# International Multidisciplinary Research Journal

# Golden Research Thoughts

Chief Editor
Dr.Tukaram Narayan Shinde

## ICT & TEACHER EDUCATION

Archna Jaiya

Computer Instructor, C.R.D.A.V Girls College of Education, Ellenabad.

### Short Profile

Archna Jaiya is Computer Instructor at C.R.D.A.V Girls College of Education, Ellenabad. She Has Completed B.A., P.G.D.C.A. and M.Sc. She Has Professional Experience 2 Years of 6 Months.

**ABSTRACT:**

We are living in the age of science & technology, Scientific and technology advancement are doing wonders in almost every field of life. Information and communication technology have revolutionized the teaching learning process. ICT provide opportunities for independent learning (E- learning). Modern web-based learning and computing provide the way in which instructions are delivered to the students.

The rapid development of information, coupled with the ability to exchange it more rapidly among more people than ever before is creating a new environment for education. It has helped in improving the task of teacher, facilitating the process of teaching-Learning as well as teacher Education and enriches the aims of education.

This paper highlights the various impacts of ICT on contemporary teacher education and explore potential future developments. This paper argues the role of ICT in transforming teaching and learning and seeks to explore how this will impact on the way programs will be offered delivered in the teacher education institutes.

## KEYWORDS

*ICT, Teacher -Education .*

1

## INTRODUCTION

ICT a global known phenomenon in all walks of life. There is no need to repeat it again that ICT has effected field of Teacher education too. Gone are the days when a teacher was assumed as a person having a stick in his hand and as a dictator of his class. ICT has brought revolutionary change in that field . Our traditional class rooms now have been transformed in modern smart -classes. The stick is in the hands of the teacher but now it is not used to punish the students, but its job is to point on specific points on the slide-projector.

> *For many a gem of purest ray serene,*
> *The dark unfathomed caves of ocean bear,*
> *Full many of flower is born to flower is flourish unseen.*
> *And waste its sweetness on the desert air.*

The job of a teacher is to bring out the hidden gem-like potentialities in pupils and to make all possible efforts to ensure that tender pupil do not waste their sweet fragrance (innocent smiles) in wilderness. Thus a teacher needs to understand the basic principles of using ICT in effective way, so that the optimum development of pupils takes place.

## MEANING OF ICT:

Information and communication technology deals with information system, creation, data-collection, data storage, access, processing and dissemination of information accurately and effective for purpose of enriching the knowledge and developing intelligent decision - making as well as problem solving ability of the user. ICT includes any communication devices or application encompassing: Radio, Television, Cellular phones, Computer etc. It is also defined as all devices, tools , content, resources, forums and services, digital and those can be converted into or delivered through digital forms, which can be deployed for realizing the goals of teaching learning, enriching access to and reach of resources , as well as management of the educational system .

These will not only include hardware devices connected to computer, and software applications, but also interactive digital content, internet and other satellite communication devices as web-based content repositories , interactive forums, learning management system and information system

## Definition:

" Information and communication technology is scientific , Technological and engineering disciplines and the management techniques used in information handling and processing their application, computers and their interaction with man an machines, and associated social, economical and cultural matters."

UNESCO's View

Thus technology of science or the sum of various technologies which use various traditional and developed scientific tools and equipments for storage, broadcasting and communication of information can be called ICT.

## Teacher Education:

Teacher education is a Program that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the challenges therein. It is well known that the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation.

## DEFINITION:

• The National Council For Teacher Education has defined teacher Education as -
 "A Program of education, research and training of persons to teach from pre-primary to higher education level."
• According to Goods' Dictionary of Education Teacher Education means - "All the formal and non formal activities and experience that help to quality a person to assume responsibilities of a member of educational profession or discharge his responsibilities more effectively ."

Teacher education is based on the theory that "Teacher are made, not born" in contrary to the assumption, "Teacher are born, not made. " since teaching is considered an art and a science , the teacher has to acquire not only knowledge , but also skills that are called " tricks of the trade."

Teacher education is broad and comprehensive. Besides pre-service and in-service programmes for teachers, it is meant to be involved in various community programmes and extension

activities, viz adult education and non - formal education programmes, literacy and development activities of the society.

Teacher Education = Teaching Skills + Pedagogical Theory + Professional skills.

An amalgamation of Teaching skills, Pedagogical theory and professional skills would serve to create the right knowledge, attitude and skills in teachers, thus promoting holistic development.

