

Online Education System

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Abstract— Online education is the most recent form of modern education in which the child can travel several miles and sit in front of the blackboard and instead of studying, can sit in a virtual class by sitting at home with his teacher via the internet. Only children with a good internet connection, such as a Smartphone, laptop, or computer, can participate in this education. Students preparing for competitive exams today, in addition to schools, colleges, and other institutions, are unable to attend coaching institutes; however, online education has made their path easier. They will now be able to study at home for competitive examinations. Many degree examinations and their syllabuses are also available online. Students can write to the teacher and present their concerns or questions. Today, many institutions offer online services for major services such as civil service, engineering, and medical, law, and so on. In today's world, we're leaving the house can be difficult, online education is an excellent option. This can not only give impetus to the disrupted education system, but it can also increase the experiences of the teacher and student in a more appealing way.

Keywords: Education, Online Education, the Study of the Case, Online Mode of Instruction and Learning

I. INTRODUCTION

Online education is a type of computer-assisted learning that uses the Internet to facilitate teacher-student interaction and the distribution of class materials. This simple definition leads to an almost infinite number of ways to teach and learn outside of traditional classrooms and off college campuses. Students can turn any location with Internet access and electricity into a classroom with online education. Audio, video, text, animations, virtual training environments, and live chats with professors are all possible. It is a rich learning environment with far greater flexibility than a traditional classroom. When used properly, online education has been showing to be more effective than traditional face-to-face instruction. It can be engaging, entertaining, and tailored to almost anyone's needs.

II. REVIEW OF LITERATURE

Rapid technological advancements have made distance education simple (McBrien et al., 2009).

The majority of the terms (online learning, open learning, web-based learning, etc.)

For example, computer-mediated learning, blended learning, and m-learning.) have the ability to use a computer connected to a network in common provides the opportunity to learn from anywhere, at any time, in any rhythm, and with any device means" (Cojocariu et al., 2014) [1]. Online learning can be defined as a tool that can improve the teaching-learning process by making it more student-centered, innovative, and interactive. and even more adaptable. Online learning is defined as "learning experiences in synchronous

or asynchronous environments using various devices with internet access (e.g., mobile phones, laptops, etc.)." Students can learn in these settings. be able to learn and interact with instructors and other students from anywhere (independence)" (Singh & Thurman, 2019) [2]. The synchronous learning environment is designed in such a way that students attend live lectures, educators and learners interact in real-time, and there is the possibility of instant feedback. Asynchronous learning environments do not provide adequate feedback, whereas synchronous learning environments do. Learning content is not available in the form of live lectures or classes in such a learning environment; instead, it is available through various learning systems and forums. In such a setting, instant feedback and immediate response are not possible (Littlefield, 2018) [3]. There are numerous opportunities for social interaction with synchronous learning (McBrien et al., 2009) [4]. During the spread of this lethal virus, such online platforms as (a) video conferencing with at least 40 to 50 students, (b) discussions with students are required. Keep classes organic, (c) internet connections are good, (d) lectures are accessible on mobile phones as well as laptops, (e) the ability to watch previously recorded lectures, and (f) instant feedback from students can be obtained and assignments can be taken (Basilaia et al., 2020).

III. PROBLEM IDENTIFICATION

Online Learning Challenges Faced by Students:

- 1) **Adaptability:** Students struggle to adjust to an online learning environment after having previously learned in a traditional classroom setting. Because of the abrupt change, they are unable to adapt to computer-based learning. Students who have always studied in a traditional classroom setting find it difficult to focus on online platforms.
- 2) **Technical issues:** Many students lack access to a high-speed internet connection, which is necessary for online learning. As a result, they're having trouble launching virtual learning and other platforms that require an internet connection. Because they are unfamiliar with technology and computer applications, they face technical difficulties.
- 3) **Computer Skills:** A major concern in today's world is a lack of computer education. Many students are still unable to use a basic computer program like Microsoft Word and PowerPoint. When technical issues arise in this scenario, they find it difficult to solve the problem. They have difficulty attending live classes, using appropriate icons, MS Office, communication-related apps and websites, browsing study materials, and so on. They may be unfamiliar with technological skills such as logging in, attending live classes, creating and submitting work, and communicating with teachers and peers

