

# Effective Integration of ICT in the Classroom

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**Abstract**—*The integration of Information Communication Technology is no longer just an optional tool in the classroom. In fact, it has now become part of the educational process for the 21st century teacher and the taught. However, regardless of which ICT tool is being employed, what is of utmost importance is how the teachers are integrating the technology in their teaching practices and what the learning outcomes are. This paper seeks to look into certain important aspects related to the effective integration of ICTs in the teaching-learning processes and also endeavors to offer suggestions to overcome the challenges in the integration of ICTs for quality sustenance and enhancement initiatives in educational institutions*

**Index Terms**—*ICT Tools, Content Development, Challenges;*

## I. INTRODUCTION

Today various ICT tools are available to the teachers that can be effectively used for knowledge creation and dissemination in today's world. Some of them are T.V, Radio, Internet, Mobile phone, desktops, laptops, tablets and many other hardware and software resources. These tools can be used in imparting education and training for teachers and students. Radio was being widely used for educational purposes in the past. However, it has lost its preeminence after the advent of TV, Computer Systems and the Internet though it continues to be used by distance education providers. But, today's tendency is to shun teacher-centric educational tools such as radio and television and embrace learner-centric instructional tools. Any modern ICT tool should meet three objectives. They are availability, accessibility and demand. An effective ICT tool should enable teachers create a more conducive learning ambiance. Teachers should be able to develop appropriate content, design suitable curriculum, impart necessary knowledge, hone the required skills, inculcate the right attitudes and devise proper assessment methods with the help of ICT tools for empowering the student community.

## II. ICT FOR CONTENT DEVELOPMENT

A teacher's role is not just limited to knowledge dissemination. Knowledge creation is also one of his responsibilities. ICT can be a great source for the teacher for developing good and appropriate quality content. In fact, various governments at the centre as well as the state have taken certain initiatives in this regard. Multimedia Educational Resource for Learning and Online Teaching, National Programme of Technology Enhanced Learning and Sakshat portal of Govt. of India are a case in point.

Such portals create quality digital content for the benefit of the teachers and the taught at various levels. Some state governments are making use of the ICT for administrative purposes as well. The Government of Andhra Pradesh has taken a step in this direction by supplying biometric machines for marking the attendance of teachers and students. This can be handy in monitoring and improving attendance patterns of the teachers and students. The Government of Andhra Pradesh has been in the forefront of using ICTs for better educational administration. This makes the system very transparent and sharing and analysis of information becomes easier. All the stakeholders - students, teachers, and administrators - can access the information at the click of a button. Certain initiatives like all correspondence may be done electronically, attendance of staff may be recorded daily online to the directorate, major notices, information regarding implementation of various Government schemes can be easily applied and can be shared by other departments as well for making improvement in the present system. United Nations Educational Scientific and Cultural Organisation (UNESCO) has published a summary of case studies conducted in nine countries in different parts of world and most of these studies reflect the necessity of having multi-prong strategies for teacher education and to improve their expertise. Existing Open and distance education systems use different technology options for delivering content- EduSAT, other TV and Radio channels. All these options use ICT. Availing the existing ICT infrastructure will increase efficiencies and saves a lot of time, cost, and effort.

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## III. ICT FOR QUALITY IMPROVEMENT

ICT tools have become indispensable for quality sustenance and enhancement initiatives in educational institutions. ICTs can be utilized for better teaching learning process and improving quality of education in all levels of education i.e., primary, secondary and college level. Researchers have found that students retain a major portion of what they see and hear and also do. ICTs can be effectively used to expose the students to learning experiences that appeal to all their senses and strengthen their memory. They also help the teachers in structuring their lessons. They support collaborative learning too. They can help to develop student's cognitive skills. Today innovation is the key to success. Reasoning and critical thinking skills are necessary for innovation. These skills can be developed by proper use of the ICTs. They can be of great help in language learning also. Multimedia projector and computer can be used to teach phonetics and pronunciation. Lessons, poems & lectures by eminent scholars stored in computers or other ICT tools can easily be shown to the students time and again anywhere. Such type of teaching and learning retains for long time in the minds of the students. Subjects like History, Geography, Political science, Physics, Chemistry, Biology, Physical education etc can easily be taught by showing small movie related with the subject to create interest among the students. Such type of movies and related multimedia material is easily available at academic repositories and from various related sites with the help of Internet. Internet is basic tool which can be utilized by teachers and students to find any information on any topic. This type teaching – learning makes the environment very interactive and is liked by students. Educational and practical CD's available in the market make this task easier to implement. At college level various facilities like computers, Electronic Board, Edusat facility initiated by various state Governments, MM projector and other peripheral devices related with teaching learning process are easily available. Repositories are libraries where these digital resources are stored and provide teachers, students, and parents with information that is structured and organized to facilitate the finding and use of learning materials regardless of their source location. Various programs running on Edusat are also very helpful for the students. Soft skill program can help students in getting their placements in reputed organizations. State level quiz and seminar can also be conducted with the help of Edusat infrastructure and can be transmitted throughout all institutes. Edusat can be used for providing training to teachers on the latest subjects and

