ABSTRACT

Higher education institutions in India are experiencing a paradigm shift. Increasing globalization of higher education and competition from foreign universities has been stimulating the change. Role of teacher is widening from mere academicians to a facilitator for the learners. Academicians involved in imparting education in the institutions of higher education are adopting technology in teaching, learning, administration, counseling and management of co-curricular activities. Present study explores use of information and communication technology used by the academicians and challenges faced by them in using ICT in teaching and learning. The data for the study is collected from a sample of teachers working in rural and semi urban arts, science and commerce colleges affiliated to Mumbai University.

Keywords: Information and communication Technology, Higher education, Teaching and Learning, Challenges

INTRODUCTION

India is the most populated country in the world. The quality of higher education contributes towards the quality of demographic dividend. National bodies regulating and assessing the quality of higher education have positively inclination towards the use of information and communication technology in teaching and learning in the institutions imparting higher education. Higher education is an enlightening fact which is learnt after the education of school. It comprises of undergraduate and postgraduate courses, as well as vocational education and training programmes. A higher education qualification in India at degree level has a period of minimum three years to complete, or four years subject to the courses. Higher education generally and commonly means university level education. It offers an amount of qualifications related to Higher National Diplomas and Foundation Degrees to Honors Degrees and also Postgraduate programs like Masters Degrees and Doctorates. These qualifications are recognized all over the world, demonstrating specialist expertise and aptitude supported by a wide-range selection of skills and talents that companies find very valuable and useful when they do staffing and enrollment for their organization.

Higher Education sector in India has observed a marvelous rise in the number of Universities/Universities level Institutions and Colleges since independence. The number of Universities has increased 34 times from 20 in 1950 to 677 in 2014. There are 45 Central Universities of which 40 are under the purview of Ministry of Human Resource Development, 318 State Universities, 185 State Private universities, 129 Deemed to be Universities, 51 Institutions of National Importance (established under Acts of Parliament) under MHRD (IITs - 16, NITs – 30 and IISERs – 5) and four Institutions (established under various State legislations). The number of colleges has also registered manifold increase of 74 times with just 500 in 1950 growing to 37,204 in 2013. The
coordination and determination of standards in Universities & Colleges is entrusted to the UGC and other statutory regulatory bodies.

The use of ICT in higher education has broadened the scope of teaching and learning. ICTs stand for information and communication technologies which include technological tools, storing data, CD-Rom, managing information, computers, Internet, and telephony communication, power point presentations. The use of ICT is also used to maintain student’s records like admissions, co-curricular activities. The teaching and learning as compared to the traditional method has improvised today with technology and speed of connectivity. There is much more learning beyond a chalk and board. Students get a wider scope to generate innovative learning and teachers do get a scope and challenges in experiencing a wide network of technology. The use of computers and Internet is still at a starting stage in few places of India specially the rural areas, but the limitation is because of high cost for the infrastructure.

LITERATURE REVIEW

Afshari (2008) reported that in Iran, computers are used for administration purposes like maintaining records of the student which includes marks, grade sheet, section or class order information about students and their activities. The result shows that majority of the principals are using computers once in a week for administrative purposes and teachers use of computer for administrative purposes is found to be less.

According to Gulbahar and Guven (2008) information and communication technology is a tool that can be used to enhance the quality of teaching various subjects. Thus, it is important for teachers to understand and use information and communication technology. So that teacher’s attitude is one of the identification of using ICT in the professional field.

Information and communication technology according to Frackman (1996) and Steen (2000) has made an impressive ‘big leap forward’ since the early 1990s in higher education in many parts of the world. ICT is now being used for various purposes in higher education institutions, ranging from executive decision-making systems to course evaluation schemes.

According to Hossein Zainally (2008) Information and Communication technology provides several facilities and possibilities for educational administrators to do their tasks. Communication and information systems have changed the very nature of higher education, allowing information to be transferred, stored, retrieved, and processed by almost all who work, study or interact with a given institution. Using the reference of other research work the author opines that there is an increase in managerial effectiveness and efficiency through usage of Information and Communication technologies.

Rajeev Singh (2008) has specified that ICT has played a major role in reducing operational inefficiency and improving decision-making in many areas of governance. An integrated Higher Education Service System is one such concept that can empower the governing bodies to administer the progress of the education plan in the whole country and serve various stakeholders in a much better manner.

In a study, Zelenakova et al (2012) pointed out that ICT has a significant impact in the way teachers and students communicate. Communication in the learning process provides a transfer of information between university teachers and students. Many institutions are now heavily investing in ICT infrastructure and aim to exploit it to the maximum extent possible.

