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## Use of ICT in Teaching of Literature and Social Sciences



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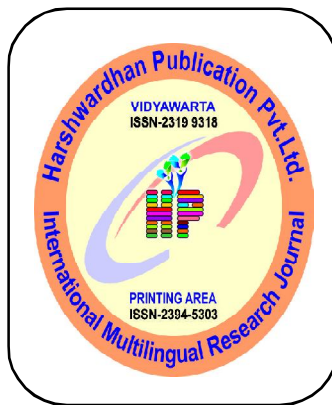
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01

## ENGLISH LANGUAGE LEARNING AND TEACHING – MO WAY

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### Abstract:

In the vogue of globalization the world has become a global village. 21st century is witnessing vast technology development. Computers, laptops, palmtops, internet, e-mail, chatting, browsing, e-commerce, net banking are the keywords of the world today. The whole world has indeed been transformed into a global village. Out sourcing, BPO, management, human resource development, call centres are the hot issues of the day. All these issues invariably abide by a single entity that is communication. In today's rat race we have all the materials comfortable and handy. On the contrary what we lack is time. Time constraint has affected every aspects of our life as 2 minutes noodles, one act plays, 20-20 matches are some of the examples. Communication factors have attained rocket speed. Everyone wants to communicate with the other person as easily as possible using minimum words. English language teaching and learning is not an exception. Students and teachers both attempt to learn and teach English respectively within short span of time with minimum efforts. The researcher in this paper focuses upon how the teaching and learning can be made effective and fruitful with the aid of mobile phones, a tool which is familiar and handy.

### Keywords:

ICT : Information and Communication Technology

MALL : Mobile assisted Language Learning

### Introduction:

Indian English consists not only of elements that are native to the English language but also of those linguistic elements super imposed on it due to interference of the mother tongue. Indian English used by educated Indians seems to be the most suitable form for us, English teachers to follow. We should not teach pidgin like English which, despite its local intelligibility is internationally unintelligible. Non-native speakers of English need not sound or act like Americans, the British or any other group of native speakers in order to be effective uses of English. What is vital is to speak English as intelligibly as possible, not necessary like natives, but well enough to be understood.

### The status of English language in India after independence

English in India is a non-native language which is recognized constitutionally as the associate national official language and inter regional link language, educationally it is recognized as an essential component of formal education and as the preferred medium of learning, with specialized education in science and technology available only through the medium of English only. Socially it is recognized and upheld as a mark of education, culture and prestige. The polity and society confers great value on the learning of English, gives it enormous playing potential, thus creating a great demand for English knowing Indian bi/multilingualism.

The growing importance of English, as Kapoor and Gupta notes is now realized as more than ever thousands of English medium schools are springing up throughout the length and breadth of the country. The question that arises here, he continues to say is not whether or not English should continue but to make its teaching and learning more efficient and effective.

Indian English has several varieties within it such as Punjabi English, Gujarati English, Marathi English and Tamil English etc. These are the regional

or geographical variations within Indian English. English in India is used by a vast body of educated people as their second or third language. It is a non-native, second language variety and has a complex network of features contributed by the mother tongue of its speakers and by their cultures and also by intra-language analogical processes. It exists as a set of coherent, homogeneous linguistic systems and is describable as the speech of identifiable social groups. It is used by a community of people and institutions in India for interpersonal and intra-institutional communication in a wide range of context.

### **English Language Teaching in India In India**

English language is being taught at primary, secondary, higher secondary, junior and senior college level. English is taught as compulsory subject till Junior college level. English is taught as compulsory subject at undergraduate level for faculties like Arts, Commerce and Science. A course of English is also mandatory for professional courses like engineering, management and computer science etc.

With the advent of globalization in 1991, there was a need to reconsider the teaching-learning English scenario in India. A new education policy was adopted in 1986 which focused on learner centred education. A new model was evolved which was a blending of structural and communicative approaches. That the syllabuses had the familiar structural base but the materials and methodology would take a communicative interactive form.

Use of ICT Vs. Traditional English Language Teaching Methods in Classrooms In the vogue of globalization the world has become a global village. 21st century is witnessing vast technology development. Computers, laptops, palmtops, internet, e-mail, chatting, browsing, e-commerce, net banking are the keywords of the world today. The whole world has indeed been transformed into a global village. Out sourcing, BPO, management, human resource development, call centres are the hot issues of the day. All these issues invariably abide by a single entity that is

communication. In today's rat race we have all the materials comfortable and handy. On the contrary what we lack is time. Time constraint has affected every aspects of our life as 2 minutes noodles, one act plays, 20-20 matches are some of the examples. Communication factors have attained rocket speed. Everyone wants to communicate with the other person as easily as possible using minimum words. English language teaching and learning is not an exception. Students and teachers both attempt to learn and teach English respectively within short span of time with minimum efforts.

### **ICT - Mobile Assisted Learning/ Teaching of English Language**

Advancement in computers and technology, internet facilities resulted in computer assisted teaching of English and use of ICT in teaching English during the first decade of the twenty first century. During the second decade of twenty first century mobile assisted language learning is widely increasing due to remarkable rise in the use of cell phones.

Use of technology has become vogue of the day, students are more techno-friendly than teachers. This point shouldn't be overlooked by the teachers of English language and the tool which is handy and multi-tasking, smart phones can be used effectively of the teaching of English in classrooms.

### **Krashen's Innatist Theory and English Language Learning and Teaching – MO WAY**

An innatist theory of second language acquisition proposed by Stephen Krashen and his five hypotheses from 'monitor models' are best to tackle the problems related English language teaching in India if assisted with Mobile teaching. The first hypothesis is 'the acquisition learning hypothesis', we acquire language as we are exposed to sample of the second language. This happens much the same way that children pick up their first language with no conscious attention to language forms. The learning on the other hand takes place, via a conscious process of study and

attention and the forms and rules of language are studied. The role of the teacher in the classroom should be of a facilitator introducing students to new input in audio, visual format without introducing the rules of grammar first. For Krashen acquisition is more important process. He asserts that only acquired language is readily available for natural, fluent communication. Smart phone and Tablets can be best resources of input for the English language learners, in addition to text books, teachers can guide students to listen to audio books of their choice, listen to English news, songs, speeches, watch informative videos with subtitles, try to read the online material of their interest in English, ask students to chat with their friends using social networking sites on current topics only in English etc. Students will find this activity close to their heart and interesting, unconsciously they will acquire grammar rules and language forms without stress as in the traditional classrooms. Teachers' role is more important as a facilitator he/she has to keep control over the resources and channelize the students' efforts in right direction.

The second is 'the monitor hypothesis', the acquired system acts to initiate the speaker's utterances and is responsible for fluency. The learned system on the other hand acts only as an editor or monitor making minor changes and polishing the acquired system. He maintains that since knowing the rules only helps the speaker supplement what has been acquired, the focus of language teaching should be on creating conditions for acquisition rather than learning. The rules of grammar should not be taught without context, they should be introduced within the context. Students are more friendly with the mobile than teacher, the same point can be utilized by teacher to instil grammatical rules in the minds of students. Although this is a herculean task as teachers have less control over the input, instead of using inductive method teachers can go for deductive and ask students to extract grammatical rules out of the online text. Students can apply the same rules and form their own material in spoken and written for-

mat, teachers can evaluate it online followed by swift feedbacks.

The third is 'the natural order hypothesis', like first language learners, second language learners seem to acquire the features of the target language in predictable sequences. Listening, Speaking, Reading and Writing should be the sequence in language learning which is violated in syllabi designing as well at the teaching level. Most of the times in traditional Indian English Language Classrooms the natural order hypothesis is overruled but in smart Mo-Classroom, this order will always be followed. Teachers can record the texts prescribed in his/her voice and send audio clips to students for listening or any advance learner can also do this. Then each student can repeat the same to improve his/her pronunciation and tone, teachers can check their recordings afterwards. Students can use online dictionaries for online referencing for phonological issues. They can record their own speeches, dialogues, group discussions for further evaluation from teachers. Online libraries, e-books, kindle can be used for reading practices, teachers must keep watch over student's reading and further discussions can be initiated for speaking practice. Students can write and submit summaries or gist of their reading, e-mails, resume, notice, minutes, and reports writing practice can be done with the help of tablets, smart phones or laptops.

Fourth is, 'the input hypothesis', Krashen asserts that one acquires language in only one way by exposure to comprehensible input. If the input contains forms and structures just beyond the learner's current level of competence in the language, then both comprehension and acquisition will increase. He has also emphasized the value of undirected pleasure reading as a source of comprehensible input. A special reading session or library hour can be introduced in the curriculum for introducing students new comprehensible input. In the beginning, students should be free to make choice of comprehensible input but later teachers should motivate students to choose

more challenging texts which will in turn contain new forms and structures and enhance students' linguistic and communicative competence. Students can be inspired to read intensively and extensively the material of their liking and choice but level should be decided by teacher to boost students' confidence to accelerate acquisition of language.

Fifth is 'the affective filter hypothesis'. Affect refers to such things as motives, needs, attitudes, emotional states. A learner who is tense, angry, anxious or bored may filter out input making it unavailable for acquisition. The filter will be up when learner is stressed, self-conscious or unmotivated. It will be down when the learner is relaxed and motivated. This has immediate implication for classroom practice. Teachers can understand why some learners, given the same opportunity to learn, may be successful while others are not. The success in acquisition may in itself contribute to more positive motivation or in Krashen's terms to a lowered affective filter. The aim of the teacher in the classroom should be to keep affective filter of the students down which will ultimately lead to language acquisition not language learning. The affective filter will always be low in Mo-Classrooms than students in traditional Indian English classrooms, they will be stress free, happy, eager and interested to acquire linguistic and literary skills. Students will be self-motivated and relaxed which will result in success in acquisition of communicative and linguistic competence in short period. This success will further contributed as motivation to learn further.

### Conclusion

Mobile assisted language learning has benefits and challenges as well. In many cases, mobiles are readily available for the college going students. In a recent study of students in higher education in the United States 82% of them owned cell phones. But the situation can be different in Indian English classrooms. But the fact is also that mobile technologies are typically less expensive than standard equipment, such as PCs. The easy portability of mobile media is another benefit. They

can be easily utilized outside of the classroom as they can in it; learners can study or practice manageable inputs of information in any place on their own time, thereby taking advantage of their convenience. Ultimately, what these benefits indicate is the potential mobile assisted language learning (MALL) has in expanding social inclusion in language learning. Notwithstanding its benefits, MALL also poses related challenges. For instance, inherent lacunas of mobile media are reduced screen sizes, limited audiovisual quality, virtual keyboarding and one-finger data entry, and limited power. Further, as mentioned earlier their availability can be limited. While cell phone ownership may be almost universal for college-aged individuals, this is not true for other populations or media. The costs for educational institutions of purchasing them on mass scale is very expensive. Other potential drawbacks include limited nonverbal communications, limited message lengths, a lack of cultural context, and potentially limited social interaction. While mobile technologies are advancing, their output is quickly moving from verbal to visual, a clear disadvantage for language learning. Considering the pros and cons of Mobile Assisted Language Learning English language teachers can make best use of them in language classrooms if combined intelligently with traditional teaching / learning methods. Complete dependence upon MALL can be hampering in Indian Language Classrooms.

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02

## Advantages of ICT in Education

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Life is about experiences, which makes us grow according to time and situations, as it flows. Sometimes everything seems clear and perfect, sometimes it's all haze. Maybe, life is a maze, it leaves us amazed. Not everyone in life gets everything. For years educators based on the purpose of education. John Dewey, the executive director and chief executive officer of ASCD stated that; "the general purpose of education is to transfer knowledge and prepare young people to participate in America's democratic society". For anyone concerned with high-tech in schools, two books are required reading as histories of technology and education. The first lady is Larry Cuban's teachers and machines; the classroom use of technology since 1920, which overviews the history of films, radio, television, and computer in America up to the early 1980's. The second is Todd Oppenheimer's the flickering mind; saving education from the false promise of technology. Bird's view on educational practices through information and communication technology (ICT) has been made to set the stage for a discussion on how to assist failing schools. With current technology, it is possible to compile a mobile library that a child can take home. Electronic text books solve a lot of the production and distribution problems in teaching materials, as well as allowing easy updates. If every child has access to a computer in class and at home, it becomes very easy to supply every child with up-to-date text books and a portal library of which it contains with its limited texts and pictures along with its multi-media resources. The ICT Education plays a great role in the life of everyone, all through the life. Getting proper

education is very necessary to get success and happy life, just as a food is necessary for healthy body. It is very important to live luxurious and happy life. It develops personality of the people, provides physical and mental standard of which it transforms people's living status. It promotes the feeling of physical, mental and social well-being by providing better life. Good education is constructive in nature which constructs our future forever. It helps a person to improve his/her status of mind, body and spirit. It provides us lots of confidence by giving us bulk of knowledge in many fields. It is a single and vital way to the success as well as personal growth. The more knowledge we get, we grow and develop more in the life. Being well educated never only means to earn certificate and good salary from various recognized and reputed organization companies and institutions, however it also means to be a good and social person in the life. We are incomplete without a good education on the basis of information and communication technology (ICT) because mindset of ICT education makes us right thinker and correct decision makers.

In today's competitive world, education without the concept and knowledge of technology it got drowned and sink into the depth of sea where on the other hand, the means of ICT towards education pull over from the depth of sea as people paved the way only towards bookish knowledge without any from its external means, education through ICT has become necessary for human beings after its food, cloth and shelter. It enables us to provide solutions from its various loopholes and problems; it promotes good habits and awareness about corruption, terrorism and other social evils prevailing among us. The ICT education is one the most important tool offers in both inner and outer strength to the person. Education is the fundamental rights of everyone and capable of bringing any desired change and upliftment towards human mind and society.

Lastly, STAY HUNGRY, STAY FOOLISH. (hungry for your knowledge and always stay foolish for that you know little) for the roots of education are bitter, but the fruit is sweet. □□□

## ADVANTAGES AND RESTRICTIONS OF USING ICT IN EDUCATION

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### Abstract

The research paper aims at exploring the advantages and restrictions of using ICT in education. The ICT plays pivotal role to impart education with equity and quality in learning and teaching modes. The ICT is required for making the learning skills effective by adapting a two-step process in which the learner is supposed to be competitive to understand the modern educational ethics to shape the multidimensional skills in a curriculum related activities. The use of ICT enhances capacity building perspectives as the emerging domains such as itinerant learning. It ensures the essential skills for professional practice so far. The online educational sources create a wider impact in learning-based activities.

The use of ICT has covered all aspects of human life in day-today life. The role of ICT in work places, education, business, commerce, and entertainment has assumed as one of the obligatory sources to cope with the global and rapid change in the world. Hence, the educational fields are needed to be supported with the massive learning and teaching sources through ICT. The need-based education through

ICT can go with the changing scenario to impart education regarding change in the working places, sharing information, teaching-learning modes, innovative scientific researches and accessible way to cope with the rapid change. The considerable restrictions for using ICT in education favor the roles of teachers in a systematic way to enhance the capabilities of the learners in the teaching-learning modes.

Keywords: Use of ICT, Teaching Learning Skills, Challenges and Restrictions in using ICT.

The digital technology and spread of English language as a mode of communication have led changes in the pedagogical sense over two decades in higher education. The emerging teaching methods by using ICT got a prominence in an active use of electronic modes to the development of teaching materials in form of pedagogical concepts have been providing the space for constructivism.

A) Advantages of Using ICT in Education: The use of ICT in education is considered as a treasured source of knowledge to pursue required skills in global, political, economical and cultural changes. It creates interest at all levels to provide access to improve the level of education to learner. It also provides a valuable contribution to traditional higher education and a means to promote skills and competencies. ICT benefits education systems to provide quality education in association with constructivism, which is a contemporary paradigm of learning. It extends educational opportunities for the students in the formal and informal ways. Tinio observes that,

“ICTs such as videos, television and multimedia computer software that combine text, sound, and colorful, moving images can be used to provide challenging and authentic content that will engage the student in the learning process”(Tinio,2002)

The use of ICT in the education avoids the traditional 'chalk and talk' modes and compels the learners to be constructivist while mak-

ing use of multimedia; the learners get involved in enhancing the skills to participate in learning trials. E- Learning through ICT can be used to promote the learning skills. The constructivist learning helps the students to construct their own knowledge and there is a focused system to design learning activities. The form of e-learning is used to access through the web-browsers or the corporate intranet. In E-learning technology, the role of the classroom teacher is supposed to the facilitator, who helps the students to construct their own ideas with the help of computer technologies. The pedagogical sense of the learner is enhanced through the use of ICT.

The use of ICT focuses on the means of learning curriculum or patterns by using the following modes.

- Preparation of data for presentation and demonstration through the productive tools of ICT.
- Use of ICT for MOOC (Massive Open Online Courses) to improve learning skills.
- Blended Learning by using MOODLE (modular object oriented dynamic learning environment) to promote perceptive skills.
- Constructivism as a mode of nurturing skills as a constructivist among learners.

The pedagogical sense among learners can be developed through the use of ICT. It involves learning the technological skills 'just-in-time' or when the learner needs to learn them as he or she engages in a curriculum-related activity. The constructivist approach through ICT can prepare the learners to analyze the things better playing a role of a catalyst. The use of ICT in education promotes the learning approaches. The role of a teacher in the traditional classroom is merely as role of the 'transmitter' of the knowledge by passing on the judgments of their own through references and contents. But by using ICT in blended learning, MOOC programmes or the MOODLES, they have to play a role of the

advisor, coach, instructor and an evaluator.

The use of ICT makes easy the learning tasks, and plays an important aspect of cognitive development, enhances the acquisition platform of general cognitive competencies. The use of ICTs for learning purposes become engrossed in the process of learning and become the sources as cognitive tools. The influence of technology on Learning approaches by using contemporary ICTs provides many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice.

ICT provides the platform to use a variety of pedagogies. As a tool, ICTs can support didactic or facilitative approaches, collaboration and interaction across time and distance, enquiry or interrogation, open or closed research, lock step or mind-map. The use of ICT in teaching-learning mode has a constructive force on teaching, learning, and research. ICT can influence the wider access to the same.

In addition, it will increase elasticity so that learners can access e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. It would offer the loaded environment and inspiration for teaching learning process which seems to have a profound impact on the process of learning in education by offering new possibilities for learners and teachers. These possibilities can have an impact on student performance and achievement. Similarly wider availability of best practices and best course material in education, which can be shared by means of ICT, can cultivate better teaching and improved academic achievements of students. On the whole, ICT facilitated education will ultimately lead to the democratization of education.

B) Restrictions in Using ICT in Education:

New media enable us to pass through the

boundaries of art, science, language and senses. They allow us to represent and simulate experience. ICT allows us to accelerate or decelerate processes for purposes of understanding. Just as an experiment allows us to reproduce, represent or test a pattern of activity in the physical world, multimedia allows us to represent and experiment in the 'virtual' world.

On the other hand, English language is the main hurdle in the use of ICT in education. It is estimated that more than 80% content on internet is English. Most of the educational soft-wares available in the world market are available in English. The country like India, where the proficiency of English is not high, especially in the rural areas would have the obstacles in the unique modes of curriculum through ICT.

One of the greatest challenges in ICT use in education is balancing educational goals with economic realities. ICTs in education programs require large capital investments and developing countries need to be prudent in making decisions about what models of ICT use will be introduced and to be conscious of maintaining economies of scale. Though the online courses on MOOC provide all the learning resources like video lectures or slides with necessary solutions, such courses lack the real emotions while dealing the contents. If Shakespeare's Hamlet is being taught through MOOC, the actual expressions of Hamlet will be missing from E-Learning process. Moreover, the whole topic in a day on Hamlet will not lead to deep understanding of it.

The Use of ICT in education at massive level will have no effective assessment methods like question and answers in the classrooms like surprise quizzes and presentations. The online educational courses would be without gentle care, empathy and respect that are involved in the traditional classrooms. There are the chances to develop a virtual social rapport through the use of online courses available on MOOC or MOOLDES.

#### Conclusion

Despite of the restrictions discussed above, the use of ICT in education will keep the teachers vibrant and more influential about their teaching process by using multi-media and digital technology. The students could concentrate more than the print texts. As they will find the class very interesting, the teaching also will retain in their mind for a longer span, which will support them during the time of examination. More so than any other type of ICT, networked computers with Internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in sound learning skills.

ICT can enhance the quality of education in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner centered environment. ICTs, especially computers and Internet technologies, enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn. It will also help to sustain quality in teaching and learning mode. It will also step ahead from the 'chalk and talk' method to digital and interactive mode of teaching and learning activities. The performance – based learning will enable to ponder into the avenues forming the platform to deal with the sound effects of ICT rather than traditional way of classrooms.

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## Enhancing the German language skills through ICT

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### Abstract

The emerging 21st Century is a technological era. Hence technology has manifold importance in shaping humankind. Language education is an area based on information and communication technology (ICT) which provides access to information, promotes interaction and communication, and enhances digital literacy skills.

The present study emphasises the techniques of enhancing the skills of German as a foreign language. Use of Information Communications Technology (ICT) in foreign language learning is boundless. The purpose of this study is to examine the necessity of ICT and highlight the positive effects of it in order to keep up with the modernized techniques in the current digital world.

To meet this end, the enormous advantages of integrating ICT in foreign language learning will be presented. With the enhancement of ICT, students will be able to communicate and collaborate with native and non-native speakers around the globe. The application of ICT is also beneficial in that they provide a wealth of resources for the students to become active learners by creating content for a worldwide audience. When students write or speak for a broader and more international audience, they become more enthusiastic about learning and be active participants in the information age. Furthermore, by using the authentic material provided by the

internet, the students will have a better insight into the culture of the country and people whose language they study. Therefore, it is stated that integrating ICT in foreign language learning will have positive effects on the students and help them be aware of the modernized world and meet the current demands of the new era.

Keywords: Information Communications Technology (ICT), integration, foreign language learning

### Introduction

The discovery and innovation of technology has made education simpler, easier and faster. This phenomenon has been hailed by many as the wave of the future in which language instruction is driven by new advances in computers, the internet, and mobile technologies. Educational Institutes like (Max Mueller Bhavan-Goethe Institute Pune) are thereby benefitted from the same. The knowledge and skills acquired for learning German make learning possible continuously throughout the lifetime. Information and Communication Technologies (ICT) as well as newer digital technologies such as computers and internet are more powerful tools for educational change and reform. They can best be harnessed to improve the efficiency and effectiveness of education.

The process of learning a second language (i.e German) may be structured in different ways – in a classroom or at home, with or without a teacher, emphasizing or minimizing grammar, gradually exposing the student to native speakers. With the advancements in ICT, technologically savvy students can engage in computer-based educational activities. Publishing student work to the World Wide Web with the help of Moodle (A learning platform offered by the Goethe Institute) and (Aluminiportal Deutschland which offers a variety of German language exercises, lists job vacancies, webinars and virtual projects are conducted in International teams and helps the students to establish contacts with German companies, universities and

funding organisations) encourages the students to introspect towards learning a foreign language. When students write or speak for a broader and more international audience, they pay more attention to polishing their work, think more deeply about the content they produce, and consider cultural norms more thoughtfully. Development of ICT has offered new opportunities to promote the quality and effectiveness of foreign language learning

### Objectives

- To elaborate the use of ICT for German Language enhancement skills
- To shed light on importance of advocating ICT in authentic language learning
- Projecting the advantages of ICT in learning German Language

### Methodology

A small study with a group of 40 students learning German Language from Max Mueller Bhavan Pune was conducted wherein the support of ICT in classrooms was analysed. Classes were conducted with the use of modern technologies like OHP (Overhead Projectors), Radio – to keep oneself updated with the country and to also offer it as a platform for listening material in terms of grasping different language dialects available throughout the country.

Details on the German language Institute in Pune

Max Mueller Bhavan well known for its intensive language course programme with 25 units of instruction in German per week, which is unique to South Asia. This programme gives course participants from all over India, particularly university students and young scientists, engineers and IT professions, the opportunity available in this field. The cultural programme aspires to meet the exacting demands posed by every category of art and culture.

### Advantages

### 1. The advantages of ICT in learning German Language

There is no more doubt that the use of ICT has positive effects on foreign language learning. Its impact is highly dependent on the way it is used. The following impacts were observed when a group of 40 students in Max Mueller Bhavan, Pune was learning German with the help of ICT:--

- The possibility to adapt easily to the teaching materials according to circumstances, learner's needs and response were observed

- ICT allows to react upon and enables the use of recent/daily news, it offers access to authentic materials on the web;

- Possibility to combine/use alternately (basic) skills (text and images, audio and video clip...)

- Lectures become more interesting and less ordinary which boosts learners' engagement

- ICT enables to focus on one specific aspect of the lesson (pronunciation, vocabulary...)

- With the help of OHP(Overhead Projectors)-The teachers were able to communicate specific terms more efficiently and as a result it was imbibed in the students as well also providing them with the information about current affairs in Germany

- Visual with listening materials, text with graphics and pictures was combined

- Novelty and creativity was perceived by the German language learning students

- Different materials for each lesson could be used not like in teaching with textbooks, where all classes presenting a certain topic are the same.

- Adaptability through Computer programmes was spotted as computer programmes are more learner-friendly

- ICT—and the internet in particular—provides language learners with the opportunity to use the language that they are learning in mean-

ingful ways in authentic contexts.

- Opportunities for cooperation and collaboration with one's classmates were discovered.

- Learners felt tutored more effectively.

- With the help of ICT-based tools and the constantly growing number of available educational resources individual and personalized guidance to the learners was provided

- As the institute is well-equipped with computers, the students could watch their favourite German Video, search for the trending topics in the country and could access any kind of information as and when they needed, groups were found to advocate extensive searching of the terms which were taught to them in the class by their respective teachers. It also helped them in completion of their day-day assignments and projects

- The institute also houses a Television with a German Channel- Deutsche Welle on-the-go. Students would patiently sit listening and observing, thereby also noting the things they found interesting whilst they were watching the television. The German Channel displayed an array of different TV programs, ranging from Talk-shows, political discussions to comedy shows, health and hygiene and also showcased the sightseeing places around the country.

### 2. The internet and language learning

The internet offers the best way to learn a second language. The advantages of online learning, can be summarized under the following headings

- 1) Access – the internet offered the possibility to experience German authenticity without the need to travel.

- 2) Flexibility – the internet allowed users to learn language even when they were home or at a friend's place or travelling anywhere, all they needed was to login to Moodle

- 3) Response – Instant feedback to learn-

ers was given over the website. This greatly enhances the learning experience.

4) Repeatability – the learner could encounter the language in a repetitive fashion until mastery was achieved.

5) Durability – the internet is 24/7. It never tires. It does not take coffee breaks.

6) Modality – As a multi modal learning tool, the internet enhanced cognitive abilities and thus fertilized language acquisition successfully.

7) Specificity – the internet allowed the language learner choice and variety in both what and with who will be learned.

8) Cost – No extra fees are charged for becoming a member of the Goethe website and all the materials available are for free. This develops collaborative writing. Furthermore, learners can share graphics, sounds and video all at one place without additional costs. It also helps to create an environment where authentic and creative communication is integrated into all aspects of the course

### 3. ICT across the curriculum in foreign language learning

- The integration of information and communications technology in learning is considered as a medium in which a variety of approaches and pedagogical philosophies may be implemented. ICT acts as a learning aid .

- The development of ICT – electronic mail, internet, multi media, possibilities to use collaborative platforms, undoubtedly, influences the process of using them in everyday classroom teaching and learning. ICT no longer serves to be a simple additional means but ICT is an indispensable part of the modern and contemporary learning environment.

- The application of ICT gives more opportunities for communication between classmates, they can exchange information in real time, they can participate in blog discussions, work in teams on different projects, exchange emails, search for information, etc.

- By using the authentic material provided by the internet, we have a better insight into the culture of the country and people whose language we study

- The effective use of ICT impacts on learners and various aspects of the learning process can be summarized as follows

- 1) ICT increases learners' motivation and thus enhances personal commitment and engagement;

- 2) ICT improves independent learning; - Learners' collaboration and communication are more important; - Learners' attainment and outcomes are improved. As for the learners perceptions of ICT, students work independently with technologies with the goal of arriving at a specified level of mastery of a given knowledge set.

- 3) At the same time, it provides flexibility to learners which are a must for mastery of learning and quality of learning.

- 4) The use of ICT in language learning not only involves pedagogical changes for teachers but also involves environmental and pedagogical changes for learners who are traditionally used to face-to-face teaching in classrooms.

- 5) ICT is beneficial for personal interaction as well, so that chat forums in German language can be established

- 6) Apart from curricular changes that come officially- usually from the Ministry of Education in each country workshops and short trainings introduce new techniques and activities or promote new materials.

- 7) Helping students find value in learning through the implementation of various instructional strategies and multiple alternative and authentic forms of assessments, while maintaining high standards of student performance in an environment which encourages students to do their best, increase in the motivational levels of all students was found.

## Conclusion

ICT presents a powerful learning environment for learners in the classroom. Many countries have made investments in ICT integration as ICT is viewed as an effective tool for renewing educational practice in any field. The use of information technology maintaining contact, that bond between us that let our students know that support was only a click away, and at the same time giving them a sense of freedom to work on the areas of their learning that they considered important. These tools also promote authentic communication in an environment where this input is scarce and at the same time helps prepare them for the technological work place of the future. If used prudently, ICTs will enable developing countries to expand access to and raise the quality of education. Today's technologically competitive world needs integration of ICT in education. If ICT is aptly adapted, then it will be lifelong learning process for the learners. The quality of learning with accountability can be improved to enhance the learners to learn things quickly and successfully. Without a doubt, technology has revolutionized society in many places around the globe, including how language instruction is taught and delivered. In particular, the Internet has become a conduit where people can learn, share, and collaborate in ways not possible years before. Therefore, if we try to integrate technology in foreign language learning our new, refocused approach to learning a second language will propel us a long way to making technology and the internet a more rewarding partner in the learning process.

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- 5) Netzwerk Deutsch als Fremdsprache



05

# EXPLORING ICT TOOLS IN LEARNING AND TEACHING PROCESS

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## Abstract:

The purpose of this paper aims to explore the use of Information and Communication Technologies (ICT) for learning and teaching process. Undoubtedly, the field of education is affected by ICT tools such as You Tube, Blog, Slide share and encyclopedia. It helps to enhance and extend potential learning. ICT plays an important role in learning and teaching process. The various tools of ICT are discussed in detail in the present study. The teaching and learning process is now not confined to the classroom. Therefore, one can access to more current knowledge of rapidly changing world through classroom based curriculum transaction and other non-institutionalized means. For the development of human skills and soft skills, there is a need to enhance the capacity to adopt the changing skill requirements. The websites or web applications have expanded the horizon of new learning and teaching process in which people live, work and communicate. It also brings new learning opportunities for learners.

Keywords: ICT and learning-teaching process, websites, knowledge and globalization.

The Education Policy of 1986/92 has brought out a significant development for the emergence of ICT and introduced new dimensions in the fields of education, in the quality of teaching and learning process. "The United Nations

Educational, Social and Cultural Organization (UNESCO), in association with the regional institutes, has framed ICT indicators for different countries. These indicators for defining technology-enabled learning were based on how technology was really being used in the most ideal of curricular practices available. No such indicators have been developed for the Indian educational context. The Department of School Education & Literacy, Ministry of Human Resource Development (MHRD), Government of India, has begun formulated the 'National Policy on ICT in School Education' with a focus on addressing the needs and challenges of teaching and learning in schools using Information and Communication Technology. The Global e-Schools and Communities Initiative (GeSCI) ([www.gesci.org](http://www.gesci.org)), a United Nations ICT Task Force organization, provides strategic assistance to MHRD in the preparation of this policy. GeSCI has partnered with the Centre for Science, Development, and Media Studies ([www.csdms.in](http://www.csdms.in)) to coordinate and facilitate the process of policy formulation." ICT is an umbrella term which covers many topic such as internet, computer, multimedia, e-learning etc. Information and Communication Technology (ICT) has preoccupied the prominent place in the world. The word 'Technology' is derived from 'techno' which stands for technique, skill or art and 'logos' which means science. In other words one can define technology as a scientific knowledge of skill. Thus it covers many tools to develop the ever growing teaching and learning process.

The government policies as well as some private institutes promote the use of ICT in education. There are some websites that help to surf through articles, facts and pictures on the interested topic. On the encyclopedia.com website, there is no registration, login, username and password.

<http://www.iseek.com/iseek/home.page>

<http://www.usc.edu/libraries/>

<http://www.ipl.org/div/subject/>

<http://www.worldcat.org/>

<http://www.britannica.com/>

<http://library.harvard.edu/>

Here one can use a free online library service and research facilities on the above mentioned websites.

There is also another website 'slide share'. It requires signing up in slide share, name and email id where we can access the website and save documentation and paper presentation, videos, graphs and also we can share that data to the different people from anywhere in the future. There is no need to carry these things with us. Slide share is cloud based website where we can upload the things. For this we have to create on linked in social media site.

You Tube is Google's website where we can upload, share and see videos. We can provide various privacy settings on our uploaded videos such as the video can be seen in publicly and privately.

Blog- it can be created his/her own blog to express the views, presentation documents, articles and also one can publish the articles on blogs. The websites like Encyclopedia, Slide share, You Tube and Blog connect the information from one corner to another corner in the world. The researchers, teachers, students and learners use these website to get information on any topic such as spots, medicine, science, marketing etc. anywhere anytime.

These websites create many opportunities for all the learners and promote the knowledge, skills, attitudes and values that lead to a productive life and respond to the requirements of the fast-changing world. It helps to amalgamate globalization with localization by exposing the deep rooted Indian culture and traditions. There are the most potent tools in which we share the information and knowledge to build the better human society. Innovative skills and updated knowledge have also taken place in India due to the use of ICT in teaching and learning process by extending horizontal and vertical growth of individual as well as society. While discussing about websites, one must not forget that there is the need of employability for the creation, maintenance and up gradation of the websites.

According to Cabero (2001), "the flexibilization time-space accounted for by the integration of ICT into teaching and learning processes contributes to increase the interaction and reception of information. Such possibilities suggest changes in the communication models and the teaching and learning methods used by teachers, giving way to new scenarios which favour both individual and collaborative learning". We are living in the information Technology Age. We use Facebook, Twitter, Blogs and many other websites in daily life. We use these websites to improve and update our knowledge. The most important ICT tools helps students and teachers to enhance and extend the knowledge and communicate with others easily. The ICT tools such as mobile applications, interactive multimedia and web applications play a vital role in teaching and learning process.

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## USE OF ICT IN TEACHING ECONOMICS

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### Abstract

Information and communication technology is the significant tool and accelerator in the process of teaching and learning. Today's generation is more technosavy than the teachers. The time is demanding acrid change in teaching and learning field with the help of ICT application. Student fond of using smart phones, its applications and find ease while learning a lot of things with smart mobile phones. Economics is a conceptual subject and focuses on various case studies, graphs, charts and practical application oriented examples. According to Merriam-Webster Dictionary, It is "a social science concerned chiefly with description and analysis of the production, distribution, and consumption of goods and services". Economics focuses on the behaviour and interactions of economic agents and its function. Prescribed syllabus and textbooks often focus on distinguishing between microeconomics and macroeconomics. Microeconomics examines the behaviour of basic elements in the economy, including individual agents and markets, their interactions and the outcomes of interactions. Individual agents may include, for example, households, firms, buyers, and sellers. Macroeconomics analyzes the entire economy (meaning aggregated production, consumption, savings, and investment) and issues affecting it, including unemployment of resources (Labour,

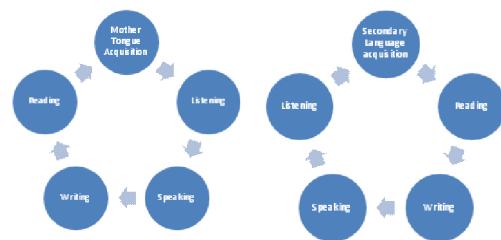
capital, and land), inflation, economic growth, and the public policies that address these issues (monetary, fiscal, and other policies). Hence, ICT is very user-friendly, effective to understand various concepts of economics. Teacher use to explain various economic concepts with the help of various language and through oral communication. Communication becomes a mess when one is short of words. Student understands someone dealing with English but cannot communicate. Student can be expert in dealing with the words, vocabulary with help of ICT. Students can whatsapp, hike, google, facebook and etc. groups to enhance their capabilities. Hence, an attempt is made to compare and evacuate various teaching ICT modules in order to strengthen students' vocabulary through this paper.

