

Impact Factor – 6.625

ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

International Multidisciplinary E-Research Journal

PEER REFREED & INDEXED JOURNAL

February - 2020 Special Issue – 230

USE OF ICT TOOLS IN TEACHING AND LEARNING



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- Chief & Executive Editor

Published by –

© **Mrs. Swati Dhanraj Sonawane**, Director, Swatidhan International Publication, Yeola, Nashik
 Email : swatidhanrajs@gmail.com Website : www.researchjourney.net Mobile : 9665398258



Use of ICT in Higher Education

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Abstract:

Information and Communication Technology in higher education is a technique of educational development as well as socio-economic development of the nation. The use and role of ICT in education is becoming more and more important and will grow continuously day to day. ICT plays a key role to empower the students, teachers and administrators of Higher Education to become Global citizens. Higher education system needs to improve the quality of education through ICT. Teaching with Technology is inevitable in current education methodology, hence to enhance the level of learning, teaching and administration it's necessary to adopt innovative teaching and administrative methods. Quality of education has been traditionally associated with qualified teachers having high degrees of personal contact with learners. This paper attempts to highlight the use of ICT in higher education.

Keyword: ICT, Higher Education

Introduction:

Information and Communication Technology is a continuously growing in higher education. Advance and emerging Technologies challenge the traditional process of teaching and learning. IT is very important to meet the needs of different learners. Many learning institution adopting ways of incorporating modern technology in to learning skills and administration. Education needs to embrace Technology and teachers need to understand the importance of learning through Technology. So teachers require the necessary training of latest skill to integrate with the advance technology. Technology assists the student's intrinsic motivation towards learning. ICT offers an opportunity of redesigning and developing new models of education. The educational institution as well as conventional universities is now using Information and Communication Technologies for various purposes. It has created a new scenario of the most of the education system.

Objective of the study:

- 1) To study the use of ICT in Higher Education.
- 2) To study the benefits of ICT in Higher Education.

Hypothesis

- 1) Use of ICT is positively effective in Higher Education.
- 2) Use of ICT in Higher Education is helpful in Quality improvement.

Research Methodology

In this research paper analytical and descriptive methods are used based on the primary and secondary source of data. The primary data is self-use of ICT in teaching and the secondary data is collected from related books, journals, research papers and internet.



Meaning of ICT

ICT is a short form of 'Information and Communication Technologies'. ICT refers to technologies that provide access of information using E-communications. It is similar to Information Technology (IT), but focus is on primarily on communication technologies. This includes the Internet, wireless networks, desktops, laptops, cell phones, and other communication mediums.

Use of ICT in Higher Education

ICT is used in higher education through different ICT tools. These tools are used by different ways in various sections of higher education like teaching, learning and administration. Following table gives us types, meaning and examples of ICT tools.

Type of ICT tools	Definition	Examples
Educational Networking	Online learning platforms that connect learners using social networking technologies, exhibiting similar functions to sites like Facebook or MySpace.	Ning, Classroom 2.0, Elgg
Web-Based Learning	A set of online applications or services that expand learners abilities to interact and collaborate with each other in the process of searching, receiving, organizing and generating educational content.	Wiki, blog, podcasting, social bookmarking, virtual worlds
Mobile Learning	Mobile devices or technologies used for educational purposes that support different aspects of instruction or make new educational activities available.	Smartphone, PDA, GPS, interactive response pads
Classroom Equipment	Stand-alone devices that are used in traditional classrooms to facilitate the interaction between teachers and students in different class activities.	Interactive white board, touch-screen computer, Kiosk

Use of ICT in Teaching and learning

There are various tools available in ICT some of these are as follows.

a) Tools used In Classroom (Formal Tools) -

1. Interactive white boards
2. Projectors
3. Digital Cameras
4. Printers
5. Desktops and Laptops
6. Biometric
7. Photocopiers
8. Cellular Phones

b) Tools used anywhere out of Classroom (Informal Tools) –

1. Tablets and Laptops
2. Poppets
3. IPods
4. Flash discs
5. Laptops



6. DVDs and CDs
7. Micro Phones
8. Pen-drives
9. Radio and Televisions
10. Cellular Phones
11. Satellite systems
12. Teleconferencing, Video conferencing and Web Conferencing
13. Email, websites, blogs
14. Online surveys
15. Google Forms
16. Virtual Learning Environment
17. Podcast
18. Online Groups and Forums
19. Media sharing, Social Networks
20. SMS, instant messaging and various apps.