OBJECTIVES OF THE STUDY

1. To study the use of ICT by teachers in higher education.
2. To know the challenges faced by teachers in using ICT.
HYPOTHESIS

- Ho: ICT is not a challenge in teaching.
- H1: ICT is a challenge in teaching.

DATA AND RESEARCH METHODOLOGY

Present study is based on the primary data collected from a purposive sample of 45 teachers teaching in the selected four colleges is selected for the study. A questionnaire having a set of 20 questions is used as the instrument of data collection. These four rural and semi-urban, Arts, Science and Commerce colleges affiliated to Mumbai University are accredited ‘A’ grade by NAAC. For arriving at meaningful conclusion the study uses percentage analysis and correlation coefficient. Hypothesis for is tested using the correlation coefficient. Data is analysed using Microsoft excel.

FINDINGS AND DISCUSSION

Out of the 45 respondents comprising of teachers teaching in for Arts, commerce and Science colleges affiliated to Mumbai University, 42 per cent and females and 58 per cent are males. Of these 75 per cent have more than 3 years of teaching experience and 25 per cent have less than three years of experience. All the respondents are using ICT either at home or college or both for administration and teaching.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Particulars</th>
<th>per cent</th>
<th>Particulars</th>
<th>per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LCD projector</td>
<td>100</td>
<td>Lesson planning</td>
<td>73</td>
</tr>
<tr>
<td>2</td>
<td>Good internet speed</td>
<td>80</td>
<td>Class presentation</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Audio-visual aid</td>
<td>42</td>
<td>Evaluation</td>
<td>73</td>
</tr>
<tr>
<td>4</td>
<td>Laptop/desktop</td>
<td>73</td>
<td>Administration</td>
<td>73</td>
</tr>
</tbody>
</table>

Table 1 shows that the teachers use ICT during lectures through LCD projectors the use is 100 per cent, Audio-visual aid, and a good internet speed helps in preparing lesson planning, class presentation which is 80 per cent and administration work is also enhanced through ICT.

Table 1 shows the use of computer by 73 per cent teachers is daily and 20 per cent two to three times per week. Majority of teachers are also comfortable using computer. 60 per cent of the teachers using ICT in teaching have received formal training where as 40 per cent has no formal training. However those who have received training are comfortable in using ICT for teaching. It is the demonstration effect and the trend which has compelled the ones who did not receive any training to use it for teaching.

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Large numbers of respondents are using ICT for various tasks as can be observed from figure 2 above. Colleges are encouraging the teacher to use ICT in teaching is evident from the finding that 29 per cent teachers get IT assistance during lectures. These are the ones who have not received any training in ICT. College surveyed has the IT staff assisting the teachers in use of ICT. The colleges also organize in house training programs for the faculty for use of ICT resources. A large 71 per cent opined that they get assistance if they face any technical error during their lectures.

**Effect of Use of ICT**

Studies prove that use of information and communication technology improves the system efficiency and makes the optimum use of resources possible. Use of ICT in teaching has a positive impact on the process outcome i.e., performance of the student. 87 per cent of teachers who are using ICT for teaching believe that use of ICT has improved in their efficiency as well as students’ performance. ICT makes it possible for them to reach the resources to students even beyond college timings and bring in the latest developments in the respective subjects. It also helps in improved research by the teachers and students. Figure 3 clearly depicts that 51 per cent of the teachers agree that learners can revisit the sessions as per their need and this will help them in learning at ease. Also ICT reduces the stress on teachers as it is time effective.

**Challenges in Use of ICT by Teachers**

The use of ICT is mostly based on self motivation by the teachers. Teachers teaching quantitative subjects find it difficult to use ICT as they believe the traditional methods is useful for them. Largely there are infrastructural problems such as slow internet connection and availability of computer hardware. In all the streams it is student teacher ratio which is detrimental to use of ICT. Many teachers are troubled by the uncertainty of electricity due to load shedding.

**FINDINGS & CONCLUSIONS**

Teachers who have experience more than three years have got a formal training in computers Teachers use LCD projectors, laptop, and audiovisual aid for their lectures. Teachers strongly believe that the students’ achievement is enhanced through ICT because it allows teachers to prepare lesson plan, class presentation, evaluation of students and administration. Almost 29 per cent teachers get IT assistance during lectures if they have any difficulty in lectures. There is a difficulty in some of the colleges of non-availability of LCD projector, computers, slow internet connection, Electricity problem, and viruses in the system, no separate laptops. Use of ICT by the teachers is similar across the streams. The future study can be done management colleges.
REFERENCES


16. www.mu.ac.in/nyweb_test/ma per cent20edu/ICT per cent20- per cent20Edu.pdf
