

**INTUITION OF ICT KNOWLEDGE: LEARNING AND DIFFERENT APPROACHES:
SPECIAL REFERENCE TO ACADEMIC ACHIEVEMENT OF B.ED STUDENT
TEACHERS**

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ABSTRACT:

Importance of communication and information technology (ICT) in education has recognized the world over. Efforts are made to provide the modern information technology tools in educational institutions at all levels in the belief that it makes the learning and teaching process efficient, effective, faster, enjoyable, with a wider reach and more inclusive. This paper outlines a knowledge of new use for information and communication technologies that offers something different. This new use enables students, teachers, to show how teachers improve their teaching and, in doing this, it enables students to have more informed and more profitable access to teachers' knowledge and skills. The paper suggests that the student teachers should aware of 4D(four-dimensional) approach of ICT Knowledge will help student teachers to do good in their academics. The student teachers should know about the knowledge of ICT is also very much important. Finally present paper express a new idea about the ICT Knowledge and problematic in an application, this approach may represent a 'quantum leap' in educational effectiveness with special reference to B.Ed student teachers.

Key words: ICT, Knowledge of ICT, B.Ed, Student teachers

Importance of communication and information technology (ICT) in education is recognized the world over. Efforts are made to provide the modern information technology tools in educational institutions at all levels in the belief that it makes the learning and teaching process efficient, effective, faster, enjoyable, with a wider reach and more inclusive. This paper outlines a new use for information and communication technologies that offers something different. This new use enables students to show teachers how to improve teaching and, in doing this, it enables students to have more informed and more profitable access to teachers' knowledge and skills. The paper suggests that, although problematic in application, this approach may represent a 'quantum leap' in educational effectiveness.

The Promise of ICT on Education

For those of the developing countries, ICT has the potential for raising the access to education and also could ameliorate the quality and relevance of education. Therefore, it represents a potentially equalizing strategy for developing countries. The absorption and acquisition of knowledge has provided for developing countries a rare of chance to promote educational systems. One of the greatest hardships bear by the poor, and by many others, who live in the poorest or remote area, is their sense of isolation and the education of these remote areas majority are deteriorate or not pay attention by the people, thus, majority of them are lack with knowledge. The emergence of ICT will promise to reduce that sense of isolation and to open access to knowledge. However, the gap between those who have control of ICT and access to ICT with those who do not introduce and integrate of ICT at different levels and in various types of education will be a most challenging undertaking. Failure to meet the challenge would mean a further broadening of the knowledge gap.

How can ICT widen access to education?

Some of the rustic and disperse population or groups traditionally are preclude from the opportunity to receive the education due to the external factors. These external factors are mostly related to the cultural and social. Cultural factor has included the minority of ethnic, girls and women. The ethnic minorities are excluded from education is due to the majority of them live in remote areas and cause them lack with the realization on the importance of education for themselves, even for their next generations, they also get less attention from others people. While, the factor of social encompasses the status of girls and women and the person with disabilities, as well as all others who for the reasons of cost or because of time constraints are unable to enroll on campus. Girls and women usually regard by others with a low status or identity in the social who are not necessarily have the education. As the promise of ICT on education state that the access of education could at anytime and anywhere. ICT let the asynchronous learning or the learning on a time lag between the convey of instruction and its reception by the learners becomes possible. The information from the source of online can be accessed to 24 hours a day even for a long time of period. If ICT is adopted in education, it could dispense with the necessary for the learners and instructors to be in one physical location. Teleconferencing technology such a type of ICT, allow the instruction or information to be accepted simultaneously through multiple, geographically scattered learners. ICT also has promise with the access to remote learning resources. Sometimes, the printed books or the books in library will has limited in quantities, through ICT, teachers and students are no longer to depend on those books with the limited quantities anymore. They can access to looking for the information and learning in anytime or anywhere with the exist of internet, a wealth of learning materials in almost every subject and in a variety of media that can be access through. For many schools in developing countries and also in the developed countries, it is very relevance.

How can the use of ICT help improve the quality of education?

ICT always been used to improve the quality of teacher training as to ensure the teachers could predominate the skills of ICT which in turn can teach the students to help them improving their academic performance. ICT also help the teachers to make possible for teaching process become effectively. Besides, ICT will promote to obtain the basic skills by drill and practice. The basic skills and concepts are the foundation for higher thinking skills and creativity. ICT also can motivate to learn. ICT technology such as networked computer with internet connectivity can increase learner motivation as it combine media richness and interactivity of other ICT technologies with the chance to connect with real people and to participate in real world events. Interactive radio likewise makes use of sound effects and other performance conventions to compel the students to listen and become involved in the lessons being delivered.

How can the ICT help to transform the learning environment into one that is learned-centered?

If the ICT has been used appropriately, it can change the content and pedagogy of educational system. With the ICT-supported educational system, the acquisition of knowledge and skill can be boosted by it, which then can empower the students for lifelong learning. When the ICT can be used properly, some of the ICT technologies, such as computer and internet, has created new ways for the learning and teaching process. These new way of learning and teaching has shifted from a teacher-centered pedagogy to learner-centered. Teacher-centered pedagogy is an traditional pedagogy which the whole process of learning is rely on the memorization or has the characteristic of rote learning.

Active learning. ICT-enhanced learning mobilizes tools for examination, calculation and analysis of information, thus providing a platform for student inquiry, analysis and construction of new information. Learners therefore learn as they do and, whenever appropriate, work on real-life problems in-depth, making learning less abstract and more relevant to the learner's life situation. In this way, and in contrast to memorization-based or rote learning, ICT-enhanced learning promotes increased learner engagement. ICT-enhanced learning is also "just-in-time" learning in which learners can choose what to learn when they need to learn it.

