

## CHALLENGES AND BENEFITS OF ONLINE TEACHING IN HIGHER EDUCATION

**Kuldeep Kaur Juneja**

Assistant Professor, Education Department  
Nirmala College of Education, Ujjain (M.P.) India  
Email: kuldpjuneja@gmail.com

### How to cite this paper:

Juneja Kuldeep Kaur (2022)  
Challenges and benefits of  
online teaching in higher  
education, Journal of Global  
Resources, Vol. 08 (01)

### DOI:

10.46587/JGR.2022.v08i01.014

**Received:** 22 Sep. 2021

**Reviewed:** 27 Oct. 2021

**Revised:** 18 Nov. 2021

**Final Accepted:** 02 Dec. 2021

**OPEN ACCESS**  
Freely available Online  
[www.isdesr.org](http://www.isdesr.org)

**Abstract:** *The present study highlights the challenges and benefits influencing the acceptance, and use of e-learning as tool for teaching within higher education. It will help to develop a strategic plan for the successful implementation of e-learning and view technology as a positive step towards evolution and change. An attempt has been made to find the effectiveness of online teaching-learning methods in Higher Education. A questionnaire has been specially designed and deployed among college faculties and students. About 200 faculties from university and Education colleges in Ujjain have taken part in the online survey and submitted responses. It was found that multimedia, digital collaboration with peers, video lectures delivered by faculty handling the subject, online quiz having multiple choice questions, interaction by the faculties during lecture and online materials provided by the faculty promoted effective online learning. Virtual classroom unlike traditional classroom, give unlimited scope for introducing teaching innovation strategies. The use of ICT tools promotes technological innovations and advances in learning and knowledge management. This paper explores the online teaching - learning tools, methods, and a survey on the innovative practices in teaching and learning. Challenges and benefits of online teaching, various components on the effective use of online tools, team- based collaborative learning, simulation and animation - based learning are discussed and explained in detail.*

**Key words:** Collaborative Learning, Information and Communication Technology, Online learning.

## **Introduction**

Education has undergone a transformation in the era of Information and Communication Technology. The information bloom and the subsequent knowledge explosion have led to tremendous change in the field of the individuals today and its effect is also witnessed in the field of education. With the global connectivity facilitated by ICT, searching for any information today has become an easy task. In this digital era, the coming generations are quite apt at handling, managing and working with technology. Technology driven world has touched almost all the fields and all aspects of life. There has been a technological transformation in the field of education as well. E- learning has become a crucial aspect of the education system. In such a situation it has become a challenge for the teachers to accommodate e- learning in their teaching-learning processes. Due to this transformation, there is a question of teacher substituting classroom; Kothari in 1988, states that, the “message” of the teacher to the students is not merely to impart knowledge content of books which is largely information fast getting out of date but more than that it should be inspiration, by his/her example, towards the process of character building and the use of knowledge for the welfare of the community. The total message to the students, and to the community, is the total life of the teacher. Thus, a teacher plays a much more crucial role rather than just imparting the knowledge content of the curricula. The paper aims to describe the ICT tools in online teaching and emphasizes on the challenges and benefits of online teaching for learning English in Higher Education.

## **ICT in Teaching and Learning**

Education is what remains after one has forgotten what one has learnt in school-*Albert Einstein*. The face of Education has undergone a sea change over the decades. In comparison with the traditional classroom teaching, the digital classroom teaching has made learning prompt, online, self- driven and flexible. The journey of education in India, too, has been dotted with innumerable milestones most recently, technology enabled learning. At the same time, digitization of education has made it feasible for teacher remotely across various locations via virtual classroom. Dramatic changes in learning models are paving way for constructive, experiential learning and collaborative learning approaches which allows learners, educators, peers and members of the community to stay connected, create, construct and share knowledge. The use of ICT tools like Multimedia, supports educators in managing remote teaching- learning processes and designing digital learning content. These ICT tools benefits both students and teachers to learn outside the brick- and- mortar classroom.

