CHANGING CLASSROOMS WITH ICT: TEACHERS PERSPECTIVE

Ms. Sujata Kumari and Mrs. Smita Sah

Abstract

ICT plays an important role in modern teaching learning process. It helps in the concept construction in the minds of students. The interrelationship between ICT and education is very critical to achieve. Teachers play an important role in teaching learning procedure and for inclusion of ICT in classroom.
The purpose of the present study was to find out the views of teachers on inclusion of ICT in classroom. The dimensions of the study were benefits of using ICT in classroom, difficulties of using ICT in Classroom, and Presence and Frequent ICT technologies used in classroom. The investigators have used qualitative method for the present study. The investigators have used semi structured interview for the data collection. The results of the study showed that teachers teaching in different schools are familiar with the benefits of ICT use in classroom but they lack knowledge of recent developments in the field of ICT.

Key Words - ICT in classroom, frequently used ICT technologies, Education.

INTRODUCTION

The emergence of ICT is one of the wonderful gifts of modern science and technology which has brought tremendous changes in library and information science. Application of information and communication technology (ICT) to library and information work has revolutionized the traditional concept of libraries from a "Storehouse of books to an intellectual information centre" connoting the concept of an electronic library. It has opened up a new chapter in library communication and facilitated global access to information crossing the geographical limitations.
A few years ago, computers were introduced into classrooms. Teachers spent time teaching students how to use the systems and

simultaneously learnt how to use the systems to teach better.
Now, computers are a part of our life in every way and they have completely taken over the classroom as well.

According to Mahaptra and Ramesh ICT, is "Information Communication Technology is the result of the technological convergence of existing single isolated technologies viz, computer technology, communication technology, information processing, publishing technology etc."

According to UNESCO "ICT is a scientific, technological and engineering discipline and management techniques used in handling information and application and association with social, economical and cultural matters".

When ICT technologies were implemented in schools gradual changes started to take place in the organisation of education, in the form and method of teaching, the role of teacher, the class organising.

One of the fundamental changes took place in the organization of the classroom.

The placement of the computers in schools does not mean the automatic change of the traditional classroom into ICT classroom.

It may change the way of teaching but the initial changes does not have to do with the real ICT learning.

Both teachers and students may not be familiar with computers and not know the uses of ICT in classroom.

An ICT classroom consists of three main aspects – Input, Output and External add ons.
- Inputs refer to the use of cameras, computers, tablets, student response systems and application software.
- Output sources consist of projectors, interactive whiteboards and large display monitors.
- External add ons would mainly be Digital Recorders, Digital Cameras, Switchers or any other external devices.

Lim and Tay (2003) classified ICT tools as :
1) Informative tools - Internet, Network Virtual Drive, Intranet systems, Homepage, etc.
2) Resignation devices - CD-ROM, etc.
3) Constructive tools - MS Word, PowerPoint, FrontPage, Adobe Photoshop, Lego   Mindstorm, etc.
4) Communicative tools - e-mail, SMS, etc.
5) Collaborative tools - discussion boards, etc. forum

EDUCATION AND ICT

Worldwide research has shown that ICT can lead to an improved student learning and better teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in the use of ICT in education with integrating technology to the curriculum has a significant and positive impact on students' achievements. The results specifically showed that the students who are continuously exposed to technology through education has better 'knowledge', presentation skills, innovative capabilities, and are ready to take more efforts into learning as compared to their counterparts.

Various devices/technology in ICT includes:
- Access of course materials through remote devices,
- Online digital repositories for lectures, course materials, and digital library,
- Online/ cloud based academic management systems,
- Employing the flipped classroom concept,
- Making use of handheld computers, tablet computers, audio players, projector devices etc.

Also, the rising number of Massive Open Online Courses(MOOCs) like the coursera, khan academy, and edx tells us that there is a huge demand for off-the-classroom learning facilities. The future of our institutions will depend on whether or not they can satisfy those needs.

Why measure ICT in education?
Policy makers accepts that ICT in education can help the students to compete in the global economy by being part of a skilled workforce

and facilitate social mobility by:
- Enhancing learning experiences and providing new sets of skills,
- Reaching more students with Massive Open Online Courses(MOOCs),
- Facilitating the training of faculties,
- Minimising costs and saving time associated with information delivery and automating regular day-to-day tasks,
- Improving the administration of institutions to enhance the quality and efficiency of service delivery.

According to UNESCO, ***"Measuring ICT in education is therefore important to inform policy makers in setting national priorities and developing ICT in education policy."***

SCHOOL AND ICT

Information and communication technology in schools can be used as a school communication tool to improve student learning and better teaching techniques. With the advancement of technology in education, schools adopt school communication software to transmit, store, share or exchange information. In this technological era, ICT in education has compelled many schools to get accustomed to smart technology. This school communication software uses computers, the internet, and multimedia as the medium of communication.

Here are few characteristics that make ICT in education a prominent school communication tool.
- It offers the wide variety of services.
- It is reliable and provides interactive learning experiences.
- It is flexible and provides comfortable learning.
- It motivates students to learn.
- It facilitates communication and promotes creativity.
- It also provides access to the digital library where information can be retrieved and stored beyond textbooks.

