

Study on Usage of ICT in Enhancing the Quality of Higher Education

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Abstract: *Information and communication technology has been adopted as a positive technological change in almost every industry; and education industry has not been excluded from this revolution. Education is considered as an important key to the transformation & overall development of human life. In today's competitive world; being literate is not enough; perusing higher education is in demand. The quality of education can be enhanced when educational institutions embrace the innovative and quality ways for teaching & learning processes. ICT symbolizes 'new time' in the evolution of education. Usage of ICT in education industry includes using information & technology in the form of hardware, software & applications in collecting storing students' data, imparting knowledge through audio-visual aids, conducting examination & evaluation of students etc. To sum up, ICT can really be proved advantageous to enhance quality of higher education. Based on primary data; this paper aims at encouraging the use of ICT to enhance the quality of education by understanding the current status of ICT practice in educational institutions and identifying key benefits & challenges of ICT with special reference to institutes in Mumbai suburbs*

Keywords: ICT, education industry, Quality, teaching & learning, revolution.

I. INTRODUCTION

A good higher education system is required for overall prosperity of a nation. A tremendous growth in the higher education sector had made the administration of higher education institutions complex. India has always been valued in education more than merely considering it as a means towards earning a good living. Right from pre-historic days, education, especially higher education has been given a predominant position in the Indian society. The rapid changes taking place in the field of education are the consequences of various types of electronic information technologies. Computer technologies which need to be applied in education sector can help to remove inequalities between the institution of developed and developing nation, between inner cities and suburbs and between rural and urban areas. It will have an increasingly positive impact on the teaching, learning and administrative function of educational institution. The rapid developments in technology have made tremendous changes in the way we live, as well as the demands of the society. Many researches reveal that the integration of ICT helps to reduce the complexity and enhance the overall administration of higher education

The use of ICT in education lends itself to more student-centered learning settings and often this creates some tensions for some teachers and students. It is in realization of this fact that many higher learning institutions in India have invested heavily in acquiring ICT to support teaching, learning and communication inside and outside the institutions. Higher learning institutions acquire funds from different source to make sure they don't miss the advantages of ICT especially the internet as an important tool in this competitive world and teaching computer related subject to equip users with IT knowledge. Recognizing the impact of new technologies on the workplace and everyday life, today's teacher education institutions try to restructure their education programs and classroom facilities, in order to minimize the teaching and learning technology gap between today and the future.

The ICT Policy in higher education aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge society leading to all round socio- economic development of the nation and global competitiveness. The introduction of ICT in the higher education has profound implications for the whole education process ranging from investment to the use of technologies in dealing with key issues of access, equity, management, efficiency, pedagogy and quality.

- 1) **Student-centered Learning:** ICT provides a technology that has the capacity to promote and encourage the transformation of education from a teacher directed enterprise towards student-centered models. As more and more students use computers as information sources and cognitive tools, the influence of the technology will increase to support their studies.
- 2) **Supporting Knowledge Construction:** Learning approaches using contemporary ICTs provide many opportunities for constructivist learning and support for resource-based, student centered settings by enabling learning to be related to context and to practice.
- 3) **Anyplace Learning:** With the help of ICT, educational institutions can offer programs at a distance mode. Today many students can use this facility through technology-facilitated learning settings.
- 4) **Anytime Learning:** Technology-facilitated educational programs remove the geographical barriers. Students are able to undertake education anywhere, anytime and at any place. This flexibility has provided learning opportunities for many more learners who previously were constrained by other commitments.
- 5) **Information Literacy:** The growing use of ICT as tools of everyday life have seen the pool of generic skills expanded in recent years to include information literacy. It is highly probable that due to the future developments and growth in technology, it will help further for information literacy.

II. BENEFITS AND CHALLENGES OF ICT

ICT provides student support services such as course outlines, digitally recorded classroom material, discussion groups, laboratory manuals and lab assignments, lecture notes, live lectures for later viewing and re-viewing, links to course specific websites, online tutorials, supplementary readings, and virtual office hours for teacher-student consultations. Virtual libraries are a particular boon to students as they cut down on costs of acquiring expensive textbooks, journals and reference material. Tools are available on the Internet to assist both teachers and students to manage writing assignments to detect and avoid the pitfalls of plagiarism and copyright violations. ICT improves the quality and the quantity of educational provision. Introducing ICT systems for teaching in developing countries has to consider about high opportunity cost of installation, investments in hardware and software's and in human skills and training. Technology-facilitated learning has proven to be quite expensive in all areas of consideration, infrastructure, course development and course delivery.

