ICT Based Innovative Practices in Classroom Management

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Education is like an engine for the development and improvement of any society. It does not just impart knowledge and skills, but it is also responsible for building human capital which breeds, drives and sets technological innovation and economic growth. Both the policymakers and teacher need to understand how technology and the education system interact with each other. The integration of ICTs in higher education brings many opportunities and also causes more challenges; that is why it is very important before implementing the use of ICTs to make sure that suitable levels of investment is in place, adequate training, good policy, careful planning, restructuring the teaching process, and a systematic approach also are required when integrating ICTs in education in order to achieve maximum educational benefits. It is also vital to think carefully about purpose of education or the context in which the ICTs can be used before implementation. ICTs are simply tools that help us achieve a purpose of education. In educational settings, this purpose will be linked to improved teaching and learning for students. ICTs do not in themselves improve student's learning opportunities; but educators who use ICTs thoughtfully do. It is the contextualized teaching and learning needs that ought to drive the ICTs intervention, rather than the technology itself.

Keywords**:** Multimedia, Transmission, Technology and Teaching.

Introduction

Experience is said to be a great teacher and this experience may be gained by the learner through direct and indirect means. Consequently, most of our learning is based on second hand experience in the form of information received by us about the objects, places, persons, ideas or events. This information provides a base for our knowledge. For this purpose, the learner must be able to learner the art of getting information, store and make its use as and when desired. However the uses of such information as well as access to such information remain incomplete without the involvement of the involvement of the art of communication.

Globalization and technological change processes that have accelerated in tandem over the past years have created a new global economy powered by technology, fueled by information and driven by knowledge. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. The international labours organization defines the requirements for education and training in the new global economy simply as a

- Basic education for all
- Core work skills for all

- Lifelong learning for all

In this connection, Information and communication technologies (ICTS) which include radio and television, and the Internet - have been touted as potentially and powerful enabling tools for educational change and reform. When used appropriately, different ICTS are said to help expand access to education, Strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life.

Definition of ICT

ICT is a type of technology employed in the shape of tools, equipment's and application support which help in the collection, storage, retrieval use transmission manipulation, and dissemination of information as accurately and efficiently possible for the purpose of enriching the knowledge and development communication, decision making as well as problem solving ability of the user. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. "ICT implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching - learning processes in addition to personal use."

Characteristics of ICT in Education

- ICT in education is any hardware and software technology that contribute in the educational information processing. In the context of present era, ICT mainly comprises of Computer technology with its hardware, like, Personal computer machine, infrastructure required for setting up Internet facility and also software like, CD ROM including various programme packages, E- learning strategies etc.

- ICT in education is any Information Technology that focuses on the acquisition, storage, manipulation, management, transmission or reception of data required for the educational purpose.

- ICT in education is any technology that deals with the exchange of information or in other words communication in the teaching learning process.

- ICT in education is any educational technology that is applied in the educational process. It encompasses Hardware approach like use of machines and materials, Software approach like use of methodologies and strategies of teaching learning and Systems approach that uses the management technology that deals with the systematic organization of the hardware and the software.

- ICT in education is the support material in the hands of the human resource involved in the educational process in order to enhance the quality of education.

Role of ICT in Classroom

ICT can provide situated learning, meta cognition, higher order thinking and a social basis for learning. It helps for the breaking of subject boundaries and for the development of project based and real-world learning. The scope of ICT in the classroom is very wide. The uses of ICT in classroom are mentioned below.

Higher Order Thinking and ICT

The impact of ICT and new technologies is the shift of emphasis from teaching to learning and form the product to the process of learning. Castro claims that using ICT in classrooms has great potential to develop student's higher order cognitive skills.

ICT for equal opportunities

ICT helps the teaches to give equal opportunities for students according to individual difference and even the students with special educational needs. The students with special educational needs normally experience difficulties while engaging in ordinary learning. But ICT can help the students with special educational needs in the following ways:

- Learners who are dyslexic can use voice – activated computers
- Learners with cerebral palsy can use tablets.

