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The advantages of Implementing ICT in Teacher Education

Rama
Assistant Professor, Yash College of Education, Haryana, India

* Corresponding Author: **Rama**

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Abstract
The rapid rise of the information and communication technologies (ICT) has grown to be one of the supreme themes investigate by educational researchers over the past two decades. This is due to the school's capacity to provide dynamic and proactive learning and teaching environment. The use of ICT by teachers is required into their daily teaching in order to substitute modern techniques with modern tools and infrastructure to stay up with the current digital era. One of the most pressing concerns facing education today is incorporating technology into the classroom. It is past time for us to look outside the four walls of our classroom and work combined with other institutions and civilizations to rejuvenate education.
The paper's main attention is on successful integration of ICT in education, which will considerably contribute to meeting students needs for studying anywhere, at any time. ICT Integration into the learning and teaching process is a rapidly evolving topic with a wider range of definitions depending on one's perspective. A widely held belief is that the integration of ICT process, as well as a concrete model for teachers, should be developed in order to increase student's learning. Considering the concept that the integration method ought to improve student learning. It is necessary to give an integrated perspective in the implementation of process and the Improve some specific example for teachers. As a result, the primary goal of this research is to create a model for evaluating integration of ICT and assisting students in improving their learning.

Keywords: ICT integration, improving learning, and teacher education

Introduction

Many academics agree that education delivery in the twenty first century should not be the same as it was in the previous century. The conventional three R's of literacy (Arithmetic, reading and writing) are being tested by unusually quick creation and transmission of information and knowledge, resulting in the transmission from the industrial to knowledge based society. The knowledge society, according to Kwando (1007), is one that understands how to we information. Traditional reading, writing, and arithmetic skills are not enough to make efficient use of information.

Can ICTs, assist in meeting the educational demands of the digital era? The solution to this question is not as simple as it may appear. To begin with, ICTs are not a magical world that educational can conjure up to solve all of the educational problems that plague today's information society. ICTs, did not generate the demands and challenges that face the education's industry, and ICTs will not answer the either. IT will be extremely difficult, If not impossible, for nations to achieve the goal of effective, education for everyone, anywhere and at any time.

It is nor a new concept to include ICT into teaching and learning. It could be older than others technology like televisions or radios, according to Wang and Woo (2007) [1]. Wang and woo, citing Earle (2002), define integration as a concept of wholeness or completion in which all key aspects of a system are effortlessly merged to form a whole.

Although he acknowledges that how both terms (innovation and technology) are defined may contribute to the issue, Earle (2002) supports Wang and Woo's perspective when he claims that integration does not need the installation of hardware in classrooms.

He also says that technology ought to be pedagogically sound and extend beyond searching for knowledge to solving issues.

Advantage of ICT in education

1. **Assists students in swiftly and successfully obtaining digital material:** Student use ICT as a tool to research topic for learning, find answers to issues that arises throughout the learning process, and more. ICT facilitates the acquisition of knowledge and aids in the understanding of academic concepts while involving students in its use.
2. **Encourage student:** Centred and Independent learning the meaningful wage of computers by students has increased recently. They access, pick, Organise, and interpret facts and information as they gain new expertise, students are better prepared to use data and information from a variety of sources and assess the educational worth of the material as a result of learning through ICT.
3. **Create a stimulating environment for learning:** ICT fosters new learning among student in their subject areas, Different forms of learning queries can be answered more creatively thanks to ICT.
4. **Encourage group collaboration in the context of distance learning:** with the use of ICT, student and collaborate, exchange and communicate at any time and from any place to communicate their ideas and think critically about their learning, students not only study together but also from one another's different learning experiences.
5. **Increase effectiveness of instruction and learning:** The students have additional opportunities to integrate their new knowledge with their prior learning and they become more self-assured to take risks and grow from their errors. ICT promotes autonomy by enabling teachers to produce their own content, giving them greater control over course material than is accessible in a regular classroom environment, the study found.

Obstacles to using ICT

Educator's perspective

1. ICT adoption in classrooms is plagued by, unclear objectives and low teachers expectations.
2. A lack of pedagogical assistance and collaborating instructors among collaborating as well as a lack of experience.
3. Throughout a class period, there isn't enough time to learn new applications or incorporate ICT.
4. Inadequate abilities to manage instructional materials.
5. Excessive attention paid to training technical or practical skills of the expense of subject matter.
6. A need to raise test results on a nationwide level.
7. Unavailability of in-service training for ICT a classroom with technical issues.
8. Handling discipline in a classroom with a lot of students.

ICT infrastructure from a managerial perspective

- Exam results and course content volume are the two areas on which school inspectors place a greater emphasis.
- An inadequate administrative infrastructure that would enable effective ICT utilisation.
- Administrative requirements to boost exam performance which divert attention from using ICT to get students involved in higher order cognitive activities.

