

ICT in Education and Learning Outcomes

Dr. Rajeev Kumar, *Assistant Professor, K.M. College of Education, Bhiwani

INTRODUCTION

In this cosmos nothing is stationary or fixed. Change takes place every moment. Teaching learning process is no exception to it. Since time immemorial teacher has been the pivot character in the classroom. All activities were destined by him until the rise of 21st Century's epoch of Science & Technology. Now it is the child and strategy who dominate the classroom teaching. Lecture Method is the thing the past now. ICT has replaced traditional method. Students of present have become very smart and their expectations from their teachers are very high. That's why even though teachers may have mastered the traditional pedagogies in teaching their students but in the classroom teachers are not able to teach in an innovative way then students will not take interest in their classroom. the use of ICT not only reduces the generation gap between teacher and students but also instills pride and confidence in the student that their teacher are moving with the times and are well equipped to prepare them for 21st century skills opportunities to do so are increasing through both formal and informal channels.

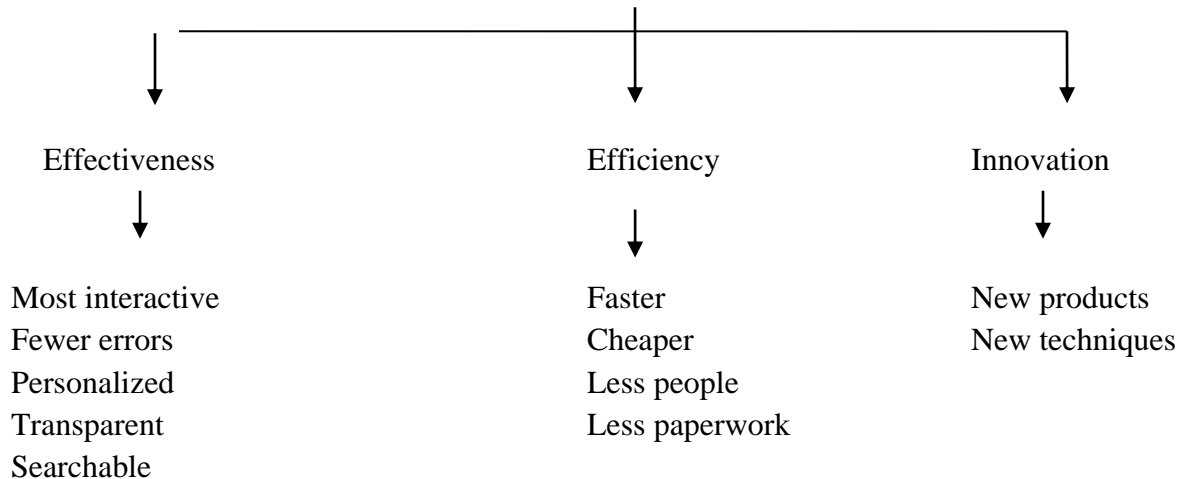
WHAT IS ICT?

Information and Communication Technology (ICT) “is the technology required for information processing. It involves use of computers, computer software and other devices to convert, store and process, transmit and retrieve information and includes services and applications associated with them (Malik 2005).”

According to Vineet Joshi Chairman, CBSE “one of the immediate uses of ICT is the help it provides in records keeping for the teachers .It also facilitates good learning environment inside the classroom. Technology is a medium of enhancing the teaching learning process. At times teachers may find difficulty in the selecting appropriate technology or teachers may also face problem in using the new technology. Various questions may arise like what and how to use? For which grade the technology should be used..... the very first question what is technology can be answered according to Wikipedia, the free encyclopedia as “**Technology** is the making, usage and knowledge of tools, techniques, crafts ,systems or methods of organization in order to solve a problem or serve some purpose.” In the classroom it is a teacher who has to use various systems and tools to convey his or her knowledge in the classroom in order to solve the problems of the students. Here some points are given with the help of which teachers can use ICT in classroom to promote better learning:

***Assistant Professor, K.M. College of Education, Bhiwani**

Characteristics of ICT



(Kamat.V.)

The ICT competency required for the teacher in the “**Knowledge Creation**” approach is as given below:-

- Design ICT-based learning resources and environments.
- Use ICT to support the development of knowledge creation and critical thinking skills of students.
- Support students’ reflective thinking.

Teachers are the torch bearers for the future society and being a pivot in the process of teaching learning, knowledge of ICT and the skill to use ICT has gained immense relevance for today’s teacher. He/She is expected to infuse knowledge of ICT successfully into his/her subject area to make classroom learning meaningful at higher level.