These are different tools used for educational communication. Using ICT tools Teachers can give knowledge to students for effective and improved academic performance.

If teachers are digitally literate then Information and Communications Technology (ICT) can impact student learning and the teacher should understand how to integrate ICT into curriculum also it leads to develop skills of advance thinking, creative and individualized options to express their depth of understandings and prepare to deal with continuous technological change in society and the workplace. Higher Education System uses a different set of ICT tools to communicate, create, disseminate, store, and manage information. ICT tools can be increases the level of understanding, accuracy, simplification, speed and data preserving capacity etc. ICT is becoming an integral to the teaching-learning process by using different approaches as interactive digital whiteboards instead of chalkboards, use of smartphones or other devices for learning during class time. By using “Flipped Classroom” students can watch lectures at home and classroom time is used for other exercises. Different e-books are also used by E-readers. ICT Motivates learner as well as learning process anywhere and anytime. Student accept more responsibility and challenges for their own learning and its assessment, developing expertise in the process.

Use of ICT in Administration

ICT in Administration can plays different tasks are as follows.

1. Record Keeping
2. Scheduling
3. Communicating with Parents
4. Advertising
5. Education Management etc.

ICT can be used in different parts of Administration

- 1. Student Administration**
- 2. Staff Administration**
- 3. General Administration**



Student Administration

ICT is used to students by different ways like online registration/enrolment, online application for admission, time-table/ lecture-practical schedule availability in electronic form, maintaining biometric attendance, communicating with parents / guardians through e-media related to academic details of students, e-media notifications regarding hostel and transportation.

Staff Administration

ICT is used to Teaching/ Non-Teaching staff by different ways like recruitment and work allotment in the institution, biometric attendance and leave management, performance appraisal, communicating with staff using e-media, different e-circulars regarding official matters, preparing lesson plans and different PPT's.

General Administration

ICT is used in general administration by different ways like scheduling / allocation of halls for examinations, spreading of information in the institution using e-kiosks, applying online for university examinations, online inwards / outwards of exam forms, processing and displaying the results of students, fee payments of students electronically.

Benefits of ICT in Higher Education

Use of ICT in education provides an opportunity to solve large quantity of challenges as quickly as possible with quality and effectiveness. It leads to the lots of benefits of ICT, some benefits of an ICT are as given below.

1. **Learn from Internet** – If the students have any problems in the lesson then there is no need to wait for Teachers, simply by searching on internet, they found lots of result and by using those results students can easily solve their problems.
2. **Learners become creative** – ICT assist students to become more creative in their learning process by using different ICT equipment's such as software programs, Internet and other thousands of resources. Using ICT learning process is in the audio and visual forms so the students does not get bored easily and become creative for the longer period of the time.
3. **Motivating Factor** – The internet is a motivating tool for many students. Younger generation has much attraction towards technology, so their excitement and enthusiasm about the Internet enhance learning. To the Advance learners, the internet provides additional learning activities not readily available in the classroom.
4. **Fast communication** – The ICT equipment's i.e. internet provides fast communication facility across geographical barriers. Students can join collaborative projects which involve students from different states, countries or continents.
5. **Locating Research materials** – There are many readymade resources are available on the internet than the library can provide. ICT provides ready access to all over world of knowledge and research.
6. **Acquiring varied writing skills** – If students want to publish their work on the internet in the form of blogs or websites, they must have to develop hypertext skills. These skills helps to students experiencing in a non-sequential writings.
7. **No need for the Library** – It doesn't mean that the library is not necessary, but it means if you want to read any book of any writer, you can read it online by staying at home using



your own tablet, phone or computer also you can sell or purchase books online. Students can read any types of books without going to any library.

