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Communication Technology in Education

Abstract

Information and communication technology is one of the fastest emergency of this new global economy and technological changing process, the experience of introducing ICT in classroom and educational setting all over the world. ICT combines both of the information technology and communication technology build with the base of computer technology ICT exhibits different natures with instructional objective in teaching and learning process. it aims towards different aims like cultural , personal , social, utilitarian aims and also different levels of importance like literacy applied technology and industries. There are sum advantages with ICT like motivating fact of past communication co-operative loan aquiring varied skills and also it show some demerit like plagiarism student privacy, preparation of time etc. Now days it plays different role in the field of education.

Keywords: Globalization, Technology, Instructional, Cultural, Utilitarian.

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Introduction

Globalization and technological change processes that have accelerated in tandem over the past fifteen years have created a new global economy powered by technology fueled by information and driven by knowledge.

Aim of the Study

Enhancing the communication and information technology towards the field of education and to promote the educational system in a systematized process and also to channelize easily with the technological gadgets to bring up the prior knowledge in relation to communication and information technology.

The emergence of this new global economy has serious implications for the nature and purpose of educational instructions as the half-life of information continues to grow exponentially schools cannot remain more venues for the transformation of a prescribed set of information from teacher to student over a fixed period of time, rather, schools must promote “Learning to Learn” i. e the acquisition of knowledge and skills that make possible continuous learning over the life time.

The illiterate of the 21st century ‘according to futurist Alvin toffer’ will not be those who cannot learn. unlearn and Relearn concerns over educational relevance and quality co-exist with the imperative of expanding educational opportunities to those made most vulnerable by globalization developing countries in general low income groups Girl and Women and low skilled-workers in particular global changes also put pressure on all groups to constantly acquire an d apply new skills, the international labour organization defines the requirements for education and training in the new global economy simply as basic education for all “core work skills for all” and lifelong learning for all.

Information and communication technologies (ICT) which Include radio and television as well as newer digital technologies such as computers and internet have been touted as potentially powerful enabling tasks for educational change and reform.

When used appropriately different ICT’s are said to help expand access to education to the increasingly quality by among others helping make teaching and learning into an engaging active process connected to real-life.

However the experience of introducing ICT’s in the class room and other educational setting all over the world over the past several decades suggest that the full realization of the potential educational benefits of ICT’s is not automatic.

The effective integration of ICT’s into the educational system is a complex multifaceted process that involves not just technology – indeed given enough initial capital getting the technology is the easiest part but

also curriculum and pedagogy institutional readiness teacher competencies and long term financing among others.

This primer is intended to help policymakers in developing countries define a frame work for the appropriate and effective use of ICT's in their educational system by first providing a brief overview of the potential benefits of ICT's , use in education and the ways by which different ICT's have been used in education thus for second.

It addresses the four broad issues in the use of ICT's in education namely educational policy and planning infrastructure capacity building language and content and financing.

Meaning of ICT and Education

Information and communication technologies I, C, T and education means "Teaching and Learning with I, C, T" I, C, T is an extended term for information technology which stress the role of unified communication and the integration of telecommunications (telephone lines and wireless signals) Computers as well as necessary enterprise software, middware, storage and audio

Definition of ICT and Education

Information and communication technologies Education is basically our society's efforts to teach its current and emerging citizens valuable knowledge and skills around computing and communication devices, software that operates them application that run on them and systems that are built with them.

Or defined for the purpose of this primer as a diverse set of technological tools and resources used to communicate and to create disseminate, store and manage ICT's stand for information and communication technologies and are information.

These technologies include computers the internet broad casting technologies (radio and television) and telephony.

Diffrences between ICT

Information and communication technologies Information technology and communication technology are two inseparable concepts, but if both types of technology are defined separately it can be defined that information technology covers all matters related to process, use as a tool to process and transfer data from one device to another Simply put information technology is all about how computers work and what can be done by computers while communication technology is all about the provision of facilities for communication b/w people with people or people with a machine /computer or machine with machine. Communication technology covers not only computers but also including telephone, radio, fax and other equipment. Information technology is formed from the computers of computer technology and information content, at the beginning of the initial discovery of a computer or computer use the term of information technology was not known at that time the more popular terms were computer technology, EDP (electronic data processing) or electronic data processing technology. Around the early 80's some new terms came to be known the name for the unit of work that does electronic data processing was changed from EDP to information technology unit of work there was also a false writing the working unit of information and technology.