Collaborative learning. ICT-supported learning allow cooperation and interaction between students, teachers as it can offer the learners having a chance to work with the people from different places and different cultures, thereby assisting to improve the communicative skill and cultivate the team spirit of learners.

Evaluate Learning. ICT-supported learning are unlike with print-based educational technologies, with the help of ICT, it can increase the recognize of different learning pathways and also given to learners an opportunity to explore more knowledge rather than merely listen and memorize.

Integrative learning. Learning that supported by the ICT can stimulate the combination of methodology in learning and teaching process which benefits for the students and teachers to be more effective in education. This approach has removed the artificial separation between the theory and practice that carry out in the traditional classroom.

ICT Development at the School Level

There are four approaches to ICT development at the school level. Emerging approach is the beginning stages of development. The approach of applying is the second stage of ICT development at the school level. After the applying approach, it is then followed by the infusing approach and the approach of transforming which are the third stage and fourth stage of development ICT at the school level.

Emerging approach

The emerging approach is linked with schools at the beginning stages of ICT development. Such schools begin to purchase computer equipment and software or perhaps have had some donated. In this initial phase, administrators and teachers are just starting to explore the possibilities and consequences of adding ICT for school management and the curriculum. The school is still firmly grounded in traditional, teacher-centred practice. For example, teachers tend to lecture and provide content while students listen, take notes, and are assessed on the prescribed content. School organization provides discrete time periods for each subject. Learners' access to technology is through individual teachers. A curriculum that focuses on basic skills and an awareness of the uses of ICT assists movement to the next approach.

Applying approach

The applying approach is linked with schools in which a new understanding of the contribution of ICT to learning has developed. In this phase, administrators and teachers use ICT for tasks already carried out in school management and in the curriculum. Teachers still largely dominate the learning environment. For example, instructing may be supplemented with ICT such as electronic slide presentations and word-processed handouts. Students receive instruction and add notes to teacher prepared handouts.

They use ICT tools to complete required lessons and are assessed on prescribed content. School organization provides discrete time periods for each subject with some flexibility to combine subjects and time periods. Learner access to technology is through one or two classroom computers and computer labs. Until now, ICT has been taught as a separate subject area. To move to the next phase, the school chooses to implement an ICT-based curriculum that increases ICT across various subject areas with the use of specific tools and software.

Infusing approach

The infusing approach is linked with schools that now have a range of computer-based technologies in laboratories, classrooms, and administrative areas. Teachers explore new ways in which ICT changes their personal productivity and professional practice. The curriculum begins to merge subject areas to reflect real-world applications. For example, content is provided from multiple sources, including community and global resources through the World Wide Web. Students' access to technology enables them to choose projects and ICT tools that stimulate learning and demonstrate their knowledge across subject areas. School organization provides the flexibility to combine subjects and time periods. Learners have more choices with regard to learning styles and pathways. They take more responsibility for their own learning and assessment. ICT is taught to selected students as a subject area at the professional level. To advance to the next phase, schools choose an ICT curriculum that allows a project-based, ICT-enhanced approach. These schools begin to involve the community more in the learning environment and as resource providers.

Transforming approach

The transforming approach is linked with schools that have used ICT creatively to rethink and renew school organization. ICT becomes an integral though invisible part of the daily personal productivity and professional practice. The focus of the curriculum is now much more learner-centered and integrates subject areas in real-world applications. For example, students may work with community leaders to solve local problems by accessing, analyzing, reporting, and presenting information with ICT tools. Learners' access to technology is broad and unrestricted. They take even more responsibility for their own learning and assessment. ICT is taught as a subject area at an applied level and is incorporated into all vocational areas. The school has become a center of learning for the community.

Issues in the Use of ICT in Education

Does ICT-enhanced learning really work?

The educational effectiveness of ICTs depends on how they are used and for what purpose. And like any other educational tool or mode of educational delivery, ICTs do not work for everyone, everywhere in the same way.

Enhancing access. It is difficult to quantify the degree to which ICTs have helped expand access to basic education since most of the interventions for this purpose have been small-scale and under-reported. One exception is the television-based project Tele secundaria (discussed in a previous section), which in 1997-98 was serving over 750,000 junior secondary students in 12,000 centers in Mexico. In Asia and Africa, assessments of distance learning projects at the junior secondary level using a combination of print, taped, and broadcast technologies have been less conclusive, while at the primary level there is little evidence that ICT-based models have thrived. In higher education and adult training, there is some evidence that educational opportunities are being opened to individuals and groups who are constrained from attending traditional universities.

Each of the 11 so-called mega-universities, the biggest and most well-established open and distance institutions in the world (which include the Open University of the United Kingdom, the Indira Gandhi National Open University of India, the China TV University System, the Universities Terbuka of Indonesia, and the University of South Africa, among others) has an annual enrollment of more than 100,000, and together they serve approximately 2.8 million. Compare that with the 14 million combined enrollments of the 3,500 colleges and universities in the United States.

Raising quality. The impact of educational radio and television broadcasts on the quality of basic education remains an under-researched area, but what little research there is suggests that these interventions are as effective as traditional classroom instruction. Of the many educational broadcast projects, the Interactive Radio Instruction project has been the most comprehensively analyzed. Findings provide strong evidence of the project's effectiveness in raising the quality of education as demonstrated by increased scores on standardized tests as well as improved attendance. In contrast, assessments of the use of computers, the Internet and related technologies for distance learning have been equivocal. Russell, in his comprehensive review of research, claims that there is "no significant difference" between the test scores of learners taking ICT-based distance learning.

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