8. **Improving the quality of presentation** – Presenting anything without ICT is getting bored, unseen and imaginary. ICT improves the quality, effectiveness, level of understanding of presentation.
9. **Effective problem solving** – Students gets their lessons in boring classes, but nowadays YouTube has created channels, where they will find a practical solution and there is a lot of competition on YouTube. That's why everyone wants to give the best solution to every answer. That's how students will be benefited and learn effective problem solving techniques.
10. **Co-operative learning** – The internet facilitates co-operative learning, students can get involved in class discussions through e-mails.

ICT gives us unlimited benefits other than the above also.

In this way different ICT tools and techniques can be used in teaching, learning and administration. Their use may leads lots of benefits to teachers, students and administrative persons in Higher Education. Use of ICT develop skills of high level of thinking, creative mind and different options to express their thoughts and adapt with advance techniques. ICT increases presentation skills, improve innovative capabilities, simplify, increase performance, improve quality and develop interest of teaching as well as learning process. Teaching with ICT is very powerful media for better understanding since students easily understand what the teachers exactly want to teach also the creative, innovative, updated, advance, robust generation of students can be generated. ICT advances the education system by automatic processing and advance techniques. The government is already taking measures to assure high quality education. Also, more and more institutions are applying for accreditation every day to imply that the education they provide is of high quality by using different ICT tools. So the use of ICT in Higher Education is positively effective as well as enhances quality education.

Limitations of ICT

Although there are lots of the benefits of ICT in Higher Education there are some limitation on the use of ICT are as follows.

- 1) ICT tools are much more expensive that's why they are unaffordable to small or poor nation.
- 2) Use of ICT in remote villages have lots of challenges.
- 3) There may be lots of distractions while using ICT tools.
- 4) Digital literacy is inevitable.
- 5) ICT equipment's can be Damaged or hacked and it leads to loss of information.
- 6) ICT Tools does not have power of imagination.
- 7) Regular maintenance is necessary to ICT equipment's.
- 8) ICT is complex and quickly changing, and it is confusing for many people.

Conclusion

The continuous use of ICT is made tremendous changes in teaching learning by all aspects of higher education. ICT is very important in teaching, learning and administration point of view in higher education such as solving online assignments, learning using ICT tools, accessing online books and journals, conducting online exams, pay online fees etc. ICT in higher



education is providing the facility of online learning to those students which have limitation of time, cost, geographical location etc. ICT is positively affecting Higher Education and improves the quality of education.

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Journal Detail

Journal Name	RESEARCH JOURNEY
ISSN/EISSN	<u>2348-7143</u>
Country	IN
Frequency	Quarterly
Journal Discipline	General Science
Year of First Publication	2014
Web Site	www.researchjourney.net
Editor	Prof. Dhanraj Dhangar & Prof. Gajanan Wankhede
Indexed	Yes
Email	researchjourney2014@gmail.com
Phone No.	+91 7709752380
Cosmos Impact Factor	2015 : 3.452



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	Evaluated version: online	2016: 6.087
		2015: 3.986


The journal is indexed in:

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Basic information

Main title	Research Journey
Other title [English]	Research Journey
Abbreviated title	
ISSN	2348-7143 (E)
URL	http://WWW.RESEARCHJOURNEY.NET
Country	 India
Journal's character	Scientific
Frequency	Quarterly
License	Free for educational use
Texts availability	Free

Contact Details

Editor-in-chief	Prof. Dhanraj Dhangar M.G.V.'S ARTS & COMMERCE COLLEGE, YEOLA, DIST NASHIK
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