Teaching and Learning System

Anu Elizabeth Mammen, Aquin Anto, Gifty Elezabeth Roy, Sini Thomas

Department of Computer Application, Saintgits College Of Engineering(autonomous),Kottayam, Kerala India.

Abstract

As we look back on the past two years and the harsh repercussions of the pandemic that continue until today, it is apparent that one of the most impacted sectors was education. Neither the world nor educational institutions were prepared to embrace the shift to online platforms brought on at lightning speed. Educational institutions worldwide promptly responded to the pandemic by going online. In record time, students moved from physical spaces that provided them with much-needed social interactions, to being seated behind a screen for hours on end. The teaching and learning system is a knowledge sharing platform which helps in improving the education system by changing manual to automated tasks. It offers online content that can be delivered to the learner anywhere and anytime through a wide range of information sources while compared to traditional learning systems. It also provides rapid access to specific knowledge and information. The teaching and learning system will reduce the paperwork and hence time consumed to complete the various tasks. This all-in-one place for teaching and learning, as described above can lead to error free, secure, reliable and a fast management system. This system has made its dashboard and basic learning management tools free for educators.

Keywords: Learning System, knowledge sharing platform

1. Introduction

Education is a very important factor in one's life. It plays a significant role in the progress of a human race. It enhances our knowledge, develops confidence and helps to discover our skills. "Education is the most powerful weapon to change the world"- By Nelson Mandela. In our traditional learning system, it provides a face-to-face interaction between the teacher and student within a limited period of time. But in online learning or synonymously known as 'elearning', the time period is not fixed and one can learn at any time. We are living in an era, where everyone uses the internet on a day-to-day basis. So, the field of education can improve its standard by the web which will provide online learning materials and make it accessible any time.

E-learning is a flexible platform with no barriers like age, qualification etc. It gives a new aspect in today's education system to improve the quality of knowledge. E-learning is an excellent option in education which allows students to work and learn at their own pace as it could provide access to learning materials at any time. Students have the flexibility to schedule their learning time with other activities around them. Another major benefit of elearning is the accessibility it provides to the users. One can learn from anywhere in the world. The main objective of this project is to develop a platform where users can share and impart their knowledge. One can learn or teach any subject on the basis of their interests.

2. Literature Survey

Online learning is a platform where knowledge can be delivered with the help of digital technology. In this

era, it is quite obvious to impart knowledge through such digital mediums. Reports make it clear that students could grasp the subject better with the help of visual graphics, text, animations, videos and audio. Using such digital media for knowledge sharing could only impact the betterment of the lives of both students and teachers as such platforms make their lives easier and more convenient.

According to Ratheeswari (2018), in the digital age, the use of Information and Communications Technology (ICT) allows students to learn and apply the skills that they need in the 21st Century. Interactive online learning allows students to uncover new information by exploring digital libraries and websites. Mat Dawi et al. (2016) found that, in the midst of globalization and the advancement of ICT, technology-based and online learning is highly encouraged. The management of pedagogical processes should be conducted creatively and undergo innovation to facilitate interaction between teachers and students. By interacting online, instructors and educators remain connected with their students notwithstanding being in different locations (Hussin, 2017). Technology-based teaching and learning techniques should be applied within schools and universities by public or private agencies. These methods should be implemented in accordance with the requirements of digital learning, and participants should experience constant interaction without the need for face-to-face communication. Various educational technologies should be employed to ensure that students feel excited to learn, and to resolve any discrepancies between the consistency of students' learning experiences online, as opposed to face-to-face.

Google's classroom is one of the best websites or applications for online based learning. Classroom was developed to help teachers and students communicate, collaborate, and share resources; it has been widely adopted by schools and educators around the world. Google Classroom can be accessed from any device with an internet connection, making it easy for students and teachers to participate in online learning, regardless of location. It is integrated with other Google apps, such as Google Drive and Google Docs, making it easy for teachers and students to collaborate and share files. Overall, Google Classroom is a useful tool for educators and students to manage and participate in online learning.
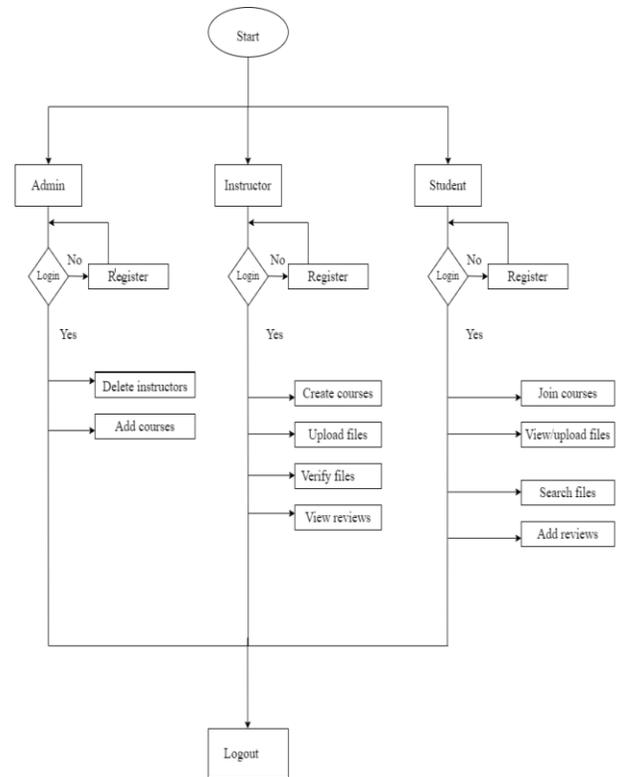
3.Methodology

