

Teachers Perception on ICT in Teaching Learning Process

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ABSTRACT

Technology and knowledge took center stage in national and international debates in the era of digitization. In the meantime, ICT has turned into a vital piece of practically all divisions and portions of education. Whatever be the part, either teaching, learning, training or evaluation, ICT took its own part of future education in India. The use of information and communication technology (ICT) has become a major driver in the transformation of education around the world. The modified Indian National Education Policy, emphasized the need to use ICT in education to improve the accessibility and quality of education. This study focuses on importance of ICT in teaching-learning process. All the policies related to quality education have the main objective of creating an environment for the optimal use of ICT in education. This study aims to analyse the teachers' perception towards uses of ICT in teaching-learning process. The study also aims to identify the challenges faced by them in using ICT. The data for the study were collected using structured questionnaire from faculty members of various colleges which includes engineering, business schools, arts and science colleges. The study identified that still the teachers need proper training, guidance to have a complete switch over from traditional teaching to modern teaching.

Keywords: ICT in education, teaching-learning process, College Professors, Perceptions

I. INTRODUCTION

Education is important today because it isn't just the advancement of scholarly abilities and information, yet additionally the successful development and improvement of the Indian economy. The education system must turn students into innovators, scholars, researchers and trainers as learners. If education is based on skills, students can improve as dynamic personalities and achieve success in their lives. Developing skills is central to improving productivity. Productivity in turn is an important source of improved standard of living and growth. ICT plays a major role for skill based education and it minimizes the efforts and time of the teachers to train the students. Teachers are the pillars in the society to produce talented human resource for various fields. Unless the teachers are not to understand the opportunities of digital concept that will led to a digital shortage in India. Hence the initiatives of teaching-learning process via ICT should starts from teachers and that will automatically disseminated among students, who are the future India.

This study examined the usage of ICT by teachers in their daily academic lives and how this influenced in colleges, with a particular focus on teaching, learning and evaluation practices.

The study also examined the perception of ICT effectiveness in teaching and learning by teachers. The colleges chosen for this study included engineering, business schools, arts and science.

II. REVIEW OF LITERATURE

Knowing the importance of ICT in education, many study have been undertaken to understand the consequences in the real life.

Catherine McLoughlin (2010) insisting the need for pedagogies that are more personal, social and participatory for self learning. **Ghavifekr et.al (2016)** have identified the major issues and challenges of utilization of ICT in teaching were, the connectivity problems, lack of technical support, proper training for utilizing ICT tools. **Budhedeo (2016)** stated that rural areas in India need improvement in education as there is a literacy gap. This literacy gap can be filled up if education system allows ICT into it and this will facilitate not only filling the literacy gap but also make possible for tapping many idle human resources.

III. NEED OF THE STUDY

Understanding and using ICT is critical for countries that strive for continued social and economic progress. The information and communication technology (ICT) based resources is to be integrated into education systems so as to facilitate the acquaintance, familiarity and competence of students. But this needs a huge task and policies, programs and initiatives. The kind of initiatives to be taken by teachers to make it is as an effective one and hence it is an hour of need to understand the perception of teachers on ICT enabled teaching, learning process.

IV. IMPORTANCE OF THE STUDY

The ICT facilitates self-paced learning with a different kind of ICT tools. As the learner tech-themselves, the ICT based teaching learning process becomes more sense, creative and dynamic. ICT enables the students to update, develop the innovative strategy in teaching. The more noteworthy preferred standpoint of ICT is it encourages educator understudies to have live contact and this advances dynamic getting the hang of, sharing of thoughts, talk and furthermore gives prompt criticism.

The availability of ICT tools and training on handling the same to equip the teachers are highly required. In the global competition, both teachers and students should update themselves to meet the emerging trends. The skill based teaching learning process is possible only with ICT, because the ICT makes teaching more lively, possibility of storing and retrieving data and information. And moreover the same is possible with high speed and accuracy. The real benefits will become fruitfulness only if it has acceptance, involvement of teachers towards ICT.

V. STUDY OBJECTIVES

The study primarily aims to analyse the teachers' perception on ICT in teaching-learning process. The ancillary objectives are

1. To identify the usages of various ICT tools
2. To analyse the extent of benefits of ICT in the day to day professional life
3. To analyse the extent of problems faced by teachers on using ICT in teaching-learning process
4. To offer suggestions to enhance the utilization of ICT in teaching, learning, training and evaluation process, understanding the teachers' perception on ICT.