## Relationship between ICT & Teacher Education:

The general integration of ICT in teacher Education probably calls for the individual teacher not to be seen as a "finished product ' when leaving teacher education, but as a lifelong learner. as such, teachers must be prepared to learn the basis of ICT , to incorporate new technology , and new pedagogical methods to improve their teaching. Educational programs for in-service teacher should also aim to enhance not only their skill as ICT users, but also as ICT developers.

We must also consider the importance played in the organizational context, in which ICT is taught and used. it is a lure to believe that a modern technology devices such as ICT can be used within existing organizational frames developed for different educational context. Teacher education shows particular difficulties in the adaptation and wider use of ICT . These difficulties relate to the excessive demands on teacher education to incorporate new items into an already crowed curriculum.

According to the need of time, integration of ICT in teacher education is compulsory. Integrating ICT in education means that we must examine the possibilities of optimizing the use of new technology. In order to provide a sustainable ICT - related professional teacher development, we should extend the scope of teacher education so that is become more integrated part of the teacher's whole career development.

The challenges of ICT in Teacher Education are mainly related to how teachers try to cope with children's informed learning , which occurs out-side the formal school environment.

## Current Scenario- Use of ICT in Teacher Education:

According to the need of era, for improving the quality of school education, it is necessary to bring change in teaching- learning Process. It is the responsibility of teacher education to introduce these new techniques and make student-teachers familiar about the new way of teaching. Various types of innovative practices are used now-a-days in class rooms as Projector, wikis, white-board, Audio Visual aids, and recordings of lectures. So these are the techniques which are used by teacher educators to teach student-teachers using ICT. They are adopting new strategies in their teaching, so students can understand how to apply, how to use such techniques in class. Communication media used by teacher educators for teacher education is:-

## COMMUNICATION MEDIA
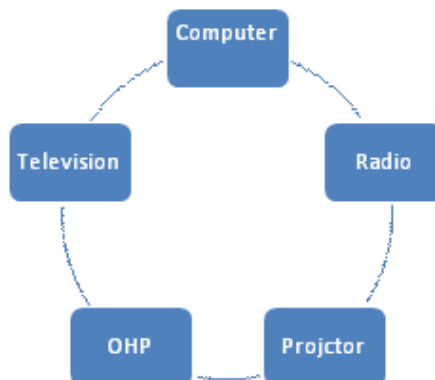


These are the innovative techniques or the form of ICT used in providing learning experiences to student teachers on-line or off line through the use of internet services and web technology of the computer using all these new electronic techniques, ICT has proved very useful for the teacher education . Services of information technology help the teacher educators in the realisaton of teaching - learning objective. it assists the teachers in their task of teaching and acquaints them with books, reference books including journals and other reading material, A-V material and equipment. Thus the revolution in the information and communication sector is making the world united. In today's world ICT is a key parameter for economic development.

Presently India is on 121st position in ICT development rankings out of total 157 countries. Hence India has to improve its status regarding ICT if it wants catch up its development goal. Present study tries to analyses the trend and pattern of ICT in India and its impact on teacher education. It is founded that though the state of development of ICT in teacher education in India is increasing in past few years but still it is far from being satisfactory.

## BARRIERS IN USE OF ICT IN TEACHER EDUCATION:

Across India and most developing countries there are many challenges in bringing ICT into the education process in general. It is common misconception that access to technology on its own, motivates teachers to apply it in their teaching   The problem reported by the teachers concerning the use of ICT were difficulties in accessing the technology, the quality of the equipment , and ability to get support when needed.  The biggest barriers to the use of computers identified by teachers (in a survey) were: lake of time available in classes and in their own schedules for planning. Some teachers identified infrastructure problems, such as shortage of computers in working condition, unreliable electricity or lake of knowledge to access internet.

The lake of incentives and support for teachers are other factors hindering their use of ICT. However administrators offer very little structural support and few incentives to use the technology effectively in the classroom. Too often the curriculum in developing countries is rigid and overloaded

leave little time for the innovative classroom practices, National Policies need to make more commitment to helping teachers effectively integrate computers and internet technologies into class rooms.

