ROLE OF ICT IN QUALITY ENHANCEMENT OF HIGHER EDUCATION

CS. Dr. Rupinder Katoch
Associate Professor, Lovely Professional University.

SANDEEP KAUR
LECTURER IN COMMERCE
GNDU RC FATTUDHINGA

PALLAVI
LECTURER IN COMMERCE,
GNDU RC FATTUDHINGA.

ABSTRACT
Education is the third eye of human life. It is social activity that enables a person to interact with the external world. It plays a significant role in the enhancement and development of mankind. It is like a treasure for human life that makes them capable of availing themselves of all the opportunities available in the world. But accessing the education not only important, the quality in the education is also important. With the help of education, you can change anything in this world. Quality education means proficient teachers with effective and efficient teaching skills that will attract the learner more. With the passage of time there is much technical advancement in the world. One of which is ICT. ICT is playing a crucial role in education system. It has made the higher education system more pliable and also anytime and anywhere. ICT has provided us with many teaching aids which can help the teaching faculties to use these aids to impart education and knowledge to students in a fascinating manner. The purpose of this paper is to discuss the role of ICT in the upliftment of education system so learners can get quality education in different interesting modes.


INTRODUCTION
Education plays a very significant role in the life of mankind. It brings changes in thinking and learning of the human beings. It makes a person capable to know their abilities to do things. It also makes them capable to grab all the opportunities in the world so they will have different and unique identity from others. In today's time, a person without education is just like a body without soul. A soul is vital for the existence of the person in the family, society and nation; same is true in concern of education. As it is important for mankind to be educated to survive in the world because it will help them to earn in decision making and many more things. But accessing the education is not only important, but the quality in education is also important. With the passage of time, there is much technical advancement in our world. One of which is ICT. It is playing a crucial role in education. It has provided us with many teaching processes to impart knowledge to the learners in interesting manner. In the ancient time, the source of education was the gurukuls. With the passage of time, the Vedic and Buddhist system of education emerged. Madras as offered education to children from the Islamic faith. Philosophy and vocational training were part of education in ancient India. Vocational education includes agriculture, building house, dance, music, weaving, medical and veterinary science etc. On the arrival of Britishers the education was imparted in English language also.

LEVELS OF EDUCATION:

- **Pre-primary** (prior to class one)
- **Primary** (class one to 8th)
- **Secondary** (9th to 10th)
• Senior secondary (11th and 12th stream based)
• Higher education (UG, PG, Research work)

HIGHER EDUCATION

Higher education is level three education after we complete school. It is provided at college and universities and has undergraduate and post graduate studies. It will give us a chance to learn and acquire knowledge about a particular interesting subject. It helps us to boost up our career prospects and earning potential.

LEVELS OF HIGHER EDUCATION

• Undergraduate Degree(3-4years)
• Post graduate Degree(2years)
• Research Degree(3-5years)

OBJECTIVES OF HIGHER EDUCATION

1) Wisdom and knowledge - education give us both wisdom and knowledge. It trains both mind and soul of mankind. It gives us ability to make sensible decisions and judgement because it enhances our knowledge and experience.

2) Love for higher values of life - education makes us capable to understand what is right and wrong. It also helps mankind to uplift themselves from the social barriers like discrimination, domination of females etc.

3) Training for becoming a good leader - to make good leaders to guide the persons professional and public life.

4) Social aims - it helps us to fight against injustice and discrimination. It also increases awareness and sensitivity to human right issues

