



# Online Learning Effectiveness on Classroom Electronic as Community Learning

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## Abstract

The new generation of distance learning online education, established with the help of multimedia computer technology and network technology, is gaining growing attention around the world with the advancement of information technology. The purpose of this paper is to provide information about the effectiveness of online learning from a summary of 12 published research.

## 1 Introduction

The development of network technology makes some difference in education mode, affecting online learning. Not all online learning is effective to its students who enroll in online learning. The support of the teacher is part of the role of the instructor in the online world. The expected presence of teachers will encourage students<sup>1</sup> to study more (Heinich, *et al.*, 2001). In online learning, the participation of instructors is greater than face to face. The high online learning participation of teachers suggests that teachers are prepared to obtain online learning. Teachers provide more words of inspiration, encouragement or acknowledgement of student achievements in online learning as opposed to teachers in face-to-face classes (Piccoli, *et al.*, 2002).

Online learning is the most powerful way to do the learning-teaching program in this pandemic age, and the purpose of this paper is to see and analyze online-based education and find the most productive way to do online learning (Yang, *et al.*, 2015).

### 1.1 Online Learning

Online learning is referred to E-Learning, where the student uses the internet and electronic device to support their needs in acquiring new knowledge that is given from the teacher. Online learning is

known as remote learning, which is the same as face - to - face learning, the difference is their learning - teaching activities is done while being apart (Zheng and Li , 2013).

In the 1800s, online learning started using parcel posts to meet students who were unable to be on campus at university. In the early 1900s, communication technology advanced and radio waves were introduced to distance education (Anna and Xiufang, 2016). An amateur radio station was started in 1919 by professors at the University of Wisconsin, becoming the first licensed radio station devoted to educational broadcasting. In 1993, online learning started to flourish with the debut of the first Internet web browser, created by the University of Illinois. This will be the initiation of studying online (Caitronia, *et al.*, 2019).

Just 6% of students were enrolled in an online course in 2008, but enrollment increased to 20% by 2018. Students who have enrolled as online learning students have increased. In 2020, the global coronavirus pandemic prompted many universities to hastily move to online learning in lieu of conducting classes in person (Muntajeeb, 2011).



Figure 1: The online learning model (Orna, et al., 2019)

