



# E learning as a boon to young generation in teaching learning process

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## Abstract

E-learning teaching can be taught in the class room and outside the classrooms. There are various resources of e learning such as Internet, YouTube, Skype, Twitter, Smart-boards, Blogs and Podcasting, computer and internet. The use of computer and internet forms the major component of teaching learning process. These are helping in improving one's learning process by higher retention of the learnt material, easy storage and multiple access to collect material, any time flexibility, more of student collaboration and teacher interaction, self-paced learning, enhanced technological support and suitable for different types of learners. It helps in improving the learners understanding, creativity and interest. A study was conducted on class 10<sup>th</sup> students of a Kolkata school and it was found that the teaching done by using e-learning had scored high in exam and had more understanding of content matter than the students who had traditional method of teaching by their teachers. Thus e- learning helps in enhancing our educational system and an important part of our teaching learning process. It helps in changing the view of our teaching method.

**Key words:** learner, e-learning, teacher, traditional method

## Introduction

The term e-learning comprises a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. As the letter “e” in e-learning stands for the word “electronic”, it would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers.

E-learning is also called Web-based learning, online learning, distributed learning, computer-assisted instruction, or Internet-based learning. Historically, there have been two common e-learning modes: distance learning and computer assisted instruction. Distance learning uses information technologies to deliver instruction to learners who are at remote locations from a central site. Computer assisted instruction also called computer-based learning and computer based teaching uses computer for teaching learning processes. E-learning teaching can be taught in the class room and outside the classrooms. There are various resources of e learning such as Internet, YouTube, Skype, Twitter, Smartboards, Blogs and Podcasting, computer and internet. The use of computer and internet forms the major component of teaching learning process.

E-learning presents an entirely new learning environment for students, thus requiring a different skill set to be successful (Romiszowski, 2004). Almost two-thirds of secondary teachers and 56 percent of elementary teachers say they are better organized as a result of the use of technology in their classroom. When considering how many years of experience a teacher has, 68 percent of teachers with 1 to 3 years of experience say that technology has increased their effectiveness by making them more productive. (Project Tomorrow, U.S.). Internet technologies permit the widespread distribution of digital content to many users simultaneously anytime and anywhere (Jethro, O.O., Grace, A.M., Thomas, A., (2012)). In one two-year study of upper elementary classrooms with 1:1 computing access, students outperformed non-laptop students on English Language Arts (ELA) literary response and analysis and writing strategies (Suhr et al., U.S.). As e-learning is a growing field in education system, there are many challenges in implementing it. Updating electronic content is easier than updating printed material: e-learning technologies allow educators to revise their content simply and quickly. Learners have control over the content, learning sequence, pace of learning, time, and, often, media, which allows them to tailor their experience to meet personal learning objectives. Critical thinking, research, and evaluation skills are growing in importance as students have increasing volumes of information from a variety of sources to sort through (New Media Consortium, 2007). Also, particularly in courses that are entirely electronic, students are much more independent than in the traditional setting. This requires that they be highly motivated and committed to teach (Huynh et al., 2003), with less social interaction with peers or an instructor. Many people around the globe live in knowledge societies that demand continuous professional development (Merriam, Caffarella, & Baumgartner, 2007). Bajpai, R. P., Kumar, N., (2015) concluded that in order to improve motivational effectiveness and academic

achievement, higher education should consider aiming to develop e-learning strategies that encourage greater engagement and also take into consideration the different learning styles found within the student body. E-learning is also expected to help improving students' computer literacy – the skill needed in the current workforce (Addah, [2012](#); Akhu-Zaheya, Khater, Nasar, & Khraisat, [2011](#); Bediang, et al., [2013](#)). Moubayed et al 2020 concluded that there is a challenge in e-learning to keep students motivated and engaged in learning.

We have the 19th century curriculum, 20th century teachers and 21st century students. Piecemeal approaches will not help "(Kaiser Dopaishi. Principal. Singapore International School). Students today are well-versed with technology and can adapt to it much faster than earlier generations. "The digital student has arrived at institutions and there is no generation gap, but digital divide when it comes to students and teachers. Vanve, A., Gaikwad, R., Shelar, (2016) concluded that E-learning is growing in training and education sector. A meta-analysis of 50 study effects found students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction. (U.S. Dept. of Education, 2010, Global). Seyedehsahar, S., Nourdad, N., and Hassantofghi, R., and Seyyedreza, S., (2018) revealed a higher level of interest in school attendance in the group provided with technology. Paul and vannija (2020) concluded that teaching learning process not only depends on traditional method due to advent of e-learning technologies.