ICT and Pedagogy

Schools exist to promote learning; it being their primary purpose. If this function is to be satisfied ICT will have to extend and improve the quality of student learning by making the related pedagogy dynamic. The ICT has successfully brought about many desirable changes in Pedagogy in several areas. A few among these are:

- Approaches to teaching and learning
- Teaching and learning style and behavior
- Context in which teaching and learning take place

The tendency is to move away from teacher-centered instruction towards the facilitation of learning with ICT, particularly through group work and student – centered learning. Teachers and learners are partners in the co-construction of knowledge.

A Course Management System (CMS**)** is a collection of software tools providing an online environment for course interactions. A CMS typically includes a variety of online tools and environments, such as:

- An area for faculty posting of class materials such as course syllabus and handouts.

- An area for student posting of papers and other assignments.
- A grade book where faculty can record grades and each student can view his or her grades.
- An integrated email tool allowing participants to send announcement email messages to the entire class or to a subset of the entire class.
- A chat tool allowing synchronous communication among class participants.
- A threaded discussion board allowing asynchronous communication among participants.

In addition, a CMS is typically integrated with other databases in the university so that students enrolled in a particular course are automatically registered in the CMS as participants in that course.

Technical Tips

The CMS will likely not only have different modules, but also allow the user to select which of these modules they want to use in the class. If a particular module is not going to be used (e.g., if the online chat is not needed during the course), that module should be turned off so that it doesn't distract students

Multimedia Approach to Teaching Learning Process

Multimedia

Digital integration of Text, Graphics, Animation, Audio, Still images, Motion Video.

Nature of Multimedia Approach

Multimedia Techniques or Methods

- Multimedia approach uses a number of medias, devices, techniques in the teaching learning process.
- Multimedia approach can convey vast information and provide many sources from which student can access the information.
- Multimedia approach will improve the teaching learning process.
- Multimedia approach is not restricted to a single type of learning style. It can provide the support of a wide range of activities.
- Multimedia approach aims at providing meaningful learning experience via a mix of media in order to achieve predetermined objectives.

- Multimedia approach provides the opportunity to gain mastery of competencies and skills.
- The choice of the media has to be done carefully so that one does not hamper or reduce the effect of the other. That is each media must complement the other.
- Multimedia approach will enable the learner to get access to information in dynamic environment.

Procedure for Adopting Multimedia Approach

The following are the six steps to be followed while adopting the Multimedia Approach.

First Stage

- In this stage the teacher initiates the teaching – learning activities.
- Teacher delivers a well prepared lesson based on the objectives formulated.
- Teacher uses a variety of media for his presentation.

Second Stage

- Teacher demonstrates a specific and specialized unit using a mix of media.
- The teacher may provide learner with programmed learning materials, cassettes and CDs.

Third Stage

- This is a preparatory stage for the learner before he stars independent learning.
- The student discusses with peer students and teachers his plan of action.

Fourth Stage

- In this stage the learner actively participates.
- He uses variety of media and materials in his self-study.

Fifth Stage

- In this stage the learner integrates theory and practice.

Sixth Stage

- In this stage learner finds that teaching – learning activities have to be organized on a higher level.
- The student involved in critical analysis, critical evaluation and exchange of ideas.

Role of Teacher in Multimedia Approach

- Teacher has to adopt a number of methods and techniques.
- Teacher has to be aware of the different available media and their availability.
- Teacher should be competent to use and demonstrate the use of the different media.
- Teacher should be skillful enough to make a judicious choice of media and competent enough to mix them sequentially and in an orderly manner.
- Teacher's role is that of a facilitator or manager of activities.
- Teacher has to lead his student for independent, individualized learning.