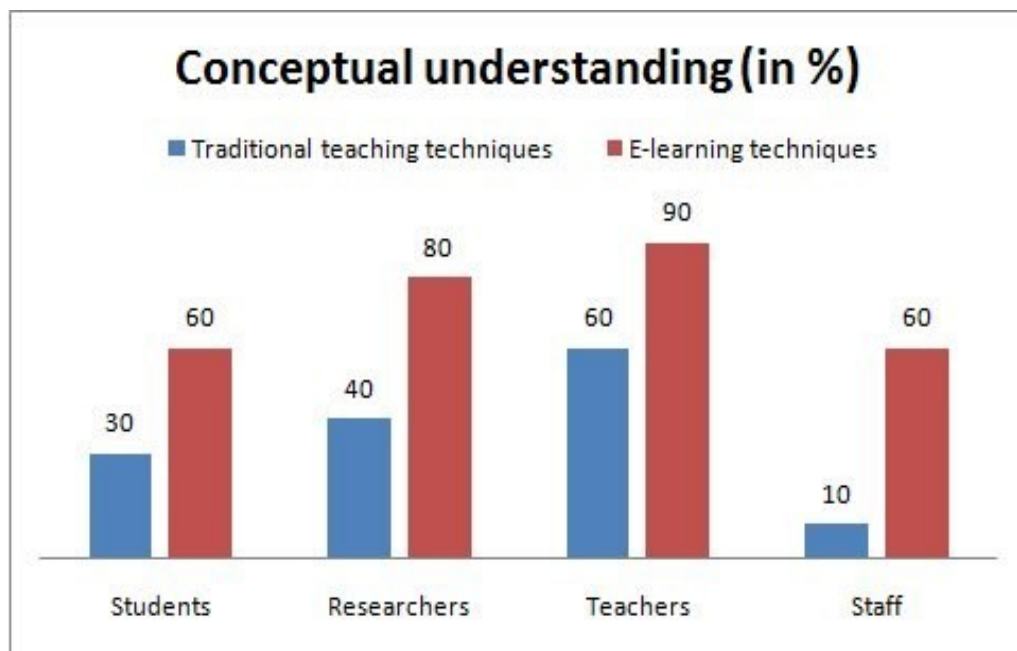
## 1.2 Effect of online learning

Online learning alters the way students of all styles and ages communicate with information and access it. It affects both learners and the organization that makes online learning common. The effect that has arisen is not always positive because of the transition (Orna, *et al.*, 2019).

If the production of online learning is done correctly, studying with it would be more effective. Teachers should have access to resources that promote dialogue and active engagement in order to complement lectures (Punaji, n.d.). Teachers can more effectively meet students with various learning styles in an online environment. For instance, for those who learn best by listening, they might post a video lecture, a diagram, pictures or video for those who learn best by seeing, and an interactive game for those who learn by doing. Online reviews will help teachers recognize those students who need some extra attention, making it less likely that they will fall through the cracks than in a typical setting (Zulfikar, *et al.*, 2019).

In online learning, social contact can be smaller than what face-to-face learning offers. A screen separating them from others can be a relief for those with debilitating social anxiety, and offers a less stressful way to ask questions and make comments. However, if they lack proficiency with computers and the Internet, others can have the opposite reaction. An online course, if well-crafted, encourages debate while respecting all of its students. Since teachers are unable to see student responses and do not always receive instant feedback, they need to tread carefully with touchy subjects to keep the conversation centered and respectful. Teachers in online learning will have to work harder to make everyone feel linked to the community and the content of the course (Qin, 2004).

Online learning costs need to be smaller than face-to-face learning costs. Students may save money on gas and other travel costs, while keeping a full-time job with face-to-face learning that would not have been feasible. While curriculum creation and technology can cost more initially, because of reduced facility use and an increased student-to-faculty ratio, institutions may find that they can decrease costs. Each organization will be different and will have to evaluate the costs and benefits of introducing online education, depending on the situation (Wang and Ma, 2006).



**Figure 2:** Graph showing conceptual understanding for both learning techniques (Zulfikar, et al., 2019)

## 2 Literature Review

It was said that the solution for advanced education is online class or e-learning. But for some reason, e-learning becomes inadequate because there is no contact between the teacher and the student and it does not help students understand the topic they are learning. But e-learning has the benefit of being more versatile and easier to apply the homework. The e-learning approach must also be enhanced so that the student can research more effectively (Anna and Xiufang, 2016).

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Teaching management was also the weakest link in our online education, which was the main issue affecting the credibility of online education, which was too urgent to enhance. Teaching management for online education must be focused on the position of the network and we should have a good understanding of the rule. We should comprehensively and critically summarize the original findings and experiences, and then seriously generalize the online education legislation with Chinese national conditions. Furthermore, we should also focus extensively on the lessons and challenges in reality. In addition, we will perform a comprehensive analysis of the relevant issues, examine the causes, and actively explore ways to solve our online education, hoping that we will make new and greater contributions to our online education career (Muntajeb, 2011).

The benefit of this analysis is that the whole study has more than 1000 student data for trials, with a very high statistical capacity for this study. This power allows small effects to be identified by promoting debate topics at the level of student engagement in online learning. The lack of statistical capacity may be the reason why little study has been documented on the effects of promoting discussion forums in online learning, since most studies appear to have less students. This study has a research range and, thus, when interpreting the findings, authors should be cautious and draw conclusions about the effects of promoting online learning discussion forums. First, while we discovered that participation in online learning discussion forums encourages better participation levels, poor correlations suggest that the evidence is substantially different. Classes with a limited number of students, for instance, exist, but the number of publications that become participation data is greater. There are also class groups that have fewer publications, on the other hand, but there are more students taking part in discussion forums (Orna, *et al.*, 2019).