The use of ICT in education adds value to teaching and learning, by enhancing the effectiveness of learning. It added a dimension to learning that was not previously available. After the inception of ICT in schools, students found learning in a technology-enhanced environment more stimulating and engaging than in a traditional

classroom environment.

Role of the teacher
- Teachers remain central to the learning process
- Lesson planning is crucial when using ICTs

Pedagogy
- Introducing technology alone will not change the teaching and learning process
- ICTs seen as tools to help teachers create more 'learner-centric' learning environments
- ICTs can be used to support change and to support/extend existing teaching practices
- Using ICTs as tools for information presentation is of mixed effectiveness

Teacher technical abilities and knowledge of ICTs
- Preparing teachers to benefit from ICT use is about more than just technical skills 'One-off training' is not sufficient
- Few teachers have broad 'expertise' in using ICTs in their teaching
- Students are more sophisticated in their use of technology than teachers

Teacher usage of ICTs
- Teachers most commonly use ICTs for administrative tasks
- More knowledgeable teachers rely less on "computer-assisted instruction"
- How teachers use ICTs is dependent on their general teaching styles

Teaching with ICTs takes more time
Introducing and using ICTs to support teaching and learning is time-consuming for teachers, both as they attempt to shift pedagogical practices and strategies and when such strategies are used regularly. Simply put: Teaching with ICTs takes more time (estimates vary on how much extra time is required to cover the same material; 10% is a common estimate).

OBJECTIVE OF THE STUDY
- To analyze the perspective of teachers on classroom use of ICT.

● To assess knowledge of teachers on the versatile uses of ICT in the learning process.

RESEARCH DESIGN

Semi-structured interview was used for this study, and the only criterion for participation was that interviewees were teachers at the selected school, as the aim of the study was to 'capture' the valuable perspectives of teachers in relation to ICT, including their 'experiences', 'concerns', and 'expectations'.

Both straight-forward and open-ended questions were developed in the preparation for the fieldwork, and, in accordance with ethical guidelines, 5 questions were developed.

Interview participants were chosen randomly from the selected schools of Patna, and, only 20 teachers were selected as the sample. Teachers' answers were analyzed and put in systematic order for better understanding of the research objectives.

DATA ANALYSIS

Teachers have given their views about ICT and its uses. On the basis of the interview, we can summarise the following points

a) DEFINITION OF ICT

Most of the teachers first of all gave the bookish definition of ICT i.e. it Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications.

But many of the teachers have given other defining points also such as:

● It is a range of technologies which is used for gathering, storing, processing, retrieving and transmitting information.
● It enables individuals to store and systemize information.
● It means the audio visual aids in educational sense.
● It means the software of communication devices such as teleconferencing. Power point presentations, educational modules.

b) BENEFITS OF USING ICT IN CLASSROOM

According to majority teachers the reason of ICT being integrated

into classrooms is because it helps improve knowledge, comprehension, practical skills and presentation skills of the children. They make power point presentations for different topics given as assignment.

● There are other benefits for teachers also like
● Access to larger pool of information and learning resources.
● Technology enables them to reinforce their lessons.
● Helps teachers to handle students with learning difficulties.
● Makes classroom management easier.

c) THE DIFFICULTIES OF USING ICT IN CLASSROOM
   According to teachers the process of using ICT in everyday education is very complicated. The opportunities provided by ICT to support teaching and learning are not problem-free. They suggested few areas where they had difficulties

● Lack of adequate ICT support, infrastructure, or time
● Not everyone has technology at home
● Technology can affect lesson time and flow
● Sometimes it's easy for students to be distracted
● Needs more professional development for ICT classroom handling.
● Lack of teaching experience with ICT

d) PRESENCE AND FREQUENT ICT TECHNOLOGIES USED IN CLASSROOM
   Private school teachers described about different ICT tools present in their classroom like Overhead and LCD projectors, Microphones, Pen Drive, interactive white board and DVDs and CDs.
   Television, Desktop and laptops, Internet, Digital cameras, Printer, Photocopier, tablets, Scanners was present in the school for the use.
   They reported regular uses of ICT tools in classroom
   Whereas in government school teachers stated presence of computer room and few projectors for the school.
   No ICT tool installed in classroom was stated.
   They also said that ICT tools present are used occasionally only.

e) KNOWLEDGE OF RECENT DEVELOPMENTS IN ICT
   Majority of the teachers did not had knowledge of recent

developments in ICT uses in classroom like

- Blended learning
- Collaborative learning
- Flipped learning
- Wiki spaces
- Learning apps like Byjus, Smart learning etc

CONCLUSION

We have seen many examples for the use of technology in the classroom and its benefits in today's society. The timing has never been better for using technology to enable and improve learning at all levels, in all places, and for people of all backgrounds.

Teachers are the key to integrating ICT with day to day learning experience. So the most important thing is that teachers need to be prepared to use these technologies effectively. Schools can use technology effectively and for the welfare of students, teachers and society and it must be done.

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