These Barriers can be classified as:

| *Technical* | *Non Technical* |
|---|---|
| • *Lake of accessibility of Computers.*<br>• *Lake of Effective Training.*<br>• *Lake of technical support.*<br>• *Lake of knowledge to access internal.*<br>• *User's friendliness.*<br>• *Poor utilization of existing of existing resources including radio, t.v* | • *Lake of time*<br>• *Lake of computers in working condition.*<br>• *Shortage of electricity.*<br>• *High cost of hardware*<br>• *Lake of accessible resources.* |

Future aspects for use of ICT for betterment of the Teacher education:

The discussion above indicates that changing landscape of communications and information exchange in the 21st century requires teachers to be at the cutting edge of knowledge, production, modification and application rather than consumption. They need to be prepared for this by being educated to use ICT effectively and creatively. Many teachers are intimidated by technology and are very comfortable with their established teaching style. To effect change, the pedagogical and educational gains that use of technology might bring need to be explicit .Teachers need support, exemplars of new practice, leadership from their own school managers and necessary time for their own professional development and trailing of new approaches.

Teacher participation in the digital content development process will catalyze its broad based usage in the classrooms. Teacher capacities will developed in instructional design, selection and critical evolution of digital content, and strategies for effective use of digital content to enhance student learning.

Teacher educators will be suitably oriented and trained to use ICT in their pre-service teacher training programmes. They will also be expected to enable pre-service teachers to be sensitised to and practice the use of ICT.

All pre-service teacher education programmes will have a compulsory ICT component. The existing curricula for pre-service teacher's training will be revised for including appropriate and relevant applications of ICT. All teacher trainees passing out of teacher education programmes will obtain adequate levels of competency in ICT and ICT enable education.

Article Indexed in :
DOAJ      Google Scholar      DRJI
BASE      EBSCO      Open J-Gate

6

| *Policies Aspects* | *Other Aspects* |
|---|---|
| • *Strong Govt. commitment and support.*<br>• *Increasing awareness of usefulness of ICT for handling the quality of teaching –learning.*<br>• *Ready availability of hardware and software resources within country.*<br>• *Liberal support from non-govt. organization in field of ICT.* | • *Providing electricity and security for computer labs.*<br>• *Computer labs management*<br>• *Widespread technical expertise available within the country* |

## CONCLUSION:

In conclusion, this paper identifies a need for teachers and teacher educators to integrate ICT into teacher education. The aim of the competence development, ICT, was that the teachers would have the opportunity to develop their professional roles and their own learning on a collective as well as on an individual basis. This paper has sought to explore the role of ICT in educations as well as we progress in to the 21st century. ICT have impacted on educational practice in teacher education to date in quite small ways but that the impact will grow considerably in years to come and that ICT will become a strong agent for change in teacher education.

The efforts of research, development, and policy formulation in ongoing teacher education and ICT application should focus not only on teacher's internal and interface effectiveness but also on their future effectiveness if total teacher effectiveness is pursued. It is hoped that this discussion can provide teacher educators a new way to develop student teachers skill and apply ICT in teacher education for education effectiveness in the new century.

ICT has changed not only educational life, but also our whole life. This is a fundamental challenge that we must accept and address in a responsible way. ICT in itself cannot solve the problems of education, but it can create new problems. That is why pre-service and in-service teachers need to have the best philosophical, ethically and pedagogical awareness to confront the challenges they will meet during their career. This is why our responsibilities as teacher educators are also to identify these challenges, to cope with them and to prepare our students for their transition from students to teacher professionals. We must try to approach ICT-based education with our students' humble but even critical view of modern technology and how it is reshaping our everyday life

## REFERENCES:

1.Anweshika, Indian Journal for Teacher Education (Volume 6, No.2, Dec.2009)
2.Anweshika, Indian Journalfor Teacher Education, (Volume 4, No.1, June 2007)
3.Distance education –A system view, moore, kearsley 1996
4.Http/www.unesco. org.org/en/ computing standers. Teacher
5.Http/www.wikipedia.com
6.Information Technologies for education and training Collis (2002)

7.Journal of Indian Education (Volume xxxvi, Noo.3, Nov.2010)

8.Online.library.wiley.com

9.Swensson, A-K (2000) computers in school . Socially isolating or a tool to promote collaboration? JOURNAL OF EDUCATION COMPUTING RESEARCH.

10.Walia J.S - Information communication and educational Technology (2014 edition), Amul Paul Publishers.

# Publish Research Article
# International Level Multidisciplinary Research Journal
# For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper,Summary of Research Project,Theses,Books and Book Review for publication,you will be pleased to know that our journals are

## Associated and Indexed,India

✶   International Scientific Journal Consortium
✶   OPEN J-GATE

## Associated and Indexed,USA

- EBSCO
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Databse
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database
- Directory Of Research Journal Indexing