While communication technology is synonymous with telecommunication technology at the heart of the process of information dissemination
The above description is the definition of the differences b/w information technology and communication technology.

ICT the combination of both information technology and communication technology .is a technology that is built with the main base of computer technology, the development of computer technology that continues to bring the main implication of this technology in data processing which loads to information.

Nature and Scope of ICT

Nature of ICT

These five for reaching implications pose a daunting challenge for the education strategist on one hand there is a backlog that must be fulfilled a set of global challenges that must be faced and an escalating demand for education in both traditional and uncharted territories on the other hand is the need to provide the whole spectrum of education services to everyone, anywhere, anytime with a focus on learning acquisition.

1. All under conditions of an ever –expanding base of education clientele and limited physical and human resources
2. It is going to be very difficult
3. Expanding educational opportunities
4. Increasing efficiency
5. Enhancing quality of learning
6. Enriching quality of teaching
7. Facilitating skill formation
8. Establishing and sustaining life-long learning
9. Improving policy planning and management
10. Advancing community linkages

ICT's for Instructional Objectives

1. Learning objectives differ in scope, level, and complexity they relate to hierarchical levels of thinking and cognitive processing ICT's for instructional objectives
2. Technologies may be used to support learning and teaching on location or at a distance in most cases though technology enhanced materials used on location can be used at a distance as well using the appropriate dissemination.
3. The makes it possible to invert in materials that may be used on location and at a distance thus widening the circle of users and lowering the unit costs.
4. It is also important to distinguish b/w instructional technologies and dissemination technologies.

ICT and the School

ICT's do not substitute for the school or diminish its rate on the contrary ICT tools can improve performance of conventional schools by improving teaching, learning and management more important. ICT's can broaden the concept of the school beyond the traditional confines of space and time by evolving its components of an enhanced model.

Scope of ICT

At fountainhead school the focus of ICT is not only a technology for its own sake but to promote its application throughout the Trans disciplinary programme of inquiry across the subject areas the I. D. learner profile and the essential elements of the PYP.

ICT is being Used for Teaching and Learning

1. Investigate and carry out a purposeful inquiry
2. Create and innovate
3. Communicate and exchange information with varied evidences using a range of media and formats
4. Collaborate by actively participating in creating and sharing knowledge
5. Organize and understand that ICT systems can be used in various ways
6. Be responsible digital citizens by making ethical and informed choice while acting integrity and honesty.

Aims and Objectives of ICT in Education

Aims of ICT in Education

The aims of ICT in education can be classified under four types

1. Utilitarian aims
2. Cultural aims
3. Social aims
4. Personal aims

Utilitarian Aims of ICT in Education Are

1. To help the learners become competent and confident users of ICT who can make efficient effective and creative use of basic application software in their everyday activities and.
2. To encourage the learners to become critical and reflective users of ICT who can evaluate the capabilities and limitations of the technology and of social technical, political, ethical organizational and economic principles associated with its use to prepare the learners for the society of tomorrow by making them adaptable users of ICT who have the necessary openness and flexibility of mind to be able to adjust to future changes in the technology.

The Social Aims of ICT in Education

1. To encourage the learners to develop the appropriate social skills that are essential for co-operative and collaborative learning based around ICT
2. To empower ICT disadvantaged learners by ensuring sufficient access for those learners who have little out of school opportunities to use the technology
3. To facilitate better communication b/w the learners there by promoting greater social understanding and harmony
4. To ensure equity b/w all learners by providing appropriate qualitative and quantitative opportunities to overcome social and learning disadvantages.

The Cultural Aims of ICT in Education Are

1. To help the learners appreciate the richness of our cultural heritage by facilitating access to all aspects of our unique culture and.
2. To help the learners become cultured citizens of the modern world by facilitating the discovery and appreciation of the cultural heritage of various countries around the world.

The Personal Aims of ICT in Education are

1. To encourage the learners to develop the appropriate personal skills that are essential for independent learning based around ICT.
2. To assist the learners to develop their potential to their fullest by facilitating the acquisition of knowledge by helping the learner concentrate on higher order cognitive tasks rather than on lower order routine tasks and by positively affecting the attitude of the learner towards further learning.
3. To help the learners with special needs integrate themselves with in school and society by increasing their independence and by developing their abilities and interests.