## **Digitization of Education**

Digitization of Education refers to the use of digital technology to teach students. A digital classroom is basically an Information and Communication Technology (ICT) based classroom solution, helping to convert traditional classrooms into interactive sessions with the help of best hardware with syllabus-complaint multimedia content. In short, digital classroom means the following-

- Use of projector with tablet.
- Using less paper.
- Use of digital resources and digital tools.
- Development of digital ethics and honour online, respect for fair use in education.
- Teacher-collected or teacher-created resources.
- Inquiry, Project and Problem-Based Learning.
- Student work is published for a wider audience.
- Digital Literacy and Multimedia.

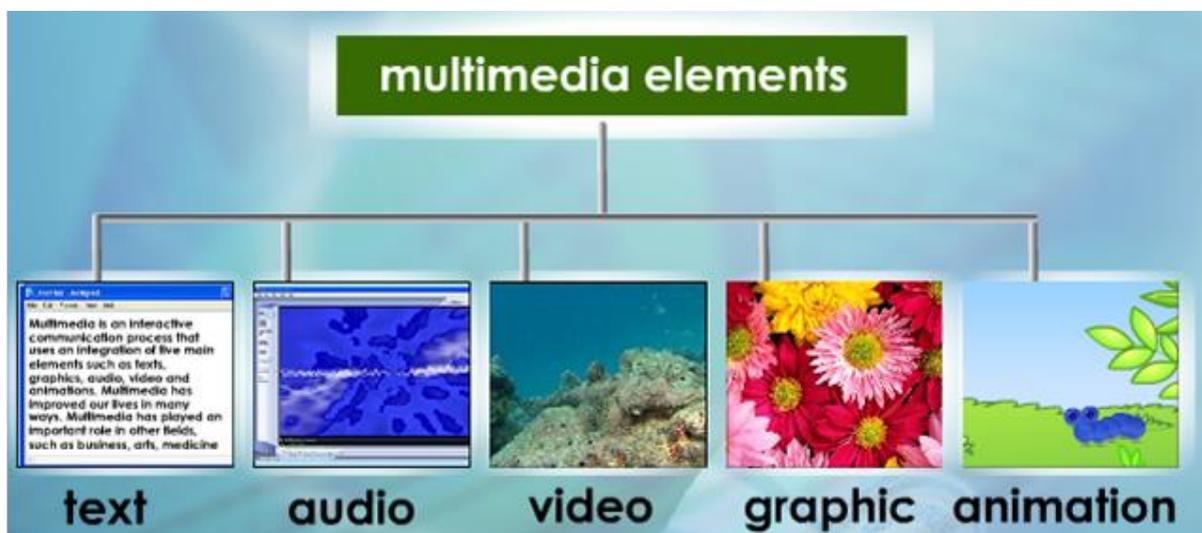
The digitization of education has led to the transformation of education on a massive scale encouraging the teacher educators to use them in online teaching. Also, the influence of multimedia encourages innovative skills in Higher Education.

### Importance of Multimedia

In the 1993, First edition of Mc- Graw Hill's-*Multimedia - Making it work*, Tay Vaughan declared "Multimedia is any combination of text, graphic art, sound, animation and video that is delivered by computer. When you allow the user the viewer of the project, to control what and when these elements are delivered, it is *Interactive Multimedia*. When you provide a structure of linked elements through which the user can navigate, interactive multimedia becomes *Hypermedia*. In other words, Multimedia is the combination of various digital media, into an integrated multi-sensory interactive application or presentation to convey information to an audience; Butcher – Powell (2005); Damodaran and Rangarajan (2007). Other than that, interactivity is also part of the elements that are required in order to complete interactive communication process through the use of multimedia.