ICT

ICT stands for information and communication technology. ICT means accessing information through telecommunication -internet, wireless networks cell phones and other communication mediums. ICT consist of two words IT and CT: IT - information technology includes technology used for collecting, processing, manipulating, storing and protecting data. CT - communication technology refers to the use of technology for telecommunication, broadcasting media, audio visual processing and for transmitting information through wired or wireless networks, phones & so on. ICT is the combination of IT and CT, in which data can be collected, stored, manipulated, processed and shared through the use of computer, internet, and network. ICT in education means the use of information and communication in education to support, enhance and impart education in the learners by electronic modes. ICT has become the integral part of the teaching - learning process, through many approaches such as replacing chalkboard with digital whiteboard, using students own. Smartphone’s or other devices for learning during class time and even students can watch lectures at home on the computer and laptop. When teachers teach the students digitally and they are trained in the use of ICT, this will lead to changes in the skills and abilities of the students. They will be more creative and can express their understandings in fascinating manner. They will also be well prepared to face the technologies changes in the workplace and also in the society. ICT has made the education anytime and anywhere teaching-learning process. With the advancement and innovation in the concepts and doubts from different ICT tools. ICT is playing a significant role in the higher education. It helps to gain interactive knowledge gaining experiences. It is dynamic and motivates students to learn. It facilitates communication and promotes creativity. Learning is anytime, anywhere and collaborative learning. Better accesses to children with disabilities. It is a kind of distance
education and online education. It saves time and money. With the introduction of digital library information can be stored. It plays a significant role in research work. It can be used for collecting, processing, storing, interpretations data. ICT can be used for planning classroom activities, delivering content to students and evaluating their learning. Slides, videos, online live streams, podcast, radio streams etc can be used to gain attention and interest of students while delivering lectures to them. Educational content in the form of slides, videos, live sessions etc can be broadcasted online with the help of ICT. Use of ICT helps in removing the geographical barriers in teaching. Students can access the learning material anywhere and anytime depending upon their routine. Students can access E-books, E-library and other resources online. ICT can also be used while enrolling students in courses with online admission forms, online entrance test, and uploading results and counselling schedules online. ICT can also be used for placement and recruitment with online registration, online test, and updating results online. ICT can be used for maintaining the record of student performance and sharing it with their parents. It enhances efficiency and quality of learning and teaching. It also leads to skill development, improve critical thinking and decision-making ability.

ICT initiatives in Higher Education

- SWAYAM
- SWAYAM PRABHA
- SHODH GANGA
- INFLIBNET
- NDL
- GIAN
- UCHCHTAR AVISHKAR YOJNA
- E-PATHSHALA

Major problems related to Higher education in India

- “LACK OF QUALITY EDUCATION” is the major issue in Indian higher education. Our education system produces graduates with degrees, who lacks the basic knowledge, then how will he/she be employed?
- We can say irony is that our colleges are teaching practical courses theoretically. There is a “LACK OF HANDS ON EXPERIENCE”.
- There is the gap in the access to resources. For quality education, there is need increasing the “ACCESSIBILITY TO RESOURCES”.

“LOW ENROLMENT” of students in institutes of higher education, As compare to other nations.

LITERATURE REVIEW –

Akram et al Conducted the study in Kashmir to know the impact of ICT on higher education students in rural and urban degree colleges. They used SPSS and minitab software’s for data analysis. Urban and rural area colleges were compared to find the access of ICT in these colleges and its impact on teaching learning used by them.

Habib (2017) revealed that ICT plays vital role for making educational practices- conducting online exams, pay fees through net, access of e-books and journals. ICT improves teaching learning process, provides online learning facilities to students who cannot afford due to various reasons.

Srivastava, T. K. et al (2014) noticed that medical students are increasingly making use of ICT in their learning process. A number of e-books and science related apps have been used by the students in medical field. The results were drawn on the basis of survey.
Manisha et al (2014) found with inception of ICT many education related practices have changed.

Mondal, A. et al (2012) told, how the use of ICT has brought changes to teaching and learning at various levels that helps in increasing the quality of education. Online and virtual environments have been created from traditional forms of learning. The use of ICT has provided distance education facilities along with e-learning.

Bhattacharya et al (2007) investigated the role of ICT in enhancing the human resource capital of the economy. This paper reviewed the aspects of e-learning, various suggestions are given for the improvement of e-learning.

Rees, R. (2005) covered the problems of usage of ICT in education. Duarte B et al (2003) explained the importance of ICT in this paper, how ICT can facilitate the faculty to guide their students with the technology. As per UGC report – India ranks 3rd in education system globally with number of schools and universities above 30,000 and 5,000. USA and China rank first and second. India gained 121st position among 157 countries so far as ICT development is concerned in education field. UNESCO – ICT in education program, bankbook Thailand (2007) also realised the importance of ICT in education. Sukanta, S. (2012) emphasized ICT in higher education is not only for educational progress only but also it leads to social development.

OBJECTIVE OF THE STUDY

1. To know the relevance of ICT in higher education.
2. To know the impact of ICT on higher education
3. To study the problems in implementation of ICT in India.

RESEARCH METHODOLOGY - in this paper has been to investigate importance and problems of ICT in higher education. Data is collected from primary and secondary sources. The questionnaire is prepared to collect the data from 50 college going students from the state of Punjab. Sample is selected as per convenience sampling. The results are analysed with the help of pie charts. Secondary data collected from various internet sources, publications.