The wide adoption of ICT calls for mindsets and skill sets that are adaptive to change. Teacher has to adapt continuous professional development in the educational uses of technology. In this sense, teachers have to be ready to make use of the possibilities that ICT offer, such as different learning contexts, focused on the students, presenting them with several types of interaction, offering different degrees of control of their own learning, adapting to their personal interests, promoting collaborative tasks and developing autonomy in their work and study .

III. REVIEW OF LITERATURE

Ronald M Hernandez (2017) :- The influence of ICT incredibly revolutionized & educational environment. People have accepted as a reality. However, there are different views in the educational sector regarding the importance & growing prospective of ICT. This paper focuses on the two sides of the coin that is prospective & challenges of ICT in education industry. The positive side of ICT advocates on integrating ICT with educational system in meaning full way so that the learning experience generated will be as the expectation of the teacher. ICT facilitate the growth of innovative educational conceptions, establishes new models of communication braking up the barriers of traditionalism in the classroom. But if look at the challenges side of ICT in education then comes the thought of the so called knowledge based society which is relected to get converted into information society. The information society or digital society is the society they attempt to convert itself with technology. Technology when blended with knowledge creates opportunities for change & adoption but posing challenges too. ICT has given way to a teaching role based on the need for training in & updating ones knowledge of teaching methods based on current requirements for this to happen the functional role of teachers within the approach towards ICT required change in their methodological practices. This change is not just technological or methodological change but the change in mind set. So, the teachers or educationalist belong to the traditional view on teaching & learning must shift their mind set optimistically towards the impact of ICT in educational industry.

Namita Saxena (2017) :- The portrayal of this paper lies in kids conciseness. In a crisp conveyance way, the author has explained the role and impact of ICT in improving quality of education. The author has described the benefit of ICT as a potential tool for extending educational opportunities and making major differences in the learning of students and teaching approaches. ICT is an assisting tool that brings innovation in teaching skills and encourages interest and active participation of students in learning. The paper further stresses on the importance of ICT as a collaborative interactive medium. The significant argument of this paper is that purposes the major advantage of ICT as a source to present and next generation of students for a work place where use of ICT is becoming more and more ubiquitous. The paper also triggers at the limitations of ICT use in education in terms of resistance and lack of from the circle of teachers in using this technology. However the paper concludes that we overcome few obstacles using ICT it can be a promising tool for progressive educational sector. Emerging tool for progressive educational sector.

Navdeep Kaur (2015) :- This research study triggers on how ICT can empower teachers to enhance the quality of education. Teachers play a pivotal role in developing the scholastic record of students in their academic front. Today's market demands the high levels of efficacy from the students. The industry ready students need the industry ready trainers. For this there has to be an appropriate integration of ICT and education. So the teachers also require upgrading themselves with the latest trends in teaching methodology. This entire paper emphasizes on using such latest trend for the teachers through teachers which procures a great opportunity to be empowered. The paper describes on the general term of ICT followed by its utility in education sector. The ICT should be integrated in universities at national and international level for a better nation. Due to some common barriers the teachers find it difficult to promote ICT and so they are not confident in effective training and sometimes technical support is not provided by the organization. Based on secondary data and a quality ROL, the paper encompasses role of ICT in modifying functioning of teachers, and devote more efficiently for teachers. It also focuses on the challenges teachers face while adapting to ICT in their teaching curriculum. The paper sums up by advocating how teachers must take up ICT to look beyond the text book and traditional aids which will further enhance both learning and teaching experience. After all, it would be a great revolution if teachers are empowered with enhanced qualities so as to shape brighter future of the students who are the true representatives of progressive nation.

Mbodila, Jones & Muhandji (2013):- Stated that ICT plays a significant role in developing human capital through bringing a revolutionary change in education. It is suggested that ICT can play a number of roles in education. Knowledge can be taken in any way but the best formula is to integrate the ICT in education. The educational benefits of ICT's depends on how they are used and for what purpose. It is found that in different part of the world the use of ICTs is different depending on the availability, affordability and access of technology. To get the maximum education benefits the integration of ICT should be based on certain parameters as adequate training, careful planning, restricting of the syllabus, systematic approach and proper investment in a place. The author argues that the main purpose of integrating

Pegu Uttam (2014):- Reported that India has one of the largest education systems in the world. The innovation of ICT has fundamentally changed the practices of not only education, business and governance but every sphere of human life. As the world is moving rapidly towards digital media the role of ICT in education has become very important. The authors have also emphasized in this paper about the role of ICT in higher education in India. The sudden change in information technology has transformed the way how knowledge is disseminated today. ICT plays an important role in the field of education, how the role of students and teachers has been changed in learning centered environment after collaborating ICT in teaching learning process. The author found that the teachers control and all aspects of learning has changed to the teachers give students, more options and responsibilities for their own learning & students, point of view passive recipient of information has changed to active participant in the learning process. Hence it is said by the author that integration of ICT has brought tremendous changes but yet to achieve the desired level of IT adoption in higher education.