Prerequisites for Developing a Multimedia Instructional Device

Planning

- Express the idea and purpose
- Develop the objectives
- Consider the learner
- Find related material
- Prepare the content outline

Designing the Multimedia Device

- Identifying the factors or criteria for media selection
- Select the media
- Make a story board
- Develop the script

Production of the Multimedia Device

- Take the picture and keep a record
- Process the picture
- Edit the picture

Edit the Narration and Captions

- Mix sound
- Prepare final copies

Follow-up

- Use the materials
- Evaluate for future use
- Revise the materials
- Obtain the copyright for the materials

Advantages of the Multimedia Approach

- Multimedia approach enables the student to represent information using several different media.
- It can arouse the curiosity among the learner and provide them vivid impressions.
- Multimedia can take into account different learning styles – some pupil learns by interpreting text, while others require more graphical representations.
- Can develop a positive attitude among the learners towards the teaching-learning process.
- Multimedia Approach allows for self-pacing
- Technique of simulation can be effectively applied through the multimedia approach.
- Helps in development of higher order thinking skills.
- Multimedia approach provides the student the flexibility of 'anywhere', 'any time' learning.
- Helps in developing group and interpersonal skills.

- Effective remediation programmes can be implemented through the multimedia approach.

- Multimedia approach can bridge language barriers since audio is not the only means of communication.

Disadvantages of the multimedia Approach

- Requires highly sophisticated infrastructure facilities, which may lead to heavy financial burden.

- Expertise and skill are required to operate the multimedia devices, which will lead to the problem of non-availability of human resources.

- Not feasible in the all topics of study.

ICT for Assessment

Traditional assessment quite often degenerates into testing of recall, memorization and factual knowledge. Students sometimes have to wait for several days or, in the case public examinations, months for feedback in the form of a simple indication of the grade reached. ICT, however, has the potential to develop and use alternative strategies for more fruitful assessment. Assessment using ICT, acts as a spring board for learning, having a strong formative potential. It provides a move to strengthen the links between assessment and learning.

ICT in Administration

Schools use the ICT in a variety of administrative matters. Teachers can use the ICT to streamline record keeping and related administrative tasks. With the ICT, reports become more reliable, updated, timely and easy to retrieve and read. This results in a reduction in the need to sort through files of documents. Also, statistical and comparative analyses can be made available immediately. Further, through the ICT, teachers and head teachers become more accountable, s achievements, complaints about teachers, deviation from curriculum planning and time tables. In short administration becomes more transparent.

Simulation and Game

Simulation is a quantitative procedure which describes a process by developing a model of that process and then conducting a series of organized experiments to predict the behavior of the process over time. The use of simulation is powerful technique which exploits some of the unique features of the computer as an aid to learning.

Game is also a powerful learning material. It promotes discovery learning. Games and simulations have considerable acceptances as interesting as pedagogical tools. Computer games and simulations can:

- Improve the speed and quality of learning and performances
- Stimulate and develop motivation and curiosity
- Enhance learning through visualization, experimentation, prediction, manipulation and logical thinking.
- Enable students to experience success and sense of achievement.

Conclusion

ICT plays very important role in classroom. The main advantage of ICT is that it has liberated human beings from tedious tasks and work which needs great physical effort. In the digital age bank dealings, medical assistance, learning and travel can all be controlled and managed by computer networks. Everyday human life is being altered in accordance with the advancement in science and technology. Our increasingly technology-rich world raises new concerns for education while also expecting schools to become the knowledge societies.

Firstly, technology can provide the necessary tools for improving the teaching and learning process, opening new avenues and opportunities. In a knowledge economy driven by technology people who do not master these competencies may suffer from a new form of 'digital divide' that may affect their capacity to fully integrate the knowledge economy and society. Students are taken to a world of virtual reality where they simply conceive things without a second thought. No communication occurs when the child is left in the hands of these digital monsters. Science has proved the lack of sustained attention among students, trained in modern educational system since they are not made to think with their brains.

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