IMPLEMENTATION OF ICT SKILLS FOR THE STUDENTS OF THEIR EMPLOYMENT IN SKILL BASED JOBS

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ICT SKILLS FOR HIGHER EDUCATION

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ABSTRACT

Integration of Information and Communication in the classroom has been transforming the way Learners are learning today. Teachers in India are also experimenting with innovative ways to teach with the help of ICT tools. They are leveraging digital platforms for planning their lessons, delivering them in the classroom setup or virtually, and conducting the assessment as well.

Educational technology is offering effective ways to reach different types of learners and assess their understanding in more than one way. One of the key components in the effectiveness of technology-based teaching and learning is the well-prepared ICT tools and resources for teachers. In order to promote technology-driven growth, the Indian government has been steadfast in putting policies in place, the use and integration of ICT by educators, and advances in the education sector. Even while Indian teachers have a positive attitude toward using ICT, they still want more infrastructure and training, especially in rural areas. This essay will discuss how technology has changed teaching methods, instructors' opinions on the use of their professional growth and the use of technology in the classroom.

***Keywords*:** ICT technology integration, barriers and solutions of ICT use, teachers' attitudes and beliefs on ICT use.

Introduction

The way people think, work, and live has completely changed as a result of the breakthroughs and transformations that technology integration has undergone in modern society. It has had a significant impact revolutionised how educational interactions take

place around the world, and it has become a crucial component of the majority of the instructional procedure. As a result of new trends, teachers can now Use cutting-edge technologies, construct learning objectives, curriculum, and instructional present tactics, conduct lessons, incorporate ongoing evaluations, and offer the necessary interventions according to the demands of the learner and the monitoring of progress. Technology use in education has also been highlighted in India's New Education Policy, 2020. Investment is required by the policy, the development of online learning platforms and tools, development of virtual reality labs and digital repositories, teaching instructors how to produce high-quality online material, creating and implementing online tests, defining content standards, Pedagogy and technology for online teaching and learning.

With the help of technological advancements such as digital and augmented reality, synthetic intelligence, multi-sensory classrooms, remote learning, and virtual and augmented books, the educational sector has undergone a drastic upheaval. ICT is seen as a crucial tool for creating understanding societies (UNESCO, 2003), and it is particularly vital as a tool in schooling that will help in reconstructing the academic strategies and tools that are essential to effective education for everyone. The teacher-scholar relationship has also improved because of instructors' efforts to integrate ICT into the study space. This has improved practice delivery to students in terms of quality, accessibility, and cost-performance. Providing mechanisms for accomplishing the Sustainable Development Goals will therefore play a significant role in helping to achieve those goals, by offering tools that make it easier for more people to access excellent educational resources and connect with more students.

Integration of ICT Skills in Higher Education

According to the **United Nation Development Program**, **"**ICTs are basically information-handling tools - a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information.**"** Utilizing technical tools such as computers, mobile phones, tablets, digital cameras, social media platforms, software programmes, and the internet in the classroom allows students to gain a deeper grasp of the material being taught. Indian instructors are getting more at ease utilising technology in their classrooms as a result of the country's expanded availability to mobile

devices, internet connections, and other digital infrastructures. The use of non-linear, text-based learning and more meaningful methods of student engagement are currently being experimented with by teachers. Technology now plays a more significant role in education than it did when computers were the only thing available in the classrooms. With the use of edtech, educators can more successfully engage learner types and provide many avenues for gauging students' comprehension. The learning becomes more student-driven because of the encouragement given to them to explore tech-related platforms and work together. The potential of ICTs extends beyond assuring efficacy and efficiency in these two aspects of teaching and learning to the elimination of administrative tasks. ICT can function in a number of general ways, as listed by the Organization for Economic Co-operation and Development (2005) and Gbenga (2006):

- It can be used to teach students the skills they will need for their future careers, as well as for continuing education throughout the rest of their life. Examples include word processing, email communication, and other such abilities.
- It can offer access to knowledge and communication that is not limited to the classroom, such as via the internet.
- Through the utilisation of outside networks, it can assist in teacher development.
- It can enhance learning and possibly change teaching processes.

The Need of ICT

The major issue is that, despite the great changes that all systems have seen since the Industrial Revolution and the introduction of ICT, educational systems have not changed as much, the system has not undergone such an efficient revolution. The classes' fundamental structure has remained unchanged for years. Student to instructor. Currently, ratio is at its highest, which is one of the primary factors for a decline in quality. ICT is now a consistent plus in this instance, the growth of artificial intelligence used for human-to-human communication, 24×7 Doubts of 40 students cannot be resolved with 24 x 7 learning," in the 60 minutes allotted for instruction. Many private start-Ups have developed with this objective and are pretty successful, yet this recurring issue lacks a solution and the appropriate formal response from the institutes of higher learning and government. Although the government's ICT-based programmes for high-quality higher