ICT use: Factors Affecting

How ICT is used is influenced by both internal and external factors. The utilisation level and the two types of factors are connected. The progress or effectiveness of technology school integration impacted by a number of external factors that have been discovered.

External factors

Availability of technology, accessibility of ICT resources, planning time, technical and administrative assistance, curriculum, Climate, and culture of the school, as well as faculty teaching loads, management routines, and pressure to get pupils ready for national admission tests. Inadequate technical and administrative support, a lack of access to computers and software, and a lack of time to prepare for classes are among the most typical of these outside problems. Internal considerations also have an impact on the outcomes of technology integration.

Internal factors

Several internal factors can also have an impact on the outcomes of technology integration. Understanding of ICT use, ideas that may conflict with its use, attitudes toward integrating technology, perception, including motivation or intention to utilise technology and ICT self- efficacy.

School Culture and ICT use: A Critical analysis

The common goals, norms, and values of the school community are included in the concept of school culture. Pelgurm and law (2009), focussing on the significance of school culture for ICT integration, revealed that effective ICT integration depends more on school leader's perspectives and vision than it does on teacher's ICT abilities. Teacher's actions, beliefs and attitudes are mediated by the school culture. Therefore, school culture also plays a significant role in successful technology integration in addition to the internal and external factors already discussed.

Tezci (2011b) [6] looked at Turkish teaches perceptions from both the technical and motivational viewpoints in order to evaluate relationship between teacher's opinions of the school climate and ICT usage. The Findings indicated that the most people didn't think they would obtain sufficient technical and inspirational assistance from their institution which was indicative of their beliefs from both perspectives. However, the level of ICT usage among instructors, the level of ICT usage among instructors increased as the school climate improved. In order to incorporate technology into their classrooms, teachers must have faith in their capacity to assist student's learning using it.

Development is needed to accomplish the goal, with a particular emphasis on enhancing instructor's abilities so they can get past their reservations about employing technology. In order to maintain control whole promoting computers based learning school need also offer new teaching strategies and technological support. Overall changing school culture and teacher's knowledge and beliefs are necessary to execute effective teaching with technology integration.

Instructional Development for teachers

It is common knowledge that effective ICT integration into teaching and learning processes depends on Instructional

teacher development. The gate keepers for pupils access to the educational opportunities made possible by technology continue to be instructors, claims Carlson (2002) [3] they mustn't be disregarded and shouldn't be. Additionally, It is insufficient to merely train instructors in technical abilities for using technology for the teaching and learning process to be improved, teachers also require instructional development in the pedagogical use of these skills. In a digital classroom, the teacher is the beginning point. For the purpose of arranging student instruction, teachers need to be well trained in the use of technology. Rather than serving as the student primary "sources" of knowledge, the instructor now serves as a guide as he or she explores the vast universe of knowledge on their own.

Being a "guide on the side" rather than "sage on the stage" Today's world has made lifelong learning one of the most important success factors. Consequently, learning how to study is still essential in addition to mastering specific talents. The learning management system (LMS) makes use of technology's ability to enhance learning outcomes and provide students with the skill they need to adapt to the quick changes occurring in their environment.

Conclusion

The process of fully integrating ICT into the educational system is done to improve learning and teaching. Its effectiveness is greatly influenced by the pedagogical design in addition to the availability of technology. Despite the fact that these is no set formula for calculating the ideal level of ICT integration in the educational system, inventive teacher's at all levels of education have always discovered methods to incorporate cutting-edge teaching aids and strategies in their lessons. ICTs should, however be used in the classroom with carefully thought out instruction.

ICTs, are being introduced and integrated into the educational system, according to Jhurree's (2005) [4] contention that global education reform is taking place. The successful implementation of ICTs in the greatly dependent on how skilfully policy makers comprehend and value the dynamics of this integration. ICTs in education have long been a sensitive issue. Some suggest that technology will fundamentally after the nature of education and lead to a sharp rise in student's performance, as Jhurree (2005) [4] alleges.

Some people take a balanced approach in contrast to these radical advocates (Jhurree' 2005) [4]. ICTs, have the potential to improve teaching and learning, in their opinion, if they are incorporated effectively. According to Levine (1998), it's critical to have a plan that is grounded in the actual needs of the school and that is also practical, do-able, and efficient. In order to deploy technology effectively and create improved learning environments, the plan should be created with the genuine needs of schools in mind, rather than just with the intention of brining technology in the classroom.

What is comes to using ICTs, in education there is no general truth and no guidance that can be followed without taking into account each country's Priorities, reality and long-term financial prospects and commitment. To increase efficacy in developing nations, use of ICT is advised in conjunction with more established media, such print media and radio broadcasts.

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