Krishnaveni (2010) :- Noticed education is one of the most important needs for the well being of individual and that of society. Information and communication technology (ICT) is a force that has changed many aspects of people's way of life in the field as education, business, law, banking, tourism, medicine architecture engineering and many more and the impact of ICT in the past two or three decades has been enormous. Author has mentioned some of the challenges competition and equity challenges, extraordinary expansion of knowledge, balancing between traditional and modern

approaches to overcome with the proper usages of ICT. This study reveals that demographic factors do not have major impact on ICT in higher education it also identifies that a set of functional areas can be integrated. Author has tried to come across major areas where ICT can be integrated but still in this fast growing educational system other areas of software can be developed to make the world of education system so easy.

Sukanata Sarkar (2012) :-Information and communication technology consist of the software hardware network and media for collection ,storage processing transmission and presentation of information voice data text images as well as services related to the society. This paper focuses on the importance of ICT in higher education and to analyze the government initiatives for the development of higher education. The integration of ICT’s has played a vital role in enhancing the quality led to the emergence of OER’s Open Education Resources which has played an important role in giving quality to the education.

Swati Vitkar (2012) :-Revealed that Indian education system is constant and used traditional resources to education system but drawback is that we cannot update it daily. Traditional education is based on face to face teaching books practical’s homework but it is not sufficient by this the degree can be taken not knowledge the enhancement should be there in teaching learning process. Cloud computing is solution of that problem. This paper describes cloud based model for higher education cloud computing is providing highly scalable and virtualized resources that can be made available to user .E-Learning is an internet based learning process using internet technology the modules can be designed. Cloud based E-learning involve the students and trainers using to provide online courses projects assignments 7 prepare tests. Finally the author said that the ICT is incorporated to enhance the traditional learning system it help the students trainers as well as institution.

3.1 Objectives of the Study

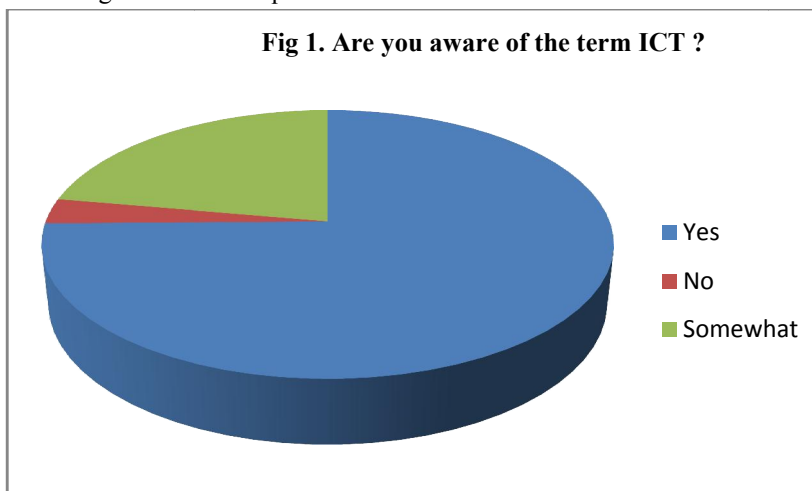
- To understand the current status of ICT in educational institutions
- To check the awareness on ICT among teachers
- To identify the perceived barriers for the adapting ICT in the institutions
- To motivate the use of ICT as a tool to enhance quality of education

3.2 Research Methodology

- Sample size – 100
- Sampling technique – Non-probability convenience sampling
- Sample frame – Teachers from various educational institutions across Mumbai suburbs
- Data collection method – Survey through structured questionnaire