Keeping in view above observations, the present study was conducted with the idea to understand the current magnitude of e-learning among adolescent students in Kolkata and explore whether the traditional method or computer assisted method are effective in the adolescent under study.

## Objective of the study

1. To find out the effectiveness of teaching by traditional method or computer assisted method among the adolescent under study.

## Nature of sample

Data was collected from the 40 students of age group 15-16 years and were studying in class X in co- educational English medium school of Kolkata.

Purposive sampling technique was used to select the students for the study.

## Tools

Two question papers are set separately containing 20 questions to test the prior knowledge and post knowledge after teaching with different methods. A question paper containing 20 questions regarding the cell division are set to test the prior knowledge of the two sections of the students. A

question paper consisting 20 questions of various variety was formed and used to find which students got maximum marks after the teaching of the topic by different methods.

## Statistical procedure

The percentage was done to find out the maximum marks obtained by the students and how many students got how many marks and from which method. The t-test was done to know significant difference between mean marks of section A and section B in the prior knowledge test.

A study was done on the students of class X of a English medium school in the subject of biology and the unit taught was cell division and subunit was mitosis. The sample unit is 40 students, and the sample was chosen purposively.

Table1: Nature of Sample

S.no.	Class X	Students	Teaching method
1.	Section A	20	Traditional
2.	Section B	20	Computer assisted
Total		40	

Before knowing the treatment effect on the students of section A and section B the prior knowledge test was done on the students to know the significant difference between the mean marks of the two sections.

Table2: t- value showing the significant difference between mean marks of section A and section B in the prior test

Class X	Mean	S.D.	t-value	significance
Section A	1.85	1.27	0.25	df=38
Section B	1.75	1.31		P>0.05 (one tailed test)

Table 2 shows there is no significant difference between the marks obtained in prior test in section A and section B. it is seen that before teaching the students with different methods the entry level knowledge of students regarding mitosis is same.

The 20 students of class X section A and 20 students of section B was chosen and given the teaching on mitosis by traditional method and computer assisted teaching respectively(table 1). In the traditional method lecture method is used to describe mitosis and its various stages and in computer assisted teaching the teacher describe mitosis and shown various slides of its various stages in computer and through video (audio visual aid) movement of nucleolus, disappearance of nuclear material and appearance of asters where shown and a short description is given after various stages of mitosis. After finishing the subunit a test was taken from these students and marks shows the achievement of students.

Table3: Evaluation of 40 students in a test of 20 marks

S.no	Section A	Marks in traditional teaching	Percentage of marks	S.no	Section B	Marks in Computer assisted teaching	Percentage of marks
1	A	8	40	1	A'	14	70
2	B	9	45	2	B'	19	95
3	C	10	50	3	C'	15	75
4	D	8	40	4	D'	18	90
5	E	9	45	5	E'	14	70
6	F	7	35	6	F'	19	95
7	G	6	30	7	G'	16	80
8	H	9	45	8	H'	15	75
9	I	10	50	9	I'	19	95
10	J	11	55	10	J'	20	100
11	K	5	25	11	K'	16	80
12	L	8	40	12	L'	17	85
13	M	15	75	13	M'	18	90
14	N	11	55	14	N'	15	75
15	O	12	60	15	O'	20	100
16	P	8	40	16	P'	19	95
17	Q	6	30	17	Q'	15	75
18	R	8	40	18	R'	18	90
19	S	7	35	19	S'	16	80
20	T	14	70	20	T'	20	100

## Result

The students taught with traditional method have marks in the percentage range of 25 to 75 whereas the students taught with computer assisted method have marks in the percentage range 70 to 100(table3). It shows the better understanding of content by the students of computer assisted Method.

Table4: Summarized marks of students in test in both methods

S.no	Marks	Students in traditional teaching	Students in computer assisted teaching
1	5	1	
2	6	2	
3	7	2	
4	8	5	
5	9	3	
6	10	2	
7	11	2	
8	12	1	
9	14	1	2
10	15	1	4
11	16		3
12	17		1

13	18		3
14	19		4
15	20		3
Total students		20	20

The students taught by traditional method score least marks 5 and highest marks 15 (figure 1). The five students got 8 marks and three students got 9 marks, two students got 5 marks, two students got 7 marks, two students got 10 marks, two students got 11 marks, one student got 5 marks, one student 12 marks, one student got 14 marks and lastly one student got 15 marks. Thus the highest marks 15 is obtained by only one student in traditional method (table 4).

