STAR
Research Journal

Available online at www.starresearchjournal.com (Star International Journal)
EDUCATION
UGC Journal No: 63023

AN ANALYSIS OF TEACHER's PREFERENCES TOWARDS USE OF ICT IN GAUTAM BUDDH NAGAR

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Abstract

Information and communication technology (ICT) is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information. ICT has become part of everyday life and all sectors from banking to tourism now depend heavily on ICT for carrying out their transactions. To increase the effectiveness and efficiency of education in all levels, the computer and the internet has been used, in the recent past, in addition to the already-available and utilized resources of radio and television, in both classroom and distance-mode of education. However, as educational resources, printed texts were and still are the most accessible, both in terms of cheap availability as well as popularity all across the world, and are in no threat of being upstaged, as the book continues to remain the chief and most powerful visual symbol of education. In this regard the paper analyze the teachers preferences towards use of ICT in teaching. The paper argues for addressing the issues in use ICTs and to integrate them in education sector to transform higher education.

Keywords: ICT, Pedagogy, Technological Tools.

INTRODUCTION

Let us begin by understanding the word PEDAGOGICAL. This word deals with the theory and practices of teaching. Despite widespread interest in the educational uses of information and communication technologies (ICT) around the world and a multitude of initiatives promoting the use of ICT in schools, we know relatively little about how ICT tools are being integrated into the classroom practices of teachers in INDIA. Broadly, ICT in education can be defined as "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information."[i] These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephone communication. It should be understood that information and communication. ICT singularly does not generate learning. Rather, it is a tool that can be effectively utilized to enhance, improve and complement learning-skills already in use that is the conventional methods of pedagogy that have been used so long. Why do we need ICT in schools? Was education not happening before computers came into existence? Why is this paradigm shift necessary? The shift is necessary because this is the age of information and technology, an age that requires that teachers facilitate the gathering of this information and not merely teach.

What one uses ICT for and how one uses it, is not addressed sufficiently. Schools and colleges acquire computers, Internet connection, LCD projectors and then send their teachers for crash courses that supposedly teach them to use technology. The trouble is this whole approach is devoid of focus. But, until teachers are made to realize the need of ICT, no amount of computerization can help.

WHAT IS ICT SUPPOSED TO BE USED FOR IN THE CLASS?

A question I often hear teachers who are unwilling to take the ICT plunge is, 'Can the student learn anything without the teacher explaining or intervening?

And my answer to that is, '*Students also have ideas of their own and knowledge that they gathered from daily life; this knowledge and ideas are not accepted or utilized by teachers. Using ICT this can be achieved in a big way.'*

Training a teacher in using ICT is more crucial than acquiring a large number of computers. Teachers have to be trained to facilitate the learning process, make the process real, achievable, challenging, yet exciting and not intimidating. Reducing teacher talk and encouraging student discussion is extremely important. Everything need not be written on the blackboard to be considered as taught. Many teachers think the computer is used only to make the content look attractive!

They need to know that in 21st century, information is not difficult to access, instead organizing, sharing, and collaborating become essential skills. Hence, ICT is not merely to portray information but to interact, share, and thus learn. ICT provides meaningful, absorbing media that makes teaching-learning more productive. Hence, the aspects/ methodology of teacher interacting with students are dealt in detail in this paper. The teaching method when integrated with information and communication technology (ICT) can revitalize teachers and students. To achieve this, our teacher in

India needs to include teaching partnership with ICT as a tool.

To present this paper schools in Gautam Buddh Nagar (Hindi & English medium) were analyzed and various factors were analyzed that affect the preferences towards the use of various ICT tools as effective teaching – learning technology.