Importance of ICT in Education

There are many important dimensions to ICT in education including:-

Literacy ICT/ Digital

Toady everyone needs a basic understanding of ICT and how to make productive use of it just to be good students workers and citizens, teaching people how to be competent basic users of ICT technologies is an important role of ICT education so they will be successful in their academic and work careers and so they can efficiently participate in modern technical society.

As parts of its study validating U.S development of labour it competency model content in California MPICT department with 99% confidence California employer agreement with the following statements regarding digital literacy.

Information and communication technologies (ICT) competencies are increasingly important for most of our employer regardless of role, if there was an agreed upon standard for digital literacy or ICT competencies expected of all workers regardless of work place role my organization would value a credential based on that standard as a way of validating ICT skills for non ICT workers

1. In the 21st century an ability to work with information and communication technologies is becoming as essential to education life and workplace success as reading writing and arithmetic. ICT digital literacy should be considered a basic skill by educational systems something thought to and assessed for all students.
2. This study details 49 competencies for ICT user level knowledge and skills as an actionable definition of what people needs to know and be able to do be digitally literate.

ICT Infrastructure and Support Applied Technologists

Beyond a basic user competency our society also needs more knowledgeable and capable technical people to deploy manage and maintain ICT equipment software and systems so they work well for used in all industries these people manage computer and communication hardware, software, and applications networked system online information

sharing communication and commerce systems, business processes making use of these systems and use support.

Specialized Business and Industry Uses of ICT

As enabling technologies ICT is used strategically in almost all businesses and industries many have developed specialized system and uses of ICT and many have specialized legal and regulatory requirements quality control system integration with production and research equipment and system security requirements and software applications and software applications for example Bioscience industries specialized ICT system and applications to conduct research analyze organic materials produce Biotech products and do required reporting.

1. Financial services industries rely on ICT to maintain customers records do business conduct trades do financial reporting secure proprietary information and comply with regulation.
2. Manufacturing industries use specialized computer controlled systems and Robotics to design produce and test products.
3. Property management operations use ICT to network and control heating and cooling, lighting and building access systems.
4. Electric utilizes use ICT to monitor and manage electricity distribution customer billing and smart metering systems.
5. Telecommunications, cable, T.V and other entertainment industries use ICT to store content manage customers and deliver their services.

ICT Research and Development

Scientists ICT fields themselves are under constant pressure to evolve and improve, we need people who deeply understand the science and technologies understanding ICT and who can work to advance the fields.

Characterization of ICT in Education

1. Teacher use of ICT has mainly focused on their use in classroom context and few studies have focused on their use elsewhere.
2. Attempting to fill this gap this paper presents a case study of 12 seconding teacher characterizing of their use of ICT in and out of the classroom.
3. Results show that teachers use these tools include the classroom for presentations and support some instructional strategies and outside the class room for lesson preparation, administration and communication and design of students assignments with ICT however the analysis of the specific characteristics of these activities is heterogonous which can have implications in the use of ICT in teaching and learning based on this we suggest that in order to take full advantage of the teaching and learning opportunities associated to use of digital tools in education there is a need to develop teacher and students digital skills specifically those associated to searching and selecting information available in the internet and developing and presenting information products.

Advantages of ICT in Education

The internet provides student with the tools they need to discover and own knowledge and give students the hooks and templates they need to fasten information to the long-term memory there are some advantages of students using ICT for learning.

Motivating Factor

The internet can put as a motivating tool for many students young people are very captivated with technology, educators must capitalize on this interest excitement and enthusiasm about the internet for the purpose of enhancing learning for already enthusiastic learners. The internet allows you to provide them with additional learning activities not readily available in the classroom

Fast Communication

The internet promotes fast communication across geographical barriers your students can join collaborate projects that involve students from different states, countries or continents

Co-Operative Learning

The internet facilitates co-operative learning encourages dialogue and creates a more engaging classroom.

Locating Research Materials

Apart from communication research is what takes many people to the internet there are many more resources on the internet than the school library can provides.

Acquiring Varied Writing Skills

If students are required to publish their work on the internet they have to develop hypertext skills these skills help students gain non-sequential writings.

Disadvantages of Using ICT for Education

The use of the internet for education is not without problem therefore one should expect the problems to be encountered in using the internet in teaching to be evolving as well there are some disadvantages of using ICT in for teaching and learning.