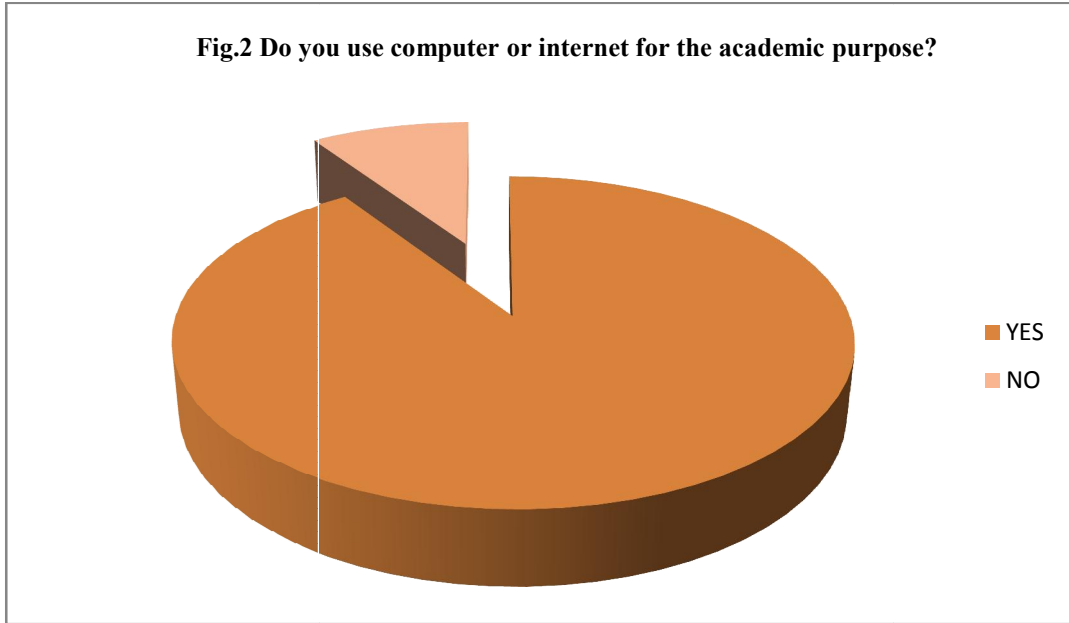
IV. DATA INTERPRETATION

Following is the graphical representation used to analyze the data followed by interpretations based on the questions asked to the respondents through a structured questionnaire:

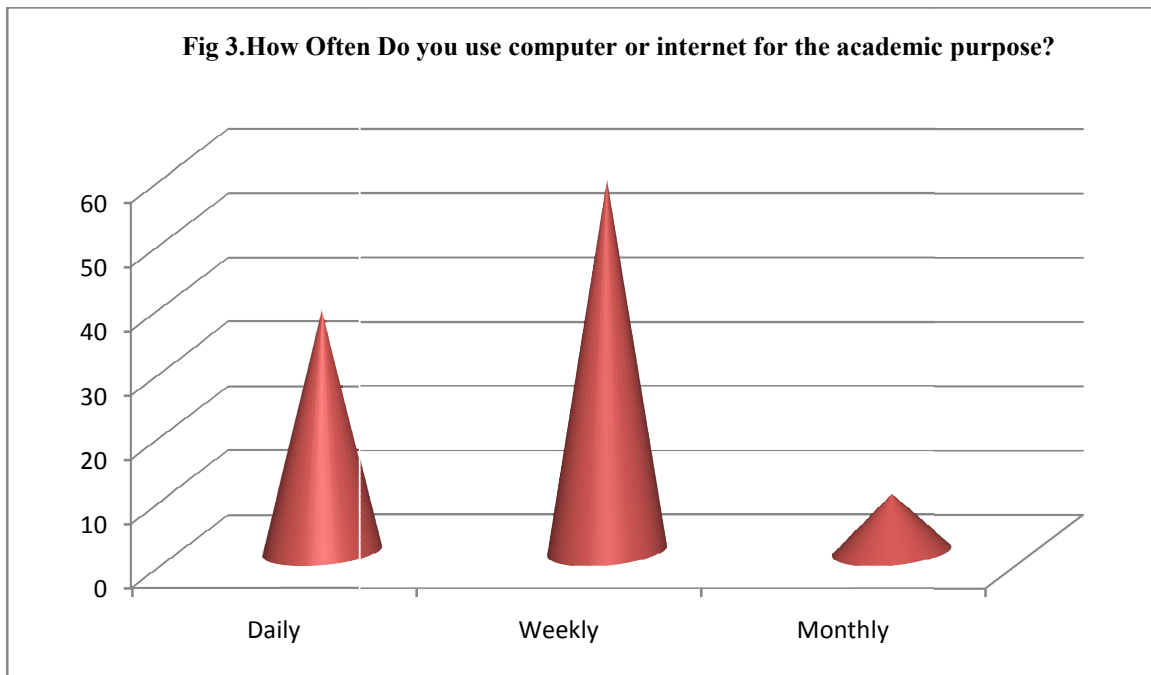




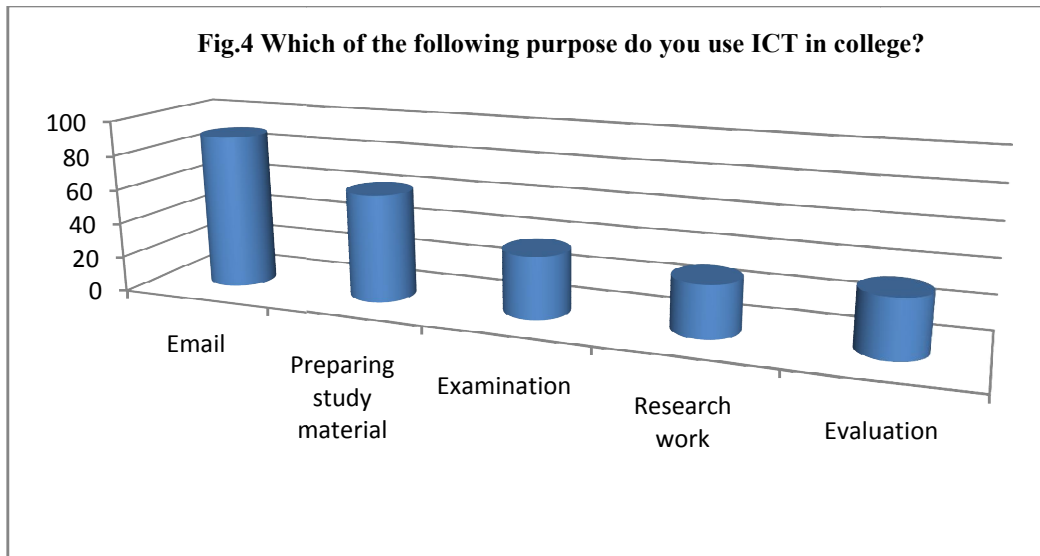
Interpretation: 74% respondents are aware of Information & Communication technology over 22% respondents somewhat know about it.



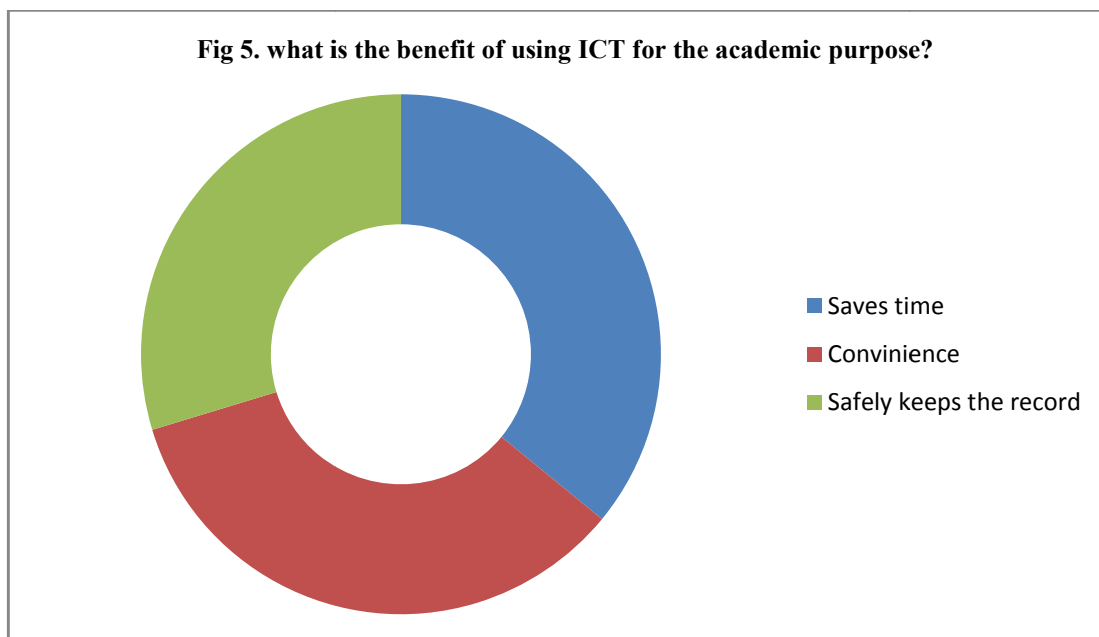
Interpretation: 68% of the respondents use ICT for academic purpose.