education include **NPTEL, SWAYAM, and e-PG Pathshala.** Systems require further development. A typical student, however, does not have access to a lot of the authorised content. Changes must be made to this. Since today's youth are so fascinated by the latest technologies, ICTs are also discovered to be motivating tools. Additionally, it encourages students to learn collaboratively and more quickly, to maximise their learning potential, and to attract a larger audience and readership, among other things. The elements of high-quality education include those that have to do with students, teachers, the environment, and the resources available. Despite being a tool in the end, ICTs have an impact on the entire system. Their successful use makes the classroom more interactive, avoids one-sided classroom learning, raises and satisfies student curiosity, and creates a better, more controlled atmosphere. ICT integration in higher education entails improving the calibre of academic research, administration, teaching, and learning. Some of the key benefits of this integration include conducting fruitful seminars, management development programmes, quick and secure academic activities, and transparency. Additionally, the psychological effectiveness of the sensory method used by ICTs, which primarily relies on visualisation, is strong. Due to this, learning is quick and of a high standard.

ICT Initiatives in Higher Education

As part of its 'Digital India strategy, the Indian government has started a number of programmes to improve access to and equity in education in India. Among them, standing out are:

1. **SWAYAM**, or Study Webs of Active Learning for Young Aspiring Minds, is a programme that aims to close the digital divide for students who, up until now, have not experienced the digital revolution and have not been able to participate in the knowledge economy. The platform aims to offer courses in four quadrants, including video lectures, specially created reading materials available for downloading/printing, quizzes and examinations for student self-evaluation, and an online discussion forum for doubt sessions. Using audio-video, multimedia, and cutting-edge pedagogy/technology, an effort has been made to enrich learning through the portal.
2. **SWAYAM PRABHA** is a collection of 32 Direct-to-Home Channels that use the GSAT-15 satellite to continuously broadcast high-quality educational programming

from sources such as NPTEL, IITs, UGC CEC, IGNOU, and NCERT.

3. The **National Digital Library of India** (NDL India) is a single-window search facility for digital content such as books, articles, videos, audios, theses, and other teaching aids suited for users belonging to different literacy rates and capabilities.
4. An activity of the **Indian Ministry of Human Resource Development** under the supervision of the **National Mission on Training via ICT infrastructure** is the **Virtual Labs Project.** IIT Delhi is the coordinating institute for a group of 12 participating institutes in the project. The project's aim is to raise access to science and engineering labs for students in isolated areas who are enrolled in colleges and universities as well as research scholars. The project aims to share expensive tools and resources that are usually only accessible to a small number of users owing to time and distance restrictions, making higher learning easier to students.
5. A- VIEW (**Amrita Virtual Interactive e-Learning World**) is a multimedia e-learning platform that is a part of the "Talk to a Teacher" development programme run by IIT Bombay and aims to create an immersive e-learning experience in real-time. The National Mission for Education using **Information and Communication Technology (NME-ICT) o**f the Indian Government, which includes other initiatives in Virtual Labs and Natural Language Processing, funds the programme. A-VIEW is presently used by a variety of IITs, NITs, and other top higher education institutions all around the country.

Technological Application in Teaching

Creative and effective teaching strategies, learning, and research are made possible by ICT. Its effects of technology adoption will be shown in excess in Indian higher education. Of course, it's uncertain that the majority of technology trends will be embraced someday. Even so, India too is adopting a lot of foreign technologies. The way higher education is delivered is considerably impacted by technology. Here are a few technology developments in the higher field of teaching:

1. **Open Education Resources (OER)**

   These refer to openly licensed text, media, and other digital assets which can be accessed free of cost. **AICTE, IGNOU** and **UGC** are taking efforts to explore and create open education sources prominent among which include **Digital Library, SWAYAM, A –VIEW** and **NPTEL**, **Shodhganga, CEC, Project Eklavya, Project OSCAR, NMEICT** and **NIOS**

2. **Meta University / Virtual Technical University**

   It entails the use of **India's growing IT tools,** thus, combining traditional systems with new opportunities for enhancing knowledge. The idea relies on the National Knowledge Network.

3. **Virtual Technical University**

   VTU envisages having at least 300 courses for the school of engineering sciences and engaging a large pool of talented faculty from Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), Indian Institute of Science (IISc) and other institutions and retired faculty.

4. **Digitization of Books (E-Textbooks)**

   There is a growing trend toward creation of a digital storehouse for books to make learning interesting and interactive for students. National Mission on Education through ICT strategy to spawn new online course content for UG, PG and Doctoral education. Efforts are now underway to practice course content for 130 courses (UG and PG).

5. **Content Delivery Using IT/ICT**

   There is an emerging trend in higher education institutes to deliver educational content through radio, television and Satellite. Increased proliferation of smart in colleges/universities is viewed to capitalize on feature-rich phones by using those features to the advantage of education. Adoption of such devices that have internet access allows students and faculty to perform a wide range of assignments.