technologies and can save lot of time and money of governments. ICTs enable learners to access information and learning materials from anywhere and at any time. Mobile phone is another major ICT tool which can be used by the teachers to stay in touch with the learners as well as their parents. Parents can be informed about the attendance patterns of their wards on a continuous basis through SMS. Other information relating to scores in tests, Exam dates can easily be sent to the students through SMS. Further, institutions upload instructional material on their websites for the benefit of the students. Online fees payment system can also be made on the portal of concerned institution. Exam results may be provided online on the same day as same is happening in case of online exams and entrance tests. This would help to sort out the problem of the delay in declaration of results of various exams. Advantages of utilizing such tools include saving of lot of paper work and help the environment making it pollution free. This will also bring transparency in the whole system of functioning.

## IV. CHALLENGES IN USING ICTS

There are many challenges in the ICT based teaching-learning process. The major challenge is equipping the teacher to deal with the ICTs effectively. It's a fact that ICTs have changed the dynamics of teaching-learning process. Many a time, the student is more informed than the teacher. Even today, many teachers lack adequate training and their teaching methodology very often outdated. For such teachers using the ICT devices can be very troublesome. Lack of proper training is making majority of teachers reluctant to adopt new technologies. There is resistance from teachers, basically from older teachers as compared to younger ones, to apply ICT in their subject. Another challenge is that at present, ICT tools are strictly limited to a handful of elite institutions. In many colleges, apart from the computer lab, the students are not exposed to the ICT devices. The whole processes of education takes place in the conventional method, i.e., chalk and talk method. The level of adoption of modern technology in the teaching and learning process is limited and uneven. The access of private college students to such devices is comparably better. It also shows that one of the challenges to be met is also of digital divide in private and Government colleges and moreover in rural and urban colleges also. Another major challenge for educators and trainers is how to develop learning materials for delivery on available ICT tools including mobile devices. The learning materials should be in manageable learning

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chunks and should make use of multimedia. Developing online material can be expensive and time consuming, quality, validity of online material, lack of flexibility in already prepared study material. A lot of

information available online may confuse the student especially in the absence of proper guidance. Students can feel isolated in absence of classroom like environment too.

## V. CONCLUSION

It cannot be denied that proper use of ICTs will have a positive impact on the teaching-learning processes. ICTs can be very handy in enhancing and sustaining quality in educational institutions. ICTs can empower the learners to be useful and productive citizens of the society. Using ICTs in can save a lot of time, money and energy for the various stakeholders in education. ICTs can bring good quality content to the doorsteps of every learner which would have a direct impact on the standards of education and its quality. If the afore mentioned challenges in the use of ICTs can be successfully overcome, the ideal of democratization of education will become a reality in the near future

## REFERENCES

- [1] Ansari, H. (2006). Internet use by the faculty members of Kuwait University. The Electronic Library Vol.24, No. (6), Pp; 791-803.
- [2] Alexander, J.O. (1999). C Arora, P., The ICT laboratory: Analysis of computers in public high schools in rural India, AACE Journal, 15(1), 57-72. (2007).
- [3] Bhardwaj Vivek, ICT Usage in 1000 Schools of India Article Cover story in Digital learning, November (2007)
- [4] Ramana Murthy B.V, Moiz Salman Abdul, Sharfuddin Mohammed , Designing a web education Model for effective teaching learning process, Proceedings of the 4th national Conference-INDIACom, Computing For Nation Development, BVICAM (2010).
- [5] Tusubira F F, Kyeyune A, What is Information and Communication Technology? Tutorial paper, Library workshop Makerere university, ICT awareness workshop (2001).
- [6] Chavan V.M, Gaikwad A.T, kulkarni M.A , Computer application in management of quality in higher educational institutes in Maharashtra , a study, Proceedings of the 6th national Conference-INDIACom, Computing For nation Development, BVICAM (2012).
- [7] Sharmila et. Al, ICT in Education and Society, Proceedings of the 6th national Conference-INDIACom, Computing For nation Development, BVICAM (2012).