### Multimedia - How it works to develop good English Communication

The term multimedia was coined to define computer software applications and presentations that utilized more than one media; Shelly, Cashman, Gunter and Gunter (2006). Basically, the teacher controls the instructional process, the content is delivered to the entire class and the teacher emphasizes on the factual knowledge. In other words, the teacher delivers the lecture content and the students listen to the lecture. Thus, the learning mode tends to be passive and the learner plays little part in their learning. In order to solve the problem, multimedia can be effectively used for instructional purposes. The use of multimedia in teaching and learning will not only maintain student's interest but also enable them to develop good English communication in a Constructivist Learning environment.



### Constructivist Teaching

Constructivist teaching is based on **Constructivist Learning Theory**. Constructivist teaching is based on the belief that learning occurs as learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information. Learners are the makers of meaning and knowledge. The teacher motivates the students to actively engage in an interactive learning environment. The students learn in a Virtual Environment.

## Concept of Constructivism

Constructivism is an innovative approach in which students construct their knowledge themselves through interaction with each-other on the basis of previous experiences. It is student-centred rather than teacher-centred in which teacher acts as a facilitator. Constructivism considered that knowledge cannot be simply provided to the students by the teachers. Rather knowledge is constructed by learners through an active, mental process of development; learners are builders and creators of meaning and knowledge. It is based on interests, general and specific abilities, attitudes, achievement, aspirations and motivation of students. This strategy offers flexibility, motivation, adaptation, creativity and versatility for the teacher and the students. It encourages students to learn through personal experiences along with others help and suitable learning material. Because of these salient features of constructivism, this strategy is fruitfully used in English teaching and learning. It will remove hesitation and develop confidence among students during communication in English. This enables the students to engage, explain, explore, elaborate and evaluate.

## ICT TOOLS USED DURING ONLINE TEACHING IN HIGHER EDUCATION

These tools are effective for teaching and learning in higher education

Tools	Methods	Example	Metaphors
MS Power point, sound, graphics and flash slide show	Easy to prepare and it can be prepared with many of the popular multimedia elements like graphic, sound and video.		Slide based
Macromedia Flash Author ware	Presentation is created using icons to represent different media elements and placed in a flowline		Icon Based
Window Movie maker, Macro media Director	Presentation is created using movie making concepts of casts, sounds, pictures and audio		Movie Based
Adobe Acrobat Reader	Easy to prepare and with word documents if you have Acrobat Reader 5 with many popular multimedia elements		Books Based

The different ICT tools used during online learning were Microsoft Office, Power Point Presentation, Adobe Acrobat, Animation. The use of multimedia, digital collaboration with peers, video lectures delivered by faculty handling the subject, online quiz having multiple choice questions, interaction by the faculties during lecture and online materials provided by the faculty promoted effective online learning. The use of ICT in a collaborative learning environment encouraged the students to develop deep-reflective thinking.

## Impact of ICT in the Teaching and Learning Process

- ✓ ICT can make the learning experiences more effective and efficient through its various products.
- ✓ It can provide motivation to the learners.
- ✓ Learners can get various information clearly and very quickly.
- ✓ Learners can learn and work at their own pace just with little guidance from the teachers.

- ✓ ICT provide a wide variety of tools to demonstrate learning suitable for different types of learners in the classroom.
- ✓ ICT can help the teachers to evaluate the learner's progress and proficiency in certain skills.
- ✓ The learners can interact with the teachers, peers and experts on various issues outside the classroom. The teacher who was more comfortable with a student-centered and communicative approach to language learning seemed to be most successful in integrating technology into the class.