A variety of Information and Communication Technology (ICT) can facilitate not only the delivery of instruction but the learning process itself also. Researchers have proved that ICT can change the way the teachers teach and that is especially effective in supporting more student-centered approaches to instruction and in developing the higher order skills and promoting collaborative activities in higher education.

OBJECTIVES OF ICT IMPLEMENTATION IN EDUCATION

- To develop a new system of collection and distribution of educational information.
- To promote technology literacy.
- The ICT Curriculum facilitates change towards a more inclusive approach that promotes positive and supportive interdependence between teachers and students, while maintaining individual accountability and autonomy.

- To plan the curriculum to promote inter-cultural collaboration and develop a learning community within and between colleges using shared and complementary approaches with languages and cultures.
- Computer Based Testing (CBT).
 - Software for research.
 - Using technology to enrich and enhance project based learning.
 - Developing 21st century skills in students.
 - Using technology to transform educational institutions.
 - Using word processors, spread sheets, multimedia databases and internet for teaching/learning.

USE OF ICT IN SCHOOLS

Access the online headlines of the day

Most schools begin each school day with an assembly followed by news headlines in the assembly. Why should teachers not take an extra minute to visit a site such as IBN live .com, hindustantimes.com, economicstimes.com etc and now these days each news channel and news paper has its website which can be easily accessed if teachers have a few extra minutes then they can check out international happenings easily it will undoubtedly enhance the general knowledge of the students.

Include URLs in your monthly calendar

Each month, Education World provides a printable and editable coloring calendar for classroom use. Before distributing copies of the calendar to your students, add the URLs of a few sites that will add to their understanding of the month's events -- and encourage them to visit those sites. The September calendar for example, might offer links to sites about Labor Day, Grandparents' Day, and Hispanic Heritage Month. (A kid-friendly search engine such as "yahoo kids" will help you locate appropriate sites.) Or, students can find the sites themselves as they complete a "months of the year project".

Challenge students with online mathematics problems

Add a daily or weekly mathematics challenge to your seatwork assignments, math lessons, or extra credit activities. The Math Forums "math problem of the week" offers word problems in five categories -- math fundamentals, pre-algebra, algebra, geometry, and pre-calculus. The "AIMS puzzle corner" provides more than 100 math-related puzzles appropriate for students in upper elementary grades and middle school include If you teach grades 3-8, extend your students online math experience and encourage them to match wits with students around the world by participating in the "abacus international math's challenge".

Provide a URL in place of a quote

Do you write a quote on the chalkboard each day, for students to reflect on and discuss? Instead of writing out the quote, provide students with the URL and have them locate the days quote themselves. “quote of the day”, “Quotes of a day” are important sources of funny, inspirational, or thought-provoking quotes.

Enrich their vocabulary

Extend students vocabulary by including an online word of the day in opening activities, seatwork assignments, or language arts lessons. The Daily Buzzword at “world central” provides a word of the day and related activity appropriate for upper elementary students. “Vocabulary builder” offers words and definitions for students in grades 4-6 and grades 6-9. The words and definitions at “a word a day” and “word of the day” are best for students in middle and high school.

Introduce history in a modern way

For many kids, history is only a subject in a book; one that's unrelated to real people, real events, or today’s news. Personalize history lessons for those students by beginning each history lesson with a quick visit to “today in history or this day in history”.

On line worksheets should be used

Are you worn out from trying to come up with new and creative seatwork assignments day after day after day? Make life easier on yourself by including a few online worksheets. Each week, Education World provides an original printable creative writing activity. In addition, technology offers lots of work sheets in a variety of curriculum areas.

