

TECHNOLOGY IN TEACHING AND LEARNING

ABHIPRIYA ROY

Abstract

Christian Louis Lange once said, "Technology is a useful servant but a dangerous master." The effective use of technology in education has changed the face of education and it has created more educational opportunities. Both teachers and students have benefited from various educational technologies, teachers have learned how to integrate technology in their classrooms and students are getting more interested in learning with technology. The use of technology in education has removed educational boundaries, both students and teachers can collaborate in real time using advanced educational technologies. However, we need to make sure that technology is used by teachers only to facilitate the learning process, not to replace the teachers but extensive use of technology acts as an impediment to the systemized teaching- learning process. Recent advancements in educational technologies have yielded positive results in our education sector. New educational technology supports both the teaching and learning processes. Technology has digitized classrooms through digital learning tools like, computers, iPads, smart phones, smart digital white boards. It has expanded course offerings, and has increased student's engagement and motivation towards learning.

This paper deals with the problems faced by teachers while teaching English in the traditional methods. It propounds five new language games to teach syntax structures to the learners by incorporating technology.

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Christian Louis Lange once said, "Technology is a useful servant but a dangerous master." The effective use of technology in education has changed the face of education and it has created more educational opportunities. Both teachers and students have benefited from various educational technologies, teachers have learned how to integrate technology in their classrooms and students are getting more interested in learning with technology. The use of technology in education has removed educational boundaries, both students and teachers can collaborate in real time using advanced educational technologies. However, we need to make sure that technology is used by teachers only to facilitate the learning process, not to replace the teachers but extensive use of technology acts as an impediment to the systemized teaching- learning process. Recent advancements in educational technologies have yielded positive results in our education sector. New educational technology supports both the teaching and learning processes. Technology has digitized classrooms through digital learning tools like, computers, iPads, smart phones, smart digital white boards. It has expanded course offerings, and has increased student's engagement and motivation towards learning.

This paper deals with the problems faced by teachers while teaching English in the traditional methods. It propounds five new language games to teach syntax structures to the learners by incorporating technology.

Keywords: impediment, integrate, syntax structures

Introduction

With the proliferation of English around the world, English is used as a second language in a country like India wherein for some people, it is the first language. It enjoys huge prominence in the country. As the number of English learners is escalating, different teaching methods have been implemented to test the effectiveness of the teaching process. Use of authentic materials in the form of films, radio, TV has been there for a long time. It is true that these technologies have proved successful in replacing the traditional teaching. The new era assigns new challenges and duties on the modern teacher. The tradition of English teaching has been drastically changed with the remarkable entry of technology. Technology provides many options, making the teaching process interesting and productive.

The traditional method of teaching did not emphasize on focused learning, critical thinking or interactivity. It obviated the learners from learning the things they are interested in. The teacher is the only source of information. Students do not make the effort to learn new things themselves. Lack of parents'

involvement can be a problem, which is part of traditional school system. This makes parents and students distant from each other as a family. In traditional classroom, teacher and books are the only source of information, which can be limited as compared to online learning in which online information is limitless. Sometimes, traditional system of teaching can make learning a boring activity, which makes learning tiresome and seems like a burden. Moreover, learners have different learning capacities, which a single teacher cannot address in a class. It hinders his learning capability due to lack of teacher's individual attention. Technology helps in overcoming these problems.

George Couros once said, "Technology will not replace great teachers but technology in the hands of great teachers can be transformational." Technology is one of the most significant drivers of both social and linguistic change. Graddol: (1997:16) states that "technology lies at the heart of the globalization process; affecting education work and culture." The use of English language has increased rapidly after 1960. At present the role and status of English is that it is the language of social context, political, sociocultural, business, education, industries, media, library, communication across borders, and key subject in curriculum and language of imparting education. It is also a crucial determinant for university entrance and processing well paid jobs in the commercial sector. Since there are more and more English learners in India, different teaching methods have been implemented to test the effectiveness of the teaching process. One method involves multimedia in ELT in order to create English contexts. This helps students to get involved and learn according to their interests, It has been tested effectively and is widely accepted for teaching English in modern world. Technology is utilized for the upliftment of modern styles.

