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VARIOUS TYPES OF ICTS AND THEIR APPLICATIONS IN TEACHING AND LEARNING

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ABSTRACT

IT is a combination of communication, reservation, processing and multimedia capabilities. The main role that is played by communication networks is called information and communication technology (ICT) or also called information technology and communication. Today, information and communication technology (ICT) is of first rate using in education systems. ICT has an important prominent role in knowledge due to its changeable ability and its capability to making relationship among students. If the curricula (or syllabus) is according to real need or real require of the learner, it increases their interest for incremental learning and IT, because of its verity and being benefited from a great deal of information has a property or characteristic to meet different needs of the learner and caused them interested in contents of the curricula. This research paper looks at the role of ICT in curriculum designing and teacher development. The paper emphasizes computer technology and television media because of their availability in our colleges and their great impact on teaching and learning processes. The objectives of this paper are to discuss the importance of ICT in education and their implication to the world of work and highlight the role of the teacher in the use of ICT in Indian classroom setting.

Keywords: Communication technology, teaching learning process, ICT tools, Curriculum

Introduction

Today's society is considered as technology based society. The emergence of Information and Communication Technology (ICT) has fundamentally changed the practices of not only business, governance or education but every sphere of human endeavour. The educational practices and procedures have also been influenced by Information and Communication Technology. Information Communication Technology (ICT) refers to the set of technologies that are applied in the process of collecting, storing,

editing, retrieving, and transfer of information in forms. Information and Communication Technology (ICT) is being considered as the technology of having far reaching consequences in the field of education. It consists of three words Information, Communication and Technology. Information refers to any representation of knowledge such as facts, data or opinions in any medium or for including textual, numerical, graphic, narrative or audio-visual forms. Communication is the process and transferring information from a sender to a receiver with the use of a medium. Technology is the practical form of scientific knowledge or the science of application of knowledge to practical. Information and Communication Technology implies the knowledge, skills and understanding needed to exchange information verbally or non-verbally through speech, action or any electronic machine such as telephone, cellular phones, fax, radio, television, video, computer, and e-mail. In addition to these network, hardware and software, satellite systems, and video conferencing also come under it.

Operational Definition of Terms Related to Technologies (ICT)

E Learning

E learning is a learning program that makes use of an information network- such as the internet, an intranet (LAN) or extranet (WAN) whether wholly or in part, for course delivery, interaction and/or facilitation.

Web-Based Learning

Web learning is a subset of e -learning and refers to learning using an internet browser such as the model, blackboard or internet explorer.

Blended Learning

Blended learning refers to learning models that combines the face-to-face classroom practice with e-learning solutions. For example, a teacher may facilitate student learning in class contact and uses the model (modular object-oriented dynamic learning environment) to facilitate out of class learning.

Constructivism

Constructivism is a paradigm of learning that assumes learning as some process individuals "construct" meaning or new knowledge based on their prior knowledge and

experience. Educators also call it the emerging pedagogy in contrast to the long existing behaviourism view of learning.

Learner- Centred Learning Environment

Learner centred learning environment is a learning environment that pays attention to knowledge, skills, attitudes, and beliefs that learners bring with them to the learning process where its impetus is derived from a paradigm of learning called constructivism.

Need of ICT for Teaching and Learning

The ICTs are needed for the following activities

- Teaching-learning
- Diagnostic Testing and Remedial teaching
- Assessment of Learning and Use of ICTs
- Psychological analysis of learners
- Development of reasoning and thinking abilities among students
- Instructional material development.

The Importance of ICT in Education

- 1. ICT Brings Inclusion: The advantage of ICT in education is that all the students in the classroom can learn from the course material. Students with special requirements are no longer at a drawback because they have the necessary materials. Students can use special ICT tools so that they can use the ICT tools to their educational requirements. Despite this, it opens up new problems related to the 'digital divide' and provides those who are less fortunate with access to ICT resources and tools.
- 2. E-Learning or Online Learning: The ICT tools provide a new way of learning for students and teachers. Online or E-learning is getting popular. Different extraordinary events are happening in our lives, opening up opportunities for schools to ensure that students can access course materials while in the classroom. Outside students are also allowed to make sure. One can also learn in class, such as at home or in hospitals.

