ABSTRACT

The convergence of information networks, multimedia packages, and satellite technology has improved learning opportunities considerably. Information Technology is in the unusual position of being both the causes of this transformation as well as the main springboard to usher in change. All nations need to meet their vital national need by this digital revolution that is far reaching. The University is the key element of the national infrastructure and information technology is the basis of other technological innovations and scientific discoveries which are transforming and challenging the Universities. The advent of this technology gives the college teacher an opportunity that is exciting and stimulating to rethink their functions and their relationships with the students.

Keywords: ICT-Education; Digital divide; Practical Issues

INTRODUCTION

The convergence of information networks, multimedia packages, and satellite technology has improved learning opportunities considerably. Due to greater educational potential, Information Communication Technology (ICT) is contributing immensely in the growth of a diverse range of alternatives to provide open and distance education programmes. It allows a significant improvement in traditional teaching and learning methods at all levels of education.

Information Technology is in the unusual position of being both the causes of this transformation as well as the main springboard to usher in change. All nations need to meet their vital national need by this digital revolution that is far reaching. The University is the key element of the national infrastructure and information technology is the basis of other technological innovations and scientific discoveries which are transforming and challenging the Universities.

Now days ICT is an indispensable part of modern education. The need to continuously upgrade information and skills is accepted by all. This is the consequence of the relentless advancement of knowledge and the need for a working professional to remain useful and relevant. ‘Keeping up’ is impossible for a single individual to manage. The educational, research and administrative changes necessitated by new technological capabilities and methodologies require a transformation of the teacher but also the University as we recognize it. The advent of this technology gives the college teacher an opportunity that is exciting and stimulating to rethink their functions and their relationships with the students.

As technology becomes more and more embedded in our culture, we must provide our learners with relevant and contemporary experiences that allow them to successfully engage with technology and prepare them for life after education. ICT provide exciting possibilities to enhance the quality of education. Interactive education softwares, open access digital libraries and intuitive technologies may facilitate new forms of interaction between educators and learners. The ICT based teaching can
motivated and purposefully engaged the learners in the learning process when concepts and skills are embedded with technology.

Computers and their use are in many ways like traditional forms of literacy with equal penetration and depth of influence than what has been achieved through text based literacy. Making provisions in the curriculum to teach computers and computer based literary programs along with the text based literacy program is the larger challenge face by the Universities. To solve the problems of cost and maintenance, integration of computational literacy with all the courses and programs is the most viable option.

ICT (tools like computer, projector, tablets, mobiles etc are using very often in our) has expanded education resources such as formal, informal, non formal, and online education through the networks. In this context students and teachers should update their technological skills in the teaching and learning environment. But we are yet to sort out quality issues which have cropped up while imparting education through ICT.

THE OBJECTIVE OF THE STUDY

To understand and tackle some of the major issues faced by the students as well as the teachers in the usages of ICT.

LIMITATIONS OF THE STUDY

The case study covers a number of colleges affiliated to University of Mumbai,. The study is focused on traditional degree courses only. As there is a large variation in the database the scope of generalization are limited.

METHODOLOGY

The study used a qualitative approach to collect the primary data from 160 students and 40 teachers of different colleges through questionnaire and telephonic interview methods. Different diagrammatic representations are used to show the ICTs penetration level achieved and the scope for applying it in various other subjects.

OBSERVATIONS

The database obtained the percentages of the possible and real level of ICT usages in different subjects. The “yes” aspects of the issues listed in the questionnaire is quantified and used for the tabulation and diagrammatic presentations. The data is summarized by the points observed from the data in two different perspectives in the following tables:

The Tabulation of the subject wise penetration as well as applicability level of in teaching are given as follows. The percentages refer to the percentage of respondents that rated the specified issue.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Penetration Level of ICT</th>
<th>Applicability Level of ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANGUAGES</td>
<td>40%</td>
<td>3%</td>
</tr>
<tr>
<td>ECONOMICS</td>
<td>80%</td>
<td>5%</td>
</tr>
<tr>
<td>COMMERCE</td>
<td>70%</td>
<td>3%</td>
</tr>
<tr>
<td>E.V.S</td>
<td>85%</td>
<td>4%</td>
</tr>
<tr>
<td>ADVERTISEMENT</td>
<td>90%</td>
<td>8%</td>
</tr>
<tr>
<td>MATHS &amp; A/C</td>
<td>30%</td>
<td>1%</td>
</tr>
<tr>
<td>SCIENCES</td>
<td>85%</td>
<td>25%</td>
</tr>
<tr>
<td>HUMANITIES</td>
<td>55%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 1. Subject wise penetration & utility level of ICT (%)
The above chart shows high level possibilities if ICT in most of the subjects other than Mathematics and Accounts.

**Teacher Perspective**

The problems faced by the teachers while using the ICT tools during their teaching are considered. The answer to “Why teachers hesitate to use ICT method for teaching?” is also deliberated here. Some of the prominent issues are listed below.

- Technical Skill: About 30% of the teachers openly said that they don’t have sufficient skill to develop digital contents.