We are living in a time with unprecedented opportunities to communicate with others in authentic and compelling linguistically and culturally contextualized domains. Technology has always been an integral part of our lives. Technology has a reciprocal relationship with teaching. The invention of new technologies helps learners understand the course content and achieve good results in the classroom. At present, technology surrounds humanity, the new generation is growing up with technology and are living with it. Computer technologies have changed the way people get information, and communicate with people around the world. For this reason, schools and educational institutions need to be aware of technological equipments. Instructors at the schools and institutions need to improve their technological skills to be able to grasp the students' attention and interests (Akyol, 2010). Now teachers are utilizing technology to improve and enhance the comprehension of the course content (Hicks, Reid, & George, 2001). Utilizing various kinds of technological equipments gives ESL learners the sense of freedom, motivation, and encouragement they need for learning process (Genc- Iltter, 2009), It also makes the lesson more efficient (Akyol, 2010). According to Lee Wang, incorporating technology in ESL classrooms has many advantages; it improves the learners' language skills like: listening, speaking, reading and writing skills. English-language learners use computers, and software programs to enhance their fluency, and improve their language skills. They use the Internet to search for information and read technology texts (Wang, 2005).

Language teaching is an area in which the utilization in technology has been motivated. While technology plays an important role in supporting and enhancing language learning, the effectiveness of any technological tool depends on the knowledge and expertise of the qualified language teacher who manages

and facilitates the language learning environment. In some cases, however, school and university administrators have permitted technology to drive the language curriculum and have even used it to replace certified language teachers. Technological devices are being used in language classes (Traore & Kyei-Blankson, 2011).

Using technology, as a teaching strategy for learning a second language in ESL classrooms, has become popular today. It supports the learning process among ESL learners and can be utilized in various forms to improve comprehension skills in their course contents (Hicks, Reid, & George, 2001). ESL learners themselves see it as pivotal source for advancing their second language proficiency (Neuman & Koskinen, 1992).

Technology has an effective relation with English language education (Singhal, 1997). Throughout the last century, English language laboratories had been used in various institutions. These laboratories consisted of several small cabinets; each cabinet had a cassette deck, a microphone and a headphone. Teachers used an efficacious control panel to observe their students' interactions. The foremost advantage of this technology was that the spoken function of students helped them learn the second language faster. Through exercising more practical drill problems, the language skills of the learners were enhanced (Nomass, 2013). Also these laboratories were a good step in creating a connection between technology and language education (Singhal, 1997). With the invention of new technologies, the incorporation of visual materials in language classrooms has become common (Vanderplank, 2010).

Technology facilitates active engagement with the learning material. It makes the learning process interactive, and students learn by engaging, researching, and receiving feedback. This makes learners passionate about what they are learning. For example, they may study geography using interactive software such as Google Maps or Google Earth.

By using the Internet, students can research real issues happening at that moment that are related to the classroom curriculum. This helps students understand that the lesson being taught refers to real problems and real people. Simulation software helps to bring to the classroom real activities that would be impossible to see without technology. By using specific simulation tools, students can see planetary movements, how a tornado develops, or how dinosaurs lived.

By using the Internet or software tools, students can create online groups. Technology can create virtual communities that connect them in real time with learners and teachers anywhere around the world. They can receive feedback from their teachers and share questions and concerns about their lessons. By listening to and reading about others' opinions and feedback, students refine their thinking, reaching higher levels of comprehension and deeper understanding. Online communities also present the opportunity for students to interact with others around the world. Technology-focused activities mostly require critical-thinking and problem-solving skills.

