrawal, 2005) [3]. Since 2002, India’s first educational radio station called Gyan Vani (Voice of Knowledge) has been on the air. This full-fledged educational radio station provides programs for different types of learners including adult learners (Agrawal, 2005) [3].

In 1959 India acquired its first television set for an experimental television service in Delhi. Television gradually expanded to the urban rich. In 1961 Educational Television (ETV) was introduced in the secondary schools in Delhi. This was a pilot project by UNESCO and the Ford Foundations. As part of the project, lessons for physics, chemistry and English were televised to secondary school students (Mohanty, 1984). To develop the rural community through education, in 1975 an experimental project was implemented called Satellite Instructional Television Experiment (SITE) with the help of the USA (Agrawal & Sinha, 1981) [1]. In 2000, a 24-hour educational channel was launched known as DD-Gyan Darshan. In 2003, in collaboration with Indira Gandhi National Open University (IGNOU) and Indian Institute of Technology (IIT), a technology education channel was launched targeted to 1.5 million engineering and technology students (Agrawal, 2005) [3].

In India, using computers related to education first started in 1984. The project was called Computer Literacy and Studies in School (CLASS). As part of the project, computers were introduced to 250 higher secondary schools. An evaluation study of the CLASS project finds that students had a positive attitude towards computer learning regardless of the type of school (Agrawal, 1996, 2005) [2, 3]. To facilitate the computer based education, the first degree in computer education was offered in 1989 in Indore, India (Goel, 2000) [5].

Integrating ICT in Education

In the conventional classroom, teaching as a regular process.

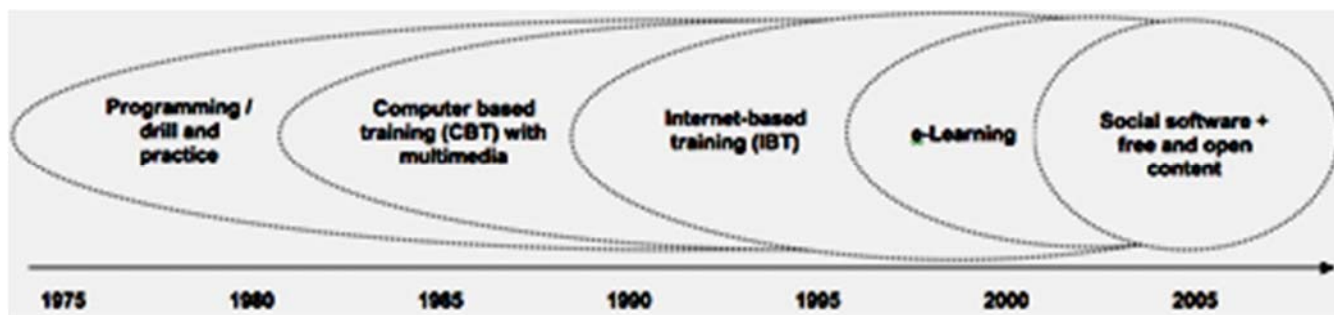
Here, lecture cum experimental methods were used. In the regular classroom all students understand all the contents to be learned is not possible. Some of them has trouble with understand all the contents. Some may be divert their mind in the classroom. This is usual process in the classroom. It can be changed by incorporating some new ideas in the form of ICT. ICT is a method to improve the teaching learning process better and easier. ICT is a new education technology for students of new learning environment. Nowadays, student’s ability is higher in nature. They have thrust to learn new things more. Teachers also prepare for their ability. So that there is no gap cannot be create between them. And the role of the every teacher should covey the concepts very easier in technical way. So, that ICT improves the students’ level and develop their better future. Finally, it improves education directly and it improves economy of the country indirectly.

Although ICT offers the opportunity to construct powerful learning experiences, it is pedagogically neutral. That is, ICT can be used in support of traditional teaching methodologies like the large group lecture, student note taking, and examinations. Teachers can use a computer and projector to show slides to illustrate a lecture, students can use laptops to take notes during the lecture, and multiple choice quizzes about the content of the lecture can be put on a website. How these new ICT tools and resources will be used is a human decision, not inherent in the technologies themselves.

ICT has the potential to be used as a supportive educational tool enabling students’ learning by doing. ICT can make it possible for teachers to engage students in self-paced, self-directed problem-based or constructivist learning experiences; and also test student learning in new, interactive, and engaging ways that may better assess their understanding of the content.

Role of ICT in Indian education

The use of computers in education is much more a series of failures than success stories. We know that new forms never replace the old one. TV never kills radio and internet never kills TV. But, it overcomes the previous one. All the old medias present with new once and get mixed to each other. The old medias never disappeared but are present in a form or another in the new medias. ICT occupy the every part of our life, particularly in education. In ancient study up to today, education changed in positive way. The studies like,



- Late 1970’s – early 1980’s: programming, drill and practice
- Late 1980’s – early 1990’s: computer based training (CBT) with multimedia

- Early 1990’s: Internet-based training (IBT)
- Late 1990’s – early 2000’s: e-Learning
- Late 2000: Social software + free and open content.

Late 1970's – early 1980's: programming, drill and practice

The pedagogical reason to teach programming means not to train programmers, but that will develop students with logical skill. The software was very simple drill and practice exercises for mathematics and language learning. These exercises didn't help all the students to reach any deeper understanding, as they were mainly simulating students. These programmes mainly used for keep the wild children quiet at the time of teaching.

Late 1980's – early 1990's: computer based training (CBT) with multimedia

After the entry of multimedia technology, drill and practice exercises failed to teach much. This was the golden era of multimedia computers and CD-ROMs. This combination has a most serious impact on education to learn easily. Some students learn better by watching videos / listening audios / animation than that of reading or watching images.

Early 1990's: Internet-based training (IBT)

In 1990's the role of CD-ROMs are fallen down. Because, it failed to update the content. This can be changed by using Internet and internet-based training. Here computer based training brought to internet without multimedia. Some of the educational experts may feel the use of internet based training without multimedia did not make the students smart. Earlier most of them feel it was cost-efficient, but it was low at cost wise.

Late 1990's – early 2000's: e-Learning

The Internet-based training got mature in late 1990's and early 2000 in a form of e-learning. The thousands of websites and articles created for education. E-learning industry was built by IT workers joined with educational experts. Pedagogy thinking of e-learning is closely related to computer based training. On the other hand e-learning field is nowadays so wide and hardly we say what are the pedagogical principles behind it. We may confirm that some social software's behind it.

Late 2000: Social software + free and open content

In late 2000, the usage of social Software's increased day by day. Blogs and wikis have already original idea with simple instruction on education. Wikipedia and is some social software's has free and open content used in education. The pedagogic thinking behind the social software can be located to the social constructivist theory and cultural-historical psychology. Learning with computers not about programming or drill and practice, nor about multimedia, nor about fast updating or cost- efficiency, it is all about people sharing ideas.

GeSCI 's role as a strategic partner to the Ministry of Human Resource and Development (MHRD), Government of India, led to the development of the policy process which was designed to be open, consultative and collaborative, while ensuring a strong base for knowledge sharing across communities. GeSCI led several open sessions on Policy Recommendations with partners and stakeholders in the ICT in Education domain in India and Asia.

Conclusion

The ancient system of education started with guru Kula system of education, Buddhist system of education and Islamic system of education. After that British system of education started in 1836 by Macaulay. Through ICT, information is given not only textual mode but may be audio, video and any other media communicated to the pupil. In India, using computers related to education first started in 1984. Now in most of the schools used smart classroom for pedagogic purpose. This is healthy aspect of our country. This causes indirect improvement of our country.

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