Plagiarism

Apart from websites that claim to help student write term papers there are numerous cases of students downloading information from the net and turning them in for grades we can minimize this problem by requiring students to cite research sources.

Student Privacy

Criminals, markets and other persons can easily get information from students when they are online,They could post danger to student's lives/may even load to litigation against the school.

Low Income Groups

According to the US department of education over 50% of public schools with a high minority enrolment had a lower rate of internet access than public schools with a low minority enrollment in 1997 the same was true of instructional rooms those schools.

Preparation of Time

It takes a lot of preparation time to effectively use the net for education in addition to designing interested based lesion plans.

Implication of ICT in Education

1. It is generally believed that ICT's can empower teachers and learners, promote change and faster the development of 21st century skills but data to support these beliefs are still limited.
2. ICT's are very rarely seen as central to the overall learning process.
3. An enduring problem, putting technology before education

Impact on Student Achivement

1. The positive impact of ICT use in education has not been proven,
2. Positive impact more likely when linked to pedagogy,
3. Computer aided instruction has been seen to slightly improve student performance on multiple choice standardization testing in some areas,
4. Need for clear goals,
5. There is an important tension b/w traditional versus new pedagogies and standardized testing,
6. ICT are used different school subjects,
7. Access outside of school affects impact,
8. Users believe that ICT's make positive difference.

Impact on Student Motivation

1. ICT's motivate teachers and students,
2. Access outside of school affects user confidence,
3. Where to place computers has an impact,
4. Proud for successfully integrating ICT use in school and after school hours are still emerging,
5. The appropriate ages for introducing computers to students are hotly debated,
6. ICT's can promote learner autonomy,
7. Gender affects impact.

Role of ICT in Education

Now a days the role of information and communication technology especially internet in the education sector playa an important role, especially in the process of empowering the technology into the educational activities education sector can be the most effective sector to anticipate and eliminate the negative impact of ICT technology (internet) in another side can be the most effective way to increase the student's knowledge.

Being aware of the significant role of ICT in our life especially in the educational activities education authorities should be wise enough in implementing the strategies to empower ICT in supporting the teaching and learning process in the classroom ICT is not just the bloom of educational activities but also it will be the secondary option to improve the effective and meaning full educational process.

The main process of the strategy for information and communication technology implementation in education is to provide the prospects and trends of integrating information and communication technology into the general educational activities.

There are some unavailable facts in the modern education

First

The ICT has developing very rapidly nowadays therefore in order to balance it the whole educational system should be reformed and ICT should be integrated into educational activities.

Second

The influence of ICT especially internet cannot be ignored in our students lives so the learning activities should be reoriented and reformulated from the manual source centered to the open source ones in this case the widely use of internet access has been an unavoidable policy that should be anticipated by schools authorities.

Third

The presence of multimedia games and online games by internet has been another serious problem that should wisely handle by the educational institutions, the students cannot be exterminated from this case they can have and do with it whenever and wherever they want schools as a matter of fact do not have enough times to prevent or stop it after school times.

Fourth

The implementation of ICT in education has not been a priority trend of educational reform and the state paid little attention to it therefore should be an active participation initiative and good will of the schools and the government institutions to enhance ICT implementation.

Fifth

The teachers should be the main motivator and initiator of ICT implementation at schools the teacher should be aware of the social change in their teaching activities, they should be agent of change from the classical method into the modern one they must also be the part of the global change in learning and teaching modification.

The Following are the Aim and Objectives of ICT Implementation in Education

1. To implement the principle of lifelong learning/ education,
2. To increase a variety of educational services and medium /method,
3. To promote equal opportunities to obtain education and information,
4. To develop a system of collecting and disseminating educational information,
5. To promote technology literacy of all citizens especially for students,
6. To develop distance education with national contents,
7. To promote the culture of learning at school,
8. To support school in sharing experience and information with others.

Conclusion

Technologies have great potential for knowledge dissemination effective learning and efficient education services yet if the educational policies and strategies are not right and if the perquisite conditions for using these technologies are not met concurrently thin potential will not be realized

1. In the dazing environment of technologies we should not lose sight of the focus of education.The most successful technologies are those that become unnoticed.
2. We do not think any more of the spectated of printing every time we read a book the

phenomenon of TV every time we watch a movie or the miracle of the telephone every time we make a call the ultimate success of ICT's for learning about the ICT's and apply our minds and emotions to the wonders of learning.

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