During the last decade, learning languages has become more important. Learning a new language not only develops individual intelligence, but also it facilitates the learner's entry into another culture and prepares them with the essential skills to succeed and change their behaviour in a rapidly changing world (Chan & Herrero, 2010). Visualization helps in improving memory, restoring health, reducing stress, increasing relaxation and motivation, improving sport performances, etc. Visualization helps in

motivating the individuals, it provides mental practice that can also be cost-effective and safer. Visualization is a powerful way to strengthen techniques, such as association and scripting.

Draper (2012) has described visualization as a foremost prerequisite for a good reader. Helping students gain visualization skills is an essential way to advance greater understanding while reading. It allows learners to be more engaged in their reading and they use their images to draw conclusions, create interpretations of the text, and recall details and elements from the text (Keene & Simmerman, 1997). Expert readers impulsively and purposefully create mental images in their minds at the time of reading, and after they have completed the task of reading. The images are stored in readers' encyclopedic knowledge. The readers use images to put in detail the things they read. The images provide depth and dimension to the reading process, engaging the reader more deeply, and making the text more memorable. Expert readers use images to draw conclusions, to create different and unique interpretations of the text, to remember the essential elements of the text, and to remember a text after it has been read. English instructors to be more imaginative and motivated using movies in EFL classrooms (Ismaili, 2012). Therefore, teachers believed that using movies in EFL classroom can increase the interaction among learners; they improve learners' speaking skill and offer learners more opportunities to use English (Ismaili, 2012). Videos that are related to the content of the curriculum can be used in EFL classrooms, to bring a realistic phase of what is being taught in the class. (Furmanovsky, 1997).

Literature Review:

1. Factors Contributing to the Level of Acceptance of Technology in Affluent Private Schools

The research paper titled 'Factors Contributing to the Level of Acceptance of Technology in Affluent Private Schools' by Margaretha Gertruida Johanna Maré & Maryke Anneke Mihai aims to explore factors that influence the technology acceptance of teachers who are employed at a school where there is wide access to different types of technology. The researchers aimed to identify distinct aspects that deter the use of the available technology, while also establishing the motivating factors in the target school. Semi-structured interviews were conducted with five divergent volunteers. The transcribed interviews were analyzed qualitatively using Atlas to assist in identifying emerging patterns. Through the analyses it became evident that although teachers are presented with technology and recognize the usefulness thereof, flaws in support from the institution are increasingly deterring even teachers with a high technology acceptance from using available technology. The researcher recommended that members of management should set clear implementation goals to staff members, while dedicating themselves to prioritizing issues such as infrastructure, maintenance of hardware, and effective training opportunities

2. An Exploratory Study of Minority Students' Technology Usage and Perceptions of Technology: Non-traditional Adult Students in Technology-Based Environments

The research article titled; "An Exploratory Study of Minority Students' Technology Usage and Perceptions of Technology: Non-traditional Adult Students in Technology-Based Environments" by Yu-Chun Kuo from Rowan University examines non-traditional, African-American adult students' use of technology and their perceptions towards this in technology-based environments. Technology perceptions

included computer self-efficacy, Internet self-efficacy, user attitude, and computer anxiety. The effects of student characteristics on these factors and the relationships between these factors were examined throughout this study. Participants included minority students who participated in face-to-face or online undergraduate courses offered in continuing education. A quantitative approach was undertaken to analyze the collected data. Results indicated that non-traditional minority students utilized basic software tools more frequently than the advanced ones, suggesting that many of them may lack the knowledge or skills for advanced technologies. Age, hours spent online, and previous online course experiences influenced students' technology perceptions. Gender did not have an impact on technology perceptions. Internet self-efficacy was affected by most of the student characteristics variables. Computer self-efficacy was found to be a good predictor for both user attitude and computer anxiety.