THIS PAPER AIMS TO THE FOLLOWING OBJECTIVES:

- To know the techno- savvy behavior among teachers of Jamshedpur.
- To know the view of teachers towards traditional and online teaching.
- To perform demographical analysis of teachers towards e – teaching.
- To know the effect of teacher's qualification level on their preference to e – teaching.
- To know the preference and awareness of teachers towards (mobile) m- teaching.
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RESEARCH METHODOLOGY

The aim of research is reached by the help of inference drawn through primary data with sample size of 100. Universe of study is Gautam Buddh Nagar Schools & colleges. i.e. teachers of different school, graduate and post graduate colleges.

QUESTIONNAIRES TECHNIQUE IS USED TO COLLECT PRIMARY DATA
TABLE:1

Qualification	**No. Of teachers**
Undergraduate	20%
Post graduate	37%
M. Phil	3%
Ph.D./D.Phil.	40%

TABLE:2

Profile	**No. of Teachers**
Private	52%
Aided	15%
Government	33%

Through the more usage of ICT as a pedagogical tool; the more focus would be on pupil interaction & teacher pupil interaction for empowering the learning process. It makes the complete learning process more constructive, dynamic. The subset where ICT needs to be implemented are:

- Website Portals
- Online class using webcam.
- e-library services
- Web based Application Services
- Education Broadcast (Recorded lectures, video streaming)
- Teleconferencing / Virtual classroom setup

FINDINGS

- A huge community of respondent will prefer ICT pedagogy, if they are given chance for it.
- Most of the respondent is from male community (78%) and they are frequent with internet & communication services.
- Most of the respondent are belongs to the age group of 30-40 and their preference towards ICT pedagogy is remarkable.
- The no. of respondent having Ph.D. /D.Phil. or post graduate qualification is approximately same but P.G. respondents are more responsive towards ICT & mobile teaching methods.
- Respondents having professional/technical qualification are more techno savvy and inclined towards online teaching tools.
- The numbers of private school/colleges are more than the government & aided in Varanasi and the respondents from private school/college are more frequent and preferential towards innovative teaching tools and communication services.
- Management as well as science stream respondent mostly uses ICT pedagogical tools in comparison to arts and commerce.
- Respondent from government school/college are aware about the internet communication tools and partially/ rarely prefer the online teaching methods.
- On account of effectiveness, the most preferred teaching method is traditional (57%) where as a small community (28%) of respondent say both methods are effective & advantageous simultaneously.
- The current teaching method of most of the respondents are traditional where as a large community of respondents uses both methods according to their convenience.

- More than half of the respondent refused that m- teaching is cheapest and easiest way of learning.
- Most of the respondent will utilize the offer of m- teaching, where as some just try to become familiar with this new concept of teaching.
- ICT pedagogy lack social interaction, which leads to lack the Behavioral development of the students.
- Teachers of Jamshedpur are very much aware of the internet communication technology.
- Traditional teaching is still mostly preferred.
- Online teaching is nice way of teaching but it should be combined with traditional teaching for better result.
- Teachers belonging to age group of 30-40 are more preferential towards innovative teaching.
- Male teachers have huge preference to online teaching in comparison to female teachers.
- Teachers having post graduate degree as highest qualification are largely inclined to prefer ICT pedagogy and m- teaching.
- m- Teaching is costly, but it is accepted by the huge community of teachers.
- This tool allows a higher degree of independence to a learner & learning process.
- This educational ICT tool can be viewed by a group of students at a time when the concepts are delivered efficiently & effectively.

MORE INFERENCES

There are two main areas that we have to look at if a paradigm shift in the teaching process has to occur: the teacher's role of teaching and the teacher's role of helping the student learn. In the first one, the teacher has to enhance teaching. Here, the teacher can ask himself or herself, 'How will ICT enhance my teaching?' The teacher should be aware of what lacunae exist in his/her teaching. The teacher should ask 'Do I need to be empowered? 'What more can be done?' 'What is the most effective way of teaching?' 'How will more students benefit from my teaching?' 'Will ICT help me?' The second role of the teacher: helping the student learn using ICT.