### **Review of related Study**

The most striking innovation in digital systems and rapid growth of Information and Communication Technologies (ICT) represent a revolution that has fundamentally changed the way people think, behave, communicate, work and earn their livelihood. As access to information and knowledge is pre requisite to achieving the Millennium Development Goals - or MDGs - it has the capacity to improve living standards for millions of people around the world. *An integrated approach to CALL in teacher education* is one in which the use of technology appears in multiple phases during the teacher candidate's coursework rather than in a single, stand - alone class. Hegelheimer (2006) provides an example of one developing model for this. He describes a course he teaches in technology skills that aims to provide a foundation course during the first semester of the two-year program that faculty in later classes can then build on. Another important approach is the *online approach* which is an example of learning about technology through technology. Online CALL courses may be offered for practical reasons (e.g., because the teacher candidates are not physically in the same location as the course, the objective of the course is to train teachers for online delivery of their own language courses. In either case, teachers have to use technology regularly to receive instructions, communicate, and complete assignments, including tasks and projects. *Anand, Saxena & Saxena (2012) E-learning and its Impact on Rural Areas* studies about the awareness and impact of E-learning in selected rural areas in India, the providers and learner's ratio and an analysis on the collected data has been made to find the advantages of E-learning resources and their effects on social and mental development of the individuals belonging to rural areas. *Darius P., Gundabattini E. and Solomon D. (2020) A Survey on the Effectiveness of Online Teaching-Learning Methods for University and College students* makes an attempt to find out the effectiveness of online teaching learning methods for university and college students by conducting online survey. *Zhang Zhen (2016) The Use of Multimedia in English Teaching. US-China Foreign Language* reveals that the application of multimedia technology in teaching English has become a trend so it is an urgent need that education should be modernized which is especially beneficial to language learning.

### **Research Questions**

- What are the challenges and benefits of online teaching for teachers?
- What is the impact of using ICT tools for teacher educators for effective online teaching?
- What is the impact of collaborative and digital learning on students?

### **Objectives:**

- To study the benefits of ICT tools for teacher educators for effective online teaching.
- To find out the impact of collaborative and digital learning on students.

### **Hypothesis**

- There is no significant effect of using ICT tools for teacher educators for effective online teaching.

- There is no significant effect of collaborative and digital learning on students.

## Methodology

**Research Design:** In the present study, the researcher for examining the attitude of teacher-educators towards the use of ICT tools and attitude of students towards learning English in a collaborative environment, conducted an online survey by constructing an Attitude Scale test based on Likert Method of summated ratings in which respondents specify their level of agreement to a statement typically in five points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Summative scales are constructed by taking answers to a set of survey questions that tap a common theme, or concept, and computing a score for each individual that can be used as a representation of their position (negative to positive, high to low) based on the concept in question. Therefore, quantitative data is obtained, which means that the data can be analyzed with relative ease.

**Sample:** Study was conducted on a sample of 200 teacher educators of University and Education colleges of Ujjain by conducting online survey using Likert Method of summated ratings. Also, a study was conducted on a sample of 50 students of Education colleges.

### Tools:

1. Attitude scale constructed by the investigator to measure attitude of teacher-educators towards the use of ICT tools.
2. 15 questions were constructed in a five-point scale to test the attitude of teacher-educators.
3. Attitude scale constructed by the investigator to measure attitude of students learning English in collaborative environment.
4. 15 questions were constructed in a five - point scale to test the attitude of students learning English.