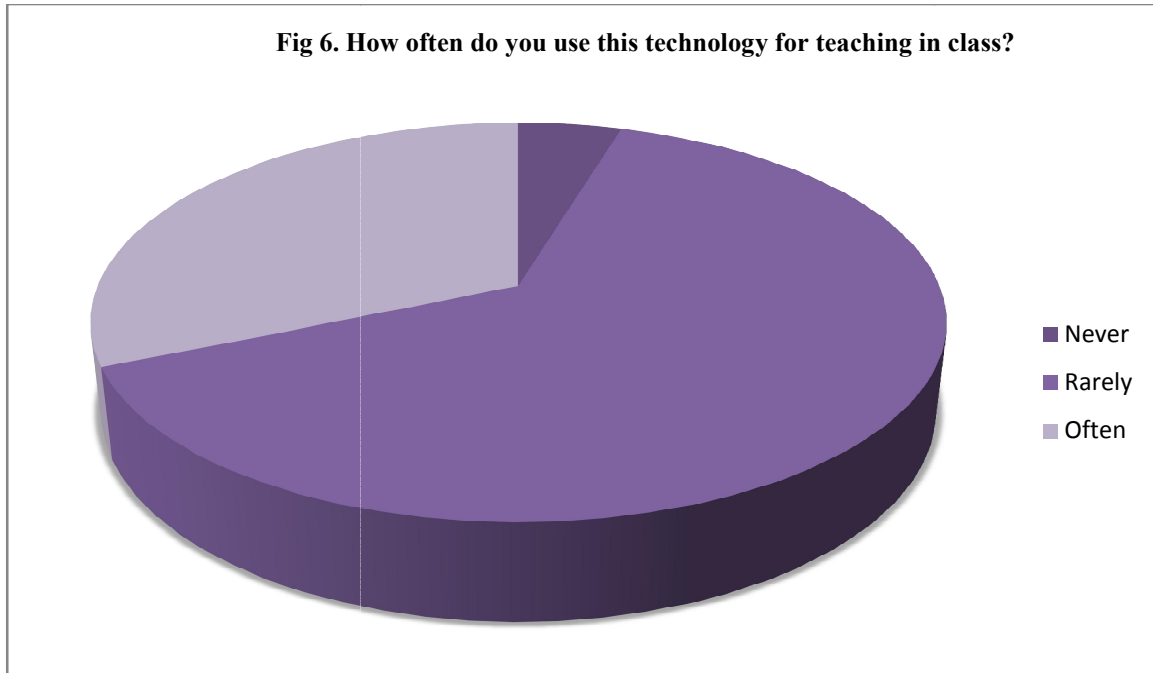
Interpretation: 58% of the respondents use ICT monthly over 38% weekly.



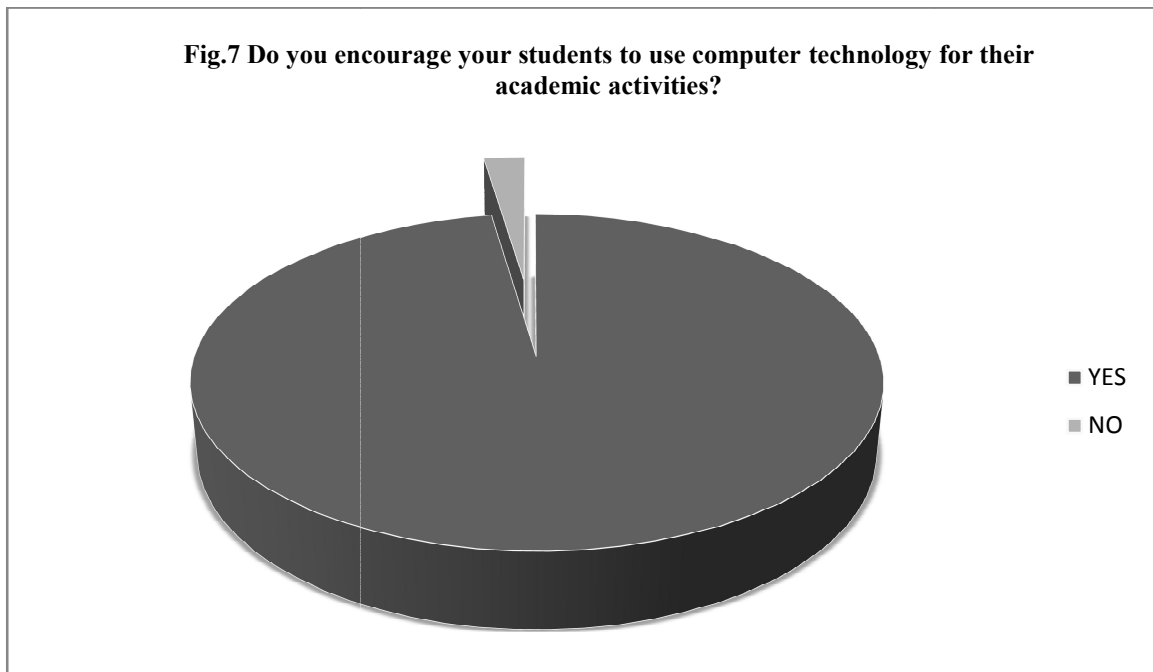
Interpretation: Mailing is the priority purpose followed by preparing study material, examination & evaluation.