VI. RESEARCH METHODOLOGY

The research aims to analyse the perception of teachers on ICT enabled teaching learning process in higher education. The study becomes descriptive research in nature. To analyse and identify the factors determining, the benefits and the problems faced on ICT enabled teaching learning process, the structured questionnaire were distributed among the professors in colleges of arts, science, engineering and business schools. 200 questionnaires were distributed, out of which, 192 questionnaire were filled in all aspects and decided the sample size. The primary data was collected using convenience sampling method. The statistical tools applied to analyse the data are mean and standard deviation, chi square test and principal component analysis. Secondary data collected through journals, websites, magazines, and newspapers are used for the study.

The sample size of the study consisting 82% of female and 18% are male respondents. With regard to stream of course, 63% of the respondents are Arts & Science college professors, 29% of the respondents are engineering college professors and 8% of the respondents are the teachers of School of business.

VII. PRIMARY STUDY RESULTS

The primary data collected through structures questionnaire is tested through various statistical tools. The results are presented and interpreted as follows:

1. Usages of ICT tools

The study analyses the usages of various ICT tools by the teachers of various discipline from Chennai city. In this regard, the respondents were requested to indicate the degree to which they have used the ICT devices in their everyday instructing learning process. From the 5 point scale used, the results are presented in the table

Table 1: Usages of ICT tools

ICT tools	Mean	Std.Deviation
Computer	4.29	1.496
Mobile Phones	2.43	1.134
Smart Board	3.71	1.704
Mobile applications and computer softwares	3.86	1.464
e-library	3.86	1.345
Power point presentation/LCD projector	4.14	1.215
Video classes	4.00	1.000
Social Network	3.57	0.787

Source: Primary data

The results of usage of ICT tools are presented in Table 1. From the mean value, it can be ranked and stated that Computer is one such ICT tools used maximum among teachers for teaching learning process. Followed by Projectors are using by many teachers.

2. Benefits of ICT

The ICT enabled teaching-learning process provides various benefits. The perception of teachers towards benefits of ICT is listed out and measured in 5 point scaling. The results are presented in the component matrix table.

Table 2: Component Matrix of Benefits of ICT

Factors	Component		
	1	2	3
Innovativeness	.828	-.122	.129
Retain the information	.958	-.085	.238
Store and retrieve, data and information	.905	.404	.117
Making leaning more enjoyable	.790	-.501	-.288
Knowledge on different aspects	.696	.333	-.635
Skill based education	.919	-.205	.302
Good for the environment	-.712	.638	-.003
Teachers attitude	.658	.738	-.127
Socio-organizational factor	-.034	.992	-.013
Adminstrative support	.475	.833	.244
Grab students attention	.290	.785	.496
Technology competence	.084	-.526	.821
Update knowledge	.053	.191	.976
Independent learning	-.216	.041	.889
Status of being engaged	-.096	-.318	.928
Self learning	.162	-.098	.876
Time saving and ground to know more	.292	-.210	.827
Enhanced knowledge	-.628	.267	.691

Source: Primary data

From the analysis, it is possible to extract 3 factors. Factor 1 incorporated with the **innovation** that ICT provides and hence the factor named as Innovation. Factor 2 associated with teachers' perception towards ICT enabled teaching and hence the factor is named as **Teachers perception**. The components under Factor 3 contribute for **professional quality** and hence it is named so.

3. Problems in utilizing ICT

Any new innovation is successful unless it overcomes the problems of the users. The problems faced by teachers in various colleges when implementing ICT enabled teaching are listed in the table. The results of Principal component test with regard to problems in utilizing ICT are presented in Table 3

Table 3: Component Matrix of Problems in utilizing ICT

Factors	Component		
	1	2	3
Integrate ICT skill to curriculum	.972	-.198	.095
Up-to-date knowledge on ICT	.621	.598	-.396
Preparedness for ICT	.822	.504	-.236
Understanding of technology	.972	-.198	.095
Lack of computer literacy	.280	-.719	-.301
Language problem	.544	.020	.204
Lack of self interest towards ICT	.742	.036	-.502
Networking problem	.321	.868	-.142
Frequent update in technology	.147	.856	.452
Malfunction	.297	.925	.007
Software and Hardware problem	.398	.839	-.260
Availability of ICT tools	-.042	.664	.742
Lack of training	.603	-.183	.691
Support for ICT at institutional level	.365	.294	.585

Source: Primary data

From the above table, it is identified that the problems in using ICT is being grouped as 3 major factors. Factor 1 includes the competency level of teachers on ICT and hence the group named as **Teachers competency**. Factor 2 is associated with **technological issues**. Factor 3 enlists the issues related with **support from Institution**.