## 3 Methodology

### 3.1 *Sample in this research*

Subjects are selected randomly to a pretest and posttest groups, i.e. 20 (equal proportion number of subjects for boys and girls) are tested in the F2F learning environment group and 20 (equal number of subjects for boys and girls) are tested in the Online Learning Environment group. In Aurangabad district, there are around 15 schools (Maharashtra Board of Secondary and Higher Secondary Schools), out of which 1 school is randomly selected. Researchers took 50% of the sample as boys and 50% as females, respectively (Punaji, n.d.).

In the online learning system and the F2F learning environment, Table 1 indicates the distribution of students. The study consisted of various student groups, such as I female Online Learning Environment and F2F learning environment students (ii), male Online Learning Environment students

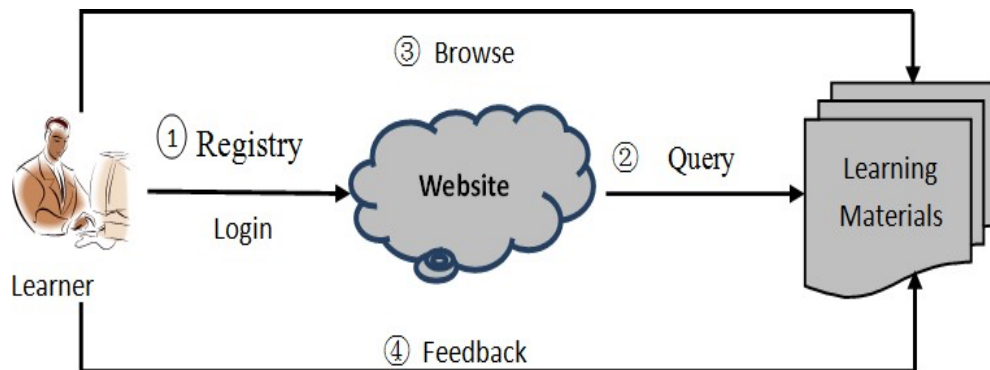
and F2F learning environment students. All 40 students were tested as samples, reflecting Aurangabad city's tenth grade population (Punaji, n.d.).

### 3.2 Tools and Techniques

A performance test administered by an instructor is used to study the performance of grade 10 physics students. The test was structured in this study by taking into account the instructional goals, questions were framed according to their forms and blue print was prepared. Since the exam was prepared by the instructor, and it is not a standardized test (Orna, *et al.*, 2019). Therefore, the test was first validated by five education experts, physics professors and teachers who taught the methodology of science. The expert recommendations and experiences of these individuals were taken into account and the face validity of the examination was taken into account (Qin, 2004).

Online Method students were given the opportunity to share information by giving them the task of planning and sharing tasks in a group through Google documents and submitting them through Moodle Learning Management System (LMS). Experience of communication through Google groups and online conferencing was also provided to them. Similarly, in groups, students of the face-to-face approach have been allocated to plan it by collaborating and engaging face- to-face with each other (Zulfikar, *et al.*, 2019).

An online evaluation was performed on Online Learning Method students, using the Moodle Learning Management Framework, and a paper pencil accomplishment test was performed on F2F students to assess their accomplishment (Wang and Ma, 2006).



**Figure 3:** The online learning process (Punaji, n.d.)

## 4 Conclusion

Each method of teaching has its advantages and drawbacks. In the lives of students and teachers, online learning has had a positive effect on saving money from travel fees. More significantly, if the student really wants to and does it without pressure, online learning can be completely useful and profitable. This often relates to the author, even though it's for online learning, they must have a passion for teaching. The more pressure the teacher provided, the more ineffective it was to learn online. Pressure here means that the instructor is only offering tasks that are not really connected to the actual course.

For students who are not able to do online learning and who believe it is also the source of inadequate online learning as an obligation. Since online learning can be completely successful if students and teachers are prepared to do online learning, not thinking as a necessity, but the passion for learning-teaching is the most important thing in online learning because students are not supervised like face-to-face learning in online education.

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