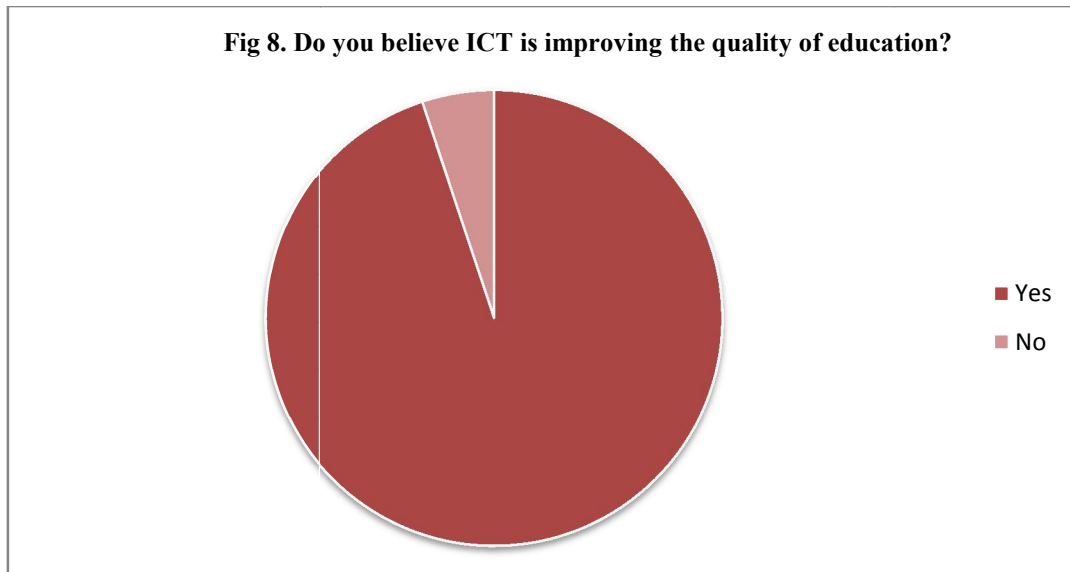
Interpretation: 46% respondents agreed that ICT saves times; 44% of respondents agree for its convenience & 38% believes that ICT safely keeps the record.



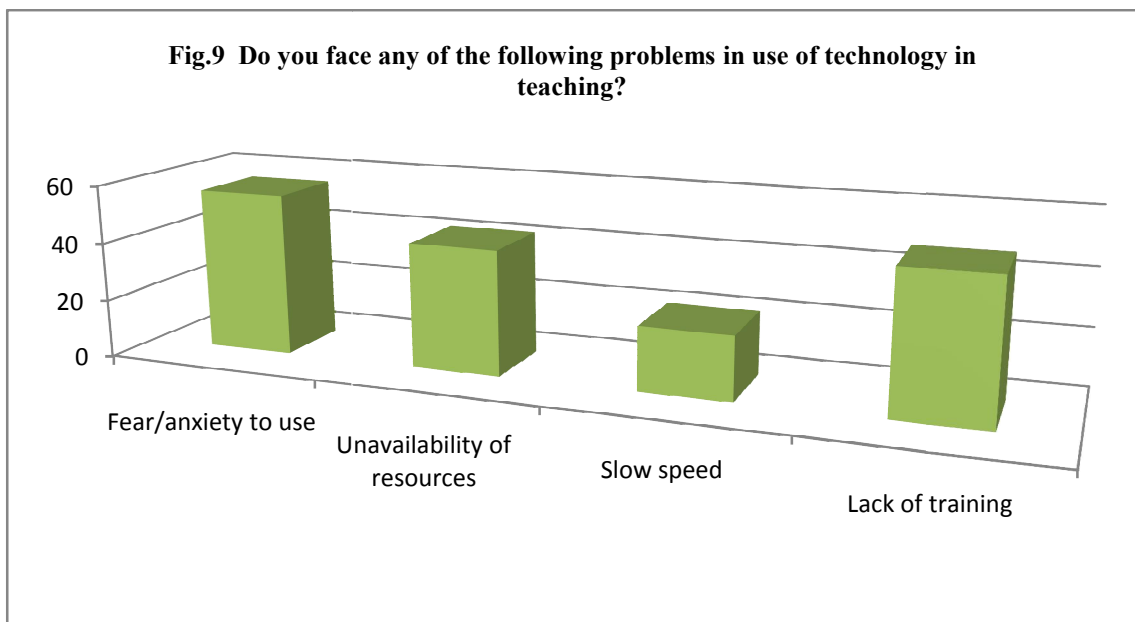
Interpretation: Only 27% respondents use ICT often in teaching whereas 55% respondents prefer use of ICT rarely.



