



# ICT TOOLS FOR CREATIVITY IN TEACHING LEARNING PROCESS

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## ABSTRACT

ICT is a broad term stands for Information Communication Technology. ICT tools for teaching and learning cover everything from digital infrastructures such as printers, computers, laptops, tablets, etc., to software tools such as Google Meet, Google Spreadsheets, etc. In traditional classrooms, a teacher's basic instructional tools for displaying information are chalkboards, multipurpose boards, bulletin boards and charts. But in today's modern scenario, tools of many professions are changing at an incredible rate and that education is no exception. The impact of technology has led to the increased use of computers for presenting information in many of today's classrooms. To make ICT teaching and learning more interactive, various platforms and tools have been created and updated over the period of time. Innovative ICT tools used in classroom teaching which helps teachers to integrate in their subject, for teaching-learning and assessment. There are numerous subject specific free of cost ICT tools available on online and offline platforms which can be used for teaching, learning and assessment. They are used by teachers to encourage participation and engage learning in their classrooms. ICT can also be used by teachers to promote collaborative work and creativity across a wide range of subjects. This study aims at highlighting the superiority of ICT tools for facilitating student learning, retention and attitudes.

**KEY WORDS:** Information Communication Technology, Teaching-Learning, Visual Information, Online Platforms

## 1. INTRODUCTION

In today's globalised world the Information and Communication Technologies (ICTs) have become deeply rooted in educational settings. Their use has fostered qualitative changes in how teaching is approached, especially in terms of presenting the contents audio-visually. Although there has been much discussion over different methods to teach college students, lectures are not likely to stop being used. To emphasize particular points, many lectures use written material presented on a chalkboard, whiteboard, or by transparencies on an overhead projector. But in the last 10 years, another method of presenting visual information with lectures has gained prominence which is projecting information directly from a computer onto a screen i.e. PowerPoint presentations. In fact, many colleges and universities have rooms equipped with technology necessary for any teacher to display information in this manner. Furthermore, some administrations are pushing the teachers to use various other technologies for creative teaching and learning.

- **Information Communication Technology:** The ICT tools means to digital infrastructures like computers, laptops, printers, scanners, software programs, data projectors, and interactive teaching box.
- **Teaching-Learning:** Teaching can be defined as engagement with learners to enable their understanding and application of knowledge, concepts and processes while learning is the acquisition of

knowledge or skills through study, experience, or being taught.

- **Visual Information:** It is use of one or more of the various visual media with or without sound. Generally, visual information includes still photography, motion picture photography, video or audio recording, graphic arts, visual aids, models, display, visual presentation services, and the support processes.
- **Online Platforms:** An online platform is a digital service that uses the Internet to facilitate interactions between two or more separate but interdependent users.

## 2. LITERATURE REVIEW

- **Simin Ghavifekr, Thanusha Kunjappan, Logeswary Ramasamy and Annreetha Anthony, in their research paper, "Teaching and Learning with ICT Tools: Issues and Challenges from Teachers' Perceptions (2020)",** revealed that their study is more related to identifying the perceptions in implementing ICT tools in teaching and learning in the classroom among school teachers. It examines the challenges of using ICT tools in teaching and learning in the classroom among school teachers and recognizes the effectiveness of the extent of ICT tools in supporting classroom teaching and learning



- **D. Sakthivel, Dr. B. Radha, in their study “ICT Tools for Modern Education (2021)”**, opined that Technology can be an extremely valuable tool, but it is only a tool and technology "cannot replace a teacher" and is not intended to replace the teacher. A good teacher must digitally be literate and must know the effective way to integrate technology into the curriculum so that teachers can keep the students committed
- **Marta Ferragut Martorell, in her study, “Use of ICT tools in the EFL classroom and their impact on students’ motivation”**, stated that, ICT has turned into one of the foundations of our modern society. Thus, the understanding and mastery of ICT have become an essential part of today’s education, alongside numeracy, writing and reading and it is expected to revolutionise the way students learn.

### 3. OBJECTIVES

- This study aims to analyze whether using ICT tools would be more beneficial for students than Chalk board teaching.
- It also aims to assess the effectiveness of ICT tools in helping the students in understanding and retaining the information.

### 4. LIMITATIONS

One of the major limitations of the study was that it is totally dependent on secondary data that may not be fully authenticated. Also the time utilized for the study was very limited which restricted the scope of the study.

### 5. RESEARCH METHODOLOGY

The study is based on secondary data. Relevant data are availed from various sources of information such as Books and Various websites.

#### 5.1 ICT enabled tools for effective teaching learning process

Most teachers feel comfortable in using lecture method, which is not capable of achieving various objectives of classroom instruction. ICT may be of great use in achieving various objectives of teaching –learning process. It provides correct information in a comprehensive manner with different examples. It helps learners to broaden their information base. ICT provides variety in the presentation of content, which helps learners to learn according to their own pace. It helps in better understanding, and long retention of information. Following tools are used in the Teaching learning process in Online-Offline mode of instruction.