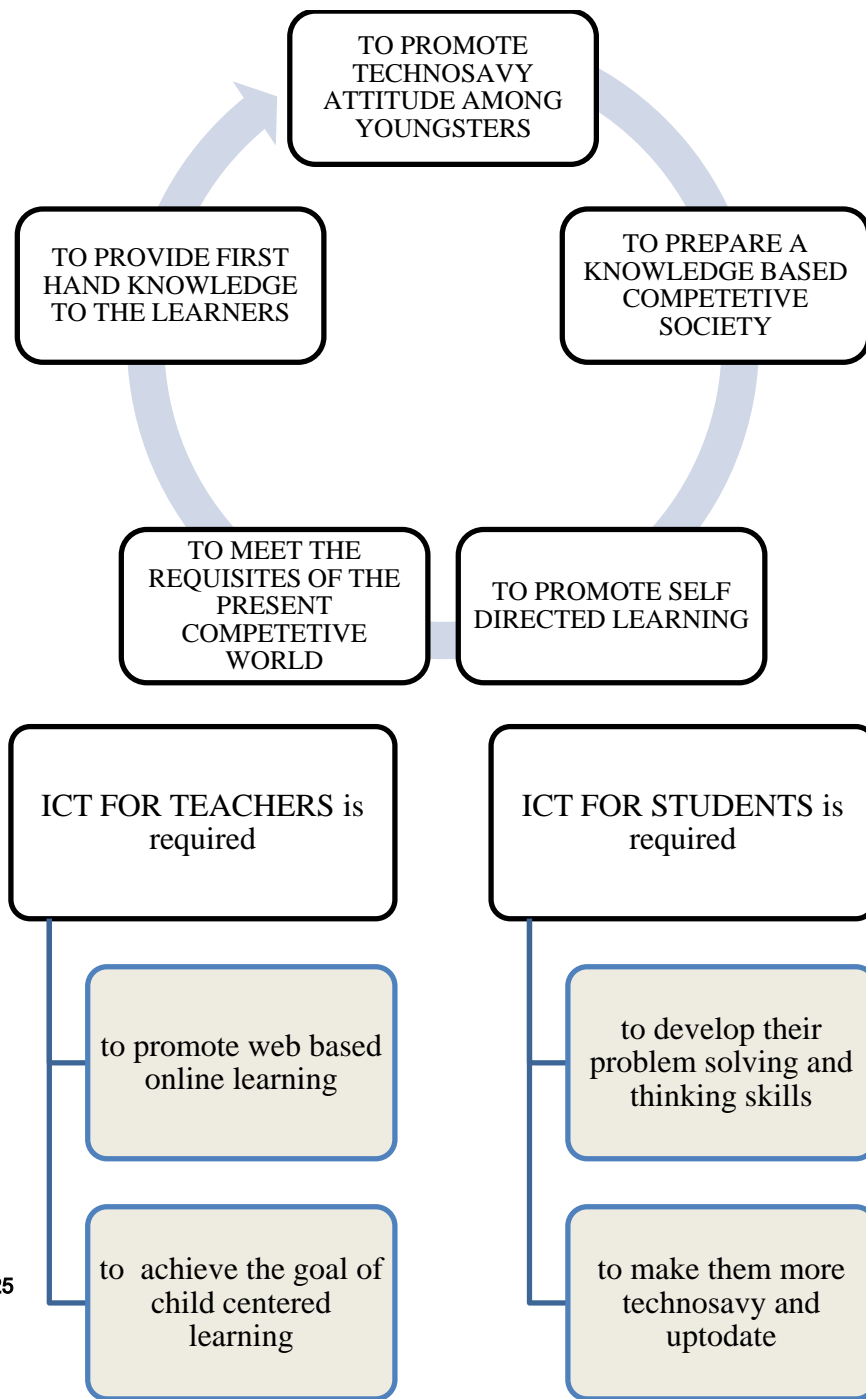
Visit on line libraries

A primary source material adds interest to any history lessons; reading the notes and seeing the pictures of various civilizations on line will help out more a student than to read only in books. It helps in to develop an insight in the students that a mere theoretical knowledge and limited resources cannot give. . Encourage students to include primary source materials in their papers like in literature, civics, science they can have firsthand knowledge available on online library.

Provide online reading comprehension practice

Add a fun reading comprehension activity to your student’s language arts curriculum with the Comenius Group's “fluency through fables” lesson. Designed for students of English as a second language, the activity is appropriate for English-speaking students in elementary and middle school as well. The lesson includes a brief fable and four categories of related activities; vocabulary matching exercises, vocabulary completion exercises, multiple choice comprehension exercises, and written discussion exercises.

WHY TECHNOLOGY IN CLASSROOMS



ICT FOR TEACHERS is required

to promote web based online learning

to achieve the goal of child centered learning

ICT FOR STUDENTS is required

to develop their problem solving and thinking skills

to make them more technosavvy and uptodate

RECENT TRENDS IN CLASSROOM TECHNOLOGY

Computer is emerging as a very important device in the field of Instructional Technology, i.e. Computer Assisted Instructional plan. Computer-Aided Learning is rapidly penetrating in classroom teaching. The computer can keep a record of full interaction with students with major gains-

1. **For the educator:** The micro record of the performance allows easy and pinpointed experimentation with alternate ways of presenting materials of different students, thereby rapidly improves understanding and practice in education.
2. **For the students:** A record of what he has learned and his particular learning idiosyncrasies can govern the heuristics by his tutor.
At the University level, educom is rapidly bringing the Institutions of higher learning into a working information network.