## Analysis and Interpretation

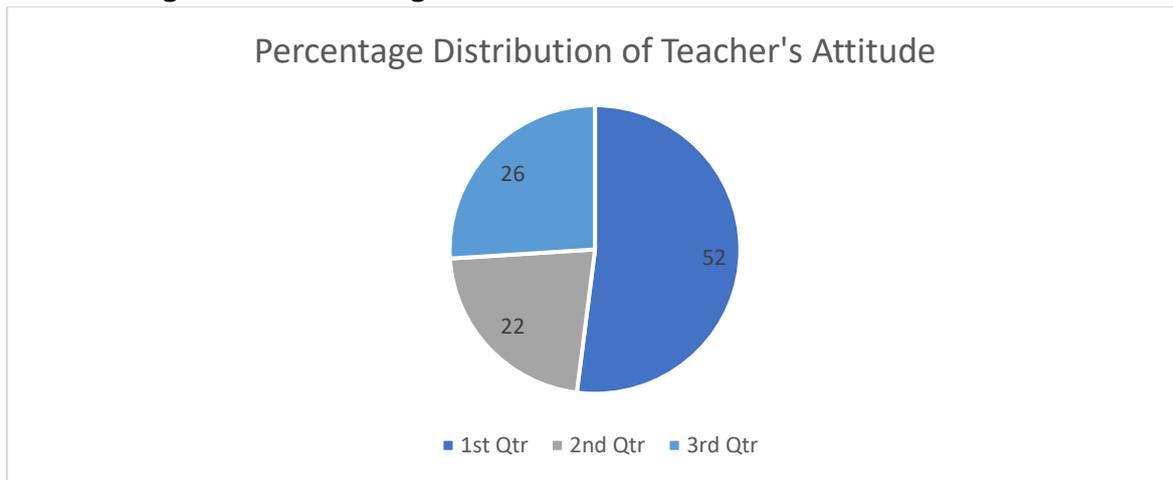
To find out the attitude of teacher-educators towards the use of ICT tools and attitude of students learning English in a collaborative environment, the investigator constructed an Attitude Scale test based on Likert Method of summated ratings. The data was collected using attitude scale, the investigator analyzed the obtained data using percentage analysis. Based on the descriptive statistics (M+SD), (M - SD), (between M and SD) the total sample is categorized into three groups - High, Average and Low.

**Table 01: Attitude of teacher-educators towards the use of ICT tools**

#	Category	Number	Percentage
1.	High	104	52
2.	Average	44	22
3.	Low	52	26
	Total	200	100

Table 1 shows the percentage distribution of Attitude of teachers towards the use of ICT tools during online teaching. 52 percent of the sample i.e., 104 teachers have High attitude towards using ICT tools and comes under high group. 22 percent i.e., 44 teachers have medium attitude towards using ICT tools and comes under Average group and 26 percent i.e., 52 teachers have Low attitude towards using ICT tools and comes under low group. A pie diagram has been drawn to show the percentage distribution of teacher's attitude towards the use of ICT tools.

**Figure 01: Percentage distribution of the Attitude of Teacher-Educators**



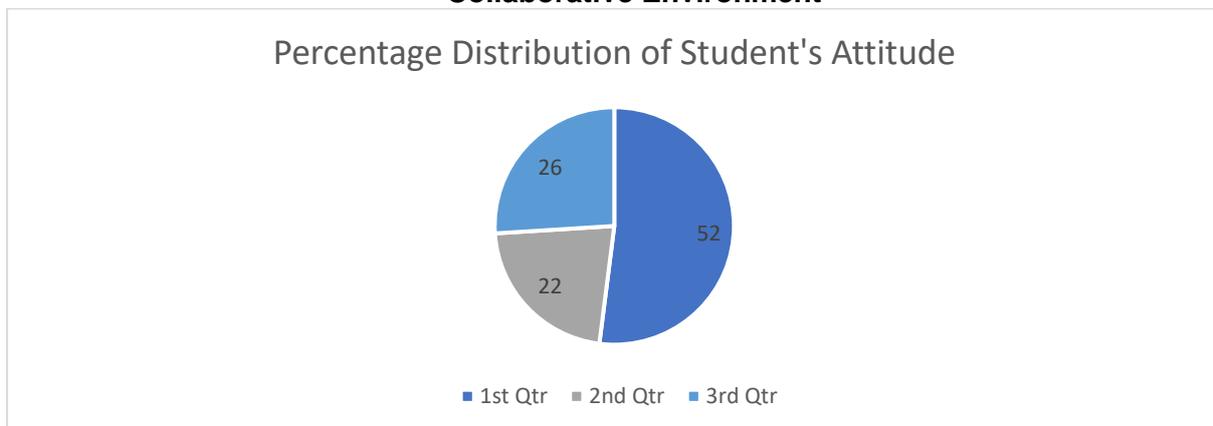
The above figure shows the percentage distribution of the Attitude of teacher - educators towards the use of ICT tools. The figure above shows the High frequency attitude of teachers towards the use of ICT in teaching English. Hence Hypothesis is rejected.

