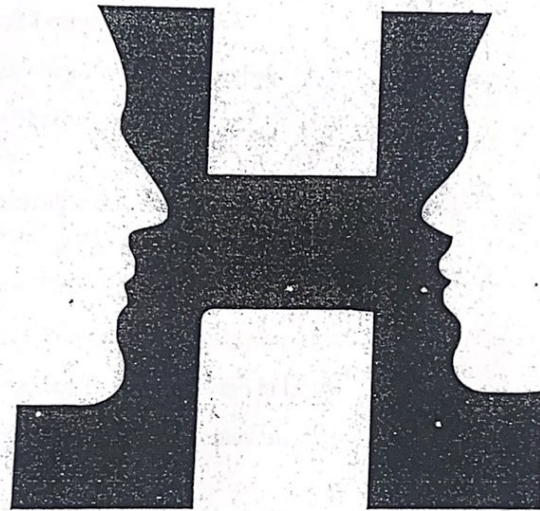# CHRONICLE OF HUMANITIES AND CULTURAL STUDIES

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18.

Role of ICT in Education

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Abstract: ICT which is now broadly used in educational world. Teacher, Student, administrator and every people related to education are popularly used ICT. Teacher use ICT for making teaching learning process easy and interesting. A competent teacher has several skills and techniques for providing successful teaching. So development and increase of skills and competencies of teacher required knowledge of ICT and Science & Technology. In modern science and technological societies education demands more knowledge of teacher regarding ICT and skills to use ICT in teaching –learning process. ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots).ICT helps teachers, students and parents to come together. Continuous and Comprehensive Evaluation (CCE) helps students as well as teachers to use more technology for making teaching learning more attractive for the betterment of our future generation. Teachers must know the use of ICT in their subject areas to help the learners for learning more effectively. So, the knowledge of ICT is very much essential for the both prospective teachers as well as in-service teachers also. This will help teachers to know integrated technology with classroom teaching.This paper discussed about the role of ICT in 21st Century"s teacher education.

Keywords: ICT, technology, science, student teacher, teacher ,e-learning

Introduction:-The United Nations Educational, Scientific and Cultural Organisation (UNESCO), a division of the United Nations, has made integrating ICT into education part of its efforts to ensure equity and access to education. The following, taken directly from a UNESCO publication on educational ICT, explains the organization's position on the initiative.[8]

Information and Communication Technology can contribute to universal access to education, equity in education, the delivery of quality learning and teaching, teachers' professional development and more efficient education management, governance and administration. UNESCO takes a holistic and comprehensive approach to promoting ICT in education. Access, inclusion and quality are among the main challenges they can address. The Organization's Intersectral Platform for ICT in education focuses on these issues through the joint work of three of its sectors: Communication & Information, Education and Science.[9]

"ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters".[10]

Teachers are at the core of any living society. Technologies play an important role in training programme of teachers. Students" accesses knowledge and information through TV, digital media, cable network, internet and social media i. e. Facebook, Twitter, Whatsapp, Linkedinn, Igo, Line, Wechat etc. ICT is very important for Pre- service teacher education programme in the 21st Century. Without proper knowledge of ICT teacher cannot perform in his/her class room and it could not be said to be a complete one. Another term that is gaining currency is blended learning.This refers to learning models that combine traditional classroom practice with e-learning solutions[4]For example, students in a traditional class can be assigned both print-based and online materials, have online mentoring sessions with their teacher through chat, and are subscribed to a class email list. Or a Web-based training course can be enhanced by periodic face-to-face instruction.[2]

Open and distance learning is defined by the Commonwealth of Learning as "a way of providing learning opportunities that is characterized by the separation of teacher and learner in time or place, or

both time and place; learning that is certified in some way by an institution or agency; the use of a variety of media, including print and electronic; two-way communications that allow learners and tutors to interact; the possibility of occasionally face-to-face meetings; and a specialized division of labour in the production and delivery of courses."[5]

Necessity And Significance of the study:-

The scenario of the classroom is changing. There is a technological gap between the progress of the society and instructional activities of the teacher in the classroom. If we see in our society on the one hand technology has revolutionized our society and on the other hand the teaching learning activities at school level have remained so far away from technology. In our classroom the knowledge is imparted by the teacher in an ancient way, a teacher centric mode which is most of the time boring and not to gain interest to the student.

Computer-based learning: Computer-based learning is one of the modules of school communication tool that helps students to enhance their learning skills through computer aided education. It imparts computer knowledge in students and enables them to obtain large amounts of information from various websites. After two decades of introducing computers to schools, education has been revolutionized ever since then. It reduces time spent on mechanical tasks such as rewriting, producing graphs and increases the scope of searching. It not only helps in finding information but also in organizing information making it easier to share with others.

Internet: Internet tools like Email, social networks, newsgroups and video transmission have connected the world like never before. Students can now communicate using emails and social networking groups that provide knowledge based information. Distance learning, online learning is also enabled through the internet. Students can learn online and also talk to experts online. Notes, readings, tutorials, assignments can be received by students from anywhere. The Internet provides major information in texts, audios, videos and graphics which can be accessed by the individual. Online learning allows students to interact with each other and faculty to interact with students.

Classroom Learning: With the introduction of ICT in education, classroom learning is one attribute that makes learning experiential and experimental to students. Students can listen to the instructor or teacher, receive visual cues through PowerPoint images, handouts or whiteboard lists and participate actively. This helps in immediate interaction and

students have opportunities to ask questions and participate in live discussions. This school communication software module further benefits in building and maintaining personal and professional relationships as classrooms offer greater personal contact with other students and teachers.

Video conferencing: This is yet another medium of communication wherein students can communicate with other students or instructors online. It enables students to become active participants in their own learning. Video Conferencing is a powerful communication tool that has the potential to change the way we deliver information to students. It is just one of the today's integrative technologies that empower students to prepare for a better future

Objective -

The objective of the present study is to find out the roles of ICT in Education.

Methodology:-

This present study is based on secondary sources like books, Articles, Journals, Thesis, University News, Expert opinion and websites etc. The method used is Descriptive Analytic method.

ICT in Education

The inclusion of ICT in the classroom, often referred to as M-Learning, has expanded the reach of educators and improved their ability to track student progress in Sub-Saharan Africa. In particular, the mobile phone has been most important in this effort. Mobile phone use is widespread, and mobile networks cover a wider area than internet networks in the region. The devices are familiar to student, teacher, and parent, and allow increased communication and access to educational materials. In addition to benefits for students, M-learning also offers the opportunity for better teacher training, which lends to a more consistent curriculum across the educational service area. In 2011, UNESCO started a yearly symposium called Mobile Learning Week with the purpose of gathering stakeholders to discuss the M-learning initiative.

The classroom is now changing its look from the traditional one i. e. from one way to two way communication. Now teachers as well as students participate in classroom discussion. Now Education is based on child centric education. So the teacher should prepare to cope up with different technology for using them in the classroom for making teaching learning interested. For effective implementation of certain student centric methodologies such as project-based learning which puts the students in the role of active researches and technology becomes the

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appropriate tool.

Recent Trends in Teacher Education:-

It is natural that education must include new technology. Teachers should also know the right attitudes and values, besides being proficient in skills related to teaching. As we know the minimum requirement of any training programme is that it should help the trainee to acquire the basic skills and competencies of a good teacher. Now-a-days new trends in teacher education are Inter-disciplinary Approach, Correspondence courses, orientation courses etc. Simulated Teaching, Micro Teaching, Programmed Instruction.

- **Mobile learning's moment has arrived.** Five years ago we were talking about SMS and very limited smartphone pilots. SMS is limited as a learning device given its inherent constraints, but the explosion of smartphone ownership everywhere means that applications are now a legitimate tool for delivering educational content – and content that can be interactive and responsive. The path to scale now exists. People are already using smartphones to learn, even in ways they aren't aware – the development field's job now is to harness this tool for systematic educational initiatives.

- **Easy online environments provide new potential for communities of practice to gather and learn from each other.** Educators and other educational professionals who may have been previously isolated from each other can now much more easily and conveniently connect and exchange knowledge. This facilitates the dissemination of new ideas and tightens professional networks, making them more useful and rewarding to participants.

- **"mini-MOOCs" are demonstrating the appetite and potential of new e-learning models.** While MOOCs are in the very early stages of uptake and development in developing countries, "mini-MOOCs" – short courses, delivered to computers or mobile devices – can help users develop specific discrete skills to help them become more competitive for employment. Mini-MOOCs help people improve specific, discrete skills that make them more competitive. In 5 years, we won't be using the term "MOOCs" we'll just be talking about different types of e-learning.

- **Blended learning is becoming a reality.** The ability for instructors to usefully integrate technology tools into lessons shows us that there isn't really a choice to be made between good teachers and useful technology. Effective

pedagogy makes use of both. One participant shared an example of how a trainer asked students to use their smartphones to fill out a short online poll, and then used the real-time results to direct class discussion.

Different Technique in ICT education

i)   Providing adequate infrastructure and technical support.

ii) Applying ICT in all subjects.

iii) Applying new Pre-service teacher Education curriculum.

iv) By using application software, using multimedia, Internet e-mail, communities, understanding system software.

Role of ICT in Education:-

- ICT helps teachers to interact with students.
- It helps them in preparation their teaching, provide feedback.
- ICT also helps teachers to access with institutions and Universities, NCERT, NAAC NCTE and UGC etc.

It helps in improve Teaching skill, helps in innovative Teaching.

- ICT helps teachers in preparation for teaching. In order to introduce ICT in pre-service teacher education different methods and strategies are applied. Different tools are used such as word processing, Database, Spreadsheet etc. Various technology based plans are used to help the teachers for their practice teaching.

- It also helps in effective use of ICT software and hardware for teaching – learning process.

- It helps in effectiveness of classroom.

- It also helps in improving professional Development and Educational management as well as enhances Active Learning of teacher Trainees.

- It is now replacing the ancient technology. As we know now-days students are always have competitive mind. So teacher must have the knowledge of the subject. This can be done through ICT.

- ICT prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.

- ICT used as an „assisting tool" for example while making assignments, communicating, collecting data & documentation, and conducting research. Typically, ICT is used independently from the subject matter.

- ICT as a medium for teaching and learning. It is a

tool for teaching and learning itself, the medium through which teachers can teach and learners can learn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.

- ICT helps Teacher to design educational environment.
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- ICT helps Teacher to identify creative child in educational institute.
- ICT as a popular tool for organisation and management in Institutions. Teachers must provide technological support to learn using motion picture, animation, simulation training which helped student teachers to give model presentation. If the teacher is highly equipped with technology, the student will also be equipped with technology.
- It removes the traditional method of teaching and prepare teacher to apply modern method of teaching.
- ICT is plays an important role in student evaluation.
- ICT is store house of educational institution because all educational information can safely store through ICT.
- ICT helps Teacher to communicate properly with their students. So ICT bridge the gap between teacher and students.
- ICT helps Teacher to pass information to students within a very little time.
- ICT helps Teacher to motivate students and growing interest in learning.
- ICT helpful for designed learning situations which are needed for both vocational education and the training of future teachers (in the teacher training institutes).
- Teacher training institutes can develop their curriculum using ICT.
- With the help of ICT Teacher training institutes can develop communication network.

Conclusion:-

Teachers in India now started using technology in the class room. Laptops, LCD projector, Desktop, EDUCOM, Smart classes, Memory sticks are becoming the common media for teacher education institutions.

The use of such technology in teaching training programmes the quality of teaching will increase effectively. A well-designed teacher training program is essential to meet the demand of today's teachers who want to learn how to use ICT effectively for their teaching. It is thus important for teacher trainers and policy makers to understand the factors affecting effectiveness and cost-effectiveness of

different approaches to ICT use in teacher training so training strategies can be appropriately explored to make such changes viable to all.

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