3. Technology: The Positive and Negative Effects on Student Achievement

The research paper titled; 'Technology: The Positive and Negative Effects on Student Achievement' by Jennifer Lyn Flanagan from The College at Brockport, aimed at identifying the positive and negative effects of technology on student achievement. One eighth of nineteen students from an urban middle school was taught a unit on Solving Systems of Equations by Graphing. The unit was implemented with and without the use of the graphing calculator. Students were first introduced to the unit through the use of pencils and graph paper. All the graphing was done by hand and students had to determine the solutions of the systems of equations by proper graphing techniques. The students were then tested at the end of the unit. Students were then given the same unit but were now able to use the graphing calculator as a means to enhance their learning of Solving Systems of Equations through graphing. Students were then tested again but this time they were able to use the graphing calculator during the test. Student achievement for the unit had risen and grades on the assessments had increased due to the presence of technology. Student engagement and interest had also increased due to the presence of technology.

4. A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome

The research article titled; 'A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome' by Ming-Hung Lin, Huang-Cheng Chen and Kuang-Sheng Liu stated that digital learning presents better positive effects on learning motivation than traditional teaching does. It showed better positive effects on learning outcome than traditional teaching does. Learning motivation revealed significantly positive effects on learning effect in learning outcome. In this study, students were tested and proceeded questionnaire survey to understand the opinions about digital learning. To effectively achieve the research objectives and test the research hypotheses, quasi-experimental research is applied in this study. Total 116 students in 4 classes were selected as the research subjects for the instructional research. It is important to combine with current teaching trend and utilize the advantages of digital learning to develop practicable teaching strategies for the teaching effectiveness.

5. Enriching Classrooms with Technology in the Basic Schools

The research article titled; “Enriching Classrooms with Technology in the Basic Schools” by Karzan Wakil, Nsar Qaisar and Chra Mohammed aimed at analysing the role of technology in the classroom for a learning process. The researchers proposed two classes- one of them enriched with technology another one without technology, after teaching the same subject for both students a test was conducted. The result showed that average of students GPA in classroom technology is 83.3%, but in the classroom without technology decrease to 60.4%, the result showed the learning increased 22.9% by using technology. Besides all students enjoyed in classroom technology and most of them learned more material with technology. The result of the paper showed that the classroom technology is more efficient to learn basic school students.

Methodology

- A. *Purpose and Significance of the Study:* Teaching sentence structure is not usually seen as an enjoyable learning concept. Writing is a complex system of communication, which means learning how to write can pose difficulties. Very few studies have been conducted to teach sentence structure to learners. Studies have been conducted on the use of technology to teach vocabulary, pronunciation, contextual clues and grammar to the learners. However research studies have not focused enough on the use of technology in teaching sentence structure to the learners. The research paper aims to identify the different technological strategies that can be incorporated into the teaching method of teaching sentence structure to the learners. It aims to answer the following research question:

Does technology play a significant role in teaching sentence structures to the learners?

B. *Participants:* The participants would be taken from two ICSE and two CBSE board schools. The study would focus on students from class VI and class IX. Ten students would be taken from each class. So a total of forty students would be taken from ICSE schools and a total of forty students would be taken from CBSE schools. Altogether, a sample size of eighty students would be taken.

C. *Instrumentations:* Five language games will be prepared by the researcher which will help in the teaching of sentence structures to the learners. The language games will be carefully designed and introduced to the learners. The language games are Master Coordinator, Clause Box, Synonym Cocktail, Homonym Trivia and Preposition Paddle.

In the game Master Coordinator, the learners are divided into several groups. The teacher distributes several tabs among the learners. Each tab has a picture of a dice with coordinating conjunctions written on the different faces of the dices. The teacher then gives each group of students, a dice. Each group of students rolls the dice and each member of the group gets a conjunction. The student then has to make a sentence with the conjunction given and pass the dice to the next member in the group.

In the game Clause Box, the learners are divided into several groups. Each group of learners is shown a slide with two clauses written on it- a principle clause and a subordinating clause. The learners would arrange the clauses in a manner that the sentences are framed correctly. Each group would then be asked

to come in front of the class, and write the sentences on the board. The group would ask the class to identify the principle and subordinate clause from the sentence and frame sentences on their own.