(Keywords: ICT, concept, macroeconomics, microeconomics)

Introduction:

Explanation is the soul of teaching and thus language or vocabulary plays a vital role on teaching learning process. Economics is not taught to students up to tenth standard. In senior colleges, it is often dealt with English which is a second language for mother tongue users. Sense of grammar, rhetoric skills, creative writing techniques are useless until student command over vocabulary. It is found that a child can acquire twelve languages up to the age of six. At the same time a college going adult student performance is poor with second language acquisition. Kid learns language with natural technique experienced at early home and neighbors, whereas, college going student fails to understand the basics of second language. It is very interesting to find out the difference between first and second language acquisition. Here, we can consider an example of the student who belongs to distinct regions of the country, whose mother tongue can be Marathi, Kannad, Hindi or Tamil. Mother tongue may be different than Social Language and it may con-

tradict to professional language or language used in career. Mother tongue acquisition follows a distinct kind of technique than the second language acquisition. From fetus to infant we hear sounds and words only, then we are introduced with speaking, then teacher teaches writing and reading respectively. Teaching conceptual economics in secondary language becomes huge task. Use of smartphones, various application minimizes ones problem of dealing with foreign language.



Whereas, while second language acquisition, we practiced writing alphabets then reading those alphabets, then listening language and then probably speaking. It becomes worst when your teacher is not fluent or user-friendly with the secondary language. If you won't listen English how will you dare to deal with it? English is taught at the level of Primary education, where teachers cannot practice English fluently. Thus, once second language can be a language of ICT.

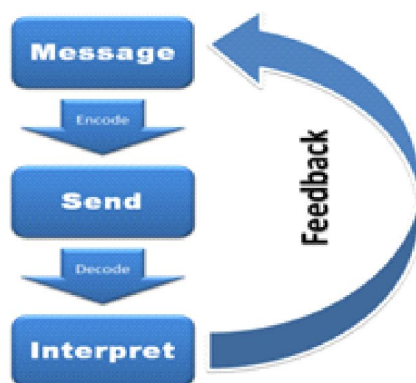
Economics professor find several difficulties while delivering his lecture in pure economic context in the class without mixing it with mother tongue where he can take help of ICT. Students' faces react as if they are on Mars and are listening to alien. Few students can understand the discourse but cannot react; few students can react but cannot write or speak. It is found that student get fear of English words especial economic concepts rather than teacher or syllabus. It is true, sometimes pronunciation too matters but it can be understood in course of time. Hence, it is necessary to develop a economic sense in student. It is true, that primary measures must be taken at primary school lev-

els, but a professor can also apply few modules in classroom which will strengthen the confidence of the students while dealing with Economis.

**Evaluating Economic Concepts through Grouping:**

A group prepared on whatsapp, hike or on other social media consists of two or more persons who interact with each other, consciously for the achievement of certain common objectives. Student can be grouped in order to understand the necessity of words. Two or more students who are interacting with one another in such a manner that each one influences and is influenced by other. Communication with new and unknown words, influence each other. Imitation is one of the great mean of education, influence encourages imitating. The members of the group are inter-dependent and are aware that they are part of group. Students ask the meaning and usage of the words to each other. It is necessary that student must be psychologically aware of one another and perceive themselves to be a group. A feeling of belongingness and security is developed when student find himself in a group, this senses the experience of kid while first language acquisition. Students help each other in solving their problems regarding building vocabulary.

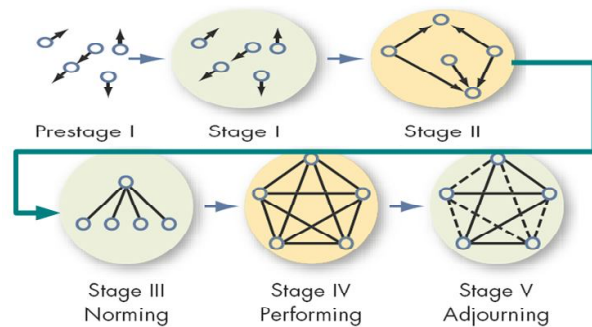
**Effective Communication Cycle**



In group once message is sent to get interpreted. Let's take an example of the usage of the word 'okay'. This word is used in distinct

context. Every listener may draw different meaning of 'okay'. The meaning will be encoded and decoded as per convenience and perspective. Group discussion helps students to strengthen confidence of the student to come out without hesitation as student find group as his home. People working together to attain a specific objective with which each is concerned is called as an Interest group. Here, building vocabulary can be set as a specific objective. People come together because they share one or more common characteristics are called as a Friends group. Hear a common interest might be to be fluent in second language acquisition. Groups are formed due to distinct reasons such as Status, Self-esteem, Affiliation, Power, Security Identity & recognition and Goal accomplishment.

Teacher can develop various groups in class in order to enhance students' active and passive vocabulary. The first stage is forming stage, where group development is characterized by much uncertainty. The second stage is storming stage were group development is characterized by intragroup conflicts.



The third stage is norming stage where group development is characterized by close relationship and cohesiveness. Next stage is performing stage where one may notice the group is fully functional. The last adjourning stage of group development is what teacher wish to bring in.

Teacher should pay attention to group dynamics. Dynamics means a force from organizational point of view. The social process by which people interact face to face in small

groups is called group dynamics. Group dynamics is concerned with the interaction of individuals in a face to face relationship. Group Dynamic focus on teamwork where in small groups are constantly in contact with each other and share common ideas to accomplish the given tasks. Group Cohesiveness is degree to which group members are attracted to each other and are motivated to stay in the group. Teacher plans distinct ideas for the sake of group cohesiveness. Making smaller groups upgrades group cohesiveness. Teacher should design goals for various groups and encourage them to agree. Members of the group should be stimulated to spent maximum time on the group. Teacher should increase group status and make admission difficult. Various competitions should be stimulated in order to make group cohesive. Group should be rewarded in spite of individuals. Various activities should be organized such as; reading newspaper, finding new words, word puzzles, guessing words, giving synonyms or antonyms, using dictionary, word antakshari, pragmatics, linguistics, fluent pronunciation, A day A word and etc.

**Conclusion:**

Thus, student can utilize several smart phones application such as whatsapp, hike, facebook and etc. to learn vocabulary and language. Groups prepared on these groups through ICT will strengthen their motive set behind learning. Simple and used to vocabulary is one of the most important aspects of second language acquisition. First language acquisition and second language acquisition can be connected through the concept of grouping. Students discover interest and homely intimacy while dealing with distinct new words and economics concepts. Student finds suitable atmosphere to speak and demonstrate economics as per context. Being a felicitator, teacher can guide and channel the group as per the need. Different activities planned by teacher, directly or indirectly promote groups to achieve their desired

goals i. e. application of economics in day to day life.

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## EXPLORING EDUCATIONAL POSSIBILITIES OF TECHNOLOGY

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### Introduction

ICT stands for Information and Communication Technologies. 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. Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills they need in the 21st century. ICT helps to enhance learning outcomes and improve access to education. ICT tools are interactive and engage educators easily in their own learning. ICT ensure that academic planning should optimize the use of technology in the teaching-learning process. ICT and its integration in education have improved the skills of teachers. It predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information.

ICTs greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for business and the poor. One of the greatest hardships endured by the poor, and by many others, who live in the poorest coun-

tries, in their sense of isolation, and ICTs can open access to knowledge in ways unimaginable not long ago.

### Operational terms Information Communication Technologies (ICT)

**E learning:** - is a learning program that makes use of an information network- such as the internet, an intranet (LAN) or extranet (WAN) whether wholly or in part, for course delivery, interaction and/or facilitation. Web-based learning is a subset of e learning and refers to learning using an internet browser such as the moodle, blackboard or internet explorer.

**Blended Learning:** - refers to learning models that combines the face-to-face classroom practice with e-learning solutions. For example, a teacher may facilitate student learning in class contact and uses the Moodle (modular object oriented dynamic learning environment) to facilitate out of class learning.

**Constructivism:** - is a paradigm of learning that assumes learning as a process individuals "construct" meaning or new knowledge based on their prior knowledge and experience. Educators also call it the emerging pedagogy in contrast to the long existing behaviorism view of learning.

**Learner-** centered learning environment: - is a learning environment that pays attention to knowledge, skills, attitudes, and beliefs that learners bring with them to the learning process where its impetus is derived from a paradigm of learning called constructivism. In the context of this article, it means students personal engagement to the learning task using the computer and or the internet connection.

### The Benefits of ICT in Education

The uses of ICT is making major differences in the learning of students and teaching approaches. Schools in the Western World invested a lot for ICT infrastructures over the last 20 years, and students use computers more often and for a much larger range of applications. Several studies reveal that students using ICT

facilities mostly show higher learning gains than those who do not use. For instance, finding across 75 studies in the United States showed the following. Students who used computer tutorials in mathematics, natural science, and social science score significantly higher on tests in these subjects. Students who used simulation software in science also scored higher. The findings also indicated that primary school students who used tutorial software in reading scored significantly higher on reading scores. Very young students who used computers to write their own stories scored significantly higher on measures of reading skill. Moreover, students who used word processors or otherwise used the computer for writing scored higher on measures of writing skill. Furthermore, the use of ICTs in education also shifts the learning approaches. The gradual progress in using computers changes from learning about computers, to learning computers, and finally to learning with computers. With respect to introducing ICT technologies in schools, Olson advises to explore the following questions as bases for in service teacher education.

(1) How can the theoretical ideas tested in practice?

(2) What does practice say back to these theoretical ideas?

(3) How is useful negative feedbacks obtained?

(4) What might be substantive talking points about the new processes? What is practical from a classroom perspective?

(5) What does talking about the new say about the nature of existing technology? Is it adequate?

(6) What scaffold needs for the next stage? On the other hand, teachers' reluctance to adopt innovations need to be seen in the context of existing technology and commitments. For instance, many teachers are currently not in a position to make informed judgments on ICTs to support their teaching goals. Clearly a vari-

ety of factors still do make using ICT in the curriculum problematic. Because of this, the influence of ICT did not bring revolutionary changes at schools. For instance, the National ICT survey in the Netherlands shows that most primary-school students use computers less than once a week and there are still many secondary school teachers who do not use ICT at all. Most often, they use computers for drill-and-practice and word processing. In recent years however, there has been a growing interest to know how computers and internet can best utilized to improve effectiveness and efficiency of education at all levels and in both formal and non-formal settings. As there is a shift of theories explaining learning processes, ICTs become handmaiden for learning activities. As a medium of instruction, ICTs fit to realize and implement the emerging pedagogy of constructivism differentiated between traditional learning setting and constructivist approaches. The former considers learning as transmission of knowledge to students, which is the sole responsibility of the teacher. On the other hand, the constructivist approach considers learning as authentic and learner centered. ICT, the computer for example is a great help in the constructivist approach, where one can design simulated and individualized learning environments to students. ICTs are exerting impacts on pedagogical approaches in the classrooms. Their contribution to changes in teaching practices, school innovation, and community services is considerable. A research review by Kozma suggests three significant concerns of consideration regarding ICTs impact on education. Firstly, student out comes such as higher scores in school subjects or the learning of entirely new skills needed for a developing economy. Secondly, we should consider teacher and classroom outcomes such as development of teachers' technology skills and knowledge of new pedagogic approaches as well as improved attitudes toward teaching. Finally, one has to consider other outcomes such as increased

innovativeness in schools and access of community members to adult education and literacy. The table below presents comparison of the traditional pedagogy and the emerging pedagogy of constructivism that fits to the use of ICT (particularly the computer and internet) to increase student involvement in learning. Emerging pedagogy is the name given to the new view of constructivist learning when compared to the relatively long existing behaviourist view of learning.

### **Implications of ICT-Enhanced Education for Policy and Planning**

There is a common belief that ICTs have significant contributions to changes in teaching practices, school change and innovations, and community services. Thus, policy makers and project leaders should think in terms of input factors that can work together to observe the right impact of ICT in education. Matching the introduction of computers with national policies and programs related to changes in curriculum, pedagogy, assessment, and teacher training is more likely to result in greater learning of students and other out comes. OECD's international survey (2002) of upper secondary schools in 17 countries reveals computer availability for students; use of ICTs by teachers; ICTs activities as a part of student assignment; the role of ICTs in teaching and learning; staff development; cooperation with other schools and organizations; and obstacle to using ICTs in schools and found great variations among the countries with respect to the mentioned variables. OECD's Education Committee meeting for instance endorsed a proposal for a new activity on ICT known as "Policy Challenges for Education". The meeting intended to identify and evaluate what education policy makers might do to better use ICTs in achieving improved educational out comes. As cited in the OECD Planning Meeting Agenda and Issue Paper (2002: 3), the structure of activity focuses on two broad and related questions as follows:

1. What policies are required to ensure that investment in ICTs leads to educational out comes? This tries to understand how ICT can contribute to greater access to learning; to higher quality teaching; and to improved and more equitable learning out comes.

2. What impact is ICT having upon the operation of educational institutions and upon educational policymaking? This tries to reflect on issues such as institutional frameworks for school management; the regulatory structures for educational institutions and teachers' work arrangements. The need for linking ICT to education policies requires recognition. In reflecting the importance of technologies, education policies should focus in the following major points:

(1) Education policies have to reflect alternate and new teaching paradigms that ICT can offer in terms of providing a more effective, relevant, and flexible mode of learning for the underprivileged and the general masses.

(2) Policies must take into account the retraining of teachers incorporating use of ICTs in education. Teachers should skilfully redesign learning environments so that students can transfer their newly gained ICT skills to other applications to use in an ICT rich environment.

(3) Most educational policies reflect the need for ICT infrastructure but they left out the need for local educational content. The development of instructional content-ware remains a neglected area, affecting investments in hardware and resulting in a heavy economic and educational loss.

(4) The focus of developing countries should be on how they use ICTs to compensate for the factors that are lacking in education, namely, well-trained teachers and the resources to pay for expensive equipment. The task is to concentrate on technological alternatives that, at low cost, bring to students the imagination and creativity of a few excellent teachers.

## Conclusion

Information communication technologies are influencing all aspects of life including education. They are promoting changes in working conditions, handling and exchanging of information, teaching-learning approaches and so on. One area in which the impacts of ICT is significant, is education. ICTs are making major differences in the teaching approaches and the ways students are learning. ICT-enhanced learning environment facilitates active, collaborative, creative, integrative, and evaluative learning as an advantage over the traditional method. In other words, ICT is becoming more appropriate in the realization and implementation of the emerging pedagogy of constructivism that gives greater responsibility of learning for students. Several surveys are showing that ICT use in education systems of developed nations has comparatively advanced than ICT use in education systems of developing nations. In addition, the major promises of ICTs use in education systems of developing countries focus on training teachers in new skills and introducing innovative pedagogies into the classrooms, investing on ICT infrastructure for schools and creating networks among educational institutes, improving overall standard of education by reducing the gap in quality of education between schools in urban and rural areas, initiation of smart school with objectives to foster self-paced, self-assessed, and self-directed learning through the applications of ICTs, and developing ICT policy for education and training. On the other hand, this article discusses the major limitations of ICT use in education as teacher related, student related, and technology related. In addition, the key challenges of ICTs integration into education systems discussed relate to policy, planning, infrastructure, learning content and language, capacity building and financing. What will be the way forward then? There is a consensus that the development of any country depends upon the quality of education programs

offered to citizens. ICTs, despite their known limitations, are believed to be beneficial in this regard. The computer and the internet are especially useful to enhance student engagement in learning and positively impact student performance and achievement. Moreover, their usefulness is more apparent in the 21st century, where the time is an era of information rich that the conventional modes of teaching learning could hardly handle it. The reviewer of this article strongly recommends the mainstreaming of ICT utilization (particularly the computer and internet) in education systems at levels, for they benefit curriculum implementation and enhanced student learning. Therefore, education policy makers, educators and all concerned should evaluate and recognize the roles of ICT in education in order to work for the effective functioning of this technology in their education systems.

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## ICT AND EASE OF DOING BUSINESS

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### Abstract:

Information and communications technology, or ICT, has a number of applications in business, including decision-making, spreading messages to employees, record-keeping and reliable communication etc. ICT covers a wide spectrum of specific tools available for a business to use. These tools include Internet networks, e-mail systems, videoconferencing and smart technology, such as phones and tablets. The information technology developments are transforming the global business landscape and the new way of doing business in the Digital Age. This paper presents the use of ICT for ease in doing business in India. It narrates some of the reforms initiated by Modi government for ease in doing business in India.

The objective of the paper is to point out the efforts of Indian Government in use of ICT for ease in doing business. The paper is based on secondary data. The paper highlights on the use of ICT and its positive impact on effective implementation of governments policy for improving ease in doing business in India.

■ **Key words:** ICT, reforms, ease in business, India

Eradicating unemployment is one of the toughest challenges our country faces at present. It requires immediate and effective focus. Though our country's GDP has shown

healthy growth rate over the years but the recently conducted report of Labour Bureau depicts grim situation about jobs opportunities in India. One best way that can help government to boost more jobs is to ignite the spark of entrepreneurship and provide support to more and more youth in the country.

Since 2014, the Government of India launched an ambitious program of regulatory reform aimed at making it easier to do business in India. The program represents a great deal of effort to create a more business-friendly environment. Government of India has emphasized on the importance of 'Ease of Doing Business' as a major pillar of 'Make in India' initiative. Hon'ble Prime Minister Shri Narendra Modi has set a target for India to be ranked among the top 50 countries over the next 3 years in the World Bank Doing Business Report. In order to achieve this target all the departments, agencies concerned have come forward and implemented the reforms in the right earn. The information technology developments are transforming the global business landscape and the new way of doing business in the Digital Age. The use of ICT has positive impact on effective implementation of government's policy for improving ease in doing business in India.

World Bank's "Doing Business 2017" report states that India's perspective of use of ICT based reforms, undertaken by the Narendra Modi government. The "distance to frontier" (DTF) score—used by the World Bank to measure the distance between each economy and the best performance in that category—has improved for most of the aspects related with business. The report especially lauds India for achieving significant reductions in time and cost to provide electricity connections to businesses. But for all of this, India has moved up—from 131 to 130—in the overall rankings. This was possible due to introduction of various reforms which are ICT based. Some of them are as follows:

■ **Starting a business**

1. The requirement of Common company seal is eliminated.

2. Introduction of form -29 by Ministry of Corporate Affairs. With this form three processes such as Name Availability, Director Identification Number and Incorporation of Company are clubbed into one. The company can be registered within 1-2 working days in India. For this ICT is extensively used.

3. Registration for Permanent Account Number (PAN), Tax Deduction Account Number (TAN), EPFO (Employees' Provident Fund Organization) and ESIC (Employee's State Insurance Corporation) and incorporation of company can be done through a single form on eBiz portal.

4. Application for environment clearance is available on e-Biz portal

5. Online and real time registration of ESIC and EPFO has been introduced.

6. Provision for online payment of EPFO and ESIC contributions has been introduced.

7. All documents for export and import to be submitted electronically with digital signatures i.e. no physical submission of document.

8. Custom ICEGATE Portal has been integrated with Food Safety and Standards Authority of India (FSSAI), Animal & Plant Quarantine, Drug Controller & Wildlife Control Bureau for imports.

9. Shram Suvidha Portal launched to issue unique Labour Identification Number (LIN), submission of common electronic returns under 8 Labour Acts and facilitate risk based inspections.

10. The provision is in place for getting PAN and TAN in T+1 day using digital signature.

11. ESIC and EPFO are completely online with no physical touch point for registration or document submission.

■ **Dealing with construction permits**

Municipal Corporations of Delhi as well as Municipal Corporation of Greater Mumbai have introduced fast track approval system for

issuing building permits with features such as Common application form, provision of using digital signature and online scrutiny of building plans.

■ **Trading Across Borders**

The Central Board of Excise and Customs (CBEC) has implemented 'Indian Customs Single Window Project' to facilitate trade. Now importers and exporters can electronically lodge their customs clearance documents at a single point only with the customs.

■ **Enforcing Contracts**

National Judicial Data Grid (NJDG), [http://njdg.ecourts.gov.in/njdg\\_public/main.php](http://njdg.ecourts.gov.in/njdg_public/main.php) provides case data including case registration, cause list, case status and orders/ judgements of courts across the country and District-wise. NJDG was opened to general public on 19th September, 2015.

■ **Getting Credit**

Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) (Central Registry) Rules, 2011 has been amended. The amendment modifies rule 4 to include additional types of charges, including: "security interest in immovable property by mortgage other than deposit of title deeds"; "security interest in hypothecation of plant and machinery, stocks, debt including book debt or receivables"; "security interest in intangible assets, being know-how, patent, copyright, trademark or any other business or commercial right of similar nature"; and "security interest in any under construction residential or commercial building or a part thereof". This amendment allows (Central Registry of Securitization Asset Reconstruction and Security Interest) CERSAI to register these additional charges.

This amendment will allow uploading of data pertaining to security interests created on all types of properties covered by the definition of property in Section 2(1)(t) of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002

(SARFAESI) i.e. immovable as well as intangible.

### ■ Getting Electricity

1. In both Delhi and Mumbai, the distribution companies have stipulated that electricity connections will be provided in 15 days and the number of documents required to obtain an electricity connection have been reduced to only

2. Online application for connections above 100 KVA have been made mandatory in Delhi and Mumbai. This will reduce procedures, cost and time taken to obtain an electricity connection significantly.

2. In Mumbai, Brihanmumbai Electric Supply and Transport (BEST) has improved its SAIDI by 3% in the period Jun 2015-Mar 2016, and SAIFI by 11% in the same period and Tata power has improved its SAIDI(System Average Interruption Duration Index) by 2.42 and it's SAIFI- (System Average Interruption Frequency Index ) by 2.41.

### ■ Registering Property

In Delhi, all sub-registrar offices have been digitized and sub-registrars' records have been integrated with the Land Records Department and in Maharashtra all property tax records have been digitized. The digitization of property records will overcome the cumbersome and time consuming paper work for registering properties. It will ensure transparency and allow citizens to ascertain history of transactions in digital mode.

### ■ Paying Taxes

1. The ESIC has developed a fully online module for electronic return filing with online payment. This has greatly reduced the time to prepare and file returns.

2. with introduction of e-Verification system, there remains no physical touch point for document submission to Income tax authorities.

### ■ State reforms

• Department of Industrial Policy and Promotion launched an online portal in April 2016 to track implementation of reforms on a real-time basis. The online portal is aimed to pro-

vide the following:

- Real time ranking and tracking of the States and UTs based on implementation of the recommendations

- Details of the good practices to learn and replicate

- Provide information on current policies and practices across States and UTs

■ More than 7000 reforms have been uploaded by States on the portal, the validation exercise of which is underway.

■ A detailed data set of ease of doing business measures implemented by various states is available at URL: <http://eodb.dipp.gov.in>.

Thus ICT is playing pivotal role in improving user friendly environment for Indian businesses. Information and communications technology, or ICT, has a number of applications in business, including decision-making, spreading messages to employees, record-keeping and reliable communication etc as it provides benefits in terms of production, quality, lowering expenses and communicating. ICT covers a wide spectrum of specific tools available for a business to use. These tools include Internet networks, e-mail systems, videoconferencing and smart technology, such as phones and tablets. ICT is utilized in a variety of different industries for different purposes. In India it is used to speed up communication networks and is an integral part of decision making which has boosted ease in doing business.

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## SCIENCE CREATED MENACE AND DEATH TRAP OF TECHNOLOGY: MISAPPLICATION OF ICT IN JOHN BRUNNER'S 'THE LONG RESULT'

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The present paper deals with the use of ICT in the select novel of John Brunner's 'The Long Result' in terms of science created menace and death trap of technology reflected. John Brunner is one of those science-fiction writers who have been exploring the technological transcendence, never-ending economic escalation and material abundance, as well as its impact on the society. ICT plays an important role in education somehow it can be hazardous in many ways. However, Brunner goes a step further in depicting the eco-social problems which are the results of the alterations and amalgamations of the techno-savvy world. His novels are always praised for their unique fusion of intersections of politics, science, society and environment with prime focus on the proliferation of technology and its aftermaths in the form of environmental apocalypse.

**Key words:** ICT, science created menace, death trap of technology, proliferation of technology.

The age old The Long Result (1965) is a dystopian fiction that depicts the social menace in the society due to the intervention of alien species. The novel projects a crackpot called Stars Are For Man League, which is committed to place human beings at their superior position over the various alien races. They have in-

vented the star drive which enabled them to discover the aliens.

The protagonist of the novel is Roald Vincent, a senior official of the Bureau of Cultural Relations. The organization handles contacts just with the aliens as well as other human colonies throughout the world. Vincent has now a new responsibility to handle a rapidly rising crisis regarding the alien ship. The alien ship is from Starhome which seeks the permission from the Earth to land. As the ship carries a diplomatic mission from a newly discovered alien species, it creates the situation of war on the earth. The crises generated out of it are also used in political manipulation between Earth and Starhome, a colony beginning to press for independence.

The novel opens with the introduction of the crisis about which the protagonist of the novel Roald Vincent is unaware. When he calls his secretary at his office, he realizes that the Chief of the Bureau, Tinescu, is very angry at him and he has to see him as soon as he arrives to the office. As he reaches to the cabin of Tinescu, he overhears the conversation between Tinescu and Giuseppe Capra, the Minister for Extra-Terrestrial Affairs, regarding the safe landing of Starhome. He thinks that the matter is irrelevant to him because he handles Viridis department. However, Tinescu shouts at him and says that Starhome's courier is damaged as it is not landed safely. The safety of Starhome is very important as it is a connecting agent between Earth and new aliens called Tau Cetians. Roald summarizes them:

'They're the first daughter contact. In other words, they weren't contacted by an expedition from Earth, but by one from Starhome – Epsilon Eridani. So far there's been no direct contact between us and them. I've seen a reference somewhere to the establishment of a mission on their planet, and I guess it won't be long now before we have a delegation of them here, too.' (10)

Their delegation has yet to visit the Earth to start a new mission in their planet by Earth, and Starhome is the only contacting agent. Tinescu further says that Starhome has manipulated Tau Cetians; hence, their welcome on Earth should be very proper. He asks Raold to make special arrangements for them, because they have already prepared their way. He explains:

They're technicians, primarily. They don't have a Bureau of Cultural Relations, they don't have enough trained inter racial psychologists, they don't have any of the basic staffs and disciplines we use. And though the captain of that ship only confessed it very grudgingly, we're sure beyond a doubt that the Tau Cetians have proved more than their courier can handle. (11)

Tinescu's words point out the possible threat that the earth may face. The aliens like Tau Cetians do not have any channels through which they may work. They are not like human beings, so they may not think about the aftermaths of any disastrous action. Tinescu put the responsibility of welcome over the shoulders of Raold as he is the head of the department in the Bureau and he also knows the ways of handling aliens.

Raold goes to the Stars Are For Man, a League designed to control and contact aliens and their ships. On his way, he is reported by the guard about the accident happened there. As he arrived there, Rattray, the director of the Stars Are For Man tells him that the wagon arranged for the aliens is smashed by cranks and his seven people are hospitalized with chlorine poisoning, and the police are on their way. He asks Raold to visit the different sections of the League before they depart to the controlling section. There Raold is introduced to Supervisor Susumama, who keeps his eye on the every movement of the aliens. Soon he observed the appearance of Tau Cetians's ship on the sky and the tension flouts in the organization, because the safety of the ship is not fully in the hands of

human beings:

You don't think we'd trust fifteen thousand tons of ship to anything but automatics, do you? The human part of the job is already over – unless the automatics fail, and they're stacked in three-way parallel (23).

However, the ship lands safely on the planet. As Raold takes Tau Cetians's to the wagon, he looks cranks hovering around there. Rattray asks Raold to report the matter to Tinescu and further ask him to report the matter to the police.

Here the Tau Cetians are moved to the safe place where Dr. Bin Ishmael is appointed to take care of them. Raold could not stop himself and goes there to meet them. Ishmael takes him to the private room where the Tau Cetians were kept. Soon Ishmael gets a message that the aliens are not safe there. He articulates the tension as: "They sent an anonymous message to say we'd better keep our aliens under careful guard, because they're tired of monsters wandering around unattended" (41). They both are aware that any mistake can lead to disastrous effects. Though the environment of the novels is related only to the world of aliens and the organizations, it is indirectly related to the threat that the entire humanity may face. The cranks and other aliens are always ready to wipe out the humanity from the earth. This threat is aptly expressed in the words of Ishmael who articulates:

Think we can afford to chance it? The Starhomers are longing to see us mishandle the first Tau Cetians delegation – that's why they're making things deliberately awkward for us. Think of the effects if someone does attempt the lives of a party of aliens! And think how much worse it'll be if Tau Cetians are involved – a race which as you said yourself was already on the way to eventual spaceflight. (41)

The alien races are so powerful that they are ready to spaceflight at any moment. They are probably superior to the humans in respect

to the tactics and weapons. It is believed that the Tau Cetians have a better technology than the human beings. So they are more dangerous than anyone and any harm to them may lead to a direct conflict between them and humans. Therefore, the members of the organizations are ever under-pressure. It is articulated in the novel as:

We didn't hand over potentially dangerous techniques; equally, we didn't infringe on any major racial goals, for fear of taking the spirit out of the species. In concrete terms, the Tau Cetians would doubtless ask for the star drive. They wouldn't get it. By the time they'd developed a world language and their own interplanetary ships, they'd almost certainly invent a star drive of their own – and who could say? It might even be superior to ours, which suffered from all kinds of drawbacks, such as the nuisance of having to use a set of engines once and once only, for some reason I didn't fully understand but which was connected with the effect of stressed-space fields on intra-atomic distances. (42)

They have developed their own world language and their own interplanetary ships. They have certainly invented a star drive of their own, which indicates the technological up-gradation of theirs. Raold also intended to do not involve in the matter but because of the orders of Tinescu and the kind of job he has, he is tracked in the way.

Raold suspects that he may be watched by someone else and he believes that this activity is ignited by the cranks that are in search of an opportunity to attack the Tau Cetians. He also suspects that a lie-detector is used by Klabund to know the affairs of Bureau in detail. However, he is not ready for such invasions. He says:

I do not accept that society has the right to invade the mental privacy of any sane individual – I shot out my hand across the shiny surface of the desk and swept aside the squat

bulk of the addresser, which was large enough to conceal from anyone sitting in my chair something as compact as a lie-detector. (53)

The modern technology that is used in different investigations and for the different purposes has surpassed all the boundaries of being a machine and now the technology is controlling the human deeds as well as human fate. The devices such as lie-detector are used to know the truth, but it has also been used to unravel the private memories of an individual. As a result, humanity has lost the private life, and it has become commodity that can be utilized by others. The invasion on private memories leads the human being to feel insecurity everywhere, and sees chaos in the society.

Raold and Martin reach to the Bureau Office, where they find Raold thinks that he may live to fly in a ship that lifts from a planet like a bit, and he may go into hyper-photonic drive as soon as it leaves the atmosphere, my guts turn over with excitement. The absence of people in the gallery still disturbs his mind. He begins to ponder over the human tendency, which may nowadays become civilized enough to resist the morbid temptation to come and gloat over a man's destruction. According to him, psyching is not cruel, but it is far from kind, and in this case it is the only possible verdict.

Raold meets the aliens in the Bureau Office. These aliens seem to be unravelling the total space, the different planets in the space, the people who live there, their astrophysics etc. Raold expressed that:

Anovel's people appeared to have the mental attributes required for the invention of space travel: an interest in other planets and races, acute intelligence, excellent astronomy and astrophysics – not to mention their unique physical qualifications. In spite of which, they seemed content to take advantage of Earth's starflight monopoly and to permit us to maintain survey missions on their planet. (151)

The aliens are interested in search of

different species in the space where they might create their own monopoly in terms of the starflight. Raold feels the superiority of these aliens over the human race as the aliens have better progress in astronomy and astrophysics. It seems:

planet of inscrutable aliens, intellectually and physically our unquestionable superiors even if they haven't any starships of their own, who've never squawked at any proposition we put to them but have always kept us politely at a distance (156).

The quest of aliens for the different land in order to gain control over them necessarily poses the threat of destruction to the human race. Their superiority proves the inferiority of human being in the scientific advancements.

Micky brings to front the fact that the issue of increasing population is the global problem and no one is free from this chain. As a result, people of the planet have nothing to do in their hands and as a result they have become living dead creatures who do not know their future. He says:

'It's a curious fact, you know,' he mused, 'but we haven't even yet adjusted to our increased lifespan. I hear Indowegiatuk ought strictly to have retired years ago, because the limit was fixed when people only averaged ninety or ninety-five. We have this top-heavy load of people still active, still productive, whom we've shuffled off into cosy pigeonholes, and there they sit, chewing their nails and – I think – dying of boredom before they have to.' (166) The excessive population leads the government to fit them in the pigeonholes. It has created a system where old peoples are living the life of their second childhood. However, there is also hope in the words of Raold who replies that government succeeds to manage the population of the planet and he is sure that one day the old age system will be reversed with the help of scientific developments. He articulates:

'One of these days we'll go beyond what we've

managed so far. We won't be content with postponing the degenerative diseases we call "old age", but we'll actually reverse the ageing process. And I daren't guess what this will do to the society of Earth.' (ibid)

He considers the problem of aging as a disease, but more than that the population explosion is the plague which makes the environment hazardous.

Brunner seems to be reacting to a nascent trend towards superficiality and overconsumption in his own time. He intuitively connects advances in medicine and science with a long-standing human desire for immortality, and predicts the commoditization of health and longevity along with it. He invents muckers, aliens, ordinary men and women who commit horrifying acts of violence against anyone with the help of ICT. The terrifying realities caused due to ICT such as the result of overcrowding, racial discrimination, alien invasions and the loss of any sense of self or personal space, Brunner has created whatever is necessary to create the possibility of such a future ever arising.

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## Evaluating the Use of Moodle to Achieve Effective and Interactive Learning – A case study of Azam Campus, Pune.

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### Abstract—

Today Information and communication technologies (ICT) has become commonplace entities in all aspects of life. Across the past twenty years the ICT revolution in India has touched all aspects of human life and it has fundamentally changed the practices and procedures of nearly all forms of business and governance sectors. Even in education, ICT is making her foot strong. but the cumulative response is not that extensive as in other fields. Many Course Management Systems (CMS) or Virtual Learning Environment (VLE) are being extensively used nationwide. Moodle is among the most widely used open-source Learning Management Systems in the educational sector. Through this article the researcher tries to throw light on the extent of effective use of open-source e-learning tool - Moodle in higher education institutes in Azam Campus, Camp-Pune. A questionnaire based study is conducted in research universe of Azam Campus institutions to evaluate the effectiveness of the Moodle-based e-learning system. The questionnaire is designed to quantify the students' familiarity with Information and Communication Technology and it characterizes the students' enrolment in the various tools and functionalities of Moodle as well as their perspective

toward expanding the integration of Moodle in the learning process. The study results indicate that Moodle is mainly used as an online repository to access course materials and there is scope for optimum use of the interactive learning tools of Moodle. However, the students demonstrated a positive perspective towards expanding the use of Moodle in the learning process.

### I. Introduction

The whole 'leap-service' faculty is often blamed to be over-verbal by the new generation. According to the youngsters the teachers do excessive use of words to convey meanings. Up to some extent we can be agreed on it. In our teaching flow, many a times we forget to consider whether or not students are really understanding and enjoying whatever we are saying. Many educational surveys have brought forward one very interesting observation about the teachers that, the teachers "talk at" the students instead of tending to "talk with" them! Lecture, project, discussion, tutorial or discovery are the traditional methods of teaching, by which the teaching service provider brings the learner into the contact of the subject matter. The effectiveness of this contact results into need of activities and materials. These may be in the form of games; role-playing, demonstration and experiments visit to real life situation, real objects and specimen, symbolical and even pictorial representation.

As per the scientific analysis, man learns through his senses. Of course, the optimal use of human senses and their respective outcome depends learner to learner in which, effective communication is proved to be one of the milestone factors. In order to achieve this, the teacher must understand something of the communication process to the extent that it will enhance a wide choice of his channel of transmitting his message to his students. The best way of helping students to learn is to bring them face to face with the world which education in-

tends to introduce to them. This is done by using real things in real life situation. At this juncture, ICT helps the teacher. ICT comes as a tool for providing more effective learning of factual information, and skills in less time than mere verbalization. Today in the fifth phase of Globalisation, ICT tend to play major role in teaching – learning process. Information and Communication Technologies (ICT) equipment are the most appropriate instructional material in the global world. (Today) The development of e-learning has become an important aspect of teaching and learning.