Interpretation: 83% teachers encourage students for using ICT in their academic purpose.

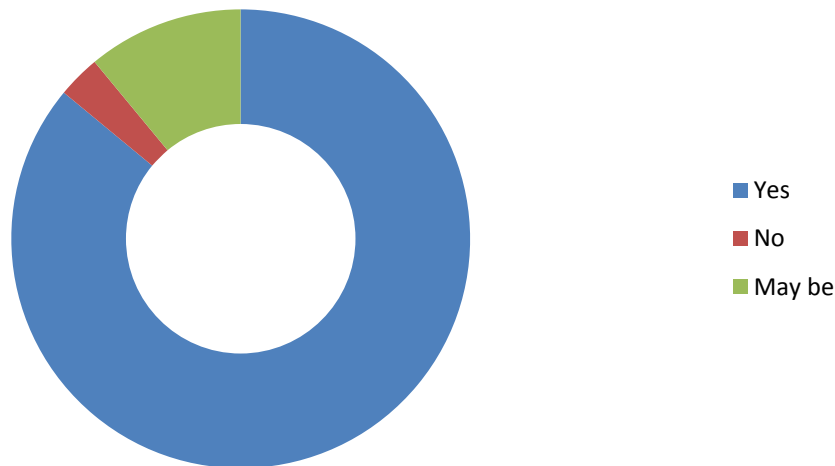


Interpretation: 93% of respondents believe that ICT is improving quality of education.



Interpretation: Fear or anxiety towards ICT is the foremost problem in the usage of ICT closely followed by lack of training & lack of resources.

Fig .10 Do you feel that colleges should encourage use of technology for teaching and learning?



Interpretation: 86% respondents feel that colleges should encourage the use of ICT in teaching & learning.

V. FINDINGS

- There is considerably a huge awareness of ICT among the academicians.
- There is adaption of using ICT in fulfilling academic duties; however not preferred by everyone.
- Mailing & preparing study material are the foremost jobs performed by academicians.
- Time-saving & convenient are the two virtues which make ICT the preferred tool.
- Majority of academicians believe that usage of ICT should be encouraged in the institutions as it enhances quality of education.
- Academicians feel anxious using ICT; they are not being provided training on ICT
- There is inadequacy of proper ICT resources.

VI. CONCLUSION

ICT, similar to other industries, has proved its efficacy in the field of education too. Though academicians have agreed to the benefits offered by ICT; it is not entirely adopted or encouraged in some educational institutions. There is an massive need to train academicians about the expedient usage of ICT so that they can explore it at an extent to enhance the quality of higher education.

VII. RECOMMENDATION

- Institutions must provide proper infrastructure & resources for ICT; to motivate its usage among the teaching staff.
- They should be given appropriate training on the usage of ICT so that there will be low or no anxiety towards the technology.
- Since teachers are the idols or opinion leaders for the students; teachers must take initiatives & measures to promote the use of ICT so as to bring on the most technologically upgraded future generation.

VIII. LIMITATIONS OF THE STUDY

- Limited sample size & sample frame
- Incomplete responses as some respondents were reluctant to admit there resistance for newer technology.

IX. SCOPE OF RESEARCH

This paper attempts to understand the current preference for the uses of ICT tools in institutions and its impact on enhancing quality of education. However the spectrum of ICT is very huge in terms of the tools it offers and it's utility. The future scope of the study will be to analyze which ICT tool impacts more efficiently on education and whether it will be suitable to the education system in the areas other than the metropolitan cities.

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Annexure: Questionnaire

Name: _____
Designation: _____
Name of the Institution: _____

- 1. Are you aware of the term ICT (Information & Communication Technology)?
 Yes No Somewhat
- 2. Do you use computer or internet for the academic purpose?
 Yes No
- 3. If Yes, How Often?
 Daily
 Weekly
 Monthly
- 4. Which of the following purpose do you use ICT in college?
 Email
 Preparing study material
 Examination
 Research work
 Evaluation

5. According to you what is the benefit of using ICT for the academic purpose?
- Saves time
- Prepare lecture notes easily
- Enhance my knowledge
- Helps in enhancing quality of teaching
6. How often do you use this technology for teaching in class?
- Never Rarely Often
7. Do you encourage your students to use computer technology for their academic activities?
- Yes No
- If yes, how _____
8. Do you believe ICT is improving the quality of education?
- Yes No
9. Do you face any of the following problems in use of technology in teaching?
- Lack of time
- Unavailability of resources
- Slow speed
- Lack of training
10. Do you feel that colleges should encourage use of technology for teaching and learning?
- Yes
- No
- May be