In the game Synonym Cocktail, the teacher prepares a technical game where the learners are divided into several groups. Each group of learners is shown a group of sentences with blanks in them on the screen. Each sentence is accompanied by a cluster of synonyms and antonyms. The learners in each group have to identify the appropriate synonym and antonym to fill the blanks in the same sentence. Each group will be only two chances to identify the correct synonym and correct antonym. If the learner selects the wrong words, there screen immediately buzzes, and the learner is alerted. The learner then gets a second chance. Then the group needs to prepare a sentence with the synonym given.

In the game Homonym Trivia, the teacher prepares a technical game where the learners are divided into several groups. Each group of learners is shown a sentence on the screen with only three homonyms as options accompanying them. If the learner chooses a wrong homonym, there is immediately a buzzing sound. The learners get only another chance to identify the correct homonym. The learner has to then construct a sentence with the homonym given.

In the game Preposition Paddle, the teacher prepares a technical game where the learners are divided into several groups. Each group of learners is shown a sentence on the screen with a blank in it. Each blank is accompanied by a number of prepositions. The learners are shown the sentences and they need to identify the correct prepositions. Once they identify the wrong preposition, a buzzing sound comes from the screen. After that the learner gets two more chances to identify the correct preposition. The learner then makes a sentence with the preposition.

Procedure:

At first, the selected students were randomly divided into control group and experimental group. The Control group was taught sentence structures from the book by teaching them the rules of sentence structuring. The Experimental group was taught sentence structures using language games with technology. It was observed that learners who were taught sentence structures using language games with technology surpassed the other group with their performance and were able to retain the structures learnt for a longer period of time.

Hypothesis

The hypothesis is that learners who are taught a foreign language using language games learn the language better and is capable of using it effectively than those students who are taught using traditional conventional methods.

Discussion

The rapidly advancing age of technology has made it possible to overcome many different challenges in our world today. The positive influence of technology when learning English is valuable and can maximize the overall experience. As technology becomes a major part in today's world, students can have more freedom and support to fully absorb the material. More students are choosing to learn English online

because of the increased efficiency with lower costs. Technology and learning English go hand in hand and here are some reasons why more prefer online lessons.

The biggest reason for incorporating technology into education is the overall changes in global communication. Technology opens doors to many more opportunities by linking the world together. A pivotal aspect of learning English is to how to communicate with others in a social setting. Learners now have a virtual community of learners to discuss topics with, seek advice, or gain leadership skills by helping others. Interactive whiteboards for instance, are a simple but invaluable way for English learners to access helpful resources or lessons. Instructors may include previous topics that are extremely important to progress to the next level. Another benefit of mixing technology and learning English is that it reinforces the interest of the learners. A traditional classroom setting is often not conducive to learning because the strategies of rote learning do not challenge or interest students. But technology has completely changed the milieu of learning and makes it easier for English learners to focus because the content can be presented in a number of ways. Lessons that include computer-based instruction, visual aids, and technologically advanced materials help students achieve more knowledge in less time.

Traditional learning in a classroom is extremely limited and can only be ongoing as long as students are present. However, technology and learning English has allowed students to use mobile phones or laptops for example, to access require information anytime they need. This not only helps students to absorb the material but also offers valuable practice on the proper ways to use tools of technology. Learners prefer to blend technology and learning English because of the valuable skills acquired throughout the lessons. Computer software and online tools help learners absorb the material much more easily and also hone language skills that are useful. Technology is most successful in maintaining the interest of students while engaging them in the lesson. It helps to emphasize the essential building blocks of language learning including vocabulary, comprehension, phonics, and overall fluency.

The use of technology has become an important part of the learning process in and out of the class. Every language class usually uses some form of technology. Technology has been used to both help and improve language learning. Technology enables teachers to adapt classroom activities, thus enhancing the language learning process. Technology continues to grow in importance as a tool to help teachers facilitate language learning for their learners.

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