RESULTS AND INTERPRETATIONS

A) ICT based teaching

<table>
<thead>
<tr>
<th>S.no</th>
<th>Question</th>
<th>(Agree/ Disagree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Can ICT solve the problems in traditional learning?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Has ICT enhanced communication among teachers and students?</td>
<td></td>
</tr>
</tbody>
</table>

1. Can ICT solve the problems in traditional learning?

- Agree
- Disagree

2. Has ICT enhanced communication among teachers and students?

- Agree
- Disagree
More than 30 students agreed with the statements that ICT helps in solving the problems of traditional learning and enhanced the communication among teachers and students.

**B) ICT in your institution**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Question</th>
<th>(Often, Always, Never)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you have access to computer in your institution?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Do you have WIFI access in your campus?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Do your teachers use power point presentation for teaching?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Does your institution encourage you to buy and use electronic gadgets like laptops?</td>
<td></td>
</tr>
</tbody>
</table>

29 students out 50 always use computer where 13 students often use computer and rest 11 never use computer in the institution. 27 students said that teachers always use PPT as teaching mode where 6 said teachers never use PPT.

Pie chart gives information about the usage of Wi-Fi in campus. Out of 50 students 24 use Wi-Fi in the campus in the meantime 15 never use Wi-Fi and rest often use it. 27 students said that institution never encourage them to buy electronic gadgets in the same concern 16 said that institution always encourage them to buy electronic gadgets.
C) Knowledge of ICT
   a. How good are you in computer basics (Excellent/ Good/ Poor)?

   ![Knowledge of computer basics](chart1.jpg)

   It can be concluded from above pie chart that 13 students out of 50 have excellent knowledge of basics where 11 students are poor in knowledge of basics and rest 26 are good at basics of computer.

   b. Do you use following software’s?

<table>
<thead>
<tr>
<th>Description</th>
<th>Always</th>
<th>Often</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adobe reader</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   ![Usage of MS Office](chart2.jpg)  ![Adobe reader](chart3.jpg)

   The above figures gives information regarding usage of two softwares i.e. Ms office and adobe reader. If we compare both students always use adobe reader in comparison with Ms office. 36 students out of 50 use adobe reader whereas 24 students always use Ms office. In the same concern 6 and 10 students never use Ms office and adobe reader respectively.

D) Are you aware of these educational Portals?

<table>
<thead>
<tr>
<th>Portal</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKSHAT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNIVERSITY PORTAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   ![Portal](chart4.jpg)
It can be interpreted from the above figure that students are mostly aware about the University portal in the meantime they are less aware about skshat and the average students are aware about UGC. From 50 students 30 students are aware of university portal whereas 15 and 5 students are aware of UGC and skshat respectively.

E) Mode of teaching used by your teacher

<table>
<thead>
<tr>
<th>Mode</th>
<th>Most</th>
<th>Often</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture and black board</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture and PPT</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture and projector</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this diagram mode of teaching mentioned by students, lecture and black board mode used by most of their teachers. Lecture with PPT and projector used often by them.

F) Impact of ICT

<table>
<thead>
<tr>
<th>S.no</th>
<th>Question</th>
<th>(YES/ NO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Has ICT changed the way you read books?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Has ICT changed the way you write your assignments</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Has ICT helped you to do higher studies?</td>
<td></td>
</tr>
</tbody>
</table>
1. Has ICT changed the way you read books?

2. Has ICT changed the way you write your assignments?

3. Has ICT helped you to do higher studies? (Q-F)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Question</th>
<th>(YES/NO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tick a gadget you know- Laptop Personal computer Mobile with internet facility, iPod Pen drive</td>
<td>(YES/NO)</td>
</tr>
</tbody>
</table>
The above pie chart shows the information about the gadget users and how much they know about it. 25 students have knowledge about mobile phones whereas 11, 9, 4 and 10 students have knowledge regarding laptop, PC, iPod and pendrives respectively.

LIMITATIONS OF THE STUDY

1. The sample size is taken as 50 students only, which may not give significant results. Basing this study in larger sample size could have generated more accurate results.
2. The survey is conducted in very short period of span.

CONCLUSION

The study covers primary survey of students enrolled in higher education by taking a sample of 50 students and concluded usage of information and communication technologies (ICTs) has brought numerous changes in teaching and learning methodologies leading to overall quality enhancements in higher education. It is both time saving and money saving. ICT helps to creates a strong communication between teachers and students.

REFERENCES


Manisha, A. (2014). The role of ICT in higher education in India. international journal of enhanced research in management and computer application.


UGC (2017). Annual Report 2016-17, New Delhi, UGC.

UNESCO (2002). Report on Open and distance Learning trends, policy and strategy considerations, UNESCO.