4. Results of hypothesis testing

The study uses the chi-square statistics to test whether the variables are associated.

H01: There is no positive perception of teachers towards usefulness of ICT

Table 4: Chi-square test (Teachers' perception and Usefulness of ICT)

	Value	Degree of freedom	P value
Pearson chi-square	39.398	8	.000

Source: Primary Data

Since the P-value (0.000) is less than the significance level (0.05), null hypothesis can not be accepted. Thus, it is concluded that there is a positive relationship between teachers' perception, believes, acceptance and usefulness of ICT.

H02: There is no positive perception of teachers on availability of ICT tools

Table 5: Chi-square test (Teachers' perception and availability of ICT tools)

	Value	Degree of freedom	P value
Pearson chi-square	19.779	6	.003

Source: Primary Data

From the results of Table 5, it can be concluded that there a positive perception of teachers on availability of ICT tools, as $p < 0.05$ and hence the null hypothesis is rejected.

VIII. FINDINGS

The following are findings from the data being analyzed.

- ❖ The study consists more number of professors are from Arts & Science Colleges, rather than engineering and others.
- ❖ It is identified that computer and mobile phones with internet facility are used for collecting and preparing study materials. The projector and smart boards are used for presentation. The evaluation process is taken up with the help of computer system. Social network and blogs are very much used for research purpose.
- ❖ From the teacher's perception, the list of benefits of ICT are grouped and identified as three major factor namely technology, perception, professional quality.
- ❖ The results of principal component analysis revealed that the problems faced by the teachers in ICT enables classes are of three major factors namely technological issues, teachers competency and a support from institution.
- ❖ Teachers have a positive attitude towards usefulness and availaibility of ICT tools.
- ❖ Though the availability of technical advancement is lagging, every colleges are provided with basic ICT tools such as Computer with internet connection, multi media projectors, smart board, etc. The training on use all the available ICT tools effectively are also lagging.
- ❖ It is identified that the overall teachers perception towards ICT is that the system is good, but it needs proper training and support from institution to implement the same effectively.

IX. SUGGESTIONS

- ✓ Programmes like workshop, seminar and conferences may conduct to create awareness and to highlight the importance of ICT in teaching-learning process so as to meet the emerging needs at Global market.
- ✓ Colleges should well equip with ICT tools and techniques.
- ✓ Board of study has to revise the syllabus time to time in accordance with implementation of ICT in teaching-learning process
- ✓ More orientation programme has to be conducted to integrate the ICT to curriculum.
- ✓ A proper training to be given for the teachers, especially the teacher belongs to streams of Arts and humanities
- ✓ Individual teacher should have an attitude to use ICT in the day to day professional life.
- ✓ Teachers will be mastery in ICT only if they are practicing frequently. Unless the teachers are good in ICT, they can't guide for students to implement ICT in their learning process.
- ✓ It is advised to the education institution seeking for quality improvement as best practices is a provision of regular training teachers for the using technology in teaching, integrate the various facilities into teaching learning process.
- ✓ An amendment may bring into the education policy and procedures to bring ICT in education.
- ✓ The criteria to sanction the qualification approval to college teachers may have capacity to use ICT in teaching, learning and evaluation process.

X. CONCLUSION

The initiative of ICT in Higher institutions should starts from top level management and should goes through teachers to students. The top level management is responsible for

availability of ICT tools and provision of training to teachers. It is the responsibilities of the teachers to utilize the same properly. The students should accept and benefited by using ICT in their learning process. The teaching staff should have ICT knowledge and are able to integrate it into the teaching-learning process. They also encouraged their students to use ICT to learn so that they can develop their knowledge and become competent. It is opined by the teachers that the teachers who have ICT knowledge and the ability to integrate it into the teaching-learning process can encourage the students to use ICT in learning process so that they can develop their knowledge and become competent. This can only be achieved through the availability of ICT tools in the institution. Only the environment can bring changes among teachers and students. Education is important for society, ICT is important for quality education and the ICT enabled environment is important to all these.

XI. REFERENCES

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