- Time aspects on digital content making: Power point presentation (PPT) making is not an easy task which requires good technical skills and patience. Readymade digital topics include bulk information which may not suitable for students.

- Making lessons more difficult: Making electronic content is a time and money consuming process. ICT restricts the scope of explanation: Some subject contents may require more explanation and discussions like problem solving, drawing curves and graphs etc.

- Poor ICT accessibility: Poor ICT infrastructure in class rooms like computers and overhead projectors. Poor coordination with ICT centres for day to day arrangements.

- Time constraints to use ICT: Teachers are very busy due to credit based syllabus system college activities, personal researches, ongoing examinations and other continuous evaluations.

- The applicability of all subjects’ content: ICT is not easy to apply to Subjects like Mathematics, Accounts etc as it is requires work notes and foot notes.

- ICT causes, instead of learning the topic content teachers spend more time to learn how to use computers for the PPT.

- Poor motivation and recognition from the colleagues and the institution.

- ICT Education is an incomplete transformation of knowledge as it possesses fewer face-to-face interaction, warmth, empathy and rapport with learners.

- ICT Education is reduced to a mechanistic system in contrast to ‘Every lecture can be a new lecture’ concept. Innovation and empathy in teaching is lost with fixed PPTs.

- ‘Googling” is not a substitute for ‘Guru concept – which establishes long-lasting impact’.

- Fear of infection of virus to the computers and personal data loss in the repeated use of USBs.
Issues in teacher perspective are charted below and the percentages refer to the percentage of respondent’s rates on “yes” aspects of the specified issue.

<table>
<thead>
<tr>
<th>TEACHER ISSUES</th>
<th>YES-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technically unskilled</td>
<td>30%</td>
</tr>
<tr>
<td>Making lessons more difficult</td>
<td>50%</td>
</tr>
<tr>
<td>Poor ICT accessibility</td>
<td>60%</td>
</tr>
<tr>
<td>Restricts the content scope</td>
<td>85%</td>
</tr>
<tr>
<td>Time constraints to use ICT</td>
<td>90%</td>
</tr>
<tr>
<td>Time aspects on digital making</td>
<td>95%</td>
</tr>
</tbody>
</table>

The following diagram indicates the main issues related with the ICT Education in teacher perspective.

**Student Perspective**

The following are the major issues facing by the students on ICT Education:

- Poor ICT infrastructure in class rooms and in the library.
- Poor internet accessibility during the teaching learning activities, projects & assignments. Poor internet speed because of old computers and old operating systems.
- Poor presentation and explanation skill of teachers on the readymade digital data. Teachers lay more emphasis on the PPT creativity rather than the topic content.
- PPT’s "Glitzy" features distract the audience, rather than focus their attention on the subject at hand.
- PPT information are excessive instead of compact in size, meandering towards the unwanted area may possible.
- In search of topic Adverse effect of ‘Googling’: In search of topic content wandering towards the unwanted area may be possible. The very easy accesses to information from the internet affect the capability and the intellect of the students.

Issues from the student perspective are given below and the percentages refer to the percentage of respondents rates on “yes” aspects of the specified issue.

<table>
<thead>
<tr>
<th>SELECTED STUDENT ISSUES</th>
<th>YES-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>College ICT infrastructure</td>
<td>25</td>
</tr>
<tr>
<td>Ease of internet access</td>
<td>35</td>
</tr>
<tr>
<td>Teacher's PPT skill</td>
<td>50</td>
</tr>
<tr>
<td>PPTs 'Glitzy' distraction</td>
<td>60</td>
</tr>
<tr>
<td>Bulk PPT information</td>
<td>70</td>
</tr>
<tr>
<td>Adverse effect of Googling</td>
<td>80</td>
</tr>
</tbody>
</table>
The following diagram indicates the main issues related with the ICT Education in student perspective.

CONCLUSION

The conceptions of students and teachers about ICT and education are very positive. Students are extremely critical about the educational use of ICT by the teaching staff. Only one third of respondents have shown positive feedback on teacher’s ICT activities. The other students are extremely negative about the approaches adopted and the skills demonstrated by the teachers. Studies indicate that by combining conventional teaching methods with ICT skills teaching, students can gain more knowledge and can perform better in their studying. ICT can be act as a complement to the traditional method but not a replacement to the teachers. Studies indicate that by combining conventional teaching methods with ICT skills teaching, students can gain more knowledge and can perform better in their studying. ICT helps to makes the lessons more interesting, easier, more fun for them and their students, more diverse, more motivating and more enjoyable. Institutions could have implemented ICT policies, faculty mobility programmes, and orientation programmes in ICT education etc to overcome some of the persisting issues in the teaching-learning atmosphere.

Most Universities have made the library the nodal point for their ICT systems. Libraries have a special role in providing information to all in order to reduce the gap between those who have the facilities to access digital information and those who do not have such facilities. Though the digital divide is a global phenomenon it is more acute among the academic community in developing countries like India. The acuteness is a consequence of their greater need. The emergence of information rich and information poor groups will create serious social problems which will ultimately lead to a denial of opportunity to the poor.

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