#### 5.2 Learning management system (MOODLE)



Moodle stands for Modular Object-Oriented Dynamic Learning Environment and statistics. Moodle is free software, a learning management system providing a platform for e-learning and it

helps the various teachers considerably in conceptualizing the various courses, course structures and curriculum thus facilitating interaction with online students. Moodle supports a range of media to present or link to learning materials, support the students and to assess their learning. It is able to provide automated assessment in the form of quiz, and give immediate detailed feedback to the students.

#### 5.3 Google Classroom



Google Classroom is a free, blended learning platform that offers a variety of benefits for both students and teachers. Google Classroom enhances the productivity and take workflow management to the next level. It keeps track of assignments coming in with a

simple glance making it very easy to know everyone’s status and to follow up with students who are missing work. Everything is time stamped, so late work is easily identifiable. Since Google apps are cloud based the work in Google Classroom saves automatically and is accessible from any device. With the app, both students and teachers can enjoy the full functionality of Google Classroom on a mobile device.

#### 5.4 Google Forms



Google Forms allows to conduct MCQ quizzes online. The information is stored as a spreadsheet automatically record the answers. The spreadsheet then populates the responses from the quiz or survey in real-time. Google

forms can be used to give feedback to and receive feedback from students and parents.

#### 5.5 Videoconferencing Platforms



During COVID pandemic when the world shifted to Online mode for teaching learning various free videoconferencing platforms like Google meet, Zoom and Cisco Webex etc., were used to conduct online

classes. All these have varying needs and features for facilitating interactive teaching and learning.

#### 5.6 Virtual Labs



The Virtual Labs provides remote-access to simulation-based Labs in various disciplines of science and engineering. This student-centric approach facilitates the absorption of basic and advanced concepts

through simulation-based experimentation. Internet-based experimentation further permits use of additional web-resources, video-lectures, animated demonstrations and self-evaluation. Virtual labs are any place, any pace, any-time, any-



type labs. It is a paradigm shift in student-centric, online education.

### 5.7 Educational Videos and animations (YouTube and Internet)



Various valuable educational videos of various subjects available on internet also has a great impact. YouTube provide additional help in better understanding of subject knowledge.

### 5.8 Smart Classroom



Classroom integrated with Smartboards and internet connections provides enhanced and interactive learning and teaching opportunities for students and teachers. The internet-connected to systems in smart classes is stored with abundant

information. It is accessible anytime for their teaching and learning process. Teachers can access information from various educational sources for teaching purposes. It helps in easy access to online resources. Smart Classrooms helps in developing critical thinking and problem-solving skills in students. There are many more ICT tools that facilitate innovative teaching learning process.

## 6. ADVANTAGES OF USING ICT TOOLS IN TEACHING LEARNING PROCESS

### • Teaching Makes Easier

Teachers are the people with one of highly benefited of having ICT in education. Through the use of it, it makes the teaching easier. When a teacher teaches the student on a new lesson it makes for them easy to inform and to evaluate what they want them to know. Creating documents files, pdf files or power point presentation through the use of computer or laptop for them to show the topics that they will going to tackle is a great way for teaching.

### • Lesson can be seen and heard

The advantage of information communication technology is the lessons can be seen and be hear. Unlike on the books you can just see it, seeing those pages with paragraphs and full of text and sometime we can see the pictures. Sound coming from the videos or music that being used will be played over and over again that makes it to remember well.

### • Easier to Understand

When the students see pictures appearing on the white screen using a projector they understand it easily what it really means.

### • Improves Communication

Having a technology in the school discussion improves communication. Because through that medium the teacher as well as the student learn more and more vocabulary words. The proper way of saying a word or words, the correct grammar and the meaning of the words improves.

### • Enjoying While Learning

Images, music and videos are one of the source of entertainment. When people see that they are happy and enjoy. Unlike from the articles that just compose of full of text it is boring. Through the colorful images, students enjoy listening to the music and imagine what it really means.

### • Students Perform Better

What is good and importance of ICT in teaching and learning is the students perform better.

When a teacher teach in front of the class and start to have a visual aid like projector, the students are attract. Pictures project on the screen and the student will see what is that. The students perform better when it is attractive.

### • Know More Information

The internet is one of the fastest way of getting information because just one touch, can get what is needed. In education the more we search and read the more information we will get. The teacher and the students both get more information by the way they use it.

### • Improves Visual Skill

When students are learning with the use of pictures, or videos their visual skill improves.

Some teachers use riddles using photos that will improve their thinking skill and cognitive skill. And because of that students are enjoying the lesson.

## 7. CONCLUSION

ICT tools are very powerful in teaching and learning. ICT tools empower both teachers and learners. They transform the teaching and learning processes from being highly teacher-dominated to becoming student-centric and this transformation results in increased learning gains for students, creating and allowing for opportunities for learners. In addition, they are cost-efficient and eliminate the usage of paper. Alongside minimizing cost, they also save time during class lectures enabling swift and dynamic transmission of content. They provide access to dynamic teaching and learning methods and facilitate easy student management. ICT is a powerful tool for educational change and reform. Appropriate use of ICT has helped the college raise the interest levels amongst the students and has helped connect learning to real-life situations. Students enjoy while learning and perform better.

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