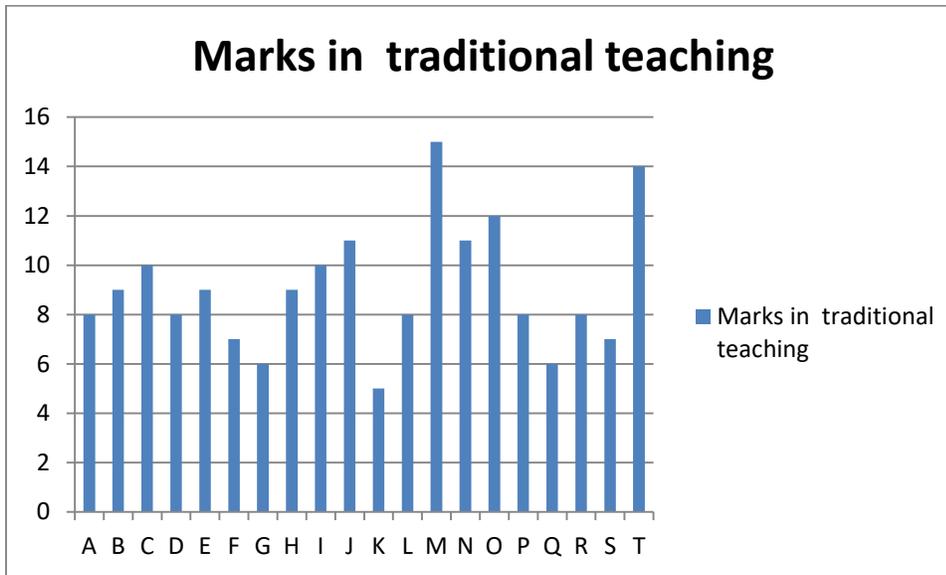


Figure 1: Marks of students of traditional teaching.

The highest marks obtained by students of computer assisted teaching is 20 and least is 14 (figure 2). The four students got 19 marks as well as four students got 15 marks. The three students got 20 marks as well as 18 marks and 3 students also got 16 marks. Only 2 students got 14 marks (table 4).

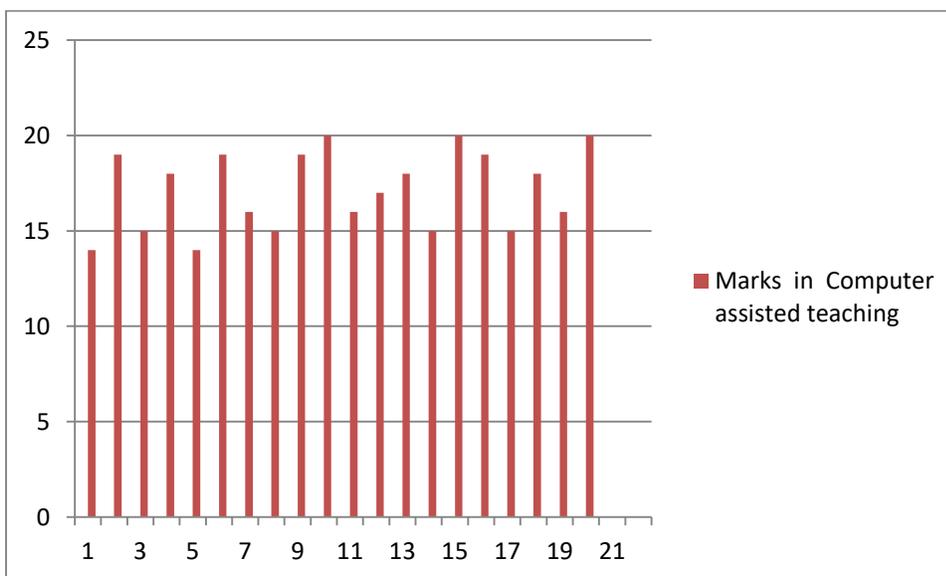


Figure 2: Marks of students of computer assisted teaching.