- ICT Enhances Subject Learning: These days, it is well known that in education,
 ICT adds a huge value to key learning areas such as numeracy and literacy.
- 4. ICT Use Motivation Learning: The demand of society for new technology has not left out children and their requirements. With new technology, children are fascinated, motivating and encouraging children to learn in the classroom.
- ICT Use Allows for Effective Differentiation Instruction with Technology: We all learn and understand things differently at different levels, styles, and the technology offers chances for this to happen.
- 6. ICT in Education Improves Engagement and Knowledge Retention: Students become more involved in their work if the TCT is integrated into lessons. And the reason behind that is the technology offers opportunities to make it more enjoyable and fun in the context of teaching similar things in a number of ways. As a result of this increased busyness, it is said that they are capable to retaining knowledge more efficiently and effectively.
- 7. ICT Use Encourages Collaboration: We only need a computer, iPad, or laptop in the classroom to understand how it works. Naturally, ICT brings children together so that the children can discuss and talk about what they are exactly doing for their work. This in turns opens communication avenues that lead to the development of language.
- 8. ICT Use Develops ICT Literacy and ICT Capability: ICT literacy and ICT capability are the skills of the 21st century which are best developed in ICT and remain transparent in the subject learning context. Offering them meaningful activities that are embedded in purposeful subject-related contexts is a great way to develop the capability of ICT.

Several Tools for Developing Literacy:

1. Drawing and Graphics Programs: - Today, visual literacy is equally significant as before. Imagine showing our students how to use one of these drawing or graphics programs to our students so that they can use it creatively, to add an image to a newspaper article, to understand how sometimes a thousand words can be told by colour, pictures or gesture. Use the medium.

- Web Creation and Design: Actually, these are the online word processor. Hence the possibilities in literacy lessons are never-ending but may be restricted to the teacher's abilities in ICT.
- 3. Digital Video: Use the power of video to help students develop language skills.
- 4. Emails: Emails are best for developing skills in online literacy. We all write differently online and also for a different audience.
- 5. Web Searching: In the 21st century, the skill to find information is an important skill. What are the available strategies for navigating the internet and electronic texts? What are the clues and signposts?
- 6. Wikis: This can be a knowledge repository for the students and the possibilities for wikis are extensive, such as blogs.
- Word Processing: Word processing is closely related to the development of literacy and language.
- 8. Blogs: Blogs are a great method for learners to interact and communicate using an online word processor.

List of ICT Tools for Teaching and Learning

ICT tools for Quizzing/Testing/Gaming:

- BookWidgets
- Gimkit
- 3. Classtools
- 4. Genial.ly
- Google forms
- Classmarker
- Flipgrid
- Deck.toys
- Formative
- Educaplay

- 11. Flubaroo
- 12. Gynzy
- 13. Plickerss
- 14. MasteryConnect
- 15. Lightsail
- 16. H5P
- 17. Kahoot
- 18. JeopardyLabs

ICT Tool for Presentation

- 1. SlideShare
- 2. Buncee
- 3. Prezi
- 4. Prowise
- Google slides
- Nearpod
- 7. Peardeck
- 8. Sutori
- 9. Lesson up
- 10. Mentimeter.

Impact on the Curriculum

The impact of ICT on curriculum content may be viewed in terms of:

ICT is said to enable teachers to save time and to increase productivity in such activities as:

- · Access to a variety of information sources, forms and types
- Preparing and updating daily lessons.

- Plans, making hard copy visualizations and handouts for classes, as well as individualized educational plans
- For slower students and students with disabilities or with special problems.
- Presenting visual/oral content materials, tasks, and questions to the audience.
- Maintaining grade books.
- Compiling a data bank of exam questions.
- Online inspection and correction of students" work on their computers; and Keeping records, chronicles, and archives of all the above-mentioned events and proceedings with fast retrieval and easy access to any entry.

ICT can enhance teaching by enhancing what is already practiced or introducing news and better ways of learning and teaching. It has a positive effect on behaviour, motivation, communication and process skills of students and teachers.

The Role of the Teacher in the Use of ICT

The effective use of ICT has great impact on teaching and is definitely changing the role of the teacher in the classroom. ICT changes teaching and learning through its potential as a source of knowledge, a medium to transmit content, a means of interaction and dialogue. The role played by these technologies in the classroom provides a challenge to teachers because they make them change the way they have been doing things. Teachers are now becoming facilitators of learning and also organizing teamwork and managing classroom activities. Jenkins highlights some of the changes in the teacher's role as,

- Change in relationship with students
- Change in the role to facilitators and managers who support learning
- Change in the content and scope of teaching

Conclusion

Information and Communication Technology (ICT), impacts on educational standards only when there is fertile background for making efficient use of it. Earlier it was argued that there is a two-way relationship between ICT and the curriculum where ICT may be used to assist in conveying the curriculum but at the same time may change the content of the curriculum. The effectiveness in the use of ICT to support learning is a function of the curriculum content and the instructional strategy such that when appropriate content is addressed using appropriate strategies students and teachers will benefit.

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