IV. METHODOLOGY

There are several methods for developing online courses, and they will differ depending on the topic, your target student, the needs of your affiliated organization, and the needs of the user. When it comes to developing online courses, many colleges and universities, for example, give their instructors a lot of leeways, whereas others have strict guidelines for their structure. Online learning methods can be self-paced or blended, and they can make use of a variety of tools to engage students and support learning. They can be self-paced or blended, and they employ a variety of tools to engage students and support their learning.

A. Online Learning Methods Are Classified Into Four Broad Categories. :-

- 1) Online Asynchronous Courses: The courses are often referred to as self-paced programs, and they are time-independent, which means the materials can be accessed 24 hours a day, seven days a week. Virtual office hours, weekly or monthly “check-in” online conversations or emails, and other forms of teacher/student interaction are common.
- 2) Online Courses that are Synchronous: These courses are delivered in real-time and can take many different forms, including virtual classrooms, live webinars, live webcasts, video/audio conferencing, instant messaging, and others. The instructor and students all log into the learning platform at the same time and date, and the instructor delivers the lecture, demonstration, or other planned learning activity. Students can ask questions at any time during the process, which is done in real-time.
- 3) Online Courses that are Hybrid or Blended: This type, as the name implies, combines aspects of both synchronous and asynchronous learning systems. They frequently hold scheduled, live classes several times throughout the semester, but supplement course material with pre-recorded lectures or presentations. Flipped Classroom Learning is another type of hybrid learning that requires students to self-study a specific topic (mostly online) and interact with teachers in the classroom to clear any doubts.
- 4) Online Competency-Based Courses: It is a personalized learning approach in which specific skills are mastered to support a specific job goal. A faculty mentor supervises the process and decides when and if competencies are attained. It is a self-paced program, but unlike a traditional asynchronous learning course, there are no pre-recorded lectures or other materials. The student and mentor work together to create a learning process that includes web-based documents, books, and on-the-job experience to help the learner develop skills and define how and when competency is achieved.

V. RESULTS AND DISCUSSIONS

Using the above-described structure, 47 virtual classrooms and a virtual teacher's lobby were created during the first week of online teaching in a private school with 920 students where online learning was introduced. 86 teachers were trained online to use the Google Hangouts Meet tools and become acquainted with the structure that had been created.

The Equipage system was used to send the classroom links to the students and parents. The list was distributed to the school teachers, and each teacher was able to join a class based on the available timetable. For the first week of online education, the Google Meet quality tool was used to extract additional meeting statistics from the system's admin panel. Teachers used desktop screen sharing extensively for material presentation, resulting in a total of 78 hours of screen sharing for one week of lessons. A total of 513 hours of video were broadcasted, which is an average of 11 hours of video per class, and 605 hours of the audio stream were transmitted, for a total of 12.87 hours per class. Approximately 5 hours total time was spent without video/audio transmission, which can be considered waiting time until the lesson begins.

VI. CONCLUSION AND FUTURE SCOPE

A. Conclusion

Online education has improved the lives of both students and working professionals. It has enabled them to take additional courses on top of their studies or jobs as they see fit. Online education has also aided faculty in asking students to study parts of the curriculum that do not require much classroom instruction online. As a result, online learning saves faculty time, allowing them to spend more time interacting with students. Online courses have improved the quality of education, and it is now easier for students to refer to the content at their leisure.

B. Future Scope

The COVID-19 pandemic has halted almost all human activities for the time being, and education is one of the most affected sectors. This outbreak has disrupted the academic year, causing classes and examinations to be canceled across the country. To ensure that students do not fall behind in their studies, schools and educational institutions moved classes online, requiring students to attend lectures via their devices. However, this method of learning has sparked a debate about whether increased screen time helps students learn or hinders their progress. Online learning may be new to some, but it has benefits and drawbacks.

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