Uses of Internet:

1. **On-line Communication:** Computer users around the world extensively use the e-mail service on the internet to communicate with each other. With the facility, Internet has proved to be a rapid and productive communication tool for millions of users.
2. **Exchange of views on the topics of common interest:** The Internet has a number of news groups. Each news group enables a group of users to exchange their views on some topic of common interest.
3. **On-line journals and magazines:** The Internet has liberally thousands of electronic subscriptions found both for free and low cost. There are many www sites on the Internet dealing with electronic versions of many journals and magazines.
4. **Video-Conferencing:** It allows a group of users located around the globe to talk and interact with each other as if they are discussing in their classroom. The students interacting can see each other talking on their computer screens and can hear each other's voice through a special audio-device fixed in their computers.

5. **Blogs:** Teacher can suggest the students to have their own Blogs in internet. A lot of Web Blog providers are free to the users, such as word press. In their Blogs, the students can create and write something like an article, poem, short story or they can express their opinion by an online forum provided in the internet. In this way, the students can share their experience with others from all over the world. The teacher must be the part of global change in the teaching-learning modification.
6. **Use of Thesaurus**
Students can change a word with any of its synonyms to prevent repetitions of a single word in a document or project. It adds beauty to the language.

Laptop is the best tool in teaching learning process as-

- Easily portable.
- Cordless.
- Connects to Internet through Pen Drive.

Cybernetics word was first used by Norbert Wiener to define the field of Automatic Control System. According to new concept Cybernetics is a flexible self adapting mechanism which is capable of changing environment in which it is placed. Models are constructed for perception, memory, learning, thinking language and all the functions of which man is capable. Application of Cybernetics to Education is automation in the field of human intelligence.

The overhead projector with slides:

- Creates interest and curiosity among students.
- Explains the concept very well.
- Can be viewed by the entire class.
- Can be shown in a semi-darkened room.
- Can be utilized according to the slow or quick pace/learning needs.

Films or Motion Pictures

The most powerful media of supplying audio-visualized information convey factual data efficaciously. They depict the methods that cannot be directly demonstrated or explained with pictorial or graphic representation. They depict the action observable vicariously by bringing the world in classroom. They also depict the unobservable action through animation. Moreover, they stimulate reality through recorded sounds.

Edusat:

Education through Satellite is the latest teaching technology in the colleges. What it involves is the making of television programmes in studio on earth. These programmes are then transmitted to a satellite above the earth. The satellite amplifies the television signals and beams them back to earth, where they are picked up by television receivers. Different subject experts

teach the topics in easy way. Time table having the details of subject experts, timings of lecture and the class for which the lecture is meant is issued before time.

CONCLUSION

Information and communication technology is not an end but means to educate the world with wider and concepts. ICT has provided a golden chance to the learners of the present world to think in a different manner and hence create a world in which everyone can be in reach of each other and education can be more learner centered and it may shift to learner directed from teacher directed.

But we should remember that Technology is not such a concept or term which is limited or can be attained with in a period or after a limited training the more we will delve deep in the concept of this term the more new concepts will be raised every time and which will come up with the new solutions. It requires a lot of awareness and training on the part of the teacher and students.

The term 'TECHNOLOGY' if broken by a layman can be said as TECH-KNOWLEDGE, that is know the logic behind the technology and this logic can be known only once teachers, teacher educators, curriculum frame workers will themselves take initiative to use more and more technology in their classrooms. The concepts of technology can be solved only by using technology it is not theoretical but a practical aspect of teaching and learning having wide horizons and deep knowledge. Smart classes are the way of educating the youth now teacher's role starts here that how can they make their classes smarter and use ICT for better educational outcomes.

REFERENCES

- Gardener, Howard (2006), "five minds for the future", Harvard business school publishing, Boston.
- Goostein, Anastassia (2009), "Totally Wired: what teens are really doing online", St. Martin Press, New York, N.Y.10010
- Sandifer, D.Stephanie (2009). "Wakefield schools", Wakefield school publishing
- Selwyn, Neil (2011),"Schools And Schooling In The Digital Age: A critical Analysis", Rutledge publication, Oxon
- www.google.com