The Internet is full of information and textbooks are bursting with information. But this information can become true knowledge only when the teacher makes it meaningful. Here the teacher can use multimedia to make topics more comprehensible. Think of a teacher showing large number of different flowers while reading out a poem on flowers, or teaching about the parts of a flower. Talking about the freedom struggle is one thing and seeing a 2 minute video on the same topic is altogether different. Preaching about rain water harvesting and showing a clipping while teaching is different. Instead of boring the students with a decade old chart on the respiratory system, showing a 1.5 minute video during teaching takes the students to a different level of understanding. Listening to the voice of Rabindranath Tagore while reading his stories, poems will help the students associate with the author. The entire teaching-learning process gets a boost with the appropriate use of ICT. It should be used to fill in the inadequacies that the teacher is facing. The problem of large numbers, students not showing interest can be tackled to some extent. Can use of ICT make teaching more meaningful, get rid of rote memorizing?

The teacher needs to be fully aware of the fact that students can find information, they need proper instructions, they need scope for creativity, and expectations of the teacher bring forth performance. The present generation is a multimedia generation. It is not their fault. They are numbed by too much of information and easy access to that information. How then can we expect our students to sit and listen to lifeless sermons in class? The information that is given in the classroom is redundant and presented in boring manner. One search on Google and lo and behold! The information at your fingertips will be difficult to assimilate. How does one harness this gargantuan accessibility of information? How to make students use it appropriately and avoid brazen plagiarism? Vague expectations, lack of innovation, poor scope for creativity make learning dull. Mere use of computer or Internet doesn't improve the learning output. The process should be like this.

STEP ONE: WHAT ARE THE PROBLEMS IN SCHOOLS, CLASSROOMS, EXCLUSIVELY RELATED TO TEACHING-LEARNING?

Identify them

- Large numbers?
- Lack of interest?
- Many drop outs?
- Learning disability?

STEP TWO: WHAT IS BEING DONE ABOUT THESE PROBLEMS?

- Can use of ICT help? Try making lectures, classes more technology laden to bring a difference. Observe the difference in the classes.

STEP THREE:

- What are the requirements of the teacher to do a better job?
- Do the teachers feel that use of ICT to help them improve their teaching?

STEP FOUR:

ARE THE TEACHERS AND STUDENTS EQUIPPED WITH ICT SKILLS?

Although ICT offers the opportunity to construct powerful learning experiences, it is pedagogically neutral. That is, ICT can be used in support of traditional teaching methodologies like the large group lecture, student note taking, and examinations. Teachers can use a computer and projector to show slides to illustrate a lecture, students can use laptops to take notes during the lecture, and multiple

choice quizzes about the content of the lecture can be put on a website.

How these new ICT tools and resources will be used is a human decision, not inherent in the technologies themselves?

ICT has the potential to be used as a supportive educational tool enabling students' learning by doing. ICT can make it possible for teachers to engage students in self-paced, self-directed problem-based or constructivist learning experiences; and also test student learning in new, interactive, and engaging ways that may better assess their understanding of the content.

A second way to assess the merit of ICT use in education is to consider what its use enables students and teachers to do that they would not otherwise be able to do. To explore this question, we considered five aspects of the educational use of ICT –

- supporting new pedagogical methods
- accessing remote resources
- enabling collaboration
- extending educational programs and
- developing skills for the workplace

Modern constructivist educational theory emphasizes critical thinking, problem solving, "authentic" learning experiences, social negotiation of knowledge, and collaboration.

CONCLUSIONS

Pedagogical methods that change the role of the teacher from disseminator of information to learning facilitator actually helps the students as they actively engage with information and materials to construct their own understandings. That is, students learn how to learn, not just what to learn. The teaching method when integrated with information and communication technology (ICT) can revitalize teachers and students. To achieve this, our teacher in India needs to include teaching partnership with ICT as a tool. When effectively integrated into a high-quality learning environment, researchers have demonstrated that ICT can help deepen students' content knowledge, engage them in constructing their own knowledge, and support the development of complex thinking skills Teachers must know how to structure lessons, select resources, guide activities, and support this learning process; many traditionally-trained teachers are not prepared to take on these tasks.

