CSE TUTOR HUB – AN ONLINE LEARNING PLATFORM

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ABSTRACT

Technology has greatly improved the current system in recent years. 'Self-study,' using online forums, has taken the place of learning over and over again. The umbrella for technology-based school programs includes large numbers of learning web applications. The CSE TUTOR HUB-Learning Web application is a web learning program that uses a mixture of content, media, and technology to make reading clear and attractive for students. It also improves learning among users. In this unique context, current research aims to explore computer science and engineering studies in technology-based personal learning. This paper also shows that the CSE TUTOR HUB web application assists and enhances learning and learning skills among students.

Index