### **What is Information and Communication Technologies (ICT)**

It has been observed that many times Information and Communication Technologies (ICTs) are associated with computer-based technologies. But the fact is that it is very much friendly with the unadventurous technologies like radio, television and telephone etc also. A long plethora of definitions of ICT are available worldwide but it might be useful to accept the definition provided by United Nations Development Programme (UNDP): 'ICTs are basically information-handling tools- a varied set of goods, applications and services that are able to work together, and combine to form our 'networked world' – a massive infrastructure of interconnected used to produce, store, process, distribute and exchange information. They include the 'old' ICTs of radio, television and telephone, and the 'new' ICTs of computers, satellite and wireless technology and the Internet. These different tools are now telephone services, standardized computing hardware, the internet, radio and television, which reaches into every corner of the globe'.

This paper is organized into four different Sections. The II section tries to introduce the readers with the Learning Management Systems (LMS) and summarizes the main characteristics of Moodle. The III sections deals with nature of the research study and the details of

the research universe. It also discusses the observations of the research. The last section discusses the conclusions and suggestions.

### **II. What are Learning Management Systems (LMS)**

Learning Management Systems (LMS), are also called as Course Management Systems (CMS) or Virtual Learning Environment (VLE) . LMS is a set of software tools that are specifically designed to support the educational process. . 1990 was the decade which gave a swing to the growth of LMS The development of LMS started in the 1990s and grew up since then. Through time, an increasing number of universities across the globe have integrated LMS in their educational systems to improve the effectiveness, accessibility, and flexibility of the learning process. LMS has been adopted by a vast number of universities across the globe.

#### **The Moodle e-learning platform**

Moodle is an effective open-source LMS platform. It aims to create e-learning websites that can be accessed only by enrolled students . In these systems, students can access courses' contents in different formats (text, image, sound), as well as interact with teachers and/or colleagues, via message boards, forums, chats, video-conference or other types of communication tools . In a functional perspective, Moodle has features which can be set up to form course assessment material, such as quizzes and online tests. Moodle is seen as a perfect LMS for higher education because it allows a steady stream of communication, which is essential. These platforms provide a set of configurable features, in order to allow the creation of online courses, pages of subjects, work groups and learning communities. In addition to the pedagogical dimension, these systems have a set of features for registering, monitoring and evaluation activities of students and teachers, enabling the contents' management via Internet. According to the approach of Piotrowski , an e-learning platform represents

a system, which provides integrated support for six different activities: creation, organization, delivery, communication, collaboration and assessment. Moodle is equipped with two supports systems having two different sets of functionalities. The first functionality is resources, which includes the digital materials created by other software tools and uploaded to the e-learning platform, such as Power Point lecture notes, Word documents, Flash animations, and video files. The second functionality is modules, which represent the material created using the Moodle platform. Modules mainly include interaction tools between users (usually students and teachers), such as lessons, homework, workshops, chats, discussion forums, news, wikis, quizzes, and surveys etc. In simple words, Moodle has forums, messaging, chat, comments, and blog posts available for students and teachers to communicate beyond the classroom, which you can access it at your own time, so you don't have to worry about being constantly preoccupied with discussions and questions, you can go on when you have time. Moodle enables and encourages collaboration and teamwork – the communication features in Moodle listed above (discussions, forums, messaging) allow students to work together, share ideas, and ask/answer questions if needed. In Indian Scenario, as far as higher education is concerned, course materials and supplementary resources are just as essential as in-class lectures. In Moodle, you can easily upload and share resources, articles, videos, pictures, and anything else students might need to complete coursework and assignments. In Moodle, assignment submissions are not only limited to school hours – you can submit assignments in Moodle at any designated time, including weekends, early mornings, and evenings. Moodle heartily accommodates learning on the go. Moodle offers mobile eLearning, as it is compatible across a number of device, including smartphones, tablets, and

laptops. Not only one can complete coursework and access course materials from home, one can also do so on the bus, or at your work also from anywhere you have internet access. In short following are the main activities and modules of the Moodle platform.

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### **The Moodle e-learning platform**

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Table 1. Activities and modules of the Moodle platform<sup>1</sup>.

Activity	Module	Description
Creation	Database	allows to build, display and search a bank of record entries about any topic allows to share a collection of data.
Organization	Lessons	represent a set of ordered topics summarizing the instructional materials and allow the access to them through the respective link;
Delivery	Assignments	allow teachers to collect work from students allow teachers to evaluate the student's work and provide feedback including grades, in a private mode allow students to upload assignment files
	Workshops	represent a peer assessment activity with many options [19]; represent a peer assessment activity with many options. allow students to submit their work via an online text tool and attachments.
Communication	Chats	allow synchronous conversation.
	Forums	represent a communication tool where students and teachers can exchange ideas by posting comments
	News	represent a special forum for general announcements allow teachers to add posts and to send emails
Collaboration	Glossary	allows creating and maintaining a list of definitions. represents a mechanism for collaborative activities that can be restricted to entries made by the teacher.
	Wikis	allow users to edit collaborative Web pages provide space for collaborative work.

Carolina Costaa, Helena Alvelos & Leonor Teixeira, "The use of Moodle e-learning platform: a study in Portuguese University" available at [www.sciencedirect.com](http://www.sciencedirect.com), archived on 18 Feb 2017.

Glossary	allows creating and maintaining a list of definitions.
Wikis	represents a mechanism for collaborative activities that can be restricted to entries made by the teacher.  allow users to edit collaborative Web pages provide space for collaborative work.
Choice	allows teachers to ask questions and specify multiple choice answers [19];
Quiz	allows teachers to design and build quizzes with a variety of questions, with different types of answers, such as multiple choice, true/false, short answer [15];
Survey	
Feedback	allows teachers to gather feedback from students using prepackaged questionnaires [15,  allows teachers to create surveys to collect feedback [19];

part of the questionnaire the participants provided information related to the frequency of using the e-learning services and the commonly used components of the Moodle platform. In the concluding part, the respondents provided information related to their opinion about the impacts of expanding the use of e-learning services during course lectures.

The analysis of the data revealed that the majority of students have long experience of using computing technology and Internet services. For example 85% of the students do chatting on a daily basis and 60% of them play online games on daily or weekly bases. Moreover, most students spend more than 2 hours per day on online activities related to their learning. However, is observed that the Moodle-based e-learning system at P.G. Departments in Azam Campus are mainly used to access course materials, including lecture slides, assignments, quizzes, and news. Such course materials are essentially prepared using other software tools, such as Microsoft Office, and uploaded to the e-learning system. It is also noticed that the interactive learning tools of Moodle, including chats, wikis, feedbacks, forums, questionnaires, and surveys, are underutilized. In fact, the interactive tools are usually prepared using the module functionalities of Moodle. These results suggest that Moodle is used as a repository platform for exchanging course materials, and there is still scope for the optimal use of interactive learning tools provided by Moodle. This study also tried to find out the attitude of P.G. students towards expanding the use of E-learning tools in lessons. This research observed a very positive response of the students in research universe for expanding the use of e-learning tools in lessons. This might be attributed to the fact that the Management of Azam Campus have provided a huge computer infrastructure, skill development center and an absolutely free

### III. Nature of the research

In order to assess the extent of effective use of open-source e-learning tool - Moodle in higher education institutes in Azam Campus, Pune, a survey based study was conducted in research universe of Azam Campus institutions. The non-formal interview sessions were conducted and questionnaire was designed to quantify the students' familiarity with Information and Communication Technology and to characterize student enrolment in the various tools and functionalities of Moodle. The investigation also tried to analyse perspectives of students towards expanding the integration of Moodle in the learning process. The questionnaire was comprised of three sections. Through the introductory session the respondents answer those questions which gave information about their gender, age, study program, and preferred devices used to access the Internet. The second

and super-fast Wi-Fi access to each and every student enrolled for any study course in Azam Campus through a huge leased line of 100 MBPS. This has further strengthened the interest of students towards computing technology and Internet services. The results of the study suggest expanding the use of Moodle in the learning process, with particular focus on integrating the interactive learning tools of Moodle to achieve an interactive and effective learning environment.

#### IV. Conclusion

The findings describe a successful implementation of an online learning environment at a systems' compliance level, which was considered an outstanding achievement. Respondents had been able to master some primary functions, such as uploading lecture notes / PowerPoint presentations. With these advances, it was widely appreciated that Moodle had begun to offer students more flexibility over their learning. However, the current survey revealed greater scope for Moodle to influence teaching and curriculum design at a deep level, instead of using Moodle as a repository or material bank. The interactive features of Moodle can be used with increased potential and interest. It's being the transition period, the students were found little tensed while taking such a software as a service provider for their study and ultimately for their future development. This can be overcome, by providing them special know-how programs and practice. This study observed that a great acceptance was observed by the P.G. students in P.G Institutions in Azam campus towards the expansion of use of Moodle for the higher studies.



11

## USE OF ICT IN PREPARING E-LEARNING MODULES FOR EMMRC

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#### Abstract:

Information and communication technologies include communication devices and also its applications like Radio, Television, cellular phones, computer and network, hardware and software .

ICT in education means teaching and learning with ICT. It can lead to improve student learning and better teaching methods.

Present study throws light on the importance of ICT in preparing teaching modules for e-content programmes in 'Office Management and Secretarial practice' domain. Under the Department of Education Multi Media Research Centre of Savitribai Phule Pune University E-learning modules are prepared for the First Year Commerce students. The entire project is prepared through Human Resource Development Ministry, .Government of India, and implemented by the Consortium for Educational Communication CEC, New Delhi under National Mission on Education through Information and Communication Technology (NME-ICT) initiative. Video shooting, of the module prepared by coordinator in the field is further uploaded by the authorities on the websites and student can avail the facility of this open source teaching material. From preparing teaching material to its broadcasting use of various technologies have been used which are effective in this teaching and learning process.

Key Words: e-content, module, open

source, initiative

### Introduction:

Use of ICT in Education means teaching and learning with ICT. ICT can lead to improvement in the learning process of students and better use of teaching methods. ICT is a media available to teachers to explain complex instructions to students in a simple method and ensure students comprehension.

Internet in the education sector plays an important role especially in the process of empowering the technology into the educational activities

ICT help teachers to create interactive classes and make the lessons more enjoyable, which could improve attendance and concentration. In self learning process students avail the facility of open source information through net facility. Through various websites, power point presentations, through live demonstrations students learning become very easy and effective. Through ICT images, delivered talks on their syllabus, and through observing and learning these e-lectures according to their convenience, has benefitted students in various ways. Through this their retentive memory improves. They can use and observe these modules again and again. Before watching e-modules, they have prior hard copy of the script in their hand which is more beneficial to them. Through this teaching and learning process become very easy and effective.

### Objectives:

To understand the nature of e-learning module

To introduce advance information and technologies related to module content

To find out various Advantages and Disadvantages of ICT in education

Methodology: This paper is based on primary data collected from the programme coordinators who have prepared these modules for EMMRC and delivered lectures on 11 modules. 5 programme co-ordinators from different

colleges from Pune city have been selected. A questionnaire comprising 50 questions based on their experiences have been prepared and inferences have been drawn.

The nature of e-learning module :

F.Y.B.Com students have to learn six subjects, in paper 5 Conservation and Preservation students have to learn 4 Units.

1. Environmental History
2. Resource Control
3. National and Regional Culture
4. Cultural Heritage.

Under unit 4 students have to learn

1. Tangible and Intangible cultural Heritage
2. Role of Individual in conserving and preserving the Heritage
3. Conservation and Preservation of Cultural Heritage
4. Government and private institutions in Heritage Maintenance
5. World Heritage Movement.

Every module has

1. Synopsis
2. Objectives
3. Learning object Repository.
4. Summary.
5. Conclusion.
6. Academic Script.
7. Transcript.
8. Frequently asked questions (10 questions).
9. Multiple choice questions (10 questions),
10. Tutorials (5 questions),
11. Assignments (3 question),
12. Misconceptions,
13. Glossary,
14. References of Books and
15. Website References

### For Example:

1) For preparing module on "Role of Individual in conserving and preserving the Cultural Heritage of India" new trends has been utilized for e.g. In large scale tourism activity wherein unrestricted hand touching of the tourists on the carvings and embellishments of the monument lead to the erosion of the monument's structure. On individual level Krupali Krusche and her team is doing conservation and preservation work of Tajmahal. She is a head of the DHARMA (Digital Historic Architectural Research and Material Analysis) research Team, specializing in 3D Documentation of World Heritage

sites. Her team is creating blueprints (laser 3 D models) and eventually is developing 3D models. In case of any natural or man-made calamity these 3D models can help us retain the monument.

Advanced devices like Mobile mapper and backpack manufactured by Leica Geosystems (Switzerland based units) are helpful for 3D scanning and also aid in finding out minute cracks or crevices in the construction.

2) Individuals efforts for Heritage mapping of forts :

We must conserve and preserve the historical monuments i.e. Forts build by Great warrior King Chatrapati Shivaji Maharaj for inspiration of our young generation. Maharashtra state fort conservation committee have chosen the Sinhadgad fort, which will be mapped with help of modern technology and 20 forts in the state will be mapped soon.

The mapping will comprise marking the bastions, fortification walls as well as other historic structures on the fort. Last year Rs. 30 crore has been spent for conservation work. This year Rs 60 crore allotted for various conservation works which will be done in phases.

The mapping will be done by Maharashtra Remote Sensing Application Centre (MRSAC), an autonomous organization under ministry of organizing and planning, government of Maharashtra. Dr. Ajay Deshpande Associate Scientist from MRSAC, who will be taking up the initiative The 3D mapping is done by two modern techniques- "High resolution satellite data imaging and the other would be through lidar technology (lidar is a method which measures distance to target by illuminating it.) (6th December 2016 Times of India – Mirror page 5). For preparing module on Conservation and Preservation of Cultural Heritage The following information is used as latest information .

3) General Conservation Measures and Methods : Ajantha and Ellora caves and their protection measures:

1) Some portions of the façade have fallen. The reinforced cement concrete work support the decayed hanging portion of the cave and it maintains the aesthetic harmony and the unity of the structure.

2) To drain out water from top of the cave, the concealed drain and drip courses were provided.

3) The tree roots were cut and poisoned and the opened joints and cracks were consolidated by grouting/cement.

4) The preservative coat to the stone surface was applied after chemical cleaning, which is a continuous process.

5) The weathered rocks were treated and restored chemically for the purpose of longevity of the sculptures.

6) To check the erosion, it is necessary to grow the plants over the bare rock which will not only check the penetration of water into the cave but will also give protection against heat, cold, rain, wind, pests etc. and shall also maintain the ecology of the area.

7) Photography is strictly prohibited inside the caves as the flash lights may damage the carvings & the paintings in the caves.

8) Entrances to Ajanta cave have sun-screen curtains to prevent direct sunlight from damaging their wall paintings.

9) Fumigation for insect eradication within all Ajanta caves and PVA treatment on the wall paintings are being conducted.

10) New grid doors and windows are being installed as preventive measures against entry of bats and birds.

11) Insecticides and repellants are being sprayed on the affected areas

12) Chemical treatment for the removal of superficial accretions is undertaken

A lot of conservation works have been done by chemical branch of Archaeological Survey of India and conservation activities are going on every year. From these above examples it shows that ICT gives latest information. Through this

information students become aware and become smart.

To find out various advantages and Disadvantages of ICT in education: The main source of information and communication technologies is internet. It has now become a part and parcel of education. Education, like home schooling, can be imparted by using internet. Teachers can upload videos in internet and the same can be accessed by students across the world for their study purpose. Advantages of internet

1. It gives wide range of information instantaneously.
2. Information is available to any one and anywhere (With proper facility of WI-FI)
3. Internet is a source of information available readily on Mobile,Laptops,Computers etc.
4. It gives you latest information.
- 5.It gives lots of Information in varied form of text and in the form of e-mail,images,power point form,map form and in Vedio form, also in tune form etc.
6. Information is always in simple form,understood by various age groups
- 7.Information in the form of images and through live talks are more effective than written script.

Online shopping is also possible through net service which saves time,money and other resources of our country.

**Disadvantages of internet:**

1. Some time wrong information is available
2. Some people are getting addicted to the internet and causing health problems.
3. Hackers can use the internet for identity theft
- 4.Hackers can create viruses and ruin valuable data
- 5.People waste their valuable time
- 6.Pornography that can get in the hands of young children too easily.
- 7.Internet has a lot of ‘cheater ‘sites

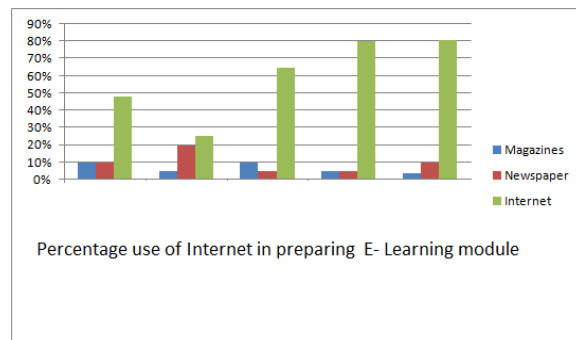
Data interpretation and Findings:

Sources of information used by Co-ordinators for preparing e-learning module for EMMRC.

Table No.1

Coordinator	No. Of modules	Books	Journals	Magazines	Newspapers	Internet
1	4	30%	2	10%	10%	48%
2	3	50%	-	5%	20%	25%
3	2	20%	-	10%	5%	65%
4	1	10%	-	5%	5%	80%
5	1	5%	-	4%	10%	81%

Diagram :1



**Interpretation and Findings:**

From this given Table No.1 and Diagram 1 It clearly shows that out of 5 co-ordinators from different colleges have written their modules with the help of books,journals,magazines,news paper and Internet.65% co-ordinators have used more than 70% of Internet, 25% co-ordinators have used 45%use of internet and 10 %co-ordinator have used less than 40% of internet for writing their modules.

Thus it clearly shows that for writing e-learning modules for the students of F.Y.B.Com co-ordinators have used internet services extensively as well as they have used journals, news papers,magazines and books.

**Conclusion :**

- 1 For preparing E-learning modules 75% Co-ordinators have used more than 70% of Internet.
- 2 More than 35 % Co-ordinators have referred Books,Journals, English News papers and Magazines.
- 3.Due to number of enlisted advantages of internet ,net surfing is common among the Co-ordinators and they have taken help for writ-

ing the module.

4. Co-ordinator has to submit their modules in given stipulated time and therefore they have taken help of Internet widely.

5. The modules on Cultural Heritage of India gives new updates of technologies.

**Recommendations:**

1. E-learning modules are informative and effective should be used frequently according to the convenience of students.

2. This facility is not available in class room teaching. Besides class room learning students must use new concepts through such modules of E-learning. So that one can stay updated with the ever changing modernized world.

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12

## IMPORTANCE OF ICT IN EDUCATION

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CLASS: M.A.PART-II(4TH SEM)

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### INTRODUCTION

To accurately understand the importance of ICT in Education there is need to actually understand the meaning of ICT.ICTs stand for information and communication technologies and are defined, for the purposes of this primer, as a ?diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.? ICT permeates the business environment, it underpins the success of modern corporations, and it provides governments with an efficient infrastructure. At the same time, ICT adds value to the processes of learning, and in the organization and management of learning institutions. The Internet is a driving force for much development and innovation in both developed and developing countries. Countries must be able to benefit from technological developments. To be able to do so, a cadre of professionals has to be educated with sound ICT backgrounds, independent of specific computer platforms or software environments. Technological developments lead to changes in work and changes in the organization of work, and required competencies are therefore changing. Gaining in importance are the following competencies:

- ❖ critical thinking,
- ❖ generalist (broad) competencies,
- ❖ ICT competencies enabling expert work,
- ❖ decision-making,

- ❖ handling of dynamic situations,
- ❖ working as a member of a team, and
- ❖ Communicating effectively.

In recent years there has been a groundswell of interest in how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings. But ICTs are more than just these technologies; older technologies such as the telephone, radio and television, although now given less attention, have a longer and richer history as instructional tools. For instance, radio and television have for over forty years been used for open and distance learning, although print remains the cheapest, most accessible and therefore most dominant delivery mechanism in both developed and developing countries. The use of computers and the Internet is still in its infancy in developing countries, if these are used at all, due to limited infrastructure and the attendant high costs of access.

Information and communication technology (ICT) has become, within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. One of UNESCO's overriding aims is to ensure that all countries, both developed and developing, have access to the best educational facilities necessary to prepare young people to play full roles in modern society and to contribute to a knowledge nation. Maintaining a capacity to advise national governments on the use of technology in schools and, in particular, on the optimal balance, given local circumstances, between ICT and older educational technologies and assisting countries in developing educational software and materials that reflect their own national and regional cultures are key components of the Organization's strategy to achieve the Education for All goals.

The main purpose of the Strategy for Information and Communication Technology Implementation in Education is to provide the prospects and trends of integrating information and communication technology (ICT) into the general educational activities.

There are some unavoidable facts in the modern education; First, the ICT has been developing very rapidly nowadays. Therefore, in order to balance it, the whole educational system should be reformed and ICT should be integrated into education.

Second, the influence of ICT, especially internet (open source tool) cannot be ignored in our student's 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 be wisely handled by the educational institutions. The students cannot be exterminated from this case. They can have and do with it wherever and whenever they want. Schools, as a matter of fact, do not have enough power and time to prevent or stop it after school times. Meanwhile, most parents do not have enough times to accompany and control their children. So, the students have large opportunities to do with multimedia games or online games or browsing the negative and porn sites. Having been addicted, the students will have too little time to study, and even do not want to attend classes.

In such situation, education institutions play an important role to eradicate these problems. One of which is by facilitating the students to do edutainment or educational games. Schools can let their students be familiar with educational games adjusted by their teachers. Besides, they can also support and facilitate their students to have their own blogs in the

internet. A lot of WebBlog providers are free to the users, such as WordPress. In their blogs, the students can create and write something, like an article, poem, news, short stories, features, or they can also express their opinion by an online forum provided in the internet. They are able to share experiences throughout their blogs to others from all over the world. I think it will be an interesting activity for them, and it will lessen their time to visit the negative or porn sites existed.

By doing so, I think our young generation will get more and more information and knowledge by browsing in the internet. They can also create innovation in web design that it may be out of the formal curriculum content, but it will be useful for their future.

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, there should be an active participation, initiative and good will of the schools and the government institutions to enhance ICT implementation at school.

Fifth, the teachers should be the main motivator and initiator of the ICT implementation at schools. The teachers should be aware of the social change in their teaching activities. They should be the 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 followings are the aim and objectives of ICT implementation in education:

1. To implement the principle of life-long 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 (development of learning skills, expansion of optional education, open source of education, etc.)

8. to support schools in sharing experience and information with others.

### CONCLUSION

Therefore this paper is an attempt to present the important issues that must be addressed by both pre-service teacher's education and in-service teacher professional development programs if schools and other educational institutions are to fully exploit the potential of computers and the Internet as educational tools. In terms of using internet and other ICT as a resource for lesson preparation, most of the teachers interviewed, admitted to never or rarely using it, while very few used the internet to gather information sporadically or regularly. The teachers particularly felt that they had both access and training inadequacy and hence were unable to utilize internet and other facilities. More teachers were comfortable however, with using computers as an individual than as a teacher. A positive find is that all those teachers who are not well versed with the computer and other technology, expressed keen interest in undergoing training for the same. They felt that if trained, they would be in a position to make use of resources available in the school. Support of school administrators and, in some cases, the community, is critical if ICTs are to be used effectively. In addition, teachers must have adequate access to functioning computers (or other technologies) and sufficient technical support. Shifting pedagogies, redesigning curriculum and assessment tools, and providing more autonomy to local schools all contribute to the optimal use of ICTs in education. Very few strong examples of integration of ICT into classroom teaching learning is visible, though some schools do use the audio visual aids and

integrate teaching of some lessons. Largely however, even where ICT is used in the classes, it is usually as an information source and not a part of core learning process.

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13

## IMPORTANCE OF ICT IN EDUCATION

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Information and Communication technology has become a regular interface in all aspects of our lives. ICT has fundamentally changed the way we govern, conduct businesses, and disseminate information through media. It is of no doubt that education as a field has also embraced the changes brought upon this new era in the last 30 years. ICT's have become in a very short span of time one of the basic building blocks of modern society .in this paper I seek to explore the advantages of use of ICT in education and more specifically look at the role of teachers in enhancing the learning experience.

Today use of ICT in educational sector is associated with enhancing quality of education and is seen as a modern aid to teaching and learning.. ICT's role in educational sector is seen as engaging students and teachers and making knowledge more accessible. ICT is seen as a tool for students to discover learning topics, solve problems and provide solution to problems in the learning process. ICT helps to keep pace with latest developments and remove communication barriers such as time and space. Digital libraries created allow teachers, students and professionals to access research material and course material from any place at any time. ICT can be of tremendous use in countries where universalization of education is targeted and dissemination of education to disadvantaged groups is concern.

Accordingly there has been substantial importance given to incorporating use of ICT in education globally. UNESCO considers that ICT can contribute to universal access to education, equity in education, delivery of quality, learning and teaching, teacher's professional development as well as improve education management, governance and administration provided the right mix of policies, technologies and capacities are in place.

The Millennium Development Goals does not explicitly mention use of ICT in education however it does play an important role in achieving goals such as broadening access, eliminating exclusion and improving quality of education and broadly meeting the education for all goals.

ICT can be beneficially leveraged to disseminate information about and catalyze adaptation, adoption, translation and distribution of sparse educational resources distributed across various media and forms. This helps to promote its widespread availability and extensive use. The Government of India in its National Policy on ICT in School education (2012) states that:

“There is an urgent need to digitize and make available educational audio and video resources, which exist in different languages, media standards and formats. Given the scarcity of print resources as well as web content in Indian languages, ICT can be very gainfully employed for digitizing and disseminating existing print resources like books, documents, handouts, charts and posters, which have been used extensively in the school system, in order to enhance its reach and use.”

With all the emphasis on ICT there is a definite consensus that using ICT in educational sector adds to the value but at the same time it is also cost intensive. Traditionally state provides for financing, provision, administration of educational activities. To integrate use of ICT into schools and colleges requires basic facili-

ties such as electricity that is readily available, availability of internet, computer penetration among others. To this end most countries are eager to promote such use but lack such facilities. In the developed countries and middle income countries it is easier to integrate ICT in classrooms. Few countries with advanced ICT infrastructure where computer penetration along with broadband internet access is extensive have the ability to offer ICT based courses. South Korea is a unique example where there are 15 single mode virtual universities that offer courses from fields such as technology, management, law, education, social sciences, languages and theology.

ICT provide an exciting dimension to the art of lectures. Stereotypical formats of lectures have an element of monotony. Use of text, sound, visual clips can be used to motivate and engage students in the learning process. Does this mean that the teachers are redundant in face of modern technology taking over? After all, a computer can work tirelessly and is capable of teaching students for 24 hours of the day!

On contrary, there is a greater need for teachers with this additional dimension being introduced in the educational sector. Teachers play an instrumental role in adapting technology and integrating it with the curriculum and need to be trained in the ability to differentiate the appropriate use of technology in order to make it effective. The teachers have to train themselves in how to use such technology and how to appropriately use it. Thus the teacher plays a vital role in maintaining hold over education and pedagogy rather than getting lost in the maze of new gizmos, gadgets and software.

Use of technology in the classroom places new demands on the teachers. Today teachers need to keep up with the massive amounts of content that students can access online at a click of a button or swipe of a phone. Use of internet now demands teachers to keep abreast of lat-

est developments in their respective fields. Yet today teachers can no longer expect to know more than his/her students. The teacher's job profile while encouraging use of ICT is akin to a sieve. In simpler words it now encompasses guiding the students to process through the multitude of information and accessing content. The teaching now has taken a shift to being more teacher centered form of delivery to student centered form of delivery

In addition to financial challenges some operational challenges also exist. Teachers will be required to trained to use ICT. There can be a psychological barrier or lack of motivation to learn more skills on part of the teachers as they might feel threatened by newer forms of ICT that students may understand better than teachers do.

A word of caution resonates when scholars denote the use of ICT in classrooms. Professor John Sweller, University of New South Wales developed the cognitive load theory in 1980's. The theory mentions that people cannot read and listen well at the same time. One of the effects in cognitive load theory is the 'redundancy effect' -which states that if one form of instruction is intelligible and adequate then providing the same material in another form (such as a Power point presentation) proves to be redundant and can actually hurt understanding. This is quite contrary to what is usually pushed in schools and colleges to depict use of ICT and in a sense to depict the learning institutions as truly modern in the sense of the term.

Currently there is little evidence to study student outcomes that policymakers hope to achieve by integrating ICT in educational sector. In USA one to one laptop projects in primary school didn't lead to measurable improvements in reading or writing skills, nor did it harm them. In Peru which has the largest deployment of computers globally, there has been expansion in computer use both at home and schools but there has been no evidence of the effects on

outcomes .

**Conclusion:**

The adoption and use of ICT has a positive impact on teaching and learning and research processes. ICT enables wider access to education and cuts down on geographical barriers. 1999 Human Development Report stated that more than half of the GDP in OECD countries is knowledge based. Undoubtedly with the establishment of knowledge society ICT is the key factor for economic growth and social wealth. Naturally educational institutions all around the world have been undergoing change to meet the demands of the knowledge society. Schools, colleges and Universities are expected to prepare individuals to be proactive members this knowledge economy. And ICT in education is imperative!



## Importance of ICT in Education

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### Abstract:

Information Communication Technology is one of the keywords of the modern world. ICT is used in the fields of Science, Business, finance, banking, library, law and even Education. E-learning, Blogging, E-portfolio, AWE system, CAL, PBL, TAL etc are the various facilities which are available due to ICT in teaching learning process. Internet facilitates technology based learning. The present paper deals with its details.

### ICT: An Introduction

Creativity and dynamism are associated with technology. The 21st century is the era of Information Technology. World Wide Web(www) is useful for students, teachers, lecturers and educationists Information. Communication Technology is useful for exchanging information, retrieval of information, processing it, storing it and using it for communication. Distance Education through ICT and Open Universities are new options for working professionals, students who shoulder responsibilities of earning bread for their families. Television broadcast helps in educating students effectively. For example, medical students, farmers, sports persons can be trained for practical performance with the help of video clips. Online certification courses conducted by Microsoft, Oracle corporation etc. Audio-

visual aids for K.G to P.G students are successfully used to educate them. Language laboratories are set up for teaching and learning phonetics. L.C.D projectors are used for effective teaching for large number of students. Webinars and online conferences are popular among teachers and lecturers.

### Role of teacher in the use of ICT

Educate teachers and staff for use of technology. A teacher has to update himself with the rapid growth of technology. Question papers for tutorials, unit tests, annual examinations can be set with the help of computers. Even papers assessments and preparation of marklist can be done on computer. Evaluation is a very important aspect of teaching learning process. Aims and objectives achieved by learner are evaluated with the help of computer. Examples of Online examinations- Entrance examinations for admission in foreign universities, On-line examination of the subject- Information Technology for std XII, Online exam for MSCIT course are conducted by Maharashtra Knowledge Corporation (MKCL)

### ICT in teaching Learning process

Concept of multimedia- multiple media like text, graphic Art, sound, , movies, animation are used to represent any kind of information. Educational softwares are developed for effective teaching learning process. The subjects like Botany, Chemistry, mathematics, Physics, Zoology, English and Social Sciences. The interactive CDs regarding entrance examinations of Medical and Engineering examinations. Computers and internet play great part in Research which is one of the important things in education. Teacher as a guide, can use computer to facilitate teaching learning process. E-learning- use of electronic device for learning is called E-learning. Aspects of E-learning are Various learning styles, intellectual skills, Verbal information, Physical skills etc.

Evaluation methods and self- assessment include feedback, performance based

learning, It is an interesting process because of active participation, affordable tools, at per convenience .

E-learning models are developed to impart quality education by integrating educational technologies. It facilitates exposure to practical knowledge outside classroom by integrating educational technologies in learning process.

Blogging- Language learners' blog posts can serve as an important source of data for researchers. It give teachers thoughts and learning processes of their students.

According to Maloney and Campbell-Evans (2002) blogging can be regarded as interactive journal writing that stimulates reflective learning and critical thinking. Accessibility to blogging can result into building a 'reading culture'. Reading at various educational levels contributes to the development of vocabulary, grammar, reading, writing, listening and fluency.

Blogs are a form of E-portfolio – a digital record of a student's work.. Student can show the blog to a future employer as a proof of their ICT skills. His audio recordings can be the proof of his speaking skills . The written commentary in the blog could be an evidence of his written work. The chat and collaborative talk content are useful to check how they work in team.E-portfolio can be created on internet by using specific tools. One of these tools can be found at LiveBinders.com . It is free in its basic form . It allows students to keep digital content like articles, written material, videos in an electronic binder, which is organised by tabs and subtabs. For example, 'divided screen' layout. Students can upload their written text on the left hand side of the screen and they can upload their commentary on the right hand side. They can share the Portfolios produced by LiveBinders with their teachers and other students for assessment and for comments . LiveBinders button helps us to add it to our browser by dragging it from the LiveBinder's

website when we sign up and then click on the button when you want to add any content from the website to your portfolio. An excellent example of an e-portfolio of that type is one produced by Shelley Terrell(www.livebinders.com) which includes a mass of pages and tabs relating to all her work in the domain of ICT and education. Videos for using LiveBinders are available onhttp://www.teachertrainingvideos.com/binder/index.html

AWE system- Automated writing evaluation is popularly used to reduce grammar errors in writing. Students can use an online AWE system easily refer internet resources for information about language usage and development of idea.

SEN(Special Educational Needs)and Assistive technology- Self operating prompting systems are helpful for SEN learners to understand and use language. List of useful phrases and words can be provided to SEN learners with audio video examples through technical devices like mobile, tablet computers etc. English language learners can use technology like voice recording apps for voice recording to record themselves reading aloud in English which teachers can access later and suggest improvements. This is helpful for shy students who hesitate to read aloud in the class.

BYOD (Bring Your Own Device) or BYOT(Bring Your Own Technology) is a popular approach in the USA and the UK. It encourages students to bring their own devices like tablets, mobile phones or laptops for completion of educational tasks.

WEB based learning: E-lessons are developed with web based technology . Instructional strategy ( ie. Ideas and activities) is decided at the first stage. Suitable technology for digital resources is selected . Proper documentation is important in designing website . website must be reviewed before uploading. The websites should be modified s per the necessary changes after review . Technology Aided

Learning

Static Web pages- Microsoft word has facility to save file in a HTML Format. Internet Explorer, Netscape etc are the standard browsers which can display HTML webPages of a website. A hyperlink can be developed between the topics which are to be learnt. Students can view and use it for their study purpose by downloading and taking prints.

Virtual classroom- A virtual classroom is a platform which gives access to advance learning for Students and teachers who are separated from each other due to time and place. Video and Audio based courses, Animated courses are available for students. WiZiQ's virtual classroom, Second Life Virtual classroom etc are examples of virtual classroom.

Role of EDUSAT- EDUSAT was launched in geosynchronous orbit on 2nd September 2004. It is the first Indian Satellite dedicated for education exclusively. It is developed for lectures which are based on audio visual interactions in virtual classrooms. EDUSAT provides Voice conferencing, Radio broadcast, TV Broadcast etc. Educational programs on radio and TV are broadcast with the help of EDUSAT network. As radio and TV are easily accessible in urban as well as rural areas, it is very useful in disseminating not only academic courses but also social education like health education, Spiritual education etc.

CAL(Computer Assisted Learning) - Teacher can make teaching-learning process interesting by using Computer. Use of special multimedia software packages and hardware is included in Computer Assisted Learning.

PBL(Project Based Learning)- Use of internet contributes to Project based learning. Projects are assigned to group of students which are completed with the help of computers and internet. So it becomes very effective in learning process.

Collaborative Learning: A small group of learners at various locations participate ac-

tively in collaborative learning. In the era of technology, distance learning is possible. The planned activities and responsibilities are informed to the group. The achievement of aims and objectives of the course are evaluated at the end of the year.

Technology Aided Learning (TAL)- In TAL student can learn at their leisure time. Audio video CDs can be developed and used. Web based courses are available for anybody, anywhere and at anytime. It is useful to develop interest and increase active participation of students.

Precautions to be taken -While using technology for educational purposes we should consider the following things:

Any image from internet which you wish to use, it is mandatory to take permission from copyright owner to use it.

Fair use- In certain spheres, a limited amount of copyrighted material will be probably used. For example, quotes from a book for its review are needed to be used. This is similar to video and audio. If for example, we use a number of images for a set of Power point slides, to be shown to a few group of students for a certain course, it will be called as fair use, because the slides are not used for commercial use. But if we use the same images on a blog which can be accessed all over the world, it wouldn't come under the ambit of 'fair use'.