- ICT pedagogy is an innovative technique in the educational institution, but it would be applicable unless and until our educational institutions are well equipped with required infra- structure and trained manpower.
- There must be combination of traditional and ICT pedagogy, as traditional teaching means face to face interaction, so it is also required at least once in a week.
- There should not be prompt change in the teaching pedagogy but slowly it should be upgraded.
- ICT mode of teaching should be appreciated to provide stress free study environment for student as well as teachers also.
- ICT mode of teaching is an effective and convenience mode for spreading the education across the world but one can't questions the significance and effectiveness of traditional teaching methodology.
- ICT mode of teaching will be very influential to the student especially for those who belong to rural/ remote areas.
- Online teaching of course plays a vital role in dissemination of information but traditional teaching include more lively discussion then online and involves an emotional touch.

A major obstacle that often poses insurmountable and sudden challenges to the teacher is the lack of proper technical support facilities in educational institutions. Since, teacher-educators are vested with the responsibility of knowledge-dissemination in ICT-enabled teaching-learning, the task of how such technology is deployed, used, how different equipments are to be installed, operated and maintained (including software), network administration and network security need to be deputed to sound professionally skilled technical group/technicians. In fact, teachers often suffer from a fear of equipment break-down or software mal-functioning that deters them from using ICT in classrooms, and often causes inferiority and insecurity issues among teacher-educators.

All said and done, it should be kept in mind that the use of ICT tools in education should not increase the existing schisms in the dominant social structure of Indian society, namely that between urban and rural India, rich and poor, cosmopolitan, mainland and remote, border areas, male and female, and caste-based divisions. Though ICT can, and is used for furthering distance education and informal sector education in India, it must be kept in mind, that without a concerted effort on the part of all stakeholders that may require a massive paradigm-shift in the way in which education is viewed. Treated and handled in India, the ICT revolution will remain a pipe-dream that may, instead of propelling the country forward become a retrogressive one, effective in marginalizing the already disadvantaged sections of the Indian populace.

A pre-requisite for spread and development of ICT tools in the country is a steady telecommunication network in the country. However, there are a number of other site-specific reasons, beside the over-arching national lacuna that impedes optimization of ICT resources in Indian classrooms As far as ICT resources are concerned, it is not always non-availability of hardware or software or proper e-content; it may also be poor organizations of resources, sub-standard quality of hardware, inappropriate software or insufficient time and curricular scope to incorporate ICT in the knowledge-

dissemination framework.

TEACHER-RELATED CHALLENGES

For successful functioning of ICT in educational scenario, teachers need to accept the major challenge of re-thinking and re-framing their roles and competencies from that of knowledge-generators to knowledge –facilitators, a step that essentially may call for a re-appraisal of the traditional role of teachers in India, where teachers are 'gurus', at par with the divine agencies, and beyond questioning. Beside an ethical/spiritual revamping of their roles, on a more pragmatic level, teachers should be competent enough to employ particular applications and be proficient with computers, be confident to integrate ICT into existing curricula, and also essay modifications of traditional educational theories and practices to enable futuristic demands of the emerging global market, that is completely information technology-oriented. A major area of concern is the mindset of certain teachers that ICT implementation may reduce or altogether eliminate the role of teacher-educators in the classrooms by substitution through computers, thereby creating a resistance to the digital revolution in educational technology. However, all these can be taken care of by underpinning the necessity of ICT in educational theories, and holistic training schedules for teachers to equip them and purge the irrational fear and apathy towards technology tools. If mobile phones, thought to exclusively an elitist possession, can come up as a pan-Indian life-tool, then, with proper strategizing and sincere policy-implementation, teachers can be convinced to evince keen understanding and positive appreciation of their changed roles.

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