The students' percentage of marks compared with both the methods and it is observed that 3 students of computer assisted method got 100% and only one student got 75% in traditional method (figure3).

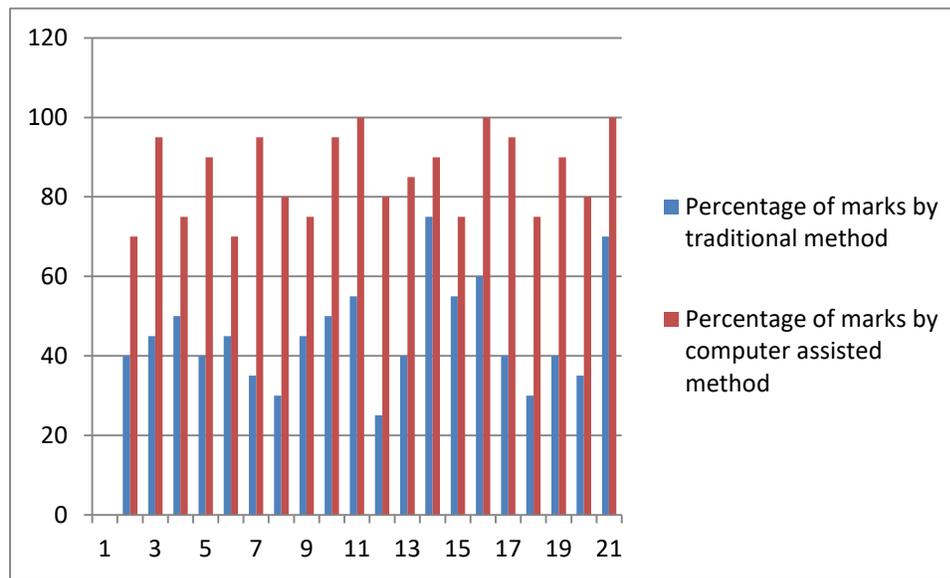


Figure3: Comparison of percentage of marks obtained by students in traditional and computer assisted method.

## Discussion

Findings shown in table 4 reveals that the highest marks obtained in computer assisted teaching is 20 and obtained by 3 students and in traditional teaching is 15 and obtained by only 1 student. As the prior knowledge of both the sections are same regarding the knowledge of mitosis(table 2), they are gained knowledge after teaching them with the different methods. The students with computer assisted teaching had scored more marks than the traditional teaching. This finding is comparable with Siritongthaworn, S., Krairit, D., Dimmitt, N. J., & Paul, H. (2006) who found that e-learning was more convenient and efficient. The students who studies with computer assisted program should be self-motivated and disciplined and scored more marks than the students who studied with traditional method. The students with computer assisted teaching had better understanding and grasping of content than the earlier one. Alkhalaf ,S., Drewa S., Alhussain,T.,(2012) also concluded that the use of e-learning systems shows a positive impact on student learning. They understand each stages of mitosis with minute changes in the cell organelles than the earlier method. The students have more retention power, interested and enthusiastic about the subject matter than the students taught by traditional method. The students of traditional method felt the topic was boring and it was difficult to remember the changes took place in different stages of mitosis.

## Application of study

The students are interested in computer assisted teaching as they are involved in digital devices more these days. Some suggestions of applying computer assisted learning in teaching process are

- a. The materials are easy accessible anywhere any time and can be replayed if something is missed.
- b. It saves time and improves the performance of students
- .
- c. It develops the knowledge of internet and students learn the computer skills as well which can be used throughout their lives.
- d. It helps the students in searching the materials according to their interest and retains learning for a long time.
- e. It has beneficial pedagogical implementation for students.

## Conclusion

The result shows according to modern and technological advancement, the student need is e- learning where their understanding is concrete and clearer. It glorified the past literature and favors the e- learning and show more retention in it as it involves more sense organs. e- learning has both advantages and disadvantages. The students will be benefitted if they don't waste time in irrelevant searching of materials and use internet in enriching their learning and have restricted use of internet for daily for only 2hrs in which they will utilize it for learning and few minutes in social networking sites. Besides advantages and disadvantages it has also limitations of using e-learning as some topics are not appropriate for e- learning and student should be computer literate.

## Limitation of the study

1. The findings of the present study cannot be generalized to the entire population; it is specific to class X students.

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