6. **Social Learning**

   The emergence of blogs and other social media platforms as well as prevalence of

YouTube, and iTunes is a leading trend in higher education. Mobile learning or m-learning is gaining a reputation. These technologies have remarkably changed the ways in which content is structured and delivered.

Benefits of ICT in Education

1. Cost Effective
2. Automation
3. Bridging the cultural divide
4. Creation of new jobs
5. Educational resources for teachers
6. Upgraded Classrooms
7. ICT in education promotes student engagement and knowledge retention
8. ICT promotes E-learning or online learning
9. Communication modes have been improved.
10. ICT has Eliminated the use of paper by going paperless. Thus, it is Eco-friendly.
11. ICT has Improved teaching and learning techniques.
12. ICT has reduced costs and saved time.
13. Management of students is simple because of ICT.
14. Manual paper-based processes and procedures can now be automated through ICT.
15. Methods of teaching and learning can be made interactive and collaborative with the help of ICT.
16. Web-based LMS technologies connect students, instructors, scholars and researchers, and education personnel together.
17. While delivering classes, teachers can use photos, videos, and graphics to help them educate more effectively.
18. Educators can construct activities that are engaging, fascinating, and well-designed.

19. ICT enhanced education quality and efficiency by improving administration.
20. In schools, colleges, and universities, ICT promotes and strengthens digital culture.

Major Issues

Because of worries about the calibre of the content, utilising the internet for learning is discouraged. The permitted content is less accessible, as was already mentioned, which causes misconceptions and erodes the dependability and validity of the accessible content.

- Information that is deceptive and misleading.
- Risk of hacking and cyberattacks.
- A potential risk to the established written and handwritten approaches
- The traditional educational curricula are replaced by using computers and the internet for ICT.
- Online course management is challenging.
- Improper use of technology.
- Not all places are reachable.
- To handle ICT, teachers must have experience.
- The cost of installing computers and the internet is high.
- Few people think that imagination can be restricted by computers.

Solution to Challenges of ICT

- Recognize and list the essential elements of ICT competency.
- When evaluating ICT capacity, make comprehensive decisions based on a wide range of criteria.
- Encourage the growth of concepts, knowledge, and skills through learning kills and confidence put to use, followed by the variety and nature of challenges solved.

- The teacher must be treated with respect.
- ICT should be used by teachers as a supplementary tool rather than as a replacement for them.
- The curriculum should include lessons on lifestyle.

Conclusion

Any nation must prioritise higher education because it fosters civic awareness and prepares the majority of the labour force to serve the country. Systems for higher education are currently expanding quickly. Innovative methods and technological breakthroughs must be incorporated into the educational system to assure both quality and quantity. ICT is being used in numerous industries, including education. However, because of the problems highlighted in the article, ICT adoption in education is gradual. Information and communication technologies (ICTs) have changed teaching and learning at all levels of higher education institutions, improving quality. In addition to enhancing the teaching-learning process in the classroom, the use of ICT in higher education also offers the option of e-learning. ICT has improved distance learning. Remote places are accessible to the teaching community, and students can access a high-quality learning environment at any time and from anyplace. To give students pedagogical and educational benefits, it is crucial that teachers or trainers use technology into their teaching methods. Instead of focusing on developing computer skills and buying software and equipment, successful ICT implementation to lead transformation focuses more on motivating and empowering teachers and assisting them in their engagement with students in learning. We need to take the note of issues, conceptualize challenges and think of possible solutions.

References

[1] Annual Report. 2017-18. University Grants Commission, New Delhi, December 2018.

[2] M.K. Arora, E-learning: Issues and Future Perspectives, E-Learning: A Boom or Curse, Twenty First Century Publications, Patiala, 2015 ISBN: 9789380748870.

[3] S.H. Budhdeo (2016). Issues and Challenges in Bringing ICT Enabled Education to Rural India, *International Journal of Science Research and Education* (IJSRE) Vol.

4, Iss. 1.

[4] S. Chandha (2015). ICT and Present Classroom Scenario, Effectiveness of CAI Programs on the Achievement in Teaching of Social Studies, E-Learning: A Boom or Curse, Twenty First Century Publications, Patiala, ISBN: 9789380748870.

[5] G.K. Deol (2015). Effectiveness of CAI Programs on the Achievement in Teaching of Social Studies, E-Learning: A Boom or Curse, Twenty First Century Publications, Patiala, 2015. ISBN: 9789380748870.

[6] S. Dhillon (2015). Issues and Challenges in E-learning, E- Learning: A Boom or Curse, *Twenty First Century Publications*, Patiala, 2015. ISBN: 9789380748870.

[7] M. Dixit, B. Singh (2015). E-learning in India: Advantages, Disadvantages and Challenges. E-Learning: A Boom or Curse, *Twenty First Century Publications*, Patiala, 2015.