Existing System:

There was a rapid shift from remote learning to online learning during the last 2 years. This resulted in an increase in the number of online sharing platforms and thereby led to the development of such existing platforms. There still exist some problems like difficulty in navigating the platform and understanding features, some platforms do not allow students to upload the files and some platforms allow the files to be uploaded but do not allow comments to be added. There even exist technical issues with the platform, such as slow loading times or difficulty in accessing features. The task of enrolling to various courses at the same time could also be a problem in such platforms. There is no all-in-one platform for searching the files users have uploaded in order to view them. Learning in the offline mode never allows personalized learning. Students could miss the notes if they were on leave for a single day thereby degrading their performance. Students would never get a chance to attend the school and elevate themselves for the past 2 years if such platforms never existed. Therefore, not only such platforms are important, the maintenance and upgradation and refinement of such platforms are vital

Proposed System:

The proposed system covers all the major drawbacks of the existing system. The proposed system allows easy access for the users to get into their respective roles – instructor or a student. Maintaining the files and organizing them according to their courses are more efficient. Such platforms can be accessed by anywhere through a stable internet connection and a device. It allows all the advantages of virtual learning like personalized learning, cost-effective learning, access to resources globally, flexibility in learning and so on. The files can be maintained carefully and saved electronically so that the fear of not maintaining it could be avoided. One major advantage of the proposed system is that the files uploaded by the users get organized at a separate space so that users can search for any files based on their interests. An instructor has the control over the files uploaded by students where they could delete the files or the student if found inappropriate. Other features of the project include easy navigation of the platform and understanding features, uploading and searching files, adding a feedback or comments below the files and easy creation of courses.

Figure 1 : work flow of the proposed system

4.Result and Discussion

This system converts the manual work into an automated   system. It has provided more of an easier way to understand and write down the notes, to correct papers and the materials could be made available in an online method. Instructors could add any hyperlinks which could be a meeting link for the classes to their course page for the students. Teachers could upload images or videos for their classes. Due to the onset of the pandemic, schools, colleges, and universities were forced to conduct lectures and classes online, as an alternative method by which to continue student's learning. While online learning has been proven to support the health of students during the pandemic, it is not as effective as conventional learning if not done in the right way under proper maintenance. Additionally, the lack of

a robust online infrastructure may impede the effectiveness of online learning. Teachers must improve students' experience of online learning by utilizing effective pedagogical methods. Concurrently, the government must take responsibility and improve the existing online infrastructure and facilities. Nevertheless, support within school communities, and among parents and school administrators, is vital to ensure the success of online learning.

class.

- Mark the attendance in an automated manner: The attendance could be marked automatically when the student enters the meeting through a link assigned in the course page or view the assignment/files in a given slot of time.
- Monitor student progress and engagement: Different tools can be used to monitor the progress of a student from the marks uploaded by an instructor through previously conducted examinations/assignments.

5.Conclusion

The project entitled Teaching and Learning system was completed successfully. The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application for students to learn materials online. This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using HTML & CSS, usage of responsive templates, and management of databases using SQLite . The entire system is secured. Also, the project helped us understand about the development phases of a project and software development life cycle. We learned how to test different features of a project. This project has given us great satisfaction in having designed an application which can be implemented to any institution that focuses on teaching students as well as letting them learn from a variety of materials that they provide with.

6.Future Enhancement

- Add a co-teacher: If a teacher is working with a colleague on the same group of students, one can add a co-teacher to the course. Co-teachers can do anything the teacher can do, but they can't delete a

7.Reference

- Datnow, A. (2020). The role of teachers in educational reform: A 20-year perspective. Journal of Educational Change, 21(1), 109–113.
- https://classroom.google.com/u/0/
- https://www.microsoft.com/en-in/microsoft-teams/group-chat-software