Table 2 shows the percentage distribution of Attitude of students learning English in a collaborative environment. 52 percent of the sample i.e., 26 students have High attitude and comes under high group. 22 percent i.e., 11 students have medium attitude and comes under Average group and 26 percent i.e., 13 students have Low attitude and comes under low group. A pie diagram has been drawn to show the percentage distribution of student's attitude.

**Table 02: Student's Attitude in learning English in a collaborative environment**

#	Category	Number	Percentage
1.	High	26	52
2.	Average	11	22
3.	Low	13	26
	Total	50	100

**Figure 02: Percentage Distribution of the Attitude of Students in Learning English in a Collaborative Environment**



The figure above shows the High frequency attitude of students in learning English. Hence Hypothesis is rejected.

## Results and Interpretation

When used appropriately, ICT especially computers and internet technologies enable new ways of teaching and learning rather than simply allow teachers to do what they have done before a better way. These new ways of teaching and learning are underpinned by constructivist theories enable a collaborative learning environment. The teacher can teach English in a digital environment, motivating to learn and explore by scaffolding the learning materials. The students become active participants in the learning environment instead of passive listeners.

## Challenges faced by teachers in handling ICT

There are numerous challenges faced by teachers in using ICT. Some of these challenges are discussed below:

1. First of all, there is need for adequate availability of technology which includes high costs incurred on acquiring, installing, operating, maintaining and replacing ICTs.
2. Secondly, it is imperative to make all teachers ICT literate and effective in handling ICT tools for teaching-learning processes.
3. Another challenge is that the teachers need to develop their own capacity so as to efficiently make use of the different ICTs in different situations. They need not think that ICT would replace teachers.
4. Another challenge faced by teachers is that English being the prominent language associated with the modern technology. This causes problems as in many states people are not comfortable with English.
5. Teachers are not comfortable in handling these modern gadgets and technological devices. They do not have the skill and command in using them in a virtual hand-on activity.
6. The challenge for educators is not to dismiss or keep up with student's latest technological know-how, but to create meaningful learning experiences in which students are taught how to apply their knowledge in solving real-world problems.

Students of the 21<sup>st</sup> century need technology-based education to survive in a technological world for which the pre-service and in-service teachers need to overcome the technological challenges.

## Discussion

- Appropriate computer technology places users in control of their own learning. It encourages both independent and collaborative learning while extending and supporting the learning process.
- The integration of ICT in teacher-education enhances classroom management skills, leadership qualities, collaborative skills, teaching methods, and lesson planning. It helps student - teachers to explore diverse teaching methods and techniques and apply those by teaching students in a real - life classroom environment.
- Since technology has become a part and parcel of lives of individuals, it becomes imperative for the teachers to be comfortable in its handling in education system as well. The teacher may utilize them in the instructional materials as per individual differences.
- There is an urgent need to develop and deploy a large variety of applications, software tools, media, and interactive devices in order to promote creative, aesthetic, analytical and problem- solving abilities and sensitivities in students and teachers.
- Teachers should develop a positive attitude towards ICT and be interested themselves in its learning. They should not take it as a hindrance to their career rather accept it as an innovative teaching resource in the classroom.
- NCF (2005) visualized a major shift in the conceptualization of teaching and learning. The main thrust is on the privacy of the active learner where teacher's role is that of a facilitator

and a constructor of knowledge who encourages learners to reflect, analyze and interpret in the process of knowledge construction. "Progress is impossible without change".

## Conclusion

In the present scenario, it is very easy to access information with technology. E-learning also facilitates information and knowledge by way of global connectivity. It can be used as an effective resource for implementing constructivist pedagogy among the learners. E-learning makes the learners "how to learn" rather than "what to learn". If the learners are taught how to learn, they are engaged in the learning processes, learning would become an interesting exercise for them and they would themselves develop capability to become life-long learners. Fair use of ICT would lead to effective transition to the knowledge society in the globalized world and would also create better teaching and learning environment in society.

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