Useful rights- There are various degrees of usage rights. Some owners of images don't like their images to be modified but they don't complain if their images are used in their original format. In order to avoid problems of infringement of copyrights, sophisticated searches should be made. ELT pics- [www.eltpics.com/index.html](http://www.eltpics.com/index.html) is a website of images created through the contributions of teachers. This site also provides lots of useful information about downloading and using images. This is a useful source of images for teachers. The images are copyright free but can not be used for commer-

cial purposes.

#### Conclusion-

Thus ICT is a boon for us. It facilitates Learning strategies . It also consists of ICT in teaching Learning process, E-learning, Blogging and E-portfolio for education. AWE system-SEN(Special Educational Needs)and Assistive technology, BYOD (Bring Your Own Device) or BYOT(Bring Your Own Technology) ,WEB based learning Virtual classroom etc. Role of EDUSAT in education is also noteworthy. Its contribution to education is worthy of its cognizance and its appreciation.

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## DIGITAL DIVIDE AND ICT IN EDUCATION: EQUALIZING OPPORTUNITIES

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#### Abstract:-

The term 'Digital divide' refers to the inequality of opportunities regarding the access and use of Information and Communication Technology (ICT). This inequality could be between individuals, groups, educational institutions or geographical areas. The government of India is very keen about making India a digitally advanced nation. It has taken many initiatives to attain the goal; but the fact is that, these efforts, to a large extent, are confined to cities and urban areas. A significant part of rural India is still deprived of the benefits of digital revolution. The reasons could be many, but unless rural India becomes technologically empowered, the dream of 'Digital India' will remain a dream. Educational institutions in the country are looking forward to this ambitious project as it will expand the horizons of their performance with respect to quality and quantity. The present paper discusses the reasons of digital divide in educational institutions in India and the measures that can be adopted to minimize the divide.

#### Keywords:-

Digital divide, digital highway, online platform, digital infrastructure, e- governance.

#### Introduction:-

Digital India is an ambitious project ini-

tiated by the government of India. The purpose of this project is to empower the country to use digital resources to keep pace with the global standards. The government further plans to establish digital highways across the country where all the Indians can derive the benefits of e-governance leading them to faster, transparent and effective administration. One of the key aspects of this initiative is to establish digital network amongst the educational institutes across the country. This will support the educational institutions to elevate their standard and the students can compete with their global counterparts.

Conceptually, the project is praiseworthy. The use of ICT plays a crucial role in making our life easy, simple and more meaningful. At the same time, there are few aspects which hold us behind in joining this great revolution. Especially in educational segment, where ICT needs to be introduced vigorously, statistics shows that we are far behind the desired target. The revolution has reached a marginal number of educational institutions in rural India. There is a dire need to provide and strengthen digital access to such educational institutes to curb the digital divide.

**Statement of the Problem:-**

The digital divide across the educational institutions in India is holding back its expected pace. Lack of digital infrastructure, digital literacy and awareness are few factors responsible for the divide. The digital divide adversely affects the process of imparting quality education, academic administration, provision of adequate resources to the learners and eventually the quality of the end receiver i.e. the learner. This in turn, holds back the progress and prosperity of the country.

**Objectives of the paper:-**

The present paper is written with following objectives:-

a. To understand the concept of digital divide in educational institutes

b. To study the reasons behind the digital divide in educational institutions

c. To suggest measure to strengthen ICT initiatives in educational institutions

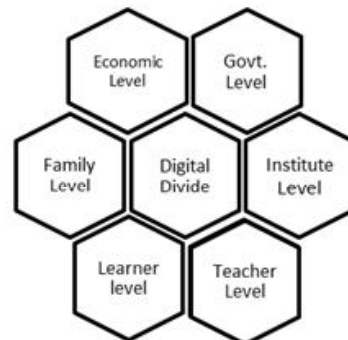
**Discussion:-**

a. Digital Divide in Educational Institutions:-

India has very large geographical area with 22 official languages and 1652 mother tongues. The practices of imparting education vary from state to state. Barring few states like Maharashtra, Kerala and Tamil Nadu, most of the other states lack adequate facilities to provide quality education. The digital revolution aims at providing Information and Communication Technology resources across the educational institutes right from primary school to the institutes of higher learning across the country. This has led to digital divide. Schools in cities, urban or semi urban areas have succeeded to grab a significant part of government assistance to introduce ICT in their institutes. A large part of the country has still remained underprivileged. This gap has deprived learners in rural areas to equalize their potentials with that of cities and urban areas as they lag behind in requisite skill and expertise required to handle the ICT resources.

b. Reasons behind Digital Divide:-

The digital divide is an outcome of many segments affecting the process of delivering quality education. It ranges from the attitude of the educators to the digital infrastructure facilities. Few reasons behind the digital divide are listed below:-



Government Level	Institute Level
▪ Inadequate funding	▪ Lack of digital infrastructure
▪ Frequent change in policies	▪ lack of technical support
▪ Corruption	▪ Unqualified teachers
▪ Bureaucracy and red tapism	▪ Maintenance related issues
▪ Regional imbalance	▪ Lack of will power to change

Teacher Level	Leamer Level
▪ Lack of training	▪ Lack of access to facilities
▪ Lack of competence	▪ Intrinsic limitation
▪ Lack of confidence	▪ Indifference
▪ Resistance to change	▪ Inadequate time availability
▪ Negative attitude	▪ Poor understanding level

Family Level	Economic Level
▪ Lack of support	▪ Expensive digital infrastructure
▪ Gender related issues	▪ High cost of hardware and software
▪ Financial condition	▪ High cost of maintenance
▪ Attitude of family members	▪ Poor loan facilities
▪ Prevailing customs and traditions	▪ Less returns on investments

c. Effective implementation of ICT initiatives in educational institutions:-

Despite the challenges cited above, the fact cannot be denied that the use of ICT is instrumental in giving a boost to the rapid development of the country. There is an immediate need that all the educational stakeholders pay attention to the limitations in application of the ICT countrywide and work upon it. The road of India becoming a superpower, no doubt, passes through the tunnel of the use of ICT by the common people at large. This requires innovative and economical ideas to popularize the use ICT across the country. Following suggestions can prove to be useful in extending the scope of ICT in educational institutions:-

i. Sharing of digital infrastructure :- Considering the financial limitations, educational institutions can come together and establish a common platform to share digital infrastructure. This will significantly reduce their financial burden. Such common platforms can even afford to procure state of the art facilities, hardware and software to educate the learners in a more effective manner.

ii. Public Private Partnership (PPP):- Educational institutions can establish collaborations with local private organizations for fi-

ancial assistance. This will boost availability of funds required for the procurement and maintenance of digital infrastructure.

iii. E-Content Development:-

Educational institutions can develop e-contents of various subjects and make it available to the other institutes who are less or under privileged with respect of ICT. It can also help generate revenue for further investments in ICT initiatives.

iv. Sharing of Expertise and Knowledge:- Educational institutes having ample ICT resources and expertise can share the same with the needy institutes. This will help to equalize the opportunities available to the learners. This will give a boost to mutual cooperation initiatives.

v. Industry academia interaction:- Education institutions can launch collaborative learning projects with the industries in the vicinity. The industries will share their digital resources and expertise with the institutes and will in turn receive trained human resources. This will lead to mutually rewarding association.

vi. Virtual Classrooms:- With the help of virtual classrooms, rural learners will enjoy the privilege to have access to the lectures of the experts in particular subjects. They can interact with the experts, ask doubts and get their queries solved. This is less expensive and the concept of 'global classrooms' will be truly materialized.

vii. Digital contents Libraries :- Educational institutions can establish libraries with digital contents where they can maintain an inventory of cds on digital lectures as well as cds of various audio video programmes broadcasted on radio and various television channels. These contents are easily available online. A lot of such contents are having open source license and are free.

viii. Language Laboratory :- Language barrier is considered as a major impediment in the process of learning. ICT helps to overcome

this barrier by way of 'Language Laboratory'. Establishment of language laboratory can help students to understand a language in its true sense. Students can also practice to read and write a language through the laboratory.

ix. Online tests and examinations:-

Students appearing for various competitive examinations can use ICT to prepare for the same. The digital contents for such examinations consists of online lectures by the experts, various search engines, which can be used to derive necessary information. Students can also take online tests to assess their progress.

x. Digital Text and Reference books (e-Books) Educational institutes can download and distribute e-books available on various academic websites in addition to the regular text books. These are free and updated more frequently than traditional books.

xi. Social Networks:- Students can use group webpages, social networking sites, Wikipedia, blogs, virtual communities and other interactive learning resources to enhance their competence level. They are exposed to the global explosion of knowledge and are able to keep themselves updated to face various challenges.

xii. Screencasting :- Screencasting is the process of sharing a digital screen with other learners across the globe. The educator can share his ideas and views on a particular topic with a large audience in real time. Learner can raise questions, get answers, they can even pause and rewind the process. A conventional classroom can never offer this facility.

xiii. Learning Management Software:- Learning management Software (LMS) help an educational institute to administer all academic and administrative activities digitally. The activities consist of admission, teacher and students' biometric attendance, online examinations, online assessment, online result declaration and many others.

#### Conclusion:-

In view of the above discussion, it can

be inferred that the ICT in education is no longer a luxury; it has become the need of the hour. It is difficult to survive and perform in the globally intensifying competition without optimum use of ICT. Though there is dearth of resources, few innovative ideas can help overcome the problem. Instead of flagging concern without any action, now is the time for all the stakeholders of education to come forward and contribute their share to this digital march.

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## IMPORTANCE OF ICT IN EDUCATION

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### Abstract :

This paper is an attempt to point out the importance of ICT in education. At the outset, I tried my level best the definition of ICT, its wide application, which is indispensable. Globalization and innovations in technology have led to an increased use of ICT in all sectors, education is no exception. It also focus on nature and scope of ICT, prospects of ICT in education, the impact of ICT on teachers and teaching methodologies.

Key Words: ICT Internet, TV. Communication Technology, Educational Revolution

### Introduction

Today the entire world is surrounded by media, such as radio, television, newspapers and computers. All these media comes under the overall umbrella of what are known as ICTs. It is the dire need of time to use such ICTs in education for overall development of students. Today is the day of demand for access to education increased with the rise in living standard and the trend towards a knowledge based society. At the same time , rapid development in information and communication technology ( ICT) have created new opportunities to enhance the rich and qualitative education. Now a days many schools and colleges are using ICT to develop course materials, deliver and share the course

content, lectures and presentations; facilitate communication among teachers and students.; conduct research and provide administrative and management services. Because ICT can enable teaching and learning from anywhere at any time. It is seen an effective means to provide lifelong educational opportunities to one and all. " The principal goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done". Jean Piaget (1896-1980). The quality enhancement in education is the growing concern of all schools and colleges across the country. It is central to our development since it empowers people and strengthens nations. It plays a vital role in opening doors to lift people out of poverty.

In this age of Information and Technology , the technology that has influenced almost all walks of human existence including present teaching-learning and other academic activities. This Informaion and Communication Technology (ICT) has initiated new possibilities into the classroom making a deep impact on perspectives about teaching and learning. The role of a teacher, the nature and context of learning, as well as the function and relative importance of course content have all been challenged and re-defined. Therefore, technophobic teachers have no place in this new world order (Barad, 2009). Information and Communication Technology is not a teaching method or theory, but rather it is a tool that assists teachers and learners by providing an enhanced access to different types of media. For teachers, ICT is a professional resource, a mode of classroom delivery, and a source of valid and valuable text types. For students, ICT provides opportunities to communicate more effectively and to develop literacy skills including skills in critical literacy. It is valuable tool for researching , composing and responding, and viewing and presenting in English.

### Nature and Scope of ICT

ICT based education at all levels have

numerous advantages over conventional mode of imparting education. As Bob Talbert quotes, "Good teachers are costly, but bad teachers cost more". ICT provides a corrective and effective solution to this basic issue. Today information is resource and knowledge is power. ICT provides any one to access vast information resource available on internet. ICT skills is one of the problem for the use of the ICT in education. The institutes where ICT is going to be integrated in education, first of all their teachers must know about how and when to use ICT tools to achieve particular purposes. ICTs become increasingly affordable, accessible, and interactive their role at all levels of education is likely to be all the more significant in making educational outcomes relevant to the labour market, in revolutionizing educational content and delivery, and in fostering information literacy. The use of ICT in education not only improves classroom teaching learning process, but also provides the facility of E- learning.

The use of ICT in language teaching can be made through computer, internet, e-mail, interactive multimedia, mobile phone gadgets, LCD projectors, interactive white boards, video conferencing etc. The incorporation of ICT provides an unlimited scope for the teachers and learners to communicate with the people worldwide, gives exposure to variety of languages, opens up an opportunity of using online resources, and most of all enhances independent learning capacity by enabling students to organize and present information in a variety of forms and compose their own work more easily and professionally.

From time to time, the government allots huge funds for the projects that are expected to raise the standard to improve and enhance the language skills of our students. It is the turn of ICT now and the focus is on integrating ICT in teaching-learning process. It is widely known that technology has changed our lives dynamically. Technology is playing a very

important role in education. It has drastically changed the way in which we communicate, work, trade, entertain and learn. The quick development of technology offers anyone willing to learn a foreign language countless ways to gain and practice linguistic knowledge. English teachers have a chance to employ this tool to make the process of learning attractive, challenging and varied.

### **Prospects of ICT in Education**

The use of ICT in education itself is evidence of learner centric process and not the process driven by teachers. In countries like India, effective use of ICT for the purpose of education has the potential to bridge the 'digital divide'. The ICT has tremendous future in developing country like India.

Quality of education can improve through the extensive and optimal use of audio-visual technologies and internet. The use of ICT should have been made obligatory to each school and college. Rural schools and colleges must train teachers and students to use these new ways of application of ICT in their syllabus and update their knowledge. Learning through ICT drives away the boredom in learning, it helps us to reduce the percentage of drop out rate and even we will overcome to some extent the problem of students absence from the classroom. Digitization of libraries of all educational institutions should be done on front foot. Today in the scenario of globalization, we have to access knowledge through ICT in order to keep pace with the latest developments.

Today, the use of ICT would be the best supplement to the traditional methods of teaching. Today, experiments of making substitute to the teacher itself are in progress. Tools like robot and audio-computer software are being designed to remove teacher completely from the classroom. However, it is not possible. Without guide or mentor the innovative software and hardware are useless. Therefore, it is better to use resources in collaboration to each other. As

per saying, if we see the learning process through our senses, 94 % learning perceived through hearing and sight. However, 83% learning is done through sight. Audio-visual aids, especially ICT, appeal to both of these senses. These ICT tools can be divided as traditional and modern tools. In traditional tools, we have 1) television and radio, 2) film strips, slides and OHP, 3) language laboratory, 4) cinema, and 5) video clips. The modern tools are mobile applications, computer software, tablet software, internet websites, interactive white board, documentary cinema, etc.

### **The Impact of ICT on Teachers and Teaching Methodologies**

Today in this modern age, ICT has been made compulsory in many schools and colleges. It is the best medium to impart update knowledge of students. Apart from the infrastructure, a necessary pre-condition for ICT benefits, the quality and quantity of ICT use in education is crucial in imparting on learning outcomes. In education, have teachers used ICT on teaching practices? It summarises the considerable evidence concerning the working and teaching practices of teachers and examinees the more direct effects of ICT on teachers motivation, skills and confidence which in turn impact on the teaching process.

### **Conclusion:**

The use of ICT in education provides new opportunities for students in the keen throat competition of the world. There is only the wider use and innovative application of the ICT by learners and teachers. ICT helps in education to access, select and interpret information. It also help to evaluate their work to improve efficiency, to be creative and take risks, to gain confidence and independence. Dunkel (1990) asserted that the possibilities of computer technology as a tool could include increasing language learners' self-esteem, language proficiency and overall academic skills. It is tremendously transforming every aspect of students

life. It help the students to develop a range of social learning skills including communication, negotiations, decision making and problem solving. It makes the knowledge easily accessible and improves the quality of education.

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## ROLE OF ICT IN E-TEACHING

Dr. Shradha Jai Prasad

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### Abstract

Teachers constitute a major input in the accomplishment of educational goals and objectives. No education system can rise above the quality of its teachers. Hence, teachers are indispensable within the teaching – learning process. In the light of this, it is impossible to think of education without the contributions of teachers. The teachers have a vital role to play is not in doubt, and effectively surmount the enormous task of capacity and nation building. Teachers must be abreast of all new development around the world more so that the world is now seen as a global village. In the preparation of teachers at all levels of our educational system, ICT has a lot to offer in this direction. However, the usage ICT in facilitating teacher education is still a myriad as many of the teachers are not ICT literate and those under training in Colleges of Education, Institutes of Education and Faculties of Education in universities are not fully exposed to the use of ICT in the acquisition of skills and practical teaching. This is a great challenge facing the effective use of ICT in teaching and learning process. This research paper focuses on role of ICT in E-Teaching.

Key words: E-Teaching, ICT, Teaching-Learning Process.

### What is E- Teaching?

Simply defined, E- Teaching is an electronic teaching. It is technically the same thing as regular classroom teaching except that e-teaching is presented in an electronic media.

With the use of internet services, the traditional method of disseminating information on universities courses through leaflets and other print outs are becoming obsolete. The internet is offering a different approach by making the universities worldwide to promote and advertise their academic programmes to much wider domestic and international audience. E-teaching is internet enabled teaching. It is the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance. In E-Teaching, Teaching and learning is one to one, more interactive and Learner centered.

### E-Teaching Tools:

- ❖ E-mail
- ❖ Chat
- ❖ Online Forum
- ❖ Web
- ❖ Video Conference
- ❖ Learning Management System

### Prospects of E-Teaching in Teacher Education:

The pace of development of ICT in every facet of human life is quite appreciable. In as much that ICT has been found to be an indispensable tool in various facets of human society, education too has adopted ICT in various ways since it has been found to be of useful support in teaching and learning process.

Teachers as nation builders cannot afford to be left behind in the revolutionary approach to modern day knowledge. It becomes highly imperative for the educational planners to be concerned with evolving effective strategies for teaching and learning of instructions in our various schools. Modern education techniques will have to be increasingly used and improved at all levels of the educational system. ICT possesses a great potential for education and capacity building. It allows for systematic gathering, processing and dissemination of information through the use of creative tools for managing and delivering subject matter. A

teacher could benefit from the dynamism of ICT to demonstrate some difficult concepts, theories and principles, thereby giving meaning to classroom instruction and making class presentation an exciting one. Teachers can use computers to simplify teaching, make learning experiences more effective and to offer students access to a variety of the latest development around the world.

**The prospects of the E-Teaching are;**

1. E-teaching Offers a Different Approach
2. A Perfect Channel for Distance Education Programme.
3. Allows for Systematic Gathering, Processing and Dissemination Of Information
4. Make Learning Experiences More Effective
5. Convenient-any Time Any Where, Self-Paced And Flexible
6. Cost Effective-virtual Learning, Reduced Material Cost, Reduced Travel /Accommodation
7. Consistent
8. Media Rich
9. Repeatable and
10. Easier To Monitor Progress

**Challenges of E-Teaching:**

It is observed that the initiation and development of Information Technology service in E-Teaching is militated against by certain human and materials factors. Some of these are highlighted as follows:

1. Expensive and unaffordable
2. Lack in infrastructure
3. Lack of adequate trained manpower
4. Poor remuneration
5. Lack of commitment on part of government
6. Lack of adequate knowledge among the educational planners
7. E-Boards are helpful but not practical in classroom. Take time to start, cannot be kept for a long duration in a non-air conditioned en-

vironment.

8. If kept on all the time, students misuse it.
9. The potential of plagiarism is high as student can copy information rather than learning and developing their own skills.
10. E-teaching may create digital divide within class.
11. Training resources are minimal.
12. Student to Computer Ratio is very low.
13. All parents are Not Computer Literate.

**Probable Ways of Improving E-Teaching**

Based on the problems highlighted above, the following ways are hereby suggested through which the influence of ICT on teacher education could be improved. –

1. Re-orientation and redirecting of system: There is urgent need to review our educational policy strategies and techniques as well as the teaching methodologies of developing our teachers.
2. Urgent need to review our educational policy: There is need to introduce the teaching of ICT in the school curricular at all levels of our educational system with emphasis on practical application.
3. ICT as a course should be made compulsory: ICT as a course should be made compulsory for lecturers and students of teacher education programme as these students will graduate to teach our school children in schools.
4. ICT centres should be established at all strategic and governmental levels: Government intervention in the areas of funding and providing necessary infrastructures to ensure success of ICT in teacher education programme. Government should stop paying lip-service to ICT but rather make frantic efforts to develop and sustain ICT policy in the nation's educational programme. This will go a long way to effectively implement the use of ICT in teaching and learning process in all spheres of our educational system. More also, this will help to guarantee the success of the new teaching technology and

teachers will be forced to be abreast with the modern development in the global educational standard, of which ICT plays a vital role.

5. ICT should be more emphasized in teacher education programme. ICT should always be seen as a tool for teachers to use and not as a substitution for teachers.

6. ICT facilities should be made available at affordable price

#### Conclusion

The importance of ICT in teacher education to improve the quality of teaching and learning process in schools cannot be over-emphasized. E-teaching offers opportunity to raise educational standards. Large range of ICT tools are available for e-teaching and e-learning. The importance of ICT in teacher education is to improve the quality of teaching and learning process. There is need for training all stakeholders in ICT.

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## ROLE OF STUDENT AND ICT

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### Introduction

From the computing dictionary, ICT is the study of technology used to handle information and aid communication. It is generally believed that ICTs can empower teachers and learners, promote change and foster the development of '21st century skills, but data to support these beliefs are still limited. There is widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills. However, there are currently very limited, unequivocally compelling data to support this belief.

### Impact on student achievement

ICT has play an essential role for every students in their education, the purposes of ICT for students are to enable them to acquire the skills that needed for the future higher studies or the digital world, which then help them to easily get a job in future. Besides, the critical thinking and analytic skill are needed for students in their future. ICT with the purpose to promote those thinking and skills of students by self-developing. Thus, student will no longer depends on the teacher anymore as it would transform the classroom environment from

teacher- centric to student-centric learning. In addition, the purpose of ICT is to offer an effective learning environment for students which then increase their performance in academic. Lastly, ICT is to enhance the existing curriculum and pedagogy for teaching and learning.

### **The Impact of ICT on Students**

ICT is very helpful for the every student as it bring many of positive impact on their education. Firstly, students will be motivating to accept to learn and to join in learning activities. Secondly, with the impact of ICT, the quality of work of students can be improving and which then given them the self-esteem or confidence to perform enhanced learning tasks. Thirdly, with the utilization of ICT, students are allow more flexible and more personalized learning which enabled more work to be finished. Fourthly, ICT enable collaborative learning with little indication of the isolated student. Fifthly, ICT has an impact on heightening the student motivation through hands-on-activity, visual representations and improved modes of presentation. By using the ICT, it also has an edit effect to change the quality of student's work and practical. For the student who has poor handwriting and languages skills, the ICT has the impact on it to improve such as using the word processing. Besides, the impact of ICT on student is to equalize individual differences and has particularly dramatic effects for students with special needs. As a student can work at the pace and intensity suitable to their demands, ICT has an impact on boosting self-pacing with increased abilities to deal with individual learning styles. The make use of ICT has also allow student to produce high quality multimedia products. In addition, students would be encouraged to collaborate with one another and take responsibility of their self-learning through using the ICT. An ICT gives an impact the imagination and creativity of student will be encouraged to use it. ICT also develops the communication or enquiry skills of student and the appropriate contexts for criti-

cal thinking, decision making and problem solving activities can be created.

Moreover, the ICT has the impact on students which enabling them to any place learning. Use of the new technology of ICT, the off-campus delivery was an option for the students who unable to attend the classes. Nowadays, more students are accepted with this technology- facilitated learning settings. There is one of the example that show the impact of ICT for the student. Traditional classroom learning has provide to learning in work-based settings which enable them to the access of courses and programs from their study places. This strategy not only have the impact of convenience for students but help to save the costs associated with the travel and time away from school and also situation and application of the learning activities within meaningful and useful contexts. Thus, the time for students to study will not be wasted. ICT also has the impact on students as it allow student to undertake education anytime. This flexibility that cause by the utilization of ICT has enhanced the availability of student's just-in-time learning. By the online technologies, students are free to participate in learning activities when time permits and many of the students could take part in formal programs as these freedom have greatly increase. Furthermore, distance education is one of the impacts of ICT on students. New technologies of ICT help student to student interaction. Student can cooperate with other students and discuss the content of class and also the activities with peers. The results of the ICT component of the 2003 PISA survey show that majority of the students had access to the computers at both home and schools and most of them used the computers for wide range of functions on their education and not just to play games. One- half of the students also reported them with the frequently use of the internet as a research tool.

### **Impact on student motivation**

1. ICTs motivate teachers and students

There appears to be general consensus that both teachers and students feel ICT use greatly contributes to student motivation for learning.

2. Access outside of school affects user confidence

(Not surprisingly) Students who use a computer at home also use them in school more frequently and with more confidence than pupils who have no home access.

3. Where to place computers has an impact Placing computers in classrooms enables much greater use of ICTs for 'higher order' skills than placing computers in separate computer laboratories (indeed, fewer computers in classrooms may enable even more use than greater numbers of computers located in separate computer labs). Related to this is an increasing attention given to the use of laptops by both teachers and students (and in some places, 'computers-on-wheels'), as well as, to a much lesser extent, to the use of personal digital assistants and other mobile devices.

4. Models for successfully integrating ICT use in school and after school hours are still emerging . There are few successful models for the integration of student computer use at home or in other 'informal settings' outside of school facilities with use in school.

5. The appropriate ages for introducing computers to students are hotly debated on a general level, appropriate ages for student ICT use in general are unclear. However, it is clear that certain uses are more or less appropriate, given student ages and abilities. Emerging research cautions against widespread use at younger ages.

6. ICTs can promote learner autonomy Evidence exists that use of ICTs can increase learner autonomy for certain learners.

7. Gender affects impact Uses of ICTs in education in many cases to be affected by the gender of the learner.

8. The 'pilot effect' can be an important driver for positive impact Dedicated ICT-related

interventions in education that introduce a new tool for teaching and learning may show improvements merely because the efforts surrounding such interventions lead teachers and students to do 'more' (potentially diverting energies and resources from other activities).

Since a student's performance is mainly explained by a student's characteristics, educational environment and teachers' characteristics, ICT may have an impact on these determinants and consequently the outcome of education". The differences observed in students' performance are thus more related to the differentiated impact of ICT on standard explanatory factors. "While ICT equipment and use rates are growing very fast in the European Union, the adoption of complementary organizational designs is very slow and differs from one institution to another". This may explain the observed differences in students' achievement.

#### Conclusion

Teachers, who adapted ICT, gave students the opportunity to play the role of self-learners. Students select their own real world, real time multimedia projects. With the use of computer software, they become active participants. They feel independent and responsible for their own learning, thus shifting their role from passive learners to the active doers and decision-makers.

Students also become explorers. They independently look for and obtain information while the teacher remains a silent partner. Furthermore, ICT helps learners become self-motivated and self-managed. Learners get involved in maintaining a fun and safe class-atmosphere, which makes it easier for the teacher to give his or her support and advice, as it is rare that the teacher comes across challenging or less disciplined learners.

Learners also play the role of team members and collaborators. They often work in groups when completing tasks and multimedia projects, such as presenting PowerPoint presentations

and photo stories that give them the opportunity to negotiate and communicate with other members of the group. In addition to these previous roles, a learner becomes a knowledge manager or leader, crucial roles a learner plays when the teacher is adapting ICT communicatively. For instance, when the learner conducts multimedia reports and presentations to figure out some real world problems or social issues, or even to express and share personal attitudes and feelings.

In conclusion the communicative use of technology in EFL classes helps students take on several roles. Students evolved from passive knowledge consumers to creators and participants in their own learning. They bear their own responsibility for learning, and they have freedom of action in a modern and safe environment that responds to the real life situation changes.

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## THE USE OF INFORMATION COMMUNICATION TECHNOLOGY IN TEACHING LEARNING PROCESS.

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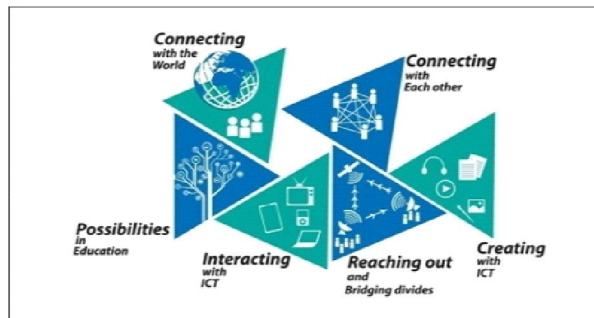
#### Abstract:

The purpose of present paper is to highlight various usages in teaching learning process. The form teaching need to be changed as situation, period is getting change. The interest of present budding generation should be increased in teaching learning process. This becomes headache to many teachers of present periods to increase and develop interest of learners. Certainly it has been noticed that students are getting attracted towards ICT. The numbers of students have been rapidly increasing in those institutes, Where ICT system is available .So E-Learning is one of the forms of this present teaching learning process. The ICT is one of the developed teaching aids of the present period. We have been growing in this period. The time demands that teachers should use the above mentioned a medium of teaching. It is a form of digital teaching. The ICT can be used for various kinds of purposes. ICT is the treasure of vast loaded information though it students and teachers can easily get or search needed information or data on a related topic. It is also experienced that anything can be searched within a short time with the help of ICT. Hence, ICT is boosting to learners and teachers of present period. It is a source of information.

Key Words: ICT, E-Learning, usages, advantages

and disadvantages of ICT.

Introduction:



ICT is one the useful resources. The term ICT is also used to refer to the convergence of audio-visual and telephone networks with computer networks through a single cabling or link system. It Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, broadcasting media, and other communication mediums. Through which enable users to access, store, transmit and manipulate information electronically in a digital form. Educational ICT tools can be divided into 3 categories: Input source, Output source and others.

However, ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.

#### Various usages:

This has been clearly noticed that the medium has been using by teachers in many school, and colleges to make the students learned and skilled. Hence, the students have been attracting at these institutes largely. This is a really colorful medium of teaching learning

process. It adds in the interest of learning of students. This is an audio n video medium, so learners can be retained at the longer time in a class. This medium of teaching has become an integral part of teaching learning process. It is also known as digital revolution. Computer is a part of ICT, so lot information can be stored in it. Students and teacher can easily access lot information on any topic. Teachers can prepare lesson plan and teaching plan with the help of ICT. ICT assists to teachers and students in their works. Therefore, it is an effective form of teaching. If you are a teacher in any institute and going to teach a topic, then you can get huge information on the related topic. And students can also search more critical analysis on the topic. The recent changes are also available on ICT on any topic. The ICT medium should be used widely in teaching learning process. To-day we have been living in globalization and in rapidly developing world. And we have been competitining educationally with the present world. Thus, it is required to use to develop teaching learning process. ICT can be used variously such as to search information, to produce piece of writing, for presentation, to check spelling mistakes, to learn correct pronunciation, to show videos of lessons, and so on. Therefore, Students and teachers have access to vast amounts of data and texts either through CD-ROMs or on the internet. As above stated it can be use to produce a piece of writing. This is a use of ICT in an English class. We are not native speakers of English or not fluent in it, so we often commit mistakes while producing a piece of writing. So it has been seen that the most teacher face the problem when it comes to writing is the reluctance of the students to edit their work before submitting it. Perhaps this is become the teacher is seen as a 'correction machine', or because students find it tedious to rewrite whole chunks of writing. A computer is of great help here, because the draft can be revised with regard to its punctuation, spelling, grammar and even organization of the complete piece of writing, without much trouble. Again, this is because

the machine is equipped with specific tools that help in this process. The skills that students learn in their computer class can be transferred directly to a computer- assisted writing class. Students' awareness of the mechanism of writing can be raised by the use of computer.

Presentation skills, that have a wide range of application in our lives today, are becoming a very important part of the curriculum even at the school level. Using computers to make a presentation helps as learners become aware of how different functions available on the basic word processor can affect a text or how different programs, such as power point , can be used.

ICT proves that students who used educational technology felt more successful in school they are more motivated to learn more and have increased self- confidence and self-esteem. It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment. Students can use ICT to present their work in a highly professional format. They can create documents and slideshows to demonstrate what they have learned, and then share this with other students, with their teacher, and even via email with people all around the world.

Teachers and learners no longer have to rely solely on printed books and other materials in physical media housed in libraries (and available in limited quantities) for their educational needs. With the Internet and the World Wide Web, a wealth of learning materials in almost every subject and in a variety of media can now be accessed from anywhere at any time of the day and by an unlimited number of people.

One defining feature of ICTs is their ability to transcend time and space. ICTs make possible asynchronous learning, or learning characterized by a time lag between the delivery of instruction and its reception by learners. Online course materials, for example, may be accessed 24 hours a day, 7 days a week. ICT-based educational delivery (e.g., educational programming

broadcast over radio or television) also dispenses with the need for all learners and the instructor to be in one physical location. Additionally, certain types of ICTs, such as teleconferencing technologies, enable instruction to be received simultaneously by multiple, geographically dispersed learners (i.e., synchronous learning).

ICTs such as videos, television and multimedia computer software that combine text, sound, and colorful, moving images can be used to provide challenging and authentic content that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatizations, comic skits, and other performance conventions to compel the students to listen and become involved in the lessons being delivered. More so than any other type of ICT, networked computers with Internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in real world events.

Therefore, ICT can improve teaching by enhancing an already practiced knowledge and introducing new ways of teaching and learning. Transforming teaching is more difficult to achieve. "Changes that take full advantage of ICT will only happen slowly over time, and only if teachers continue to experiment with new approaches." In fact; it has become so much a part of our lives, that educationists have identified computer literacy as one of the tools required for survival in the world today.

**Advantages:**

- ❖ Regular use of ICT across different curriculum subjects can have a beneficial motivational influence on students' learning.
- ❖ ICT facilitates sharing of resources, expertise and advice
- ❖ Greater flexibility in when and where tasks are carried out
- ❖ Gains in ICT literacy skills, confidence and enthusiasm.
- ❖ Easier planning and preparation of

lessons and designing materials

- ❖ Access to up-to-date pupil and school data, anytime and anywhere.

- ❖ Computer use during lessons motivated students to continue using learning outside school or college hours.

- ❖ More focused teaching, tailored to students' strengths and weaknesses, through better analysis of attainment data

- ❖ Gains in understanding and analytical skills, including improvements in reading

- ❖ Development of writing skills (including spelling, grammar, punctuation, editing and re-drafting), also fluency, originality and elaboration.

- ❖ Encouragement of independent and active learning, and self-responsibility for learning.

- ❖ Flexibility of 'anytime, anywhere' access.

- ❖ Students found learning in a technology-enhanced setting more stimulating and student-centered than in a traditional classroom

- ❖ Broadband technology supports the reliable and uninterrupted downloading of web-hosted educational multimedia resources

- ❖ ICT also help teachers to work in teams and share ideas related to curriculum.

- ❖ Through ICT, images can easily be used in teaching and improving the retentive memory of students.

- ❖ Through ICT, teachers can easily explain complex instructions and ensure students' comprehension.

- ❖ Through ICT, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve student attendance and concentration.

#### Disadvantages:

- ❖ Setting up the devices can be very troublesome.

- ❖ Too expensive to afford

- ❖ Hard for teachers to use with a lack of experience using ICT tools.

#### Conclusion:

ICT is a one of the crucial resources of

teaching learning process of this present epoch. Although, it has advantages and disadvantages. However, use of ICT has become part and parcel of our lives. The various sectors have been using the medium for different purposes. The banks, media, films industries, business, industries, and the whole World have been using the medium. The world has influenced and attracted toward it. Yet in India it is found that village people are less aware about it. The importance of computers in ELT can be seen in the number of publication that have come out in the past few years on topics such as 'Using computers to teach English' and 'Using internet to teach English'. Information and Communication Technologies have recently gained groundswell of interest. A range of research indicates the potential of ICT to support improvements in aspects of literacy, numeracy and science. Furthermore, it has been proved that new technologies have lots of benefits on the students.

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## USE OF ICT IN POLITICAL SCIENCE

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### Abstract:

The application of Information and communications technologies (ICT) In Political science has helped tremendously in understanding of contemporary Political science. ICT includes various tools which are helpful in studying, analyzing data, political events, movements, institutions, and political behavior of voters and citizens. The use of ICT immensely helped to reduce accurate data. The use of computer programs and statistical method the new field is emerged which is Psephology, the statistical study of elections and voting behavior. Also, the application of ICTs in Political Science has led to emergence of e-governance, which means electronic government. The impact of information and communications technology is seen on every field of society and as politics is happens in society it is found in politics also.

**Introduction** - In this paper, I am trying to discuss use and application of ICT in political science, with a view to how use of ICT helping understanding of political process in national and international level. Also it is about how ICT have impacted different sub-fields of political science.

### Concept Clarification-

ICT - It is the acronym that represents information and communications technology (ies.) It covers any device that can store, re-

trieve, manipulate and transmit or receive information.

**POLITICAL SCIENCE** – it is the systematic study of State, power and politics.

**E- GOVERNANCE-** It is interchangeably use for online government, or electronic government, digital government. it involves the use of ICT and other web based telecommunication technologies to improve or enhance service delivery by government.

### USE OF ICT IN POLITICAL SCIENCE

The term ICT this includes three different words which are information, communications, and technologies respectively. However, there is no universally accepted definition of ICT, because the technology is evolving continuously almost on daily basis. As a result of this different scholars look at ICT from different view point.

According to Wikipedia ICT is “ A diverse set of technological tools and resources used to communicate, and to create disseminate, store and manage information. These technologies include computers the internet, broadcasting technologies (radio and television) and telephony”. Also ICT covers any product that will store, transmit or receive information electronically in a digital form such as computer, smart phone, pen drive e.t.c.

However, before going to discuss the use of ICT in political science we must first understand the subject matter of political science.

Political science is a social science which deals with the systems of government, and the analysis of political activities, political thoughts and political behavior. The scope of political science is also varies from political philosophy, political theory, comparative politics, public administration, international relation, public policy and other subfields.

The use of ICT in every field of political science mentioned above varies according to need and scope.

### USE AND IMPACT OF ICT ON POLITICAL

**PROCESS-**

1) Elections – The use of ICT in electoral process is increasing day by day. As we can see now, in India the election commission conducting voting by using EVM- that is electronic voting machines. Earlier the voting process was conducted by using ballot boxes, now in India we have electronic voting machines, as a result of which election process is now much more transparent and accurate.

2) Social Media- Similarly the use of social media in election campaign is increasing day by day. Now an individual is free and has a tool in his or her hand by which an individual can express his opinions, share experiences, campaign for a particular party. The another impact of social media is on the process of political socialization, which means the process of an individual getting exposed to the political environment and political system in which he lives. Social media which includes tools like Facebook, Twitter, WhatsApp, etc. plays an important role in the political process of the society, not only in the time of elections but also for the specific social and political issues. The famous example of this is that in the year 2010 the Arab Spring, the revolution for democracy started in Tunisia was spread rapidly because of the social networking sites mentioned above. So, for political scientists to understand the political process it is inevitable to study the ICT and its impact.

3) Psephology – It is a scientific study of elections, voting patterns and behavior by using statistical methods, demography. The psephologist uses statistical methods, voting data, computer programs to find out voting patterns, election results in the form of exit polls etc. In which the use of ICT is very important.

4) E-GOVERNANCE – The most important use of ICT can be found in the field of Public Administration. The concept of E-governance itself is based on the use of ICT in day to day administration. The use of ICT in administration can change the process of administration fun-

damentally especially in a country like India. E-governance means application of information and communication technologies for delivering government services, exchange of information, communication transactions etc.

In India, the center government and different state governments started different services like direct benefit transfer in which subsidies of government are directly put into bank accounts of the last beneficiary, by using bank accounts, Aadhar card and mobile phones. By using ICT in governance a lot can be achieved in India. The recent move for a cashless economy by government is also possible by using ICT. Government of India promoting tools for cashless transactions in which every citizen has to use electronic devices, internet, smart phones, etc. The use of ICT is also proved beneficial in decreasing corruption. The work of government is now being conducted through digital modes. The recruitment process done by taking online application forms, marks are displayed on websites, applicants can send their queries so on and so forth. Hence the use of ICT has a potential to change the life of a common man.

5) Terrorism – As mentioned above, social media is an effective tool for political campaign but we cannot neglect the other side of it. Terrorist organizations are also using these sites for spreading hatred and recruiting young boys and girls for their purpose. As the case of ISIS, the terrorist organization using internet and social media platforms for recruiting terrorists from India, Pakistan, Bangladesh and from other countries also.

6) Globalization - ICT has remained one of the driving forces of globalization such that through the mediums like radio, television, telephone, computer and internet, satellites as well as different services and applications associated with them like video conferencing and distance learning greatly proved helpful for penetrating political values and norms across the nations. The media houses of the world discuss

the global issues which are important for the world at large, like terrorism, climate change, human rights e.t.c

However, the challenges of implementing ICT in poor countries or in developing countries like india is difficult. The issue of allocating funds for the required infrastructure for ICT is biggest challenge. Also the literacy rate and the quality of education is also a very big question in front of the government. Moreover, the nature of political systems in the developing and poor countries are unable to find importance of the use of ICT. The policy makers in these countries show no concern in for the development of ICT in promoting political education in their respective countries. The ISRO's recent record may be proven inspiration for these countries as Indian Space Research Organisation (ISRO) shows how to use technology in cost effective way. Conclusion – The 21st century is the century of technology. The constant changes happening in technology have a great impact on every day's life. So as on the politics of the nation and world. The countries must take the advantage of the ICT and try to improve the lives of the poor people of the world, making government more participatory and by which to create a society based on the values of liberty and equality.

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## USE OF SMARTPHONE IN LEARNING LANGUAGE AND LITERATURE

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#### Abstract:

The present paper tries to highlight the use of smartphones in learning English language and literature. In this era of globalization, Information and Communication Technology has proved to be fruitful in rapid progress in every walk of life. The ICT plays a supporting role in the field of education in a true sense of the term. Education is the two way interaction. This simply means that Teacher and Student are the two important aspects of education. However the medium of education does matter. The use of ICT in the process of teaching and learning has been increased. Rapid research in ICT has brought many devices. One of the most portable and accessible devices is Smartphone. Nearly every college goer is equipped with this easy to use device. This can be called as a pocket computer and can be helpful in the process of learning both language and literature. In fact, the use of Cell Phones, Mobile Phones and now Smartphones is restricted in Indian classroom however the present paper attempts to focus the positive side of the use of smartphone. It can be an effective tool of language and literature learning like other communication and computing devices.

Keywords: Smartphone, English language and literature learning, ICT

#### Introduction

In this era of globalization, information

and communication technology plays an important role in every aspect of human life. Education field is no exception to this. There has been a lot of change in the methodology of teaching and learning. In modern education ICT plays the most supportive and instrumental role. This includes any communication device like computer, projector and even mobile smartphone. There is an urgent need of technology integrated education. Puentedura suggests a SAMR framework for characterizing the level of technology-integrated teaching. This model consists of four levels: (1) Substitution – at this level technology is used for replacing older tools; (2) Augmentation – this level is close to the first level of use with additional functions; (3) Modification – at this level technology is used more effectively. Parts of the task are re-designed, thus modifying the learning method; (4) Redefinition – this level is parallel to the high levels of thinking – synthesis and assessment – leading to teaching and learning models which are different from those not using technology. (Puentedura, 2006) Thus the level three suggested by Puentedura can be achieved by using smartphones effectively.

#### **Smartphone as a tool of learning**

Technology is being changed rapidly. Now it is the time to move from E-Learning to M-Learning. E-Learning includes all sort of electronic media. M-Learning includes the learning with the help of mobile devices. Smartphone can be an effective learning tool in this era of information and communication technology. This is a modified, easy and portable device. It is not just a cell phone it is a smartphone that is enhanced and equipped with increased hardware and software.

Whilst smartphones are only pocket size, they incorporate computing power and memory capable of running complex software and storing huge amounts of data. The smartphones also includes keyboards, cameras, audio recorders, gesture-based input, and high resolution displays. In addition to this there is a wide range

of apps which include support for office productivity, location-based interactivity, media production, web browsing, social media, communication and entertainment.

#### **Application of smartphone in the classroom**

If one considers smartphone as a well-equipped device, it can be used inside the classroom with supervision of teacher. The use of this device in classroom creates interest about the topic in the minds of students. Teacher should observe the ways of using smartphones on the part of the learners. Tami Seifert in one of the academic experiments in this regard observes, "We found a difference in the way the three generations relate to smartphones and mobile technology: Middle school students use their smartphones to download and listen to music, Facebook, download applications and contact friends and family. If mobiles were allowed in class, students stated they would use them for translation, recording, taking notes, taking pictures of the board instead of copying the material, use the internet to clarify issues and expand knowledge, calculator, text to voice software and spellchecking. In the post-test they suggested using their smartphones in order to take exams, view maps in geography, learn history facts and solve math riddles. Some students felt that using the various functions smartphones offered could save a lot of time in the classroom. College students, on the other hand, use smartphones for surfing the Internet, as a GPS, learning management, Facebook, recording lessons, chat, watch alarm and taking notes. Most instructors use smartphones for making calls, time management, mind maps, keeping a calendar, and very few other applications, which they discover gradually." (Seifert, 2014:122)

#### **Use of smartphone in learning language**

The smartphone can be highly effective tool in acquiring the basic skills of language-LSWR. The learners can listen English with using the audio, they can improve their own pronunciation by recording their own voice. They

can improve their vocabulary and grammar skills. As there are many android apps containing dictionaries, thesaurus and grammar. There are standard dictionaries and thesaurus like Oxford and Webster available in the form of apps. These dictionaries are both online and offline. With the help of these dictionaries, the students can not only read but listen the pronunciation, meaning and description of the word. Even there are dictionaries like Idioms and Phrases. More to that there are many apps containing Grammar Books. These books are easy to use for any smartphone user. The learner can test their own linguistic skills by using the practical grammar quiz provided with the books. There are an ample number of grammar books available on internet and can easily be downloaded by the language learners. Smartphone can be used any time and anywhere so that the learner can enjoy the process of language learning. This can be made more interesting.

#### **Use of smartphone in learning literature**

The learning of literature in a foreign language itself is a challenge. In order to understand English Literature the learner should have some necessary background knowledge. This can be achieved by using smartphones. The learner can see the images of the poet or writer on their screen. They can listen and watch the views of different critics regarding the text. The learning of poetry can be more interesting when the students watch videos related to the poems prescribed. Fortunately there are a lot of sites providing variety of videos related to the concerned poetry. Students can have option to listen the same poem by different speakers and singers all over the world. Same in case with the study of Drama and Novel. There are full movies based on English Drama and Novels available on you tube and other related websites that can easily be downloaded by the students. Besides there are many apps containing Literary and Critical Terms. Even with the help of mobile internet students can read and contribute to the review of books. With the help of

smartphone they can download e-books and other study material as well.

#### **Use of Smartphone by Learner and the Role of teacher**

The use of smartphone has many advantages. Firstly it is portable and easy to use and hence saves time. Secondly it creates interest in the minds of learners hence the participation and involvement of the learners in the classroom can be increased, Thirdly it can easily overcome all other ICT devices as having smart features. Fourthly it can be used both inside and outside the classroom.

However there are some disadvantages like misuse of smartphones on the part of learners. In this regard the role of a teacher is important. So far Indian College class rooms are concerned the mobilephones are strictly prohibited in college campus. In such situation the use of smartphone in a Compulsory English classroom cannot be possible as there are a number of students. But it is quite possible in the Special English classroom as the students are comparatively less in number and sincere. The smartphones can be applicable in some specific situations in the classroom. It is the role of teacher to teach the learners how to use smartphone for learning English language and literature. He should inform them about different websites and apps related with the study. Teacher can form a group of learners with the help of the messengers like Whats App in order to make the process of learning more interesting.

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## Use of ICT in Teaching English Literature

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### ABSTRACT

Information and Communication Technology (ICT) in higher education can revolutionize the education sector across the country, thereby making its impact felt in other areas like governance, economy and administration. The National Mission on Education through Information and Communication Technology (NME-ICT), launched by the government of India, seeks to offer connectivity across the nation. It is a mission under which several schemes have been undertaken. One such scheme has been undertaken by University Grants Commission (UGC) to develop e-content at the postgraduate level, which would be put up on the web portal of the HRD Ministry. Today in the fast marching world where everything is digitized, the education sector should not lag behind for the simple reason that it is education which guarantees the future of the citizens and also the progress of the nation. Use of ICT in higher education in various fields such as medical science, computer science engineering, commerce, management, etc. information technology can be of utmost significance. However, the use of ICT tools in the so called 'traditional' subjects such as history, literature, political science, economics and other areas of humanities need to be carefully done. In this paper, the focus is given on how use of ICT in the teaching of English literature can make

it more interesting for the stake holders.

Keywords: ICT, Teaching, digitized, English literature, stake holders, e-content

### INTRODUCTION

ICT is much vital to add-on the traditional method of education. The word 'add-on' here is important, because technology cannot substitute the teacher as such. The use of ICT can increase or add to the traditional methods. In the present framework of technology and information explosion, traditional methods of teaching appear tedious and in most of the educational institutions across the nation English literature is taught using traditional methods where the teacher delivers a lecture for an hour or so and leaves the class. The students too, get exhausted of the monotonous everyday routine. Moreover, the importance of English literature as a subject of study needs to be rejuvenated. More and more students enter into the professional courses where they feel their future is safe, in terms of material needs. However, English literature is a subject from which one cannot run away. It is a compulsory subject in most of the courses. English literature is observed to be a 'traditional' subject and students who wish to be teachers generally take up this so-called 'traditional' field. The use of ICT in teaching English literature and language can reform the way the subject is seen, taught and thought of. The role of the teacher is of enormous significance in the teaching of literature but ICT can enrich the teaching by doing away with monotony and making the students interested in what is being taught. It can encourage and keep the students involved because ICT tools work at different levels – the students can have an opportunity to experience, read, visualize, hear, think, discuss, interact and also learn. This can be accomplished through various means involving ICT.

### THE SCOPE OF ICT

English literature includes a number of

areas for learning such as poetry, fiction, drama, criticism, literary theory. Each requires a different kind of learning and different methods of teaching and learning. Why not to use ICT for it? The use of ICT can help the teacher to use different methods of teaching, which will then help students to keep the text or the matters given in it, in their minds, perhaps, throughout their lives. But this depends not merely on the use of ICT but also the student and the educator. Thus, in the teaching of English literature as a subject of higher studies, a combination of the old, involving the teacher and the new mode of teaching, involving ICT tools can go a long way. Moreover, ICT would help in research in various fields of English literature. ICT tools would assist students grasp the text and would improve their expertise. ICT tools can also help in making students attentive and interested. It also requires initiative of the students especially whose English is a second or third language, to use ICT for better learning.

English literature can be made appealing by the use of audio-visual devices, web resources, playing of movies or staged plays, online appendices, dictionaries, thesaurus, etc. The use of Clicker – the Student Response System introduced under NME-ICT can boost interaction in an English literature class. Scenes from movies can be revealed and discussed. Use of slides having video, audio, images and texts – a combination can be more helpful. Presentation of poetry can be made using ICT tools, use of multiple choice questions on different topics, quizzes; presentations are some of the ways in which ICT can be made operative in a literature class. Teachers would feel relaxed as they would not have to remember and can use slides to take the deliberations forward. As a result, use of blackboard would no longer be essential. Effective incorporation of ICT tools into the educational system is a challenging task and the success of NME-ICT depends on this, apart from other things. Ensuring quality, equity and access

at the same time is an intimidating task which needs to be satisfied.

#### **TACTIC TO REVIVE A LITERATURE CLASS**

Poetry:

- The teacher can put up the poetry on screen using slide shows.
- The writer's image can be shown.
- An audio can be played where the poetry is recited, made more interesting if the poet himself/herself recites.
- Apart from these, poets like Blake whose poems have a corresponding painting; the poems can be shown accompanied by the corresponding painting or illustration.
- Moreover, poems involving myths too, can be imagined through images presented in slides by the teacher.
- Important journal articles and books can be referred to the students through the slides itself so that the teacher need not use the blackboard or spell out the names of the writers or their works.
- When everything is given, it inspires discussion and helps in creating a critical insight.
- This critical insight can be improved further if the students are given assignments whereby use of ICT tools cannot be done away with.
- Moreover, if poems are shown on screen, it becomes easy for the teacher to point out relevant details and also contrast one poem with another, making literature lively and an involving exercise.
- The themes, images and movement of the poem can be discussed through different slides which are innovative and effective. It will depend on the teacher how he/she prepares the slides or presentations.
- The combined effect of the 'visual' and 'hearing' would make students experience what is being taught.

Of course, the role of the teacher is the most important in making ICT effective.

**Fiction:**

Methods similar to those in poetry can be used in teaching fiction.

In addition,

- Movies based on novels can be shown in full or some important scenes can be presented and discussed.

- The themes, characterization, historical context, narration can be deliberated through slide shows and presentations.

- You tube can be assimilated—of course with caution—to introduce certain memorable scenes from movies based on novels.

Through this students can be introduced to the works of great personalities.

**Drama:**

In addition to the techniques mentioned already,

- Staged plays can be shown through ICT tools and the minute intricacies of a play can be discussed.

- As a result the use of light, sound, stage setting and props all will come live before the students and thus would have a lasting impact on them.

- This would achieve the dual function of literature to enlighten and give pleasure.

**Criticism:**

This could be made interesting by

- The use of illustrations from literary texts and through practical exercises.

- The use of ICT would enable to make criticism an elevating and in depth exercise.

- Critics on a subject can be referred to and students may be stimulated to go through their works.

**Literary Theory:**

Most students are afraid of this area. Their fear can be done away with by the use of ICT.

- The theorists can be shown on screen, their interviews or recorded lectures can be

played.

- The ideas can be applied to literary texts and hence their applicability be made clear.

- Examples, pictures and other such strategies can be used to make students attentive.

**Others:**

Indian Writing in English, African, American literature and other such areas can be taught using ICT.

- History of English literature can be shown in horizontal forms.

- Video conferencing can be expedited so that communication can take place among students, research scholars and teachers not just within the nation but across the world.

- This would make them aware of the literary scenario elsewhere, keep them up-to-date, bring in different points of views and interpretations and improve their information.

- Research scholars would be helped through cloud computing or through other technology.

- The concept of e-content undertaken under NME-ICT would be helpful.

- Scholarly journal articles should be made accessible on a larger scale.

- ICT combined with the old-fashioned approaches of teaching can make teaching and learning literature a brilliant experience.

- A portal can be established entirely for literature. This portal can have the e-content which can be updated by academicians and research scholars.

- Moreover, teaching literature should not be restricted to the use of slides or projectors alone. The development of e-content would help students refer to relevant material on a topic.

- In addition, free e-books can be uploaded so that students can have access to these as well. Links to important journals can be provided or perhaps articles on a single writer

can all be listed in one place.

### THE DIGITAL DIVIDE

The breach or the dissimilarity in the distribution and use of technology between urban India and rural India, that is, the digital divide present in India has a contrary influence on the growth and development of the country. Something more important that requires attention is the issue of digital divide. The focus in this paper is more on the Indian scenario. The use of satellite and other devices in the field of education is not new in India. But through NME-ICT it will be carried on in a huge scale and in a systematized way. The goal of contact, justness and excellence is ensured through this mission. The use of ICT tools in higher education, which is the insertion of NME-ICT, will help bridge the digital divide in the following ways:

- Emphasis will remain on building computer/technology infrastructure throughout the country. When remote areas are included, the other thing which will be of interest is the use of technology. Once people learn to use these, the bridging process of the digital divide India is facing would prove successful.
- Use of ICT tools will give a lift to distance learning and education. Through ICT, distance learning can be made simple and easy, which in turn help in bridging the digital divide.
- The plan of using low-cost ICT devices like the tablets will go a long way in bridging the digital divide because low-cost devices can be made accessible to a much larger group of students.
- The use of ICT in higher education will help in increasing the GER (Gross Enrollment Rate) of India.
- Online courses, development of e-content, e-learning, digital libraries, online encyclopedias, journals, and books would promote learning and make knowledge available to all irrespective of the distance or location or financial resources
- Since India is a huge country, with more

area under rural rather than urban population, it is only through ICT that higher education can be made available to all the villages of the country.

- The step to provide ICT in the universities and colleges is indeed a praiseworthy initiatory step.
- The use of ICT tools in higher education in India will, to a certain extent, help in bridging this digital divide as well. India might someday be able to be at par with the developed nations, although it is a distant dream.
- When everything is computerized, the records of the performance of the students too, would be computerized. This would make getting jobs easier, as the original certificates need not be verified every time.
- Last, but not the least, research scholars can make use of ICT tools to carry forward their research. This would refine their skills as well as make them adept in using these tools and compete in the international field.

### Conclusion:

Thus, we may conclude that ICT is a significant instrument which has the potential to make the teaching and learning of 'traditional' subjects like English literature or to be broader, literature in any language a live experience. It would help in energizing the importance of such subjects by several resources. The resources mentioned above are only suggestions and not meticulous. A lot more can be done with the views of experts in the field of ICT. The present government strategy, NME-ICT seems to be on the right track. It would help tie the digital divide to a certain extent and also help in the growth and development of the country by building up human resource and providing employment. Some of the ways by which the digital divide within the country and in the international scenario can be bridged are enumerated. It also needs to be understood that the use of ICT should be more effective from both the sides, teachers and students to make it a success.

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## ADVANTAGES OF ICT IN EDUCATION

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Today, we are living in the "Knowledge Society". The information technology has become a strategic necessity of our life and its role will increase in the near future. The innovation of information technology is a precious gift to human being as it has made the capacity to make tedious work a very simple one. Information technology revolution, knowledge became a significant key factor of production. It is now considered as driver of economic and social transformation. The generation and utilization of knowledge is now predominant factor in the creation of wealth.

The art and technology of acquiring, storing, compressing transmitting, processing, accessing and interpreting information is known as information technology. It can process raw data into meaningful information and knowledge.

IT vision- The bestway of transforming a nation is through the application of technology with a vision. Realizing this, the government of India, in the recent years, has increased the budget for higher education. But, majority of institutions are engaged in teaching work only. Teachers do not have adequate time for undertaking research and extension work. Thus education became a repetitive activity of transferring information

and data from one generation to another. Some scholars argue 'we have still not made much progress in basic technologies, we are coping technology developed abroad and at the most customizing'. West is using Indian brain and developing fundamental technology much better. We have a huge IT force but they are mostly busy doing outsourced jobs. Without the judicious application of knowledge in a social setting, the teaching and research virtually becomes waste. The success lies in interdisciplinary approach, team work and convergence of technologies with social perspective. What is required today is a move toward transformation of India into a developed nation. And that is possible only with a vibrant education system manned by motivated and professionally competent teachers.

National policy of education (1986) emphasized the importance of motivation in improving the teaching-learning process. In pursuance to this policy, UGC has now setup 66 academic staff colleges in different states of the country. And UGC has organized a variety of programmes for improving the quality of teaching and research in different branches of knowledge. These programmes include Orientation programmes, refresher courses, short term courses and workshops. Besides, it also organizes training programmes for enhancing professional competence of non-teaching staff of the colleges and Universities.

Active learning- An effective learning situation consists of five elements-teacher, learner or student, subject matter, teaching aids and physical facilities. Out of these five elements learner or student is considered the focal point. An innovative teacher manipulates subject matter, teaching aids and physical facilities for better learning on the part of the students. A teacher who can creatively setup a dialectic of learning activities with help of PPT presentation in which students move back and between having rich new experiences and engag-

ing in deep, meaningful dialogue, can maximize the likelihood that the learners will experience significant and meaningful learning. At higher education level teachers practice multifaceted innovative strategies to create active learning among the students. A variety of teaching techniques with the help of ICT tools are effectively applied along with traditional one way instruction, lecture method to create optimal environment for active learning.

Teachers make use of LCD, slide projector and over head projector to teach complex topic in Social Science. Visual aids like maps, globe, atlas, photographs, slides, charts, models are frequently shown in subjects like Geography, Education, Fine arts, History, Political Science. Recorded CDs, DVDs are taken to class for phonetic transcription and film version of play and novel is shown by English teachers. Regional languages related TV programme study is useful for understanding and linking importance to local communication. More use of audio-visual aids recently in many subjects than during previous five years indicates the increasing necessity of a number of inputs to fulfil the needs of curious students. Hence to keep students attentive throughout teachers try to take help of a number of carefully chosen teaching aids available in their institutions.

Social Sciences Laboratory-Practical are essential for Science subjects which require well equipped laboratories, but some social sciences teachers also feel the need of laboratories with all necessary equipment where students can get demonstration, do practical and be active learners. Previously only science laboratories have been mentioned in teacher's experiences but labs role is considered very important for learners in most subjects in present times.

Use of Computers- Use of multimedia, online projector, library internet etc. facilitates learning in Social Sciences. Demand of these effective methods in more subjects is evident

along with routine lectures in the class. A creative bent of mind of teachers and use of audio-visual aids can lead to multiple techniques catalyzing active learning. In higher education need is to understand the basis of active learning and designing the instruction accordingly linking these with the recent initiatives in improvement and modernization of higher education.

An Empirical study- ICT has deeply affected the education sector along with other sectors of economy. ICT is the core of educational process without the knowledge of IT, even a highly qualified teacher is not competent enough to impart relevant knowledge. IT provides infinite avenues for teachers particularly in updating their knowledge, skills and interdisciplinary approach to education. It is observed that majority of teachers are not having Internet facility but they are having their own e-mail ID's. Mostly teachers feel that computer knowledge is a necessity of modern day life and it should be a part of our curriculum. Majority of the college and university teachers acknowledged the significance of computer skill. They do possess the required infrastructure for IT application but are lacking in professional training.

Concluding comments and suggestions- This is an age of 'communication revolution'. There has been a virtual 'Communication Explosion' all over the world in recent times. Communication has a crucial role to play in accessing the right information to target students. The country entered the satellite era, home entertainments industry boomed with the expansion of multichannel TV, and the knowledge sector took a quantum jump with the merger of computers and telecommunication..

In the present era of globalization, the scope and demand for higher education is increasing and the new paradigms in higher education involve creation of intellects of world standards and also training of skilled human power at mass

level without compromising on quality. Higher education, is no longer a luxury, but it is essential for survival. Now, the higher education is passing through an interesting phase worldwide. It is changing radically by becoming flexible in diversity of programmes, in its structure, curricula and delivery systems. It is adapting itself to the clever use of information and communication technologies. By effectively using the advancements in information technology as tools of instruction, a teacher can now be made free to devote his or her time in helping the students to attain greater awareness and self-realization.

#### Suggestions-

1. Well-equipped computer labs along with Internet facilities should be in every colleges and every department of university.
2. Computer education should be compulsory part of curriculum at every level (especially social science) of education.
3. Government should develop a separate plan by encouraging inter-institutional linkages including BSNL, NASSCOM (National Associations of software and service companies), universities, etc. to make It education effective.
4. IT knowledge should be made essential requirement for all kind of appointments in education sector.

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## 'It takes you for some one to become something'.....

(The Role of Information and Communication Technology in teaching Political Science)

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### Abstract :-

'Knowledge is Power' and knowledge is provided by Information Technology. Political Science studies processes such as decision making, Policy making, election through Political structure. So ICT gives us information of its content in that sense ICT and Political Science is inter connected. In the study of Political Science ICT is important because the end users of any technology are human beings. Political Science studies political behaviour of human being, which is shaped by information. ICT has brought Transparency and Accountability in the Political dealings. As well as it empowered the ordinary individual through providing information. Monopoly of knowledge has challenge and diminished. But one should use the tool of ICT carefully, because information, you get is not always verified or crosscheck and unnecessarily you are drowned in the flood of information, so one has to use this tool effectively to drag success in the mission.

Keywords :-

- 1) ICT - Information and Communication Technology.
- 2) Global – Involving the entire world.
- 3) Cross Cultural – Relating to or involving

two or more different cultures or countries.

- 4) Visualize - One that visualizes.
- 5) Perspective – Approaches.
- 6) Transparency – Openness
- 7) Accountability – Responsibility
- 8) Bargaining – an agreement in which people or groups say they will do or give something in exchange for something else.
- 9) Monopoly – Complete Control.
- 10) Linear – Formed by lines.

### Introduction -

Political Science is a major social science. It studies not only the functioning and working of the concepts 'State', 'Government'. 'Constitution', 'Various Political processes but also studies 'Power relating such as policy making, decision making, electrical process, Peace maintenance and conflict' resolvment etc. It not only concentrate on local, regional and national events and happening but touches international and global issues related to human society, Social Political order, Political Society, Political Man, Political behaviour, Political structures etc. are the subject matter of Political Science. It mainly studies political dealings and political interactions among various people all over the world, policy making, implementation of policies and their consequences, and lastly public opinion all over the world. To understand different facets of society it is essential to have 'knowledge' of the society. Because 'knowledge is Power'. This knowledge is provided by Information Technology. In this service Communications becomes important aspect of this subject; in therefore political science and information Technology are closely connected with each other.

Information and communication technology (ICT) is considered as a pre-requisite for the development of any discipline. Without communication no discipline can promote theories. Therefore use of ICT in teaching and learning political science becomes very relevant and

important. ICT helps to form and establish political interaction, socio political structure and socio – political organization and also help to form 'Public-Opinion'. It has eased the life and provided all basic facilities for promotion and enhancement of our political understanding. It has opened a new chapter in the community service. Therefore it is relevant to use ICT in teaching Political Science.

Advantages - ICT in education of political science means teaching and learning with ICT. There are 3 main advantages of ICT tools for education as the following firstly, through ICT, images can easily be used in teaching and improving the retentive memory of students. Secondly, teachers can easily explain complex instructions and ensure students comprehension and thirdly, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve students attendance and interests and concentration.

Study of ICT develops certain abilities among the teachers and students which help them to form political opinion and understand the subject easily.

a) Skill of analyzing is increased., b) Creativity is nurtured, c) Different perspectives are developed, d) Improves qualifications of the learner., e) Introduces diversification of the society at a glance, f) Develops logical thinking, logical communication web design skills, which contributes to society using solid knowledge of human science., g) Understands global socio political issues.

Thus the development of Human Sciences focuses on humans from a wide range of perceptive, offering programs to scientifically examine and analyse humans. Programs through which students develop skills for communications presentation, leadership, teamwork counseling and other practical aspects. Thus ICT does the important task that is to develop abilities to analyse humans from scientific and psychological perspective, to tackle various

socio-political issues.

ICT in education has improved and has brought about an easy access to different learning resources. The benefits of ICT learning are the following.

- ❖ Information Technology (IT) has the ability of speeding up information delivery. So in one second information is spread out people all over the world get the information speedily.

- ❖ It is cost saving procedure.

- ❖ It is accessible any where and any-time, no fix time table and no zones are fixed so easily available fulltime learning process.

- ❖ It is useful for disabled people mainly blind, deaf or physically unfit people.

- ❖ Effective, Enjoyable and Interesting, Tension Free learning process is possible because of the use of Audio – visual content. On line libraries, eBooks facilities made learning process more continuous and lifelong.

- ❖ Multimedia content is also one of the most important benefit of ICT. Multimedia has brought the world closer, interdependence becomes necessary.

Thus, effective use of technology in education has changed the face of education and it has created more educational opportunities. The use of technology in education has removed educational boundaries. Through digitalized classrooms through digital learning tools like Computers iPads, Smart Phones, Smart Digital White Board, Visualizer, Webcam, Scribed made the learning process more effective and interesting. Apart from enhancing efficiency, IT has turned the world into a global village and made access to information quite easy.

Importance of use of ICT in studing Political Science - In the study of Political Science the use of ICT is important because the end users of any technology are human beings. Therefore social science in humanities is also as important as for other physical science subjects. Social Science studies problems of society and humanity itself. So it is useful.

ICT and Political Science are well integrated and connected with each other. The scope and subject matter of Political Science have reached new horizons due to the widely application of ICT. The society and world are shrinking into villages because computer and internet has made life easy to access anything present at any corner of the world. Because of the use of ICT, it becomes possible to do cross cultural and cross global research studies. Because of ICT books and printed material is easily accessible and can be used while sitting in any part of the world. The interaction between social scientists, scholars and politicians of East-West has made it possible to share their ideas and academic achievements. As a result, it has benefitted the scholars of less developing countries of third world to get optimum benefit from the studies conducted in the developed part of the world.

Importance of ITC in the Application of Politics - Due to the use of ICT, Politics as a Social Institution is totally reshaped and changed. Due to revolution in ICT, Explosion of Information becomes possible. People all over the world started getting socio-political information speedily. It helps them to prepare their opinion and to take an action quickly. It led to political understanding meaningful and effective. People have come out from their earlier attitude and approaches which were influenced by caste, religion, region and have started thinking rationally, intelligently and smartly. So ICT has helped the people in shaping their attitudes and values. The value of Brotherhood, Equality, Tolerance, Sacrifice, Kindness, Patience has taught by these scientific tools, because of reservoirs of information resources. Because of ICT, people are well aware and well equipped about their social rights and responsibilities. Empty slogans and propaganda are not well needed and responded by the masses. Thus it teaches politicians as well as common people that how to activate the politics.

ICT has brought Transparency and Accountability in the Political order for e.g. declaration of property enables the voter to think about candidate while voting. ICT made representative were accountable because all their dealings are now available on sites which keep on check on their strategies and party policies. ICT has not excluded anybody, representatives, voters, social workers, party leaders are well informed so they keep check on each other, by this way democracy works and we find transparency. This transparency creates good, comfortable atmosphere, Earlier elections were fought on the issue of caste, religion reservation but because of ICT people have informed development procedure. So they have started demanding 'development issues'. So 'Development' has become important factor in creating consciousness among the people. This is the gift of Information Technology In Politics, 'Bargaining is important phenomenon, ICT brings transparency in bargaining and avoid misuse of money, power and muscle during elections. Because of the spread of ICT, people all over the world are linked through internet, social web therefore formation of social groups and social organization becomes possible and through this forum people can raise their voice against any injustice and violence. ICT has helped the people in decision making. Because of information technology it becomes easier for the people to take informed decisions. ICT provides multi dimensional information. It is not linear information. So it helps decision making for people as well as rulers and administrators Secondly. transparency in 'Political Dealing or Political Affairs is facilitated by information technology. Though political consciousness is not develop or achieve through ICT, but it helps to take correct decision choose correct alternative. Monopoly of knowledge has diminished. Because of the use of ICT ordinary people are empowered. ICT uniformly (irrespective of class, caste, gender, status) has empowered of everybody by providing informa-

tion. So it is benetial for enrichment and to increase the understanding of the society.

**Limitations :** The information you get through ICT is not verified and it is in a huge form. There is no method for crosschecking or to check the authenticity so you can become the victime of false information and propoganda. You are drowned in the flood of information. It is a source of providing a joint platform to communicate and share their ideas, cultured values and to form social network. People are aware of the reality they are exposed with the help of Information and Communication Technologies. So one should use this tool very responsibly and effectively and nutrally. Otherwise I would like to sum up the line with the quotation, 'No matter what kind of knowledge or technologies, those that cannot serve society are meaningless'.



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## ICT in Education: A Generic Model to boost effectiveness of Educators

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*"If we teach today's students as we taught  
yesterday's, we rob them of tomorrow."  
- John Dewey*

### **Abstract:-**

The word 'Information and Communication Technology' (ICT) has become the global buzzword. It is very difficult to imagine our life without use of technology for daily activities. On one side we strive to learn and update ourselves to use the technology, on the other hand, teaching has remained far behind in the trend. There has been a very marginal change in the teaching and learning practices in nearly last 150 years. We still take pride in adhering to the obsolete 'chalk and talk' method to impart knowledge. It is said that 'No one can stop an idea, whose time has come'. That time has come now. We, as a part of teaching fraternity must learn the use of modern technology to keep pace with the era of transformation in pedagogy. The present paper deals with the opportunities and avenues available to the educators to use information technology and to make the entire process a joyful experience.

### **Keywords:-**

Information technology, Educators, curriculum, content delivery, PowerPoint presentation, Search Engines.

### **Introduction:-**

In today's world, technological developments have enveloped our lives from all angles. No one can stay aloof from these developments. Educators are no exceptions to this. Increasing number of admissions in the colleges and decreasing number of students in the classrooms have posed a question on the competence and ability of an educator to attract and retain students in the class. It is easy to blame the students' fraternity for their indifference and virtually getting rid of the intensifying problem. But it is not just to turn a deaf ear to the issue. There is a dire need to pay serious heed to this problem and find a solution out. This is apparent that the students no more find the curricula and the content delivery mechanism challenging and interesting. Efforts need to be taken to encounter both the aspects so that we can turn the wheel anti clockwise.

**Statement of the Problem:-**

The existing pattern of higher education is decades old. There have been no constructive changes since long. To meet global standards and expectation, there is an immediate need to adopt innovative techniques and practices to bring the level of education to the desired standards. This is possible only when we adapt ourselves with the use of information technology. The huge gap between the education imparted by Indian institutions and that of foreign ones also substantiate the need to replace the existing delivery mechanism with that consists of application of information technology.

**Objectives of the study:-**

The present paper is authored with following objectives:-

1. To find out gaps in existing curricula
2. To find out gaps and problems in curricula delivery mechanism
3. To suggest improvements in delivery mechanism by way of using information technology as an instrument
4. To suggest measures for easy accessibility of information technology

**Discussion:-**

1. Gaps in curricula :-

Prevailing curricula is designed by the apex body i.e. the university (except those of autonomous institutes). It is valid for five years. Educators are expected to adhere to the contents of the curricula. However, the educators enjoy the autonomy to choose the methodology to be adopted to impart the contents. This is the point where the problem starts to emerge and grow. Most of the educators use the same techniques that have been adopted by their educators to deliver the contents. They conveniently ignore that the expectations of various stakeholders have changed and they expect the curricula to be effective, enriching and being delivered by using available technological mechanism. The prevailing gaps are observed as follows:-

- a. The curricula does not meet and satisfy the expectations of employers and other stakeholders
- b. There is no quality management and monitoring system
- c. Latest events and occurrences are rarely covered
- d. Educators are reluctant towards inclusion of technology related aspects of curricula
- e. Five yearly revisions also do not assure any substantial addition to the existing inventory of knowledge.
- f. Up gradation of curricula always lag behind the changes in the respective fields.
- g. The prevailing methods of imparting knowledge do not allow the changes to be inculcated effectively.

2. Gaps in curricula delivery mechanism:-

Even if the curricula are designed to keep pace with the changes in the outside world, the educators find it difficult to impart the same by using the suggested techniques and technologies. Sometimes, the curriculum explicitly suggests use of internet and computer laboratories to

deliver particular contents in an effective manner but it is not done in the desired way due to many reasons. Some of the reasons are as below:-

a. Lack of adequate facilities like computer laboratories, internet, required software etc.

b. Lack of digital literacy amongst the educators to impart certain contents by using suggested technology.

c. Lack of digital expertise among the educators as sometimes, mere literacy about the multimedia is not adequate.

d. Lack of enthusiasm from both the learner and educators side

3. Information Technology and Delivery Mechanism:-

Despite the above limitations, it is a fact that the use of ICT in teaching makes the entire process more meaningful, interesting and effective. Following techniques are expected to benefit the educators in manifold ways:-

**a. You Tube Videos :-**

Screening of You Tube videos help the educator explain certain concepts in a simple and lucid manner. This is one of the most effective tools as it is free, time saving and has an inventory of videos on almost everything under the sun. Once downloaded, these videos can be used for a number of times.

**b. Use of PowerPoint Presentation:-**

PowerPoint presentations are considered to be one of the most acknowledged facets of using information technology in educating process. There are many options available for animation and it actually has no limits on making a presentation more and more interesting and effective. Educators can update the contents of these presentations depending upon the requirement of a particular topic and updating of the curricula.

**c. Online tests:-**

In addition to classroom tests, educators can encourage the students to take online tests.

These tests are free, time and energy saving and the results are readily available along with the performance analysis.

**d. Smartphone applications:-**

There are many applications available under 'Books and References' and 'Education' category of Google Play android systems. Students can learn various topics and contents any-time, anywhere. It is cheap, user friendly and is prepared by the experts in the particular field. It is certainly a substantial addition to the existing inventory of skill and knowledge.

**e. Online Academic Communities and Chatrooms:-**

Several academic communities are available online. Educators can participate in those communities. They can take part in various discussions which will help them to enhance their knowledge, skill and competence. They are also exposed to the global inventory of knowledge.

**f. Social networking sites:-**

Social networking sites like Facebook, Twitter and Whatsapp can be used to impart and update knowledge of the learner in many ways. The role of educator is to be a facilitator between the knowledge and the learner. Educator can help a learner to filter and select the required contents.

**g. E-Content Portals of various universities :-**

Several universities have started their e-content portals where students can access the lectures delivered by the experts. For example, University of Pune has made many lectures by the experts across many faculties through the EMMRC (Electronic Multi Media Research Centre). These have proved to be of immense use to the learners. Educators also can prepare such lectures and make it available on the website of their respective institution.

**h. Use of search engines:-**

Students can access various search engines like Baidu, Bing, Munax, Google etc. to derive desired information. This keeps them

updated as the information is updated in real time. The intrinsic limitation of text and reference books can be overcome here.

i. Use of Other software like MS Word and Excel, Tally ERP etc. :-

Use of above software has become the need of the hour. Training and regular use of the software improves the skill, competence and employability of learners. Institutes may start short term courses for learners. It is beneficial to both the learner and the educator.

Benefits of ICT in Education:-

Stakeholder	Benefits
Students	<ul style="list-style-type: none"> <li>♦ Increased access</li> <li>♦ Flexibility of contents and delivery</li> <li>♦ Combination of work and education</li> <li>♦ Learner centric approach</li> <li>♦ Higher quality of education</li> <li>♦ New ways of interaction</li> <li>♦ Enhanced employment opportunities</li> </ul>
Employers	<ul style="list-style-type: none"> <li>♦ High quality and cost effective professional development</li> <li>♦ Updating of employee skills, increased productivity</li> <li>♦ Development of new learning culture</li> <li>♦ Sharing of work and training time with the employees</li> <li>♦ Increased portability of training</li> </ul>
Government	<ul style="list-style-type: none"> <li>♦ Increase in capacity and cost effectiveness of education</li> <li>♦ To reach large target group</li> <li>♦ To support and enhance quality and relevance of existing education system</li> <li>♦ Sharing of curricula and information resources</li> <li>♦ To promote innovation and opportunities for lifelong learning.</li> </ul>

Source:- UNESCO, (2002)

#### 4. Accessibility to Information Technology:-

To use information technology widely, there is a dire need to make it easily available across all the users. It is not possible to improve the quality of education without using information technology. To make the use of information technology popular, it must fulfill three conditions:-

- Easy accessibility
- Knowledge about its usage
- Support system

The researcher suggests following measures to popularize the use of information technology amongst educators as well as the students:-

a. Provision of ICT based infrastructure (computers and internet facility) to the educators and students

b. Provision of Wi-Fi facility in the campus

c. Training to the educators about innovative application of information technology

d. Initiation of digital security measures to protect the systems and prevent potential damages

Conclusion:-

ICT can affect the delivery of education and enable wider access to the same. In addition, it will increase flexibility so that learners can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It would enable development of collaborative skills as well as knowledge creation skills. This in turn would better prepare the learners for lifelong learning as well as to join the industry. It can improve the quality of learning and thus contribute to the economy.

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## Impact and Strategies of ICT in Social Sciences

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### Abstract:

In this research paper impact and strategies of information and communication in social sciences is studied. It is observed that social science teachers use a variety of information and communication technology (ICT) and services for teaching students, as this technology has been proved to be very useful in teaching and searching numerous information quickly and with ease. ICT also help the teachers to access, approach, integrate, evaluate, create, and communicate information more easily. Significant developments in ICT have definitely enhanced the way information is collected, processed and disseminated. While processing, storage and retrieval facilities are provided by computers, telecommunications provide the facilities for the transfer or communication of data or information. The study also identifies the importance of training and technical knowledge to use ICTs which is essential for the teachers of social sciences. The paper recommends advance training and guidance for use of ICT-based technologies for the maximum utilization of this technology for teaching by the teachers of social sciences.

### Key words:

Strategies in ICT, Importance of ICT in teaching Social Sciences, Impact of ICT.

### Introduction:

The utilization of the ICT in educational institutions has changed the teaching, learning

and research environment. ICT is playing an important role in providing information and communication to the teachers in every educational institution. India is a democratic country, education is an absolute necessity and also implements right to education. In India where any citizen may possess any public office including that of executive or legislature a common citizen's educational programme for the population is very essential. It is more than a matter of individual and personal choice. Education is concern of society as a whole. Therefore the educational institutions are expected to contribute directly to the progress of good citizenship, loyalty to democracy, civic responsibility and human relationship. In the present complex world, the teachers are expected to provide fruitful education to the students as it helps the student to groom their personality, learn to live effectively and prepare themselves for useful and well-adjusted lives in future. It is the responsibility of the teacher to nurture the students to acquire a philosophy of life, developed personality, skills, understandings and knowledge that will prove useful to them for their bright future. These are the aims and goals of the educational institutions and ultimately the responsibilities on the teachers, and social sciences as an independent field of study, has assumed a special responsibility towards the attainment of these aims and goals for the all round development of the student.

### Strategies in ICT:

Social Sciences are under increasing pressure to use the new information and communication technologies to teach students the knowledge and skills they need for development. It is observed that

radical implications of ICTs are used for conventional teaching and learning. It assumes the transformation of technology in teaching-learning process and the way teachers and students gain access to knowledge and information. With the emerging new technologies in ICTs the teaching profession is changing from

teachercentric,lecture-based instruction towards student at the centre and creating interactive learningenvironments for them. Educational strategies are based onformulating and implementing successful ICT-enabled teachereducation programmes. The prime responsibility of education institutions may either assume a leadership role in thetransformation of education or be left behind in rapidly changing technological field. In order to consume optimum benefits of ICTs in teaching and learning process, it is essentialthat teachers should possess accurate knowledge and able to effectively use this technology. The educational institutions are required to design programmes and model the new pedagogies and techniques for learning.

It is necessary to provides resources and technical help to educators,administrators and policy-makers in the government sector for improved application of ICTs in teacher educationalprogrammes. It is essential at the part of educational institutions alsoto provide expertswith extensive experience in the integration of ICTs into teacher orientation programmes.It also identifies important strategies for managing the change process in theteacher education programme as technology becomes a baseline for transformingthe teaching-learning process. It will further help ingenerating ample interest in teachers andwill largely contribute to achieving goals and overwhelming priority to achieve challenges of scope and scale of ICT for all.

Importance of ICT in teaching Social Sciences:

The teaching of social sciences subjects can be accurately enhanced by the use ofICT at a standard level. Designing various documents and power point presentationsproducing reports using ICT tools in subjects like political science, history, geography or economics topics ishighly motivational for students. Students put efforts in adding graphics, photographs,pictures, and other information about a topic to reports they

write and presentationthey create. In the area of ICT alarge range of graphicalinformation, including diagrams, structures and other pictures, is easily accessible on internet. Other information can be gathered using the web tools for creation of graphics, to give contents to a topic discussed in the syllabus, and tomake classroom teaching more closely approximate to current situations about the subject concern.

Wide range of scope is definite in social scienceswhich provide opportunities to discuss ICT informationand it is also related to protection of privacy towards protection of data andcopyright. There is opportunity also for discussions on the impact of ICT in society. Changesare expected in social order as they are related to professions, employment, and socio, economic and political values ofinvesting in ICT.It helps teachers and students learn to deal with current issues like corruption, regionalism, cultural aspects etc. It becomes easy to obtain a better understanding of issues related to social sciences.

#### **Impact of ICT:**

Majority of educational institutions utilizes ICTs technology for communication followed by access to information. Teachers use internet for higher studies andthe most used servicesof internet are e-mail, the web sites, discussion forums etc. The teachers in social sciences make use of internet for preparing assignments. The relationship betweencomputer literacy of academic staff and their use ofelectronic information sources is increasing day by day. The impact of otherfactors such as age, gender and educational background has no barrier on the use of ICT sources. Statistical and significantimprovement between computer literacy and the use ofICT sources and services is occurring in present era. A significantrelationship is developing between academics and their use of ICT sources.To teach effectively the teachers of social sciencesare using ICT for primaryinformation. They are accessing search engines tobrowse the required

information and it is clear that in comparison to traditional documents, internet saves time, easy to access, more informative, useful and more preferred. Information regarding social sciences becomes easy through ICT as the educational institution has facilities to provide access to various databases and online journals. It is again a good source for downloading software or text, e-mail services, and for finding related references. There are many search engines available and teachers are making use of the same and always find useful information on the net as quality information is available on the internet. Various information about improving teaching process in social sciences is carried through ICT products and services. Teachers use e-mail and document exchange, electronic journals, online databases, for preparing to update knowledge.

ICTs have played an important role in supporting teaching and research in social sciences and it is made available by the educational institutions. But the last decade has brought a tremendous change in relationships between teachers and students. ICT enabled products and services, and the availability of online information resources have changed the way the services educational institutions and libraries now provide to their teachers and students. ICT is the integration of computer and communication technology used to process, store and disseminate information. It has changed the traditional practices of library and information centre in providing services to the students.

According to Indian constitution every citizen is guaranteed right to education. Every citizen of India should be given an equal opportunity to learn to the limits of their capacities. Government provides various facilities in education and promotes importance of education and tries to meet the special educational and other related needs of teachers and students. ICT shows powerful impact in teaching process by making substantial use of electronic equipment's, especially computers for collect-

ing, analyzing and spreading information. ICT is considered as scientific, technological and useful in every discipline and management courses and it is used in handling information, its application and association with social sciences, and cultural fields. ICT creates positive involvement in the classroom and built intellectual relationship between teachers and students. In more specific terms ICT is useful to avail of all internet media in managing and processing information. Information is power and with knowledge come learning, skills, adaptability, understanding and intelligence factors that contribute to the progress of an individual. ICT is the means and direction to acquire the power of knowledge. As knowledge plays an important role, it follows that the acquisition of knowledge must be fruitful. At the same time it is equally essential to keep pace with rapidly changing world and it is possible obvious through ICT. It also provides numerous access to reliable information.

It directs the way for construction of knowledge and it is useful in teaching in social sciences. ICT is powerful in universalize education in the truest sense. ICT is an important tool for bridging social divides to understand facts in detail. ICT can be utilized in such a way that it becomes an opportunity equalizer by providing information, communication and computing resources in far village and tribal areas. Teachers are expected to be learner is to be active. They cannot be passive in the process of teaching and learning. Learning is to effect desirable changes in students behavior, knowledge, importance of living and adjustment of knowledge, skills etc. It aims at maximizing learning experiences. Social Studies is the science of learning and education is to be organized through social studies principles and teaching through pedagogic principles. Besides methods, we use various media and materials for maximizing the learning experiences of students. That is why multimedia or ICT approach to learning must be used for ensuring efficiency and effectiveness. In

education ICT is an assisting tool. Following points are to be taken into consideration:-

1. ICT systems increasingly involve many people:

systems are open evolving, are today managed in an area today managed in an ad hoc ad hoc and reactive manner, on the basis of real understanding. we can use inspiration from the social sciences to move toward an improved understanding of such systems and better techniques for managing and designing them.

2. Understanding large socio-technological systems:

It is indeed difficult to understand large ICT systems open, evolving, and depend on the actions of many people. Authorities have little knowledge to guide their decisions. Would allow limited prediction of system behaviour certainty regarding properties such as stability and security. Greater efficiency in managing systems, markets, the response to epidemics or natural disasters.

Engineering social benevolence and creativity other modern ICT systems from malicious behaviours that undermine their functioning. lack sophisticated means for preventing such behaviours, encouraging good behavior. It is essential to learn principles, inspired in part by social norms and other social phenomena, for designing ICT system other social phenomena naturally dissuade malicious be naturally dissuade malicious behavior.

#### Conclusion:

The impact of ICTs technology in social sciences and the potential they offer for global sharing of knowledge cannot be denied. ICT should be used to enhance learning of all parts of the curriculum and inter-disciplinary and cross disciplinary thinking. Opportunities for professional development in this field of education are given to teachers so that they can effectively perform the role of facilitators, thus allowing students to gain knowledge independently. Thus ICT in teaching of social studies is developing rapidly. It involves developing rela-

tionship between students and teachers and encourages them to continuously update themselves, to ascertain the kind of ICT suitable for the learning experience to be provided and to use ICT to optimize the process of education. To achieve these objectives, teachers should not only have a working knowledge of ICT resources but also the ability to gain more information. Innovative steps should be taken to develop creativity in exploring to ICT supported learning environments. The process could be developed in various phases which includes conception, development and evaluation. The most important development is related with technical or instrumental learning is dependent on the ideas and purposes of areas in social sciences. The ICT has proved to be a great asset to many of the social science teachers. The research paper also identifies that major hindrances faced by the teachers as well as students is lack of training, lack of technical knowledge and limited number of computers. It is further observed that lack of awareness of ICTs is also one of the major hindrances to use the new technologies. Majority of the researchers learned to use ICTs through the guidance from colleagues and staff. Therefore, it is recommended that educational institutions should provide initial orientation workshops and training for the researchers on ICT based technology so that they can utilize these technologies to optimum level.

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## Bringing Information and Communication Technology into Classrooms

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### Abstract

The presenter has divided the paper into four parts. The first part deals with Information and Communication Technology (ICT). The second part focuses on different ICT tools like computers, recorded lectures and social media, which can be used by teachers in their day-to-day classrooms. The next part talks about the suggestions for teachers and authorities for implementing ICT into teaching-learning process and the concluding part deals with a hope that technology would become an integral part of teaching-learning process in future.

Key words: ICT, teaching-learning process

### INTRODUCTION

Twenty first century learners extensively make use of technology in their day to day life.

Technology has become a greater part of everyone's life but it has not achieved the same status in the field of teaching-learning. Teachers of today also use technology for numerous activities but the use of technology in the classrooms is restricted only to PowerPoint Presentations with the help of LCD.

Lewis (2009) in his book *Bringing Technology into the Classroom* states that today's

generation is 'Digital Native' and teachers' generation is of 'Digital Immigrants'. He further mentions that there has been a tremendous progress in educational technology and today's students are more interested in using technology as it is new and exciting. But teachers make use of teaching strategies of the analogue world. Thus it is very much essential to bring technology into Indian classrooms to make teaching-learning process interactive, innovative and interesting. Teachers can make use of various ICT tools to make their teaching effective and 'reach' the students. One must not forget that technology is nothing without a teacher, a plan and the pedagogy behind using it. The writer suggests that it is essential to consider curriculum closely before implementing technology in the classrooms. It is essential to manage technology and don't let technology manage you. Various ICT tools are available to help you and your students to be more productive. They are not ends in themselves.

### ICT TOOLS IN CLASSROOMS

A teacher can make use of following ICT tools to make his teaching collaborative.

#### 1. Computers and Internet:

We cannot ignore the development and importance of computers in all the fields of life. It can play a vital role in the teaching-learning process as well. Many times, we find our learners using computers and internet. They are very much familiar with the modern technology. So being a teacher, why can't we adopt computers and computer aided technology in teaching-learning process? We can learn about various cultures, religions, traditions, etc. without moving out of the classroom. We as teachers can come to know about various teaching methodologies used in other places. With the help of internet we can bring the whole world in the classroom. There are various websites, which can be used in teaching.

We can make use of various facilities like MS Word, PowerPoint in our teaching-learning

process. All teachers can use Power Point Presentations regularly to make their teaching more

useful and communicative. Teachers can make use of different charts, diagrams and tables in their presentations. It is said that 'one picture is equivalent to thousand words', which is truly applicable to power point presentations. Thus, we cannot ignore the impact of presentations on students as PPTs help students to understand the content easily, quickly and in a better way.

## **2. Video, Cinema and Television:**

Video is one of the modern tools for learning a language. The videos can be played for the development of different skills. The main benefit of videos is that it can be stopped at any time and can be played many times.

Cinema can also be used as a teaching tool. Various investigations conducted in U.S.A. show that film producers increased reading interest in children. The film show depicts real learning situations, which are vivid, and helps to motivate learners to develop their study habits. Television is also a very powerful medium in providing education to the masses. It is called as 'the queen of audio-visual aids' and is used for educational purposes in more than one hundred countries today. The history shows that by 1958 more than 98% of the population of the U.K. and the U.S.A. was covered by television transmission. In 1967, the first regular service of coloured television in Europe began on BBC-2.

## **3. Virtual Classroom and Recorded Lectures :**

A lot of significant changes have taken place in the educational field due to growing popularity and access to the internet. It is very much essential that an educational institute makes utmost use of 'e-facilities' for making the teaching learning process more effective. One of the important e-facilities is Virtual Classroom and radical transformation can be brought in teaching learning process with the help of virtual classroom. In this facility of virtual

classroom, the distance learner does not have to attend a class in a traditional way, but one can attend the class either from one's home, workplace or any cyber café. To attend the virtual class, the learner requires only a computer with internet connection. With the help of this facility, the learner can clarify his doubts by asking questions in live sessions by sitting at his convenient place. The term 'virtual' means a simulation of the real thing, virtual classroom is a simulated classroom via Internet, which provides a convenient communication environment for learners. A virtual classroom aspires to provide a learning experience that is similar to a real classroom. Virtual classroom can be compared to the actual classroom, the only difference between them is, virtual class is live Internet broadcast, where teacher and students are separated by different geographic location and they interact with each other by way of multimedia resources. Recorded Lectures can help students to enhance their understanding of key concepts. These recorded lectures are of expert faculty who deal with important courses and areas of the program curricula. Such lectures provide an asynchronous and effective form of learning.

## **4. E-Books and Kindle:**

Today's generation prefer to read online or in electronic form. So teachers should make use of e-books, which can be easily downloaded from various sources. These e-books can be shared with students, so that they can read whenever they wish to refer to them. Kindle is one of the useful tools of ICT, which supports digital books. We can download numerous books with the help of internet on Kindle. Amazon provides abundant ebooks, which can be downloaded on Kindle. Newspapers as well as magazines are also available online. Many libraries like British Library, provide the facility of digital books, magazines and reference material, which can be accessed from anywhere in the world.

## **5. Social Media (Facebook, Twitter, Blog,**

**LinkedIn, WhatsApp, YouTube):**

Social Media like Facebook, Twitter, and Blog are online interactive groups, which help to build relationships. Teachers can establish dialogue among students with the help of social media. It provides an opportunity to teachers to listen to the views of students on different study related topics. Teachers can also share different resources with students for effective learning. In many developed countries like the USA and the UK as well as in many developing countries like India teachers effectively use social media in their teaching-learning process. But the percentage of use of social media in India is negligible. It's our responsibility to increase the use of social media in our classrooms.

**SUGGESTIONS**

Even though National Policy on ICT gives importance to the use of educational technology in teaching-learning process, it is challenging to bring ICT into classrooms. There are many challenges which are faced by teachers but it is our responsibility to bring ICT into classrooms and support the vision of National Policy on ICT, which states that 'the ICT Policy in Education aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge society leading to all round socio – economic development of the nation and global competitiveness.' To bring this vision into reality, the presenter wish to suggest following measures:

**1. Awareness:**

More awareness about the use ICT in teaching-learning process should be created among authorities, teachers, parents as well as students. They should know how ICT benefits in teaching-learning process.

**2. Flexibility:**

The colleges should provide more flexibility to teachers, so that they can make effective use of ICT in their teaching-learning process.

**3. Training :** Training in ICT use should

be provided not only to teachers but also to the

students, so that they do not face any difficulty at the time of teaching-learning process.

**4. Tools:** The authorities should make available more number of computers for the benefits of learners. At the same time, various educational CDs, DVDs etc. should be available in the computer lab.

**5. Encouragement:** Teachers should be encouraged to use ICT in their teaching-learning process. If a teacher makes effective use of ICT, then he or she should be rewarded by the authorities, so that others are motivated to use technology in their teaching.

**6. Teaching Approach:** Teachers should have a learner-centric approach, which is easily possible by using ICT in the classroom.

**CONCLUSION**

In conclusion, the presenter wishes to state that we can bring in quality with the help of ICT, which is hampered in mass education. There are many problems which are faced by a teacher in a traditional mode of teaching but ICT can help to overcome these problems. ICT can also help to monitor the progress of a learner in a better manner. It can help to disseminate knowledge appropriately. Many educational committees have proposed the use of technology in the classrooms.

Finally, the presenter wishes to refer to Bhagat, who suggests in his book What Young India Wants that 'may be we need to redesign the traditional model of a school, perhaps using technology to impart learning and course materials have to be brutally revamped to bring them in sync with the modern world.'

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## साहित्याच्या अध्यापनात माहिती

### संप्रेषणाचा वापर

प्रा. दीपक गायकवाड  
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#### प्रस्तावना

सध्या माहितीचा स्फोट झाला आहे. सर्व माहिती एकत्र करून त्यांची विशिष्ट पद्धतीने मांडणी करून तात्काळ उपलब्ध करून देण्याचे कार्य संगणकाद्वारे केले जाते. राष्ट्रीय, आंतरराष्ट्रीय स्तरावरील माहिती इंटरनेटच्या माध्यमातून प्राप्त होऊ शकते. अनेक संशोधनामध्ये असे दिसून आले आहे की, अध्यापनात संप्रेषण भूमिका बजावत असते. प्रत्येक स्तरावर संप्रेषण हा त्या प्रक्रियेचा एकात्मक व अविभाज्य घटक असतो. अध्यापनाची उद्दिष्ट्ये किती प्रमाणात साध्य होतात हे तेथील संप्रेषणाच्या दर्जावरच अवलंबून असते. अध्यापनाचे यश संप्रेषणाच्या दर्जाशी निगडित असते. संप्रेषण जितके अधिक परिणामकारक तितके विद्यार्थ्यांना अध्ययन सोपे होत असते. साहित्याच्या अध्यापनासाठी याचा उपयोग येणाऱ्या काळात गरजेचा आहे.

#### ❖ साहित्य व माहिती संप्रेषण

सध्या प्रत्येक दशकात जगातील ज्ञान दुपटीने वाढत आहे. या परिवर्तनाचे जसे फायदे आहेत तसेच तोटेही आहेत. भविष्यकाळात कोणते बदल होतील याचा वेध सातत्याने घेणे आवश्यक झाले आहे. व्यापार उद्योगाच्या क्षेत्रात या परिवर्तनामुळे जागतिकीकरण असून महत्त्व प्राप्त झाले आहे. शिक्षण क्षेत्रातही या परिवर्तनाचा खोलवर परिणाम झाला आहे. अध्यापन अध्ययनाच्या पारंपारिक पद्धतीचा नव्या युगात उपयोग कमी कमी होत जाणार आहे म्हणून साहित्याचे अध्यापन पारंपारिक पद्धतीने न करता माहिती तंत्रज्ञानावर आधारित अध्यापन-अध्ययन पद्धतीचा वापर वाढत्या प्रमाणात करावा लागणार आहे. त्यात ई-लर्निंग, कॉम्प्युटर असिस्टेड लर्निंग, ऑन लाईन एज्युकेशन या पद्धतींचा समावेश होऊ शकतो. भारतीय शिक्षण पद्धतीत या दृष्टीने सुयोग्य बदल करण्यात येत आहे. प्राथमिक स्तरापासून संगणकाचे शिक्षण देण्यास प्रारंभ झाला आहे.

#### ❖ संगणकाच्या साहाय्याने साहित्याचे अध्यापन

संगणकाद्वारे जगातील कोणत्याही बाबीसंबंधी माहिती उपलब्ध होऊ शकते व ती माहिती साठवून ठेवता येते. ती पाहिजे त्यावेळी,

पाहिजे त्याला उपलब्ध होऊ शकते. शिक्षक व विद्यार्थी या माहितीचा उपयोग करू शकतात. विद्यार्थ्यांना उपयुक्त अशी पी.पी.टी. व शैक्षणिक कार्यक्रम तयार करून यांच्या साहाय्याने स्वयं अध्ययन विद्यार्थी करू शकतात. वेगवेगळ्या कांदबरीतील उतारे, नाटकातील महत्वाचे संवाद, महत्वाच्या कविता, साहित्यिकांचे फोटो, पॉवर पॉइंट प्रेझेंटेशनच्या मार्फत विद्यार्थ्यांसमोर सादर करू शकतो. प्रशासनिक मराठीचे अध्यापन करताना प्रत्यक्षात जाहिरात लेखन, अर्ज लेखन वगैरे घटक दाखवू शकतो. विद्यार्थ्यांसाठी क्रमान्वित अध्ययनाच्या तत्त्वानुसार मूल्यमापनाचा कार्यक्रमही संगणकाच्या साहाय्याने सर्वांसाठी उपलब्ध होऊ शकतो. उदाहरणार्थ-वा.म. जोशी यांची मंडू काळे व सरला भोळेफया कादंबरीत अभिनव पत्रात्मक तंत्रपद्धती वापरली आहे. ही तंत्र पद्धती संगणकाच्या माध्यमातून आपण विद्यार्थ्यांसमोर सादर करू शकतो. ही पत्रात्मक रचना तंत्रगत गुणांच्या दृष्टीने पाहता मराठीत अभिनव आहे. जिच्यामध्ये मनोविश्लेषणावर व वृत्तीवैचित्र्यावर भर आहे. अशा कथेला पत्रात्मक पद्धतीने उठाव मिळतो. कादंबरीतील ही एकसष्ट पत्रापैकी काही पत्रे आपण संगणकाच्या माध्यमातून ठळकपणे विद्यार्थ्यांसमोर सादर करू शकतो व त्यावर चर्चा करू शकतो. त्यामुळे त्यातील आशय विद्यार्थ्यांना परिणामकारकपणे समजवू शकतो. मनटसम्राटफ या नाटकाचे अध्यापन करताना नाटकातील पात्रे त्यांच्या भावना, संवाद, नाटकाची रचना, नाटकाच्या तांत्रिक बाजू आपण संगणकाच्या माध्यमातून विद्यार्थ्यांना परिणामकारक समजवू शकतो. साहित्याच्या अध्यापनात प्रत्येक कलाकृती संदर्भात आपण या पद्धतीचा वापर करू शकतो.

साहित्याच्या, भाषेच्या नव्या वापराकडे येणाऱ्या काळात दुर्लक्ष करून चालणार नाही. युनिकोडच्या साहाय्याने संगणकावर मराठी लिहिण्याची कला व ती कौशल्ये आपण विद्यार्थ्यांना शिकवू शकतो. फेसबुक, व्हाट्सअप, ब्लॉगलेखन, विकीपीडिया लेखन-संपादन ही कौशल्ये माहिती संप्रेषणाच्या माध्यमातून विद्यार्थ्यांपर्यंत आपण पोहोचविली पाहिजेत. अभिवाचन, शब्दांकन, सूत्रसंचालन अशी दृक-श्राव्य माध्यमातील विविध कौशल्ये आपण साहित्याच्या विद्यार्थ्यांपर्यंत पोहोचवू शकतो. भाषेच्या मुलभूत वापरासाठी महाविद्यालयात सुसज्ज अशा भाषाशाळा उभारायला हव्यात. त्यामुळे अध्यापनात प्रभावीपणे माहिती संप्रेषणाचा वापर होऊन विद्यार्थ्यांना फायदा होईल.

शिक्षणाच्या संदर्भात जगातील विभिन्न देशातील विद्यार्थ्यांना अन्य देशातील शिक्षणाचा लाभ होण्यासाठी मुक्तद्वार असणे गरजेचे आहे. त्यामुळे औपचारिक शिक्षणासंदर्भात आंतरराष्ट्रीय स्तरावरील अदान-प्रदानात वाढ करण्याचा प्रयत्न वाढेल. विभिन्न देशातील विद्यार्थ्यांना साहित्याच्या अध्ययनाकडे आकृष्ट करण्यासाठी व साहित्याचे अध्यापन अधिकाधिक दर्जेदार करणे होईल याकडे कसोशीने लक्ष दिले पाहिजे. या दर्जेदार अध्यापनासाठी अधिकाधिक प्रमाणात माहिती तंत्रज्ञानाचा उपयोग करावा लागेल.

❖ **माहिती संप्रेषण कौशल्ये:**

माहिती संप्रेषण कौशल्ये कोणकोणती व ती कशी विकसित करावी याबद्दलची माहिती साहित्याचे अध्यापन करणाऱ्या शिक्षकाला असणे आवश्यक आहे. विशेषतः पुढील कौशल्यांचा प्राधान्याने अभ्यास अपेक्षित आहे. लेखन कौशल्ये- थोडक्या शब्दात, नेमक्या भाषेत व अर्थपूर्ण लिहिणे म्हणजे लेखन कौशल्य होय. या कौशल्याचा वापर माहिती संप्रेषणात करताना विद्यार्थ्यांचा सर्वांगीण विचार करावा. विद्यार्थ्यांची अनुभव संपन्नता, पार्श्वभूमी, मूल्ये, श्रद्धा, बौद्धिक पातळी याबद्दलची माहिती मिळवावी व कोणता संदेश संज्ञापित करावयाचा आहे हे निश्चित करावे. एखादी कल्पना, विचार जेव्हा सुचतील तेव्हा लिहून ठेवाव्यात व नंतर त्यांची योग्य प्रमाणे जुळणी/मांडणी करावी. भाषेतील योजना किंवा विचार यांच्या संदर्भात कोणती उदाहरणे व दाखले द्यावेत याचा विचार करावा. नेमकेपणा, तरलता, संक्षिप्तपणा व दिशादर्शीपणा यामध्ये असावा. शब्दसंख्या आवश्यक तेवढीच आहे किंवा नाही, व्याकरणदृष्ट्या शब्दरचना योग्य आहे किंवा नाही, शब्दांची निवड योग्य आहे किंवा नाही, विचारांची मांडणी तार्किकदृष्ट्या बरोबर झाले आहे किंवा नाही, दोन परिच्छेदांची जोडणी योग्य झाली आहे का? हे तपासून त्यामध्ये सुधारणा करून आपण विविध साहित्य प्रकारांच्या अध्यापनात माहिती संप्रेषणाचा वापर करतेवेळी या कौशल्यांचा विचार केला पाहिजे. विशेषतः व्यावहारिक व उपयोजित मराठीच्या अध्यापनाच्यावेळी या संप्रेषण कौशल्यांचा विचार होणे गरजेचे आहे. अलिकडच्या काळात जागतिकीकरणाच्या प्रक्रियेत भाषांतर, रूपांतर, अनुवाद या संकल्पनांना महत्त्व येऊ लागले आहे. या संकल्पनांचा अर्थ, स्वरूप व प्रत्यक्षात अनुवाद कसा करायचा हे टप्प्याटप्प्याने आपण माहिती संप्रेषणाच्या माध्यमातून प्रभावीपणे विद्यार्थ्यांपर्यंत पोहचवू शकतो. उत्तम अनुवाद व अनुवादक यामुळे घडतील. अवघड वाटणारी अनुवादाची प्रक्रिया यामुळे सोपी होईल. ज्ञानप्राप्तीसाठी व विशिष्ट कौशल्यांचा विकास करण्यासाठी अध्ययनार्थ्यांच्या सूचना व प्रशिक्षण देण्याची प्रक्रिया म्हणजे शिक्षण होय. हे कार्य करत असताना माहिती तंत्रज्ञान वापरले जात आहे. अध्ययन-अध्यापन प्रक्रियेमध्ये मूल्यमापनामध्ये, शैक्षणिक व्यवस्थापनासाठी, दूरस्थ व निरंतर शिक्षण देण्यासाठी, शैक्षणिक संशोधनासाठी व माहितीची देवाण-घेवाण प्रभावीपणे करण्यासाठी माहिती संप्रेषण तंत्रज्ञानाचा वापर साहित्याच्या अध्यापनात महत्त्वाचा बनला आहे.

❖ **समारोप**

अध्ययन-अध्यापन प्रक्रियेमध्ये संदेशवहनाला खूप महत्त्व आहे. प्रभावी शिक्षक होण्यासाठी संबंधित विषयातील ज्ञान महत्त्वाचे आहेच पण ते ज्ञान इतरांपर्यंत यशस्वीपणे पोहोचविण्यासाठी प्रभावी संदेशवहनाची आवश्यकता असते. म्हणून आधुनिक युगात माहिती संप्रेषणाचा प्रभावी वापर अध्यापनात करण्यासाठी त्याचे प्रकार, प्रभावी

पद्धती याची माहिती असणे आवश्यक आहे. आजचे युग हे माहिती-संदेशवहन तंत्रज्ञानाचे युग आहे. साहित्याच्या अध्यापन क्षेत्रात यशस्वी होण्यासाठी गती व अचूकता महत्त्वाची असते. माहिती तंत्रज्ञानामुळे हे सहज साध्य आहे. इंटरनेट, ऑनलाईन ट्रेडिंग, व्हर्च्युअल क्लासरूम, चित्रित परिषद, माहिती सामग्री परिषद, ध्वनी परिषद, दूरदर्शन, भ्रमणध्वनी, मराठी संकेतस्थळे इत्यादी शब्द परावलीचे बनले आहेत. हे विद्यार्थ्यांना माहिती असणे गरजेचे आहे. पण साहित्याच्या अध्यापनात याचा प्रभावीपणे वापर केला गेला पाहिजे तरच मराठीच्या अध्यापनाचा दर्जा आणखी उंचावेल.

❖ **संदर्भ**

१) डॉ. अरविंद दुनाखे, डॉ. हेमलता पारसनीस, मप्रगत शैक्षणिक व्यवस्थापन, प्रशासन व वित्त व्यवहारफनित्य नूतन प्रकाशन, पुणे, २००८

२) डॉ. सुनिल राणे, मजनरल फाऊंडेशन कोर्सफविद्याभारती प्रकाशन, पुणे २००८



## शिक्षणक्षेत्रात तंत्रज्ञानाचे महत्त्व

सौ. स्वाती महेश पटवर्धन

मॉडर्न कला विज्ञान व वाणिज्य महाविद्यालय,  
शिवाजीनगर, पुणे-०५

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माहिती व संप्रेषण तंत्रज्ञान म्हणजेच ICT चा वापर करून शिक्षणाच्या दर्जात उल्लेखनीय आणि सकारात्मक सुधारणा करता येईल. असे सर्वच शिक्षणतज्ञ व संशोधकाचे मत आहे आणि ते बरोबरही आहे. कारण आजचे युग हे तंत्रज्ञानाचे युग आहे . आपली वाढती लोकसंख्या आणि जागतिक स्पर्धा यांचा विचार केला असता काळाबरोबर चालणे आपल्याला क्रमप्राप्त आहे. आपण असे म्हणतो की आपली पुढची पिढी म्हणजे आपल्या देशाचे भवितव्य आहे आणि आपल्याला देशाचा विकास करायचा असेल आणि आपल्या देशाला महासत्ता बनवायचे असेल तर आपल्या नविन पिढीला योग्य ते शिक्षण आणि मार्गदर्शन करण्याची संपूर्ण जबाबदारी ही शिक्षकांची तसेच पालकांचीही आहे आणि आपल्याला नविन पिढीचा विकास करायचा असेल तर ICT शिवाय पर्याय नाही.

मानवाला बदल हवा असतो, तेच ते काम केल्यामुळे कामामध्ये शिथिलता निर्माण होते. तसेच पारंपारिक रटाळ अध्यापन पद्धतीमुळे विद्यार्थ्यांचा शिकण्यामधील रस कमी होत जातो. उदा. एखादा विषय तोंडी समजावून सांगण्यापेक्षा तो P. P. T किंवा नाट्यरूपांतर करून शिकविला तर तो जास्त चांगल्या प्रकारे विद्यार्थ्यांना समजतो हे सिद्ध झाले आहे. अधिकाधिक विद्यार्थ्यांना शिक्षणाच्या प्रवाहात आणण्यासाठी भारत सरकारने देखिल अनेक उपक्रम राबविले आहेत. तसेच अनेक योजना आखून त्यास अनुदानदेखील मंजूर केले आहे. त्यातीलच एक महत्त्वाचा उपक्रम म्हणजे शिक्षणामध्ये तंत्रज्ञानाचा वापर.

माहिती व दळणवळणांच्या साधनामुळे परीक्षा पद्धती, माहितीचे विश्लेषण करण्याच्या पद्धती यात अमुलाग्र बदल घडून आले आहेत. तंत्रज्ञानाच्या वापरामुळे संपूर्ण जग एकमेकांशी जोडले गेले आहे. तंत्रज्ञानाच्या सहाय्याने एका क्लिकद्वारे आपण हवी ती माहिती मिळवू शकतो. विद्यार्थी घरबसल्या एखाद्या विषयाचे ज्ञान मिळवू शकतात, निरनिराळ्या प्रकारे अभ्यास करू शकतात, दैनंदिन जीवनातील घटना अभ्यासू शकतात व त्यायोगे विषय अधिक सखोलरित्या जाणुन घेवू शकतात. शिक्षणामधील तंत्रज्ञानाच्या वापरामुळे केवळ अभ्यासाची घोकंपट्टी करून गुण मिळविण्याच्या पद्धतीला प्रोत्साहन मिळण्यापेक्षा

विद्यार्थ्यांचा शिक्षणातील रस वाढण्यात मदत होत आहे व खद्यया अर्थाने विद्यार्थी ज्ञान मिळवू पाहत आहे.

आजच्या काळात शिक्षक व विद्यार्थी यांचे नाते पारंपारिक गुरू शिष्यासारखे न रहाता अधिक मैत्रीपूर्ण बनले आहे . शिक्षक जर तंत्रज्ञानाचा वापर करण्यात कुशल असतील तर विद्यार्थ्यांना पाठ्यपुस्तका-व्यतिरीक्त अनेक चांगल्या गोष्टींचे ज्ञान उपलब्ध करून देवू शकतात. ज्यायोगे विद्यार्थ्यांचा सर्वांगीण विकास होण्यास मदत होते . वाढत्या लोकसंख्येमुळे तसेच सर्व मुलांना शिक्षणाच्या प्रवाहामध्ये आणण्याचा सरकारच्या प्रयत्नांमुळे शाळा महाविद्यालयातील विद्यार्थी संख्या वरचेवर वाढत आहे. त्यामुळे अगदी छोट्या गोष्टीमध्ये तंत्रज्ञानाचा वापर अपरिहार्य बनला आहे. उदा. विद्यार्थ्यांची रोल लिस्ट, रोल कॉल रजिस्टर फी रजिस्टर या सर्व गोष्टींचे रेकॉर्ड संगणकाद्वारे ठेवण्यात आल्याने वेळेची खुप बचत तर होतेच पण त्यात अचुकता निर्माण होते. शहरातील ~~~h~~mer in m hr q U b n | r s U | B o o k s O f A c c o u n t s व रोखीचे व्यवहार देखील वेगवेगळ्या Software मार्फत केले जातात. (Tally) परंतु आता ग्रामीण भागात देखील संगणकाचा वापर मोठ्या प्रमाणावर होऊ लागला आहे .

१) पूर्वीपेक्षा आताच्या परीक्षा पद्धतीमध्ये देखील अमुलाग्र बदल झालेला दिसून येतो. शहरातील प्रत्येक महाविद्यालयामधील परीक्षा अर्ज आता जपश्रळपश पद्धतीने भरले जातात. त्यामुळे विद्यार्थी दिलेल्या वेळेत घरी बसून अर्ज भरू शकतो. तसेच विद्यार्थ्यांनी भरलेले अर्ज विद्यापीठात जमा करण्याची वेळ येत नाही. त्यामुळे जाण्या-येण्याचा वेळ, ,खर्च, रस्त्यावरील रहदारी एका विशिष्ट काट्टरसमोर होणारी गर्दी आणि सगळ्यात महत्त्वाचे म्हणजे अमर्याद होणारा कागदाचा वापर टाळता येणे शक्य झाले आहे.

२) पूर्वी विद्यापीठांना परीक्षेसाठी लागणाऱ्या सर्व प्रश्नपत्रिका महाविद्यालयामध्ये आणुन द्यावा लागत होत्या, परंतु या तंत्रज्ञानाचा वापर करून Password च्या सहाय्याने प्रत्येक परीक्षाकेंद्रावर प्रश्नपत्रिका आता Online उपलब्ध करून दिल्या जातात. यामुळे महाविद्यालयांना झालेला सर्वात मोठा फायदा म्हणजे Online प्रश्नपत्रिका वेळेवरच उपलब्ध होत असल्याने प्रश्नपत्रिका फुटणे किंवा प्रश्नपत्रिकांच्या सुरक्षिततेची फार मोठी जबाबदारी कमी झाली आहे.

३) नजिकच्या काळात Online परीक्षा हे तंत्रदेखील विकासीत होताना दिसत आहे व त्यासाठी सरकारदेखील प्रयत्न करीत आहे. सध्या काही ठराविक परीक्षा Online पद्धतीने घेतल्या जातात. उदा. Engineering च्या परीक्षा किंवा MHCET, MHCET चा तर निकालदेखील Online लागतो. विद्यार्थ्यांना निकालाचीसुद्धा प्रतीक्षा करावी लागत नाही.

४) Virtual Classroom हे देखील एक अद्यावत तंत्रज्ञान विकसित होत आहे. याचा खुप मोठा फायदा विद्यार्थ्यांना मिळत आहे.

Virtual Classroom च्या माध्यमातून विद्यार्थी एकमेकांशी संवाद

साधु शकतात. ज्ञानाची देवाणघेवाण करू शकतात. एखादया अतिशय तज्ञ अशा शिक्षकाचे व्याख्यान internate द्वारे ग्रहण करू शकतात. शिक्षकाने वर्गातच येडून शिकवले पाहिजे असे नाही तर Virtual Classroom च्या माध्यमातुन दिल्लीमध्ये सुरू असलेले एखादया शिक्षकाचे व्याख्यान विद्यार्थी पुण्यात बसुण एकू शकतात.

५) Video Conference हे देखील एक विकसीत तंत्रज्ञान आहे. आजकाल इंटरव्यु दिल्या शिवाय नोकरी मिळू शकत नाही. दूर एखादया शहराच्या ठिकाणी इंटरव्यु असेल तर Video Conference च्या माध्यमातुन घरबसल्या विद्यार्थी इंटरव्यु एकू शकतो. यात त्याचा व कंपनीचा वेळ, पैसा याची मोठया प्रमाणात बचत होते.

६) महाविद्यालयांना खूप पूर्वीचे रेकॉर्ड वर्षानुवर्षे जपून ठेवणे अवघड असते. त्यासाठी ऊळसळींरश्र ठशलीव ड्रींशा ही संकल्पना अतिशय उत्तम आहे. पूर्वीचे सर्व रेकॉर्ड डलरप करून ठेवल्यास हवी तेव्हा हवी ती खुप जुनी माहिती आपण एका क्लिकद्वारे मिळवू शकतो.

७) सूचनाफलकावर सूचना लावणे ही पद्धत आता काळानुरूप बदलत चालली आहे. आजकाल प्रत्येक विद्यार्थ्याकडे मोबाईल असतो. सर्व विद्यार्थ्यांना एखादी समान सूचना दयायची झाल्यास ईश्रज्ञ डचड हा सर्वात सोपा पर्याय आहे. तसेच शाळा महाविद्यालयांमध्ये Electronic Board हा देखील उत्तम पर्याय आहे. या बोर्डवर आपण विद्यार्थ्यांसाठीचा मेसेज टाईप केल्यास तो मेसेज Display होत रहातो.

८) शाळा महाविद्यालयांमध्ये प्रवेश घेण्याची प्रक्रिया सोपी राहिलेली नाही. तसेच पालक देखील शाळा महाविद्यालय निवडताना खुप जागरूक झाले आहेत. प्रत्येक शाळेत किंवा महाविद्यालयात जाडून चौकशी करणे शक्य नसल्याने शाळा किंवा महाविद्यालयांची वेबसाईट असणे अत्यंत महत्त्वाचे आहे. ज्यायोगे संपुर्ण माहिती समाजापर्यंत पोहचविण्यास खुप मदत होते.

शेवटी मुद्दा काय तर देशाच्या प्रगतीला हातभार लावण्याचे एक महत्त्वाचे साधन म्हणजे तंत्रज्ञानाचा वापर. अगदी अलिकडेच सरकारने सर्व महाविद्यालये व सर्व विद्यापीठे एकत्र जोडण्यासाठी एक धोरण राबविले आहे. ज्यामध्ये Internet साठी लागणाऱ्या वार्षिक खर्चाचा ७५% भार सरकार (HRD) उचलणार व २५% महाविद्यालय/विद्यापीठ खर्च करणार. HRD चे हे धोरण असो किंवा Cashless Transaction सारखे धोरण असो थोडक्यात काय तर तंत्रज्ञानाच्या वापराला पर्याय नाही हेच खरे.

देशाच्या उन्नतीचा जागर

म्हणजे

तंत्रज्ञानाचा मुक्त वापर

निष्कर्ष : १) तंत्रज्ञानाचा वापर अपरिहार्य

२) ग्रामीण भागात देखील तंत्रज्ञानाचा वापर होणे अत्यावश्यक

३) तंत्रज्ञानाचा वापर केल्याने वेळ पैसा यांची बचत

४) तंत्रज्ञानाच्या वापरामुळे ज्ञानाचे अफाट भांडार सर्वांसाठी खुले.  
उपाययोजना : १) सर्व शाळा महाविद्यालयांना तंत्रज्ञानाचा वापर करण्यासाठी प्रोत्साहन दिले पाहिजे.

२) तज्ञ लोकांकडून Workshop, Seminar च्या माध्यमातुन तंत्रज्ञानाविषयी जागृती निर्माण होणे गरजेचे आहे.

३) महाविद्यालयांमध्ये विद्यार्थ्यांना सर्वतोपरी मदत करण्याचे धोरण अवलंबिले गेले पाहिजे.

४) तंत्रज्ञानाच्या वापरामुळे विशेष अनुदान मंजूर केल्याने तंत्रज्ञानाचा वापर मोठया प्रमाणावर होडू शकेल.

संदर्भ :

संगणक तुमच्यासाठी - श्री कामतकर - मनोविकास प्रकाशन

संगणक शस्त्र - श्री शिंदे पी एस - कैलास पब्लिकेशन

संगणक युगाचा महानायक - बिल गेट्स - साकेत प्रकाशन



## “सामाजिक शास्त्रातील माहिती व संसूचन तंत्रज्ञानाचा उपयोग आणि त्यातील अडथळांचा अभ्यास”

(Use & Obstacles of ICT in Social Sciences studies)

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### प्रस्तावना:-

एकविसाव्या शतकाच्या सुरवातीलाच भारताच्या शैक्षणिक धोरणामध्ये माहिती व संसूचन तंत्रज्ञान या मुद्याला अनन्यसाधारण महत्व प्राप्त झालेले आहे. पारंपारिक अध्ययण व अध्यापण पध्दतीतील अडथळे किंवा दोष दुर करण्यासाठी माहिती व संसूचन तंत्रज्ञानाचा स्विकार शैक्षणिक क्षेत्रात करण्यात आला आहे. यासोबतच वैज्ञानिक व तंत्रज्ञानात्मक क्रांतीचा एक परिपाक म्हणून १९९० नंतर भारतात हळूहळू तंत्रज्ञानात्मक क्रांती घडून येण्यास सुरवात झाली होती. १९९१ मध्ये भारताने खाजगीकरण, उदारीकरण आणि जागतिकीकरणाचा या तत्वांचा स्विकार केला त्याचा परिणाम असा झाला की, विकसित देशांमध्ये अस्तित्वात असलेले तंत्रज्ञान भारतात येण्यास मदत झाली भारताने कृषी क्षेत्रात १९६६ मध्येच हरित क्रांतीचा स्विकार केला होता. आज कृषी बरोबरच उद्योग, व्यापार, दळणवळण, बँकींग, नागरी सेवा, आरोग्य, लश्करी सामर्थ्य इत्यादी असे एकही क्षेत्र तंत्रज्ञान विरहीत राहिले नाही त्याला शिक्षण क्षेत्र अपवाद राहिले नाही. २१ व्या शतकाच्या सुरवातीच्या दशकामध्ये माहितीच्या क्रांतीची स्पष्ट दर्शन होण्यास प्रारंभ झाला. याच माहितीच्या क्रांतीचा उपयोग शैक्षणिक क्षेत्रात दिसून येतो. आज निरक्षरतेची व्याख्या बदललेली असून ज्याला संगणक ज्ञान अवगत नाही त्याला निरक्षर म्हणण्याची वेळ आली आहे. कारण आज सर्व व्यवहार

संगणक प्रणालीशी जोडल्याचे दिसून येते. भारत सरकारने संपुर्ण सेवा क्षेत्रात मोठ्या प्रमाणात माहिती व संसूचन तंत्रज्ञानाचा व इंटरनेटचा स्विकार केलेला दिसून येतो.

अभ्यासाची उद्दिष्टे:-

१. माहिती व संसूचन तंत्रज्ञानाचे स्वरूप समजून घेणे.
२. उच्च शिक्षणातील अध्ययण, अध्यापण आणि मुल्यमापन प्रक्रियेत माहिती व संसूचन तंत्रज्ञानाचे महत्व समजून घेणे.
३. सामाजिक संशोधन क्षेत्रात माहिती व संसूचन तंत्रज्ञानाच्या उपयुक्ततेचा अभ्यास करणे.

३. उच्च शिक्षणातील अध्ययण, अध्यापण आणि मुल्यमापन प्रक्रियेत माहिती व संसूचन तंत्रज्ञानाच्या अमलबजावणीतील अडथळे किंवा समस्यांचा अभ्यास करणे.

माहिती व संसूचन तंत्रज्ञानाचे स्वरूप:-

माहिती व संसूचन तंत्रज्ञानामध्ये प्रामुख्याने संगणक, संगणक प्रणाली, ज्यामध्ये हार्डवेअर, सॉटवेअर, संगणकीय भाशा आणि मुळ माहिती वापरून हवी ती माहिती सरळ सोप्या पध्दतीने मिळवली जाते म्हणजे योग्य अशी माहिती इंटरनेटच्या माध्यमातून पोहचवली किंवा मिळवली जाते. या क्षेत्रातील नावाजलेल्या कंपन्यांमध्ये पुणे येथील सी-डॅक, तसेच मायक्रोसॉट, सॉटॉनिक, विस्टा, गुगल आणि संदेशवहनामध्ये जी मेल, रीडिफमेल, याहू इत्यादी शेकडो कंपन्या आहेत. पारंपारिक साधनांमध्ये रेडियो, टि.व्ही. रेकॉर्डर पेजर यांचा उपयोग अध्ययण अध्यापणामध्ये होत होता. आज आधुनिक काळात आणि फोर जी इंटरनेटच्या काळात विविध टि.व्ही. चॅनेल्स विशेषतः शैक्षणिक आणि माहिती प्रसारीत करणारे चॅनेल्स, एफ. एम. वाहीन्या, संगणक, गुगल इंजिन, इंटरनेट, अँड्रॉइड मोबाइल व त्यासाठी लागणारी हजारो ॲप्स, टॅब, लॅपटॉप, सोशल मिडीया ज्यामध्ये व्हॉट्सॲप व फेसबुक, विविध माहिती चित्रफीती, विशेष अध्ययणासाठी तयार केलेले सॉटवेअर यांचा सामावेश आहे. गुगलच्या रूपाने आज प्रत्येकाच्या हातामध्ये हवी ती माहिती, हवी तेंव्हा आणि हवी तेथे उपलब्ध होते हे माणवासाठी वरदान जरी असले तरी ज्ञान आणि माहिती यांत फरक असून माहितीवर विवेकाचा संस्कार केल्याने ज्ञान मिळते.

उच्च शिक्षणातील माहिती व संसूचन तंत्रज्ञानाचा उपयोग:-

आज मानव संसाधन मंत्रालय, विद्यापीठ अनुदान आयोग, राष्ट्रीय मुल्यांकन आणि पुर्नमुल्यांकन परिशद, राज्य सरकार, विद्यापीठे यांनी राष्ट्रीय शैक्षणिक धोरणाच्या अंतर्गत उच्च शिक्षणामध्ये माहिती व संसूचन तंत्रज्ञानाचा स्विकार

अचूकपणे करण्यास सुरवात केलेली आहे. संकेतस्थळाच्या माध्यमातून माहिती पोहचवणे, माहिती स्विकारणे, ऑनलाईन पेमेंट व्यवस्था करणे, कर्मचाऱ्यांचे सर्व रेकॉर्ड ठेवणे, विद्यार्थी आणि कर्मचाऱ्यांची हजेरी बायोमॅट्रीक पध्दतीने घेणे, परिपत्रके, विविध सूचना देणे, जी.आर काढणे इत्यादीच्या वापरासाठी ऑनलाईन पध्दतीचा वापर केला जातो आहे. ऑनलाईन प्रवेश, त्यांच्या कागदपत्रांचे स्कॅनिंग, पेपरविरहित कार्यप्रणाली विकसित करणे, शैक्षणिक कॅलेंडर प्रसिध्द करणे इत्यादी. नॅक परिशदेनेसुध्दा जी महाविद्यालये आणि विद्यापीठे अशा तंत्रज्ञानाचा वापर करतात त्यांना अधिक गुण दिलेली आहेत. उच्च शिक्षणामध्ये पदवी आणि पदव्युत्तर वर्गासाठी पॉवर पॉईंट प्रेझेंटेशनद्वारे अध्यापण करणे, विशयाशी निगडीत डाक्यूमेंट्री दाखवणे, इ पुस्तके आणि इ जर्नल्स उपलब्ध करून देणे, स्मार्ट बोर्ड, एल सी डी किंवा ओएचपी प्रोजेक्टर च्या माध्यमातून शिकवणे, अभियांत्रिकी, मेडीकल, मॅनेजमेंट क्षेत्राशी संबंधित माहिती तंत्रज्ञानाचा वापर अध्ययण अध्यापण प्रक्रियेत करणे, यासोबतच व्हर्च्यूअल क्लासरूमचा वापर, व्हीडीओ कॉन्फरंसद्वारे तज्ञांची लेक्चर्स अरेज करणे, रेकॉर्डेड यूट्युबवरील लेक्चर्स दाखविणे त्यासाठी विविध हार्डवेअरचा वापर केला जातो जसे की, इंटरनल हार्डडिस्क, पेन ड्राइव्ह, मेमरी कार्ड, व्हीडीओ रेकॉर्डेड कॅमेरा, इलेक्ट्रॉनिक सूचनाफलक, एस एम एस प्रणाली, इ लायब्ररी विकसित करणे, विद्यार्थ्यांसाठी संगणक लॅब, इंटरनेट सुविधा उपलब्ध करून दिली जाते त्यामुळे अध्ययण व अध्यापण प्रक्रिया अधिक सुलभ होण्यास मदत होते.

विद्यार्थ्यांच्या मुल्यमापन प्रक्रियेतही माहिती व संसूचन तंत्रज्ञानाचा वापर प्रभावीपणे होत असतांना दिसून येतो. विद्यार्थ्यांचे परीक्षा फॉर्म, परीक्षांचे वेळापत्रक हॉलतिकीट यामध्ये ऑनलाईन संगणकप्रणालीचा वापर केला जातो. परीक्षेमध्ये पारंपारिक सिट नंबरच्या ऐवजी बारकोड व्यवस्था स्विकारणे, उत्तरपत्रिका स्कॅन करून ऑनलाईन पध्दतीने तपासल्या जातात, प्रश्नपत्रिका ऑनलाईन पध्दतीने महाविद्यालयात पोहचवली जाते. महाविद्यालयाकडील अंतर्गत गुण ऑनलाईन पध्दतीने विद्यापीठाकडे पोहचवणे, परीक्षकांच्या नेमणूका त्यांचे मानधन संगणकीय प्रणालीद्वारे पोहचवणे, परीक्षांचे निकाल ऑनलाईन घोशित केले जातात. केंद्रिय आणि राज्य लोकसेवा आयोगाच्या उत्तरतालिका संगणकाद्वारे तपासल्या जातात ज्यामध्ये कोणत्याही प्रकाराचा मानवी हस्तक्षेप नसतो. रेल्वे, बँकींग व अन्य नोकरभरतीच्या परीक्षा या ऑनलाईन पध्दतीने घेतल्या

जातात. महाविद्यालयामध्ये परीक्षेत होणारे गैरप्रकार थांबवण्यासाठी अलीकडेच सीसीटीव्ही सारख्या तंत्रज्ञानाचा वापर प्रत्येक शैक्षणिक संस्थांमध्ये मोठया प्रमाणात केला जात आहे. शाळा महाविद्यालयातील विद्यार्थ्यांची घटती उपस्थिती रोखण्यासाठी महाराष्ट्र सरकारने असा आदेश काढला की शिक्षकांनी दररोज विद्यार्थ्यांसमवेत सेल्फ काढावा आणि तो शिक्षण विभागाला पाठविण्यात यावा हा निर्णय अव्यवहार्य असल्याकारणाने शिक्षक संघटनांनी यास जोरदार विरोध केला.

अध्ययण अध्यापण आणि मुल्यमापन प्रक्रियेमध्ये प्राध्यापक आणि विद्यार्थी यांना आवड किंवा रूची निर्माण होण्यासाठी माहिती तंत्रज्ञानाचा उपयोग करणे आवश्यक आहे. केवळ पारंपारिक पध्दतीले लेक्चर ऐकणे किंवा खडु फळा यांचा वापर विद्यार्थ्यांच्या अध्ययण प्रक्रियेत अडथळा निर्माण करतो. अध्ययण आणि अध्यापण अधिक प्रभावीपणे होण्यासाठी वर उल्लेख केल्याप्रमाणे माहिती तंत्रज्ञानाचा उपयोग होणे गरजेचे आहे. दृक-श्राव्य माध्यमे शिक्षणात अभिरूची निर्माण करतात. एखादा अवघड विषय, संकल्पना समजून घेण्यासाठी सुलभ जाते. आज आदर्श शिक्षक तोच आहे जो आपल्या अध्यापणामध्ये माहिती तंत्रज्ञानाचा पुरेसा वापर करतो आणि आदर्श विद्यार्थी तोच आहे जो माहिती तंत्रज्ञानाचा उपयोग नविन गोष्टी शिकण्यासाठी करतो. वर्गामध्ये जे विद्यार्थी स्लोलर्नर आहेत त्यांच्यासाठी माहिती तंत्रज्ञान हे एक वरदान आहे तसेच अडव्हान्स लर्नर यांना आणखी पुढे जाण्यासाठी या तंत्रज्ञानाची मदत होते.

**सामाजिक संशोधन क्षेत्रातील माहिती तंत्रज्ञानाचा उपयोग:-**

सामाजिक संशोधन पध्दतीमध्ये माहिती तंत्रज्ञानाचा वापर वाढलेला आहे. पुर्वी तो केवळ विज्ञान विषयाच्या संशोधनामध्ये होत असे. सामाजिक शास्त्रात आधुनिक संशोधन पध्दतींचा अंगीकार केलेल्या टाटा इन्स्टीट्यूट ऑफ सोशल सायंसेस मुंबई, लोकनीती व सीएसडीएस दिल्ली, आयसीएसएसआर दिल्ली, यशदा, पुणे विद्यापीठ पुणे, सीएसएस गुजरात, जी बी पंत संस्थान अलाहाबाद जेएनयू, इत्यादींचा नामोल्लेख करता येतो. त्यासाठी एस.पी.एस.एस. सारख्या सॉटवेअरचा वापर केला जातो. तथ्य संकलन आणि गोळा केलेल्या माहितीचे उत्तम प्रकारे सांखिकी विश्लेषण ज्यामध्ये विविध तक्ते, टक्केवारी, आलेख, विविध चल अचल नुसार सांखिकीचे वर्गीकरण अतिशय अचूकप्रमाणे केले जाते. वाड:मय चौऱ्यास आळा घालण्यासाठी प्लागरीझम सॉटवेअर चाचणी केली जाते. प्रश्नावलीचे कोडींग आणि डिकोडींग करणे,

नमुना निवड, मुलाखतीसाठी ऑडीओ व्हीडीओ रेकॉर्डरचा उपयोग करणे, लिहलेली संशोधने संकेतस्थळावर प्रकाशित करणे त्याचा फिडबॅक घेणे या सर्वांमध्ये इंटरनेटचा वापर अनिवार्य आहे त्यामुळे आज कोणतेही सामाजिक संशोधन हे माहिती तंत्रज्ञानाचा वापर केल्याशिवाय पूर्ण होउ शकत नाही असेच म्हणावे लागते.

**माहिती व संसूचन तंत्रज्ञान वापरातील अडथळे/समस्या:-**

उच्च शिक्षणातील अध्ययण अध्यापण आणि मुल्यमापन प्रक्रियेत माहिती व संसूचन तंत्रज्ञान वापरण्यामध्ये अनेक अडथळे असलेली दिसून येतात.

१. **खर्चिक साधणे**-शिक्षण क्षेत्रात वापरण्यात येणारे स्मार्टबोर्ड, एल.सी.डी. प्रोजेक्टर, संगणक लॅप, इंटरनेट डाटा सेवा या बाबी भारतात कमी खर्चात उपलब्ध होत नाही. विद्यार्थ्यांसाठी ही साधणे मोठ्या प्रमाणात विकत घ्यावी लागतात त्यासाठी शासनाकडून निधी उपलब्ध होत नाही.

२. **संगणक निरक्षरता**- अध्ययण अध्यापणामध्ये माहिती व संसूचन तंत्रज्ञान वापरत असतांना ही एक सर्वात मोठी अडचण समोर येते. देशातील बहुतेक शिक्षक उच्चविद्याविभूषित असले तरी संगणक व सॉटवेअरच्या दृष्टीने निरक्षर असल्याने पी.पी.टी. बनवणे, लॅपटॉप, स्मार्टबोर्ड, व संगणक हाताळणे, इंटरनेटचा वापर, टायपींग करणे इत्यादी बाबत त्यांचे प्रशिक्षण झालेले नाही किंवा त्याबद्दल त्यांची उदासिनता दिसून येते.

३. **इंटरनेटचा मर्यादित वापर**- उच्च शिक्षणामध्ये माहिती व संसूचन तंत्रज्ञानाचा वापर मोठ्या प्रमाणात करण्यास हरकत नाही परंतु अजूनही ग्रामीण भागात फोर जी च काय पण टु जी सेवा सुध्दा मिळणे अवघड आहे. इंटरनेट डेटाचे दर मोबाइल कंपन्यांकडून मोठ्या प्रमाणात वसूल केले जातात, डोगराळ किंवा दुर्गम भागामध्ये अजूनही इंटरनेट सेवा उपलब्ध नाही त्यामुळे याचा तेथे गंधही नाही.

४. **पुरेशा पायाभूत सुविधांचा अभाव**- माहिती व संसूचन तंत्रज्ञानासाठी सतत विजपुरवठा असणे, बॅटरी बॅकअप असणे, त्यासाठी लागणारा प्रशिक्षक वर्ग, फर्निचर, त्या साधणांची सुरक्षा, दुरूस्तीचा खर्च, तंत्रज्ञानासाठी आवश्यक आणि पोशक पायाभूत सुविधा असल्या पाहीजेत दुर्दैवाने यातील एकही सुविधा डोंगराळ आदिवासी, दुर्गम किंवा जंगलामध्ये नाही किंवा त्या पुरवण्यास अनेक अडचणी आहेत.

५. **उपयुक्त सॉटवेअरचा अभाव**- ज्याप्रमाणे उद्योग व्यापार आणि बँकींग क्षेत्रात सॉटवेअर व संगणक प्रणालीचा

विकास झालेला आहे तसा विकास शिक्षणक्षेत्रात नाही शिक्षणउपयोगी सॉटवेअरमध्ये निर्माण झालेली नाहीत जी आहेत त्यांच्या किंमती सर्वसामान्यांना परवडणाऱ्या नाहीत.

**निष्कर्ष:-**

१. उच्च शिक्षणामध्ये माहिती व संसूचन तंत्रज्ञानाच्या वापरामुळे अध्ययण अध्यापण आणि मुल्यमापन कार्य अधिक प्रभावी अचुकपणे, निरपेक्षपणे पार पाडता येणे शक्य झाले आहे.

२. माहिती व संसूचन तंत्रज्ञानाच्या वापरामुळे उच्च शिक्षणप्रणाली गतीशिल आणि सक्रिय झालेली आहे.

३. माहिती व संसूचन तंत्रज्ञान वापरामुळे आंतरविद्याशाखीय दृष्टीकोन वाढीस चालना मिळाली आहे.

४. दृक-श्राव्य माध्यमांमुळे अध्ययण अध्यापण मार्गातील अडथळे दूर होण्यास मदत झाली आहे. स्लो लर्नर यांच्यासाठी तर ही साधणे वरदानच ठरले आहे.

५. सामाजिक संशोधनामध्ये माहिती व संसूचन तंत्रज्ञान वापर होत असल्याने संशोधनांची नितीमुल्य राखली जात आहेत, संशोधनांमध्ये अचूकता आली मानवी चूका टाळता येणे शक्य झाले आहे, विप्लेशण प्रभावीपणे होउ लागले त्यामुळे त्यामुळे संशोधनाची गुणवत्ता तर वाढलीच आहे त्यासोबत संशोधकाचा वेळ आणि पैसा यात बचत झाली.

६. उच्च शिक्षण धोरणामध्ये शासन माहिती व संसूचन तंत्रज्ञान साधणासाठी अत्यल्प तरतूद करते त्यामुळे निधी न उपलब्ध होणे, प्रशिक्षणाचा आभाव, पायाभूत गोश्टी उपलब्ध नसणे, शिक्षकांची उदासिनता, प्रशासन किंवा नेतृत्वाच्या प्रोत्साहनाचा आभाव इत्यादी गोश्टी अडथळ्याच्या स्वरूपात दिसून येतात.

**संदर्भ:-**

१. किरण झा एंव राजेंद्र प्रसाद शर्मा, १९९६, विज्ञान एंव प्राद्यौगिकी, स्पेक्ट्रम, नई दिल्ली.

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## सामाजिक शास्त्रामधील माहिती तंत्रज्ञानाचा वापर

वैशाली प्रकाश पवार

राज्यशास्त्र विभागप्रमुख,  
श्री. शाहू मंदिर महाविद्यालय

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### गोष्टवारा (Abstract):

२० व्या शतकाच्या उत्तरार्धात भारतात डिजीटल क्रांती घडून आली. डिजीटल क्रांतीचा प्रभाव सर्वच विद्याशाखांवर झालेला आहे. डिजीटल क्रांतीच्या प्रभावातून कोणतीही विद्याशाखा अलिप्त राहू शकलेली नाही. २१ व्या शतकामध्ये तर डिजीटल इंडिया ही संकल्पना शासनाने जाहिर केलेली आहे. डिजीटल लायब्ररी, पेपरलेस वर्क अशा विविध गोष्टींचा उदय झालेला आहे. अधुनिक सामाजिक शास्त्राच्या अध्ययन व अध्यापनाच्या प्रक्रियेवर माहिती तंत्रज्ञान या घटकाचा मोठा प्रभाव दिसतो. सामाजिक शास्त्रामधील पारंपारिक अध्ययन व अध्यापनाच्या प्रक्रियेचा न्हास झालेला दिसतो. तांत्रिक क्रांतीमुळे सामाजिक शास्त्राच्या अध्ययन व अध्यापनाच्या क्षेत्रात महत्वाचा बदल घडून आलेला आहे. ज्ञानाचे, माहितीचे देवाण-घेवाण करणाऱ्या तंत्रज्ञानाच्या साधनांची चर्चा यामध्ये केलेली आहे. माहिती तंत्रज्ञानाच्या वापरामुळे सामाजिक शास्त्रामधील अध्ययन व अध्यापनाची पध्दत कशी बदलली? तसेच या माहिती तंत्रज्ञानाच्या वापरामुळे सामाजिक शास्त्रांपुढे कोणती आव्हाने निर्माण झाली या मुद्यांची चर्चा या शोधनिबंधात केली आहे.

### प्रस्तावना

माहिती तंत्रज्ञानाचा वापर अधुनिक काळात जीवनाच्या प्रत्येक क्षेत्रात केला जात आहे. सामाजिक शास्त्रामध्येदेखील माहिती तंत्रज्ञानाचा वापर करण्याचे प्रमाण वाढले आहे. उच्च शिक्षणाच्या क्षेत्रात विविध अंगाने माहिती तंत्रज्ञानाचा वापर केला जात आहे. गेली दोन दशकपुर्वी माहिती तंत्रज्ञानाचा वापर म्हणजे केवळ टेलिव्हिजन, संगणक, प्रोजेक्टर, व्हिडिओ अशी संकल्पना होती. परंतु आज सामान्य लोकदेखील त्यांच्या दैनंदिन जीवनामध्ये मोठ्या प्रमाणावर तंत्रज्ञानाचा वापर करित आहेत. हेच तंत्रज्ञान अध्ययन व अध्यापनासाठी महत्वाचे साधन ठरत आहे. उदा. ऑनलाईन व्याख्यान, चर्चा, फोरम्, फेसबुक, टीव्टर, मल्टीमिडिया, सोशल बुक मार्किंग, ऑनलाईन ब्लॉग, ऑडियन्स रिसर्पास सिस्टीम,

सीडीएस. सर्वच सामाजिक शास्त्रे अधुनिक तांत्रिक साधनांच्याव्दारे अध्ययन व अध्यापन करित असल्याने ती त्यामधील संशोधन अधिक अचूक व वास्तवाला भिडणारे असे बनले आहे. अधुनिक माहिती तंत्रज्ञानाची साधने आंतरक्रियाशीलतेला प्रोत्साहित करित आहेत. पीअर शिकण्याची सुविधा, फिडबॅकमध्ये सुधारणा या गोष्टी मोठ्या संख्येच्या वर्गांना अध्यापनासाठी उपयोगाच्या ठरत आहेत. सामाजिक शास्त्रामध्ये होणाऱ्या बदलाचे आकलन माहिती तंत्रज्ञानाच्या वापरामुळे सहज व जलद गतीने करणे शक्य झाले आहे. सामाजिक शास्त्राच्या वर्गामध्ये माहिती तंत्रज्ञानाच्या वापराचे विशिष्ट असे फायदे झालेले दिसतात. सामाजिक शास्त्राच्या अभ्यासाचा विषयच व्यक्ती, समाज व त्यासंबंधित घटक हे असतात. सामाजिक शास्त्राचे विद्यार्थी हे सतत बदलाशी संबंधित इश्यूज शिकत असतात. हे बदल दर आठवड्याला किंवा अगदी दर दिवसालाही होत असतात. उदा. राज्यशास्त्रामध्ये निवडणूका, प्रचार, आंतरराष्ट्रीय संघर्ष यामध्ये सतत बदल घडत असतात. तसेच समाजशास्त्र, अर्थशास्त्र, मानसशास्त्र, तत्वज्ञान यासारख्या शास्त्रांमध्येही सतत बदल होत असतात. तसेच उच्च शिक्षणाच्या व्यवस्थेतील बदलही समजून घेण्यासाठी माहिती तंत्रज्ञानाची साधने गरजेची व उपयुक्त ठरत आहेत. माहिती तंत्रज्ञान व सामाजिक शास्त्रे यांचे संबंध पुढील उदाहरणाच्या आधारे स्पष्ट केले आहे.

### ऑनलाईन व्याख्यान व चर्चा

माहिती तंत्रज्ञानामुळे ऑनलाईन व्याख्यान व चर्चा घेता येतात. सामाजिक शास्त्राच्या संदर्भात ही पध्दत यशवंतराव चव्हाण मुक्त विद्यापीठ आणि इंदिरा गांधी मुक्त विद्यापीठे वापरते. त्या आधारे शिक्षक विद्यार्थीना उपलब्ध होतात.

### फोरम् व फेसबुक

माहिती तंत्रज्ञानामुळे फोरम् व फेसबुक यांचा वापर वाढला आहे. फोरम् व फेसबुक वर माहितीचे देवाणघेवाण होते. विद्यार्थी व शिक्षक चर्चा करतात.

### टीव्टर व मल्टीमिडिया

माहिती तंत्रज्ञानामुळे टीव्टर व मल्टीमिडिया यांचा वापर वाढलेला आहे. छोटे चित्रपट, माहिती पट यांचे कार्यक्रम घेतले जातात.

### मोबाईल एप

मास्टफोन, टॅबलेट, इतर साधने ही मोबाईलच्या माध्यमाद्वारे चालविली जातात. यांची सुरुवात २००८मध्ये झाली. हा खरेतर वितरण कार्यक्रम आहे. गुगल प्ले, गुगल सर्च, पंदोरा, जीमेल, असे लोकप्रिय मोबाईल एप्स आहेत. त्यांचा वापर सामाजिक शास्त्रे करत आहेत.

### सोशल नेटवर्कींग

सोशल नेटवर्कींग हे इंटरनेटवरून विद्यार्थींशी संवाद करण्याचे एक साधन आहे. यामध्ये फेसबुक किंवा टिव्टर यांचा समावेश

होते. विद्यार्थी वैचारिक मैत्री करणे मैत्री मागे घेणे, चूक बरोबर कळविणे, सामूहिक गट तयार करणे. वैचारिक देवाणघेवाण करणे इत्यादी गोष्टीचा यामध्ये समावेश होतो. ज्ञानाला ओळखणे, ज्ञानाला आत्मसाथ करणे, त्यामध्ये पुनर्रचना करणे, सर्वसमावेश स्वरूप देणे असे ज्ञानाचे व्यवस्थापन केले जाते.

#### ऑनलाईन ब्लॉग

वेबब्लॉगचे जनक जॉर्न बारजर हे आहेत. वेब म्हणजे आंतरजल व ब्लॉग म्हणजे नोंद असा अर्थ घेतला जातो. हा एक प्रकारे संकेत स्थळाचा भाग आहे. शिक्षकाचे विचार, नोट्स, चित्रफित, इत्यादी विद्यार्थी पर्यंत पोचविण्याचे हे एक माध्यम आहे. ब्लॉग हा एक शिक्षक तयार करतो. यावर विद्यार्थी व शिक्षक चर्चा करू शकतात.

१९९९ नंतर सामाजिक शास्त्राच्या अध्यापनामध्ये ब्लॉगचा वापर वाढला. ब्लॉग ध्विण्यासाठी व वापरण्यासाठी निघालेल्या साधनांमुळे अल्पावधीमध्ये सामाजिक शास्त्राच्या शिक्षक व विद्यार्थी वर्गामध्ये तो लोकप्रिय झालेला दिसतो. थ्रीवार्शीनी, झरळपी.पशी, दूशिरि, डौलहु लहरपसश याची काही साधने आहेत. याशिवाय पितास.कॉम, डायरी लॅन्ड तसेच ब्लॉगर.कॉम या साधनांद्वारे सामाजिक शास्त्राचा अभ्यास करणे सोपे झाले आहे. मराठी भाषेतही ब्लॉग उपलब्ध झाल्याने इंटरनेटवर मराठी भाषेत लिखान करणे शक्य झाले आहे. वैचारिक व संशोधनात्मक लेखन या ब्लॉगवर उपलब्ध असल्याने अध्ययन व अध्यापन प्रक्रिया सोपी बनली आहे.

#### लाइव्ह जर्नल

ब्रँड फिट्झ पॅट्रिक यांनी मार्च १९९९ मध्ये लाइव्ह जर्नलची सुरवात केली. ह्या लाइव्ह जर्नलमुळे सामाजिक शास्त्रातील नव-नवे प्रवाह समजून घेण्यास मदत होते. तसेच विकसित, विकसनशील व अविकसित देशांमध्ये सामाजिक शास्त्रामध्ये होणाऱ्या बदलाची चर्चा यामध्ये केलेली असते. लाइव्ह जर्नलमुळे सामाजिक शास्त्राची अध्ययनदेखील सुलभ होते.

माहिती तंत्रज्ञानाच्या साधनांमुळे सामाजिक शास्त्रांना पुढील महत्वाचे फायदे झालेले दिसतात.

- १) जास्तीत जास्त ज्ञान कमीत कमी वेळात संकलित करता येते.
- २) संकलित केलेले जास्तीत जास्त ज्ञान कमीत कमी वेळात जास्त विद्यार्थ्यांपर्यंत पोहचविता येते.
- ३) ज्ञान ग्रहण करण्याच्या पंचइंद्रीयांचा यामध्ये पुर्ण वापर करून घेता येतो. म्हणजेच ऑडिओ-व्हिडिओ पध्दतीचा वापर करता येतो.
- ४) माहिती तंत्रज्ञानाच्या या पध्दती वापरण्यामुळे ज्ञानाचे पुर्नपरिक्षण करता येते व ज्ञानाला सर्वसमावेशक स्वरूप देता येते.
- ५) माहिती तंत्रज्ञानाच्या वापर करून विद्यार्थ्यांच्या ऑनलाईन

परिक्षा घेता येतात. प्रश्नपत्रिका ऑनलाईन देता येतात.

- ६) ऑनलाईन निकाल लावता येते.
- ७) प्रश्न-उत्तरांची की जाहिर केली जाते. उदा. सेट परिक्षा
- ८) ऑनलाईन मुलाखती देता येतात.
- ९) संख्याशास्त्रीय पध्दतीचा वापर करून आलेख देता येते. सामाजिक शास्त्रांपुढील आव्हाने
- १) शिक्षण म्हणजे संवाद प्रक्रिया होय. माहिती तंत्रज्ञानामुळे संवाद कमी होतो व ज्ञानाचा भडिमार जास्त होतो.
- २) शिक्षण म्हणजे संथपणे बदलाची प्रक्रिया असते. तर याउलट माहिती तंत्रज्ञानाची प्रक्रिया जलद असते. यामुळे शिक्षण व माहिती तंत्रज्ञान यामध्ये विसंगती निर्माण होते.
- ३) माहिती तंत्रज्ञानामुळे माहितीलाच ज्ञान समजले जाते. त्यामुळे ज्ञान निर्मितीची प्रक्रिया मंदावते.
- ४) माहिती तंत्रज्ञानामुळे माहिती सहजपणे उपलब्ध होते. त्यामुळे कॉपी व पेस्ट करण्यावर भर दिला जातो.
- ५) माहिती तंत्रज्ञानाच्या उपलब्धतेतून वाडमयचौर्याची समस्या निर्माण होते.

#### सारांश

सामाजिक शास्त्रांचे ज्ञान प्राप्त करण्याकरिता माहिती तंत्रज्ञानातून विकसित झालेल्या साधनांचा वापर करता येतो. ही साधने वापरण्यातून ज्ञानाची देवाण-घेवाण सुलभपणे होते. ज्ञान विद्यार्थ्यांपर्यंत जलदगतीन पोहचते. अशा अधुनिक पध्दती वापरल्यामुळे विद्यार्थ्यांमध्ये विषयाबद्दल गोडी निर्माण होते. विद्यार्थ्यांमध्ये विषयाची आवड निर्माण करण्यामध्ये हे माध्यम प्रभावी ठरले आहे. अधुनिक काळामध्ये निती ते संगणक असेही म्हटले जात आहे. माहिती तंत्रज्ञानाच्या साधनांमुळे सामाजिक शास्त्राच्या अभ्यासामध्ये अचूकता, पारदर्शकता निर्माण होते. ऑडियन्स रिसर्चसिस्टीम, सीडीएस, पीअर शिकण्याची सुविधा, फिडबॅकमध्ये सुधारणा तसेच युट्यूबवरून शिक्षकांना वाहिनी तयार करता येते. या वाहिनींद्वारे शिक्षक आपल्या ज्ञानाचा विस्तार करू शकतो. एकूणच सामाजिक शास्त्राच्या अध्ययन व अध्यापन प्रक्रियेमध्ये माहिती तंत्रज्ञानाला अन्यय साधारण महत्त्व प्राप्त झाले आहे.

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## साहित्याच्या अभ्यासात माहिती संप्रेषण तंत्रज्ञानाचे (ICT) उपयोजन

प्रा.डॉ. सुभाष दिनकर आहरे

सहयोगी प्राध्यापक व मराठी विभाग प्रमुख  
डॉ. बाबासाहेब आंबेडकर महाविद्यालय, औध, पुणे.

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### १.१ प्रास्ताविक -

शिक्षण हे राष्ट्रीय विकासाचे, प्रगतीचे तसेच सर्वच स्तरावर सामाजिक परिवर्तनाचे एक प्रभावी साधन आहे. शिक्षणातील अध्ययन अध्यापन प्रक्रिया ही अखंड चालणारी अशी प्रक्रिया आहे. शिक्षणप्रक्रियेत शैक्षणिक उद्दिष्टे, शैक्षणिक अनुभूती व मूल्यमापन साधने या तीन घटकांना महत्व आहे. आज आपण माहिती संप्रेषण तंत्रज्ञानाच्या युगात वावरत आहोत. या अध्ययन अध्यापन प्रक्रियेत सर्वच विषयांच्या अभ्यासात (ICT) चा उपयोग मोठ्या प्रमाणात केला जात आहे. त्यामुळे ज्ञानाचे भांडार आपणासमोर खुले झालेले आहे. साहित्याचा अभ्यास करताना तसेच साहित्याचे अध्ययन व अध्यापन करताना माहिती संप्रेषण तंत्रज्ञानाचा वापर अधिकाधिक केल्यास ही प्रक्रिया अधिक सुलभ व प्रभावकारी ठरेल.

### १.२ माहिती संप्रेषण तंत्रज्ञान: स्वरूप महत्व-

माहिती संप्रेषण तंत्रज्ञान (ICT) यामध्ये माहितीची निर्मिती करणे, संप्रेषणाच्या प्रगत साधनांचा वापर करणे व योग्य त्या तंत्रज्ञानाच्या मदतीने माहितीची देवाणघेवाण करणे इ. क्रियांचा समावेश होतो. नवनवीन संप्रेषण साधनांच्या मदतीने नवनवीन माहिती लोकांपर्यंत पोहोचवण्यासाठी उपयोगात आणले जाणारे प्रगत तंत्रज्ञान म्हणजे 'माहिती संप्रेषण तंत्रज्ञान' होय. दैनंदिन जीवनव्यवहारात (ICT) चा वापर वाढत आहे. मानवी जीवनात माहिती संप्रेषण तंत्रज्ञानाचा पदोपदी व प्रत्येक क्षेत्रात वापर दिसून येतो. (ICT) च्या वापराने अध्ययन प्रक्रिया जलद, सोपी, आनंदी व परिणामकारक झालेली आहे. त्यामुळे अध्यापनात जिवंतपणा आणणे शक्य झालेले आहे. त्याद्वारे

विद्यार्थी स्वयंअध्ययन व स्वयंमूल्यमापन करू शकतो. विद्यार्थी व शिक्षक या दोन्ही घटकांना माहितीचे अनेकाविध स्रोत उपलब्ध झाले आहेत. (ICT) मुळे दुर्गम भागातही उच्च शिक्षणाची व निरंतर शिक्षणाची सोय झाली आहे. शिक्षक व विद्यार्थी यांना जगभरातील अद्ययावत स्वरूपाची नवनवीन माहिती अल्प वेळेत उपलब्ध होते. नवीन कौशल्ये शिकण्यासाठी, ज्ञानात भर घालून ज्ञान अद्ययावत करण्यासाठी (ICT) चा उपयोग होतो. विविध प्रकारच्या सॉफ्टवेअरचा आणि आयसीटीच्या साधनांचा वापर शिक्षणप्रक्रियेत केला जात आहे. आयसीटीमुळे पर्यायी शिक्षणाच्या संधी उपलब्ध झाल्या आहेत. उपयुक्त माहितीचा शोध घेणे व तिचा वापर करणे (ICT) मुळे शक्य झाले आहे. लॅपटॉप, संगणक, आंतरजाल (Internet) वेबसाईट, ईमेल, टेलिकॉन्फरन्सिंग व्हॉट्सअप, मेसेजेस, व्हिडीओ कॉन्फरन्सिंग, भ्रमणध्वनी, ध्वनिमुद्रक, सीडीज, युट्युब, फेसबुक, मेसेंजर, इन्स्टाग्राम इ. साधनांमुळे ज्ञानप्राप्तीचा वेग वाढलेला आहे. या साधनांच्या मदतीने जलद व वास्तव माहिती गोळा केली जाते. तरी त्यातील सत्यता पडताळून पाहिली पाहिजे. ही माहिती साठवणे, गोळा करणे, विश्लेषण करणे आणि योग्य ठिकाणी पोहोचविणे ष्च मुळे शक्य झाले आहे.

### १.३ साहित्याच्या अभ्यासाची व्याप्ती-

साहित्याचे प्रामुख्याने दोन प्रकार पडतात १) शास्त्रीय साहित्य व २) ललित साहित्य या दोन्ही साहित्याचे पुन्हा प्रकार आहेत. त्याचेही पुन्हा पोटप्रकार आहेत. साहित्याची व्याप्ती वाढत आहे. साहित्याचा अभ्यास सखोल व सत्यवृत्तीने केला जावा. यासाठी अनेक संदर्भग्रंथ, विविध भाषेतील कलाकृती अभ्यासणे आवश्यक आहे. स्तरीय अभ्यासपध्दती बरोबरच क्षेत्रीय अभ्यासपध्दतीचा वापर साहित्याच्या संशोधनात करणे आवश्यक आहे. कलाकृतीच्या अभ्यासाबरोबरच स्तरीय व क्षेत्रीय पध्दतीचा वापर करताना (ICT) चा मोठ्या प्रमाणात वापर होत आहे व तो केला जावा. आज आपणास इंटरनेटच्या मदतीने पाहिजे तो लेखक, त्याच्या विविध कलाकृती online उपलब्ध होत आहेत. त्याद्वारे अभ्यासास दिशा मिळू शकते. साहित्याचा तुलनात्मक अभ्यास करताना, तौलनिक अभ्यास करताना, प्राचीन- अर्वाचीन साहित्याचा अभ्यास करताना अधिकाधिक (ICT) चा वापर केला पाहिजे.

### १.४ साहित्याच्या अभ्यासात (ICT) चे उपयोजन-

साहित्याचा अभ्यास करताना विद्यार्थी व शिक्षक या दोघांनीही (ICT) चा वापर केला पाहिजे. स्वयंअध्ययनाच्या दृष्टीनेही एक महत्त्वाची बाब आहे. शिक्षकाने अध्यापनात (ICT) च्या विविध साधनांचा वापर करावा त्यातून नवनवीन शैक्षणिक साधनांची निर्मिती करून अध्यापन परिणामकारक व मनोरंजक पध्दतीने करावे.

i) विद्यार्थ्यांच्या व शिक्षकांच्या संशोधनवृत्तीस चालना मिळेल. लोकसाहित्याचे संशोधन करताना भ्रमणध्वनी (Android) स्मार्टफोन असेल तर गीतांचे ध्वनिमुद्रण, छायाचित्रण हे सर्व सहज शक्य आहे. संकलित माहितीवर नंतर योग्य ते संस्करण करता येईल.

ii) आवडत्या लेखकाची भेट व मुलाखत घेऊन ती रेकॉर्डिंग करून पुढेही त्याचे उपयोजन करता येईल.

iii) संगणकाच्या माध्यमातून, इंटरनेट व इतर तंत्रज्ञानाच्या मदतीने विविध लेखकांच्या कलाकृती, साहित्यकृती विद्यार्थ्यांना ;म.इववाद्द उपलब्ध करून देता येईल.

iv) सी.डी. प्लेअर, टेपरेकॉर्डर, मोबाईल यांच्या मदतीने विद्यार्थ्यांमध्ये भाषिक कौशल्यांचा उच्चतम विकास साध्य होईल. मान्यवर वक्त्यांची भाषणे, काव्यगायनाचे कार्यक्रम ऐकविता येतील. तसेच विद्यार्थ्यांमध्ये भाषणकलेचा विकास करण्यासाठी त्यांची भाषणे ध्वनिमुद्रित करून त्यांना एकेविता येतील व त्यात दुरुस्ती करता येईल.

v) ग्रंथालयातील, विभागातील Self library मधील पुस्तकांच्या नोंदी ठेवणे, ती शोधणे यासाठीही प्ळ चा उपयोग होतो.

vi) N-list, shodhganga, book ganga, e-sahitya या माध्यमातून आपणास विविध पुस्तके व नियतकालिकांची सहज उपलब्धी होते व आपणास साहित्याच्या अभ्यासात व संशोधनात त्याचा उपयोग होतो.

vii) भ्रमणध्वनीमुळे आवाज, लिखित व चित्रस्वरूपात संदेश जगात कोठेही पाठविणे शक्य झाले आहे. इंटरनेटचा वापर व त्यामार्फत ई-मेल संदेश पाठवता येतात. अध्ययावत भ्रमणध्वनीमध्ये इंटरनेट, वाय-फाय, ब्लू-टूथ, एस.एम.एस., एम.एम.एस. यासारख्या सुविधा उपलब्ध आहेत.

viii) वेब कॅमेराच्या मदतीने दूरवरील, इतर देशातील लेखकाची मुलाखतही घेता येईल. एखादी साहित्यकृती अभ्यासताना त्या कवीची किंवा लेखकाची वेब कॅमेराच्या मदतीने मुलाखत घेऊन लेखनाची निर्मितीप्रक्रिया व त्या

कलाकृतीचा, कवितेचा अर्थ आपणास, विद्यार्थ्यांना समजावून घेता येईल.

ix) वर्ड प्रोसेसिंग सिस्टीममुळे मजकुरातील चुका, त्रुटी छपाईपूर्वी दुरुस्त करता येतात. मजकुराची जागा बदलता येते. नको असलेला मजकूर काढता येतो. नवीन मजकुराची भर घालता येते. दस्तऐवजाची छपाई करण्यापूर्वी त्यातील स्पेलिंग व ग्रामरच्या चुका शोधण्यासाठी स्पेलिंग चेकर हे उपयुक्त साधन वापरता येते. त्यामुळे विद्यार्थ्यांच्या शब्दभांडारात भर पडेल.

x) आपल्या संगणकामध्ये, मोबाईलमध्ये आपण E-sahitya चे कलेक्शन करू शकतो. पाहिजे तेव्हा त्याचा संदर्भ म्हणून आपणास वापर करता येतो.

xi) साहित्याचे अध्यापन परिणामधारक होण्यासाठी परंपरागत शिक्षणाऐवजी सादरीकरणाचा (PPT) वापर करावा. एखाद्या लेखकाच्या कथेचे/कादंबरीचे अध्यापन करताना लेखक परिचय, कालखंड, समकालीन लेखक, कलाकृती, संबंधित कथा कादंबरी, आशय, वैशिष्ट्ये, मूल्यमापन यापध्दतीने वेगवेगळ्या Slides तयार करून अध्यापन अर्जेदार पध्दतीने करता येईल. विविध सभा, संमेलने, चर्चासत्रे, परिषदांमध्ये सादरीकरणाचा वापर करता येईल.

१.५ : समारोप- ज्ञानात भर घालणे, साहित्याविषयीचे ज्ञान अद्ययावत ठेवणे, भाषाविषयक विविध कौशल्ये शिकण्यासाठी आयसीटीचा वापर करणे आवश्यक आहे. तंत्रज्ञानाच्या मदतीने माहितीचे संकलन व पृथक्करण सोपे झाले आहे. त्यामुळे साहित्याच्या अभ्यासाची व संशोधनाची आवड विद्यार्थी व शिक्षक या दोन्ही घटकांत निश्चितच होईल. फक्त या माध्यमातून मिळणाऱ्या ज्ञानाचा, माहितीचा गैरवापर होणार नाही तसेच ICT चे उपयोजन चांगल्या कामासाठी होईल याचे भान प्रत्येकाने ठेवले पाहिजे.

**संदर्भग्रंथ:**

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## ICT and Its Use by the Teachers in Higher Educational Institutions In Maharashtra

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**Abstract:** Information and Communication Technologies have revolutionized the world businesses, they have revolutionized the thinking abilities and has brought huge information at finger tips. The technology has mesmerized the living methodologies, what seems to be used to the minimum is that ICT is still a show biz in higher educational institutions (HEI). Its utilization needs to more effective than it mere being a concept of reading from the screen, the paper discusses the attitudes that are limiting ICT and seriously affecting the learning processes in the class room.

**Keywords:** ICT, Teachers initiative, HEI, Learner centric mechanisms.

### Introduction:

The student was dismissed from the class for using mobile. The teacher was upset for two reasons the student was using a mobile in the class room and was also asking questions. The teacher felt that the student was humiliating the teacher by not paying attention and by disturbing the class through his witty questions. The student told the Principal that he was referring the text on the web and was asking the questions that he felt were making him inquisitive. Now there is no mobile in the class and no questions to ask, the lecture sails smoothly. The present scenario is common. Though whether the mobiles should be allowed in the class remain

an issue to debate the teachers creative skills decide the students to ask the questions. Use of ICT is a part of creative use of technology for learning and not a means of escape for teaching the syllabi hurriedly and in a dull fashion.

### Problem statement:

1. The teachers in higher educational institutions (HEI) in Maharashtra either use ICT far minimum than expected.
2. The utilization is more teaching centric and not learning centric.
3. The objective is defeated as the methodology is teacher centric rather than learner centric

### Objective:

The use of ICT in HEI needs to grow, however the utilization of ICT is more to rapidly run through the syllabi rather than to develop inquisitive approach among the students. Making the lectures dull boring rather than interesting and inquisitive.

### Methodology:

1. Presently ICT for most teachers is Power Point presentations with a lot of text and lots of pictures. The average size of the presentation is more than 25 slides that run with huge amount of literature from the books or from a source.
2. An ICT lecture means reading the text and moving ahead.
3. The teacher and the students are in dark and the interaction is to the minimum. Crammed literature in the subject makes the content boring and the literature on the screen competes with the speaker.
4. This defeats the purpose of the lecture.
5. The use of audio, video clips is to the minimum.
6. Creation of genuine content from the teacher is as good as absent.

### Results & Discussion:

ICT is supposed to impact the teaching learning process. The learning process should

be promoted with the teachers skills. Presently we still believe that teaching is a job and that ICT is a way to quickly go through huge content in a short while. The present scenario considers a blank out on the students' side by the teacher. The teaching using these aids means the students are as good as absent and it is the teacher reading the content. The quick movement of the next slide makes the student blank. The end result being the teacher completes the topic, the student tries to cope up with the content and is unable to focus on the content as well as on the teacher. There is no discussion and the lecture cum presentation is over. It frustrates the student and teacher feels happy that the teacher has completed the syllabi.

The prime aim of ICT is to break the traditional concept of a closed curriculum based fixed content. A style where the student had to mug up and reproduce rather than to learn and understand. The role of the teacher is fast changing to become a facilitator in the process of learning. The large number of slides and huge amount of crammed literature in the slides only promotes teaching.

ICT should provide the teacher meaningfully interact with the students making the process conducive for learning. Minimum literature on the slides and maximum utilization of hybridized teaching methodologies with ICT is needed for a better understanding.

The present teaching style adopted by the teachers is putting those on an island with no connect with other teachers. The ICT should help the teacher to create a network of teachers and improve the andragogical techniques. The learner is an adult learner and has come for learning with experiences, correlating the teaching with his experiences would help us his learning process easier than our teaching methodology.

ICT also aims at overcoming the cross cultural issues making the learner think on a larger scale than he possibly does. Teaching and learning becomes pleasurable when the teacher comes with a plan and the student is aware of the topic to be taught. On the other hand I feel that the teacher prepares the lecture once for all and presents it again and again. The teacher gives lesser chances for the student to prepare himself and orient himself before teaching by the teacher. This process therefore is increasing the gap wider than ever before.

ICT gives student the chance to learn anywhere and anytime. Teaching material accessibility to the student in advanced with ICT with facilitate learning, however this does not happen.

The adult learner comes to the class to learn from a good teacher. The teacher cannot afford the student to offer him a dull method making him feel of carrying goods and luggage as a porter at the end of lecture. The lectures should make the content easier and meaningful rather than difficult and in accessible.

Creatively designed ICT materials need to be prepared by the teacher. ICT is about creativity and creative learning for better understanding. I feel the teachers have mistaken it as a tool of completion of syllabi.

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8. E-Content Development Open Educational Resourcesv Audio Programs Repository Video Programmes Repositoryv Learning Objects Repositoryv Other e-content (Animations, Online Labs)v Online Courses (using Moodle LMS).

## 'ICT: A Gateway to Effective English Literature Teaching'

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### Abstract

Information and Communication Technology (ICT) in teaching literature can transform the teaching in India. The Central government has launched the National Mission on Education through Information and Communication Technology (NME-ICT) in 2009 which tries to make available connectivity across the country. It is the need of the hour in contemporary fast progressing world where everything is digitized and necessarily teaching methodologies should not remain orthodox because education guarantees the future of the citizens and the progress of the any society. The time has come when it is obligatory to go beyond traditional ideas of reading and writing curriculum in the classrooms. The teachers have to provide the students with opportunities to develop skills, including skills in visual literacy, which will facilitate them to engage with an increasingly broad range of texts including multimedia texts. Generally, the application of ICT in higher education in the faculties of engineering, medical science, accountancy, management, business administration, computer science, information technology is thought to be unproblematic. But when it comes to the use of ICT tools in the supposed 'traditional' subjects like literature, political science, economics, history and other areas

of humanities, the problems crop up. The present paper focuses on how ICT can be used in teaching English literature to make it interesting for students, teachers, and research scholars. It also discusses how the ideas of the subject can come alive as the study of literature is, in fact, a study of a number of subjects in multidisciplinary and interdisciplinary modes and ICT can provide a right medium of link for it.

**Keywords:** ICT, Teaching, English literature, digital, technologies, learners, global.

### 1.0 Introduction

Information and Communication Technology (ICT) pervades every part of modern society. ICT has played equally momentous role in the local educational field during past few years. The expression Information-Communication Technology (ICT) refers to a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information” (Blurton, 2002) that include computers, the Internet, broadcasting technologies (radio and television), and telephone. A successful integration of ICT into both the English curriculum and English pedagogical practice is must to prepare students to be literate and become lifelong learners and global citizens of the 21st century. The need of making education flexible in incorporating ICT at schools as the technology is changing at a faster pace than change at the school level. The ICT application should be used particularly in English Literature courses. English Literature courses are offered in most higher learning institutions in India. ICT is an important tool to aid the conventional mode of teaching though technology cannot substitute the teachers. The traditional methods of teaching can be enhanced through everything that technology has to offer in the existing circumstances.

Though the conventional approach of teaching has become dull, in majority of the colleges and universities across the country English literature is taught in the traditional way where the teacher speaks for an hour or so and leaves the class. But it should be noted that information and technology is booming far and wide in present time. The learners find traditional teaching wearing and dry. Under these circumstances, a fresh need is felt to invigorate the significance of English literature as area of study. English literature is an obligatory subject in most of the courses at degree level. Traditionally English literature is seen as a conventional subject and those who aspire to become teachers normally opt for it. The successful incorporation of ICT tools into the educational system is a tough task. Nevertheless making use of ICT in teaching English literature and language can modernize the way it is considered and taught. Alongwith the major responsibility of the teacher, ICT can supplement the teaching by removing tediousness and training the students to take interest in what is being taught. It can stimulate and keep the students occupied because ICT tools work at various stages – they can have a chance to observe, read, imagine, listen, contemplate, talk about, interrelate and discover. It is possible to achieve it through a variety of means relating ICT.

### The Scope of ICT in teaching English literature

English literature covers various genres like poetry, drama, fiction, literary theory and criticism. Each one of them demands a different way of study and different method of teaching. ICT can be used to help the instructor to apply various methods of teaching which can help the students to keep text or the issues involved in it, in their minds throughout their lives even. The effective use of ICT depends on student and the teacher. The teaching of English literature as a subject in universities should be a combination of the

old methods involving the teacher and the new mode of teaching involving ICT tools which can pave a new way in teaching. Furthermore ICT can be helpful in research in various fields of English literature. The ICT techniques can also be helpful to students for comprehending the text and would improve their ability. These tools can make students to pay special attention and become interested.

The teaching of English literature can be made interesting by using audio-visual devices, web sources, playing of movies or staged plays, online glossaries, dictionaries, thesaurus, etc. The scenes from movies can be shown and discussed. An amalgamation of slides with video, audio, images and texts can be very useful in teaching literature. ICT devices can be used to narrate poetry in literature class and teacher can ask multiple choice questions on different themes, aspects and take presentations to make teaching effective. The topic slides can take the classroom discussions forward. This would encourage a teacher to give away the use of blackboard.

#### **ICT can revitalize a literature class**

ICT is most effective when set in the curriculum and integrated into units of study. The English teachers can maximize the impact of ICT in their classrooms by undertaking ICT as an essential part of lessons, present ideas dynamically, and use a range of media. ICT should be incorporated in such a manner as to require purposeful application and meaningful engagement with the technology.

**Poetry:** Poetry is a genre where the teacher can display poetry on screen through slide shows and when poetry is recited on audio, it becomes more interesting. Students wish to listen to the poet's voice therefore wherever possible, a poet can be invited and poetry can be recited in his voice. Illustrations help a lot in explaining the ideas and poetry. For instance, poets like William Blake and Rossetti's poems have a equivalent painting;

their poems can be displayed together with the analogous painting or illustration. In addition, poems concerning myths can be given a visual form through images presented in slides in the class. Undoubtedly, in this entire process of making ICT effective the function of a teacher is the most important. Therefore both man and technology have to go together. The important articles in the journals, critics and books can be consulted and displayed through the slides so that the teachers are not required to use the blackboard or explain the critics and their views. Everything is exhibited on slides promoting discussion and helping in creating an analytical view. This analytical outlook can be more improved by giving students coursework with mandatory use of ICT tools. It will compel them to use these tools and seek for information from several sources. Furthermore if poem is displayed on the screen, it becomes easy for the teacher to point out applicable particulars and also compare one poem with another to make literature class dynamic and an involving exercise.

Poetry can be taught by playing an audio where it is recited. The 'listening' of the poem will make a lasting impact on the minds of the students because it will linger for some time and they would enjoy responding to it. In addition, a picture of the poet or different pictures in varied settings can also be shown if available, so that it can be related to his/her biography and while the pictures are played, the biographical details can be discussed by the teacher. Similarly, in order to give a feel of a particular age, other visuals can be displayed. A joint effect of the 'visual' and 'listening' would make students experience what is being taught. The teacher can discuss themes, images and movement of the poem through various novel and useful slides. Here the responsibility of a teacher is immense.

**Fiction:** As far as fiction is concerned, the movies based on novels can be screened in full or some important scenes can be presented and discussed. The subject, character portrayal, historical background and narration can be examined through slide shows and presentations. It is possible to properly integrate *You tube* but of course with caution—to bring in some unforgettable scenes from movies based on novels. This can introduce students to the works of great film directors.

**Drama:** In a drama class, staged plays can be shown through ICT tools besides the techniques mentioned earlier, and the microscopic details of a play can be discussed. Consequently the use of several elements like light, sound, stage setting and properties becomes alive before the students and thus has a lasting impact on them. This will help in attaining the twin purpose of literature to instruct and give delight. For instance, BBC has a huge compilation of Shakespeare's plays which can be included in the library.

**Criticism:** This is an important area of study and students can go on searching for information through several electronic sources. It could be made fascinating by picking illustrations from literary texts and through practical exercises. The use of ICT can be facilitating to make criticism a stirring and in depth exercise. The critics on a particular topic can be consulted and students can be assigned to go through their works.

**Literary Theory:** It is that part of study which the students are badly scared of and ICT can help to remove the fear from their minds. The theorists can be exhibited on the screen with their interviews and recorded lectures. Their main ideas in the summary form can be put up and later can be applied to literary texts and hence their significance can be made clear. The illustrations, images and other such devices can be used to make

students attentive and listen to it with curiosity.

The literature from India in English, African, American literature and other such areas can be taught through ICT. It is possible to show the history of English literature in tabular forms. Video conferencing can make possible the communication among students, research scholars and teachers not only within India but across the world. This would keep them abreast of the literary developments everywhere, keep them advanced, raise different points of views and interpretations and improve their awareness. The research intellectuals can be supported through cloud computing and other technology by making the resources available at one place. The idea of e-content can be very useful. The learned journal articles should be made available in great amount. Thus, ICT combined with the traditional methods of teaching can make teaching and learning literature a vibrant experience altogether.

But teaching literature should not be restricted to use of slides or projectors only. The development of e-content would facilitate students to consult relevant information on a specific subject. It is possible to develop an exclusive portal for literature. This portal can contain the e-content which can be modernized by academicians and research scholars with genuine data. Besides, free e-books can be uploaded so that students can have access to them. The links to important journals can be provided.

**Conclusion:**

In conclusion, it can be said that the use of ICT tools will reduce space and will give impetus to distance learning and education. This will automatically facilitate people to avail education. Online courses, development of e-content, e-learning, digital libraries, online encyclopedias, journals, and books would encourage learning and make knowledge

available to everyone regardless of the distance or location or financial conditions. ICT enables students and teachers to arrange and present information in a variety of forms. It can provide the tools for composing and publishing a range of both conventional and multi-media texts so that students as well as teachers read, compose, and convert texts in fresh and demanding ways.

Thus, it can be said that ICT is an important tool having the potential to make the teaching and learning of 'traditional' subjects like English literature a lived experience. It would help in restorative the importance of such subjects by a variety of means. The aforementioned means are just suggestions and they are not complete. A lot more can be done with the opinions of experts in the field of ICT. The English Literature teachers use ICT applications in their English Literature classrooms in a limited way. Their use is restricted to What's App and LMS for uploading and sharing teaching materials. The ICT application is still not fully used. When it comes to coursework evaluation, the teachers still use conventional method when testing the students in examination questions. But they have optimistic approach towards ICT application in English Literature classrooms. There is a need to provide training to them to fully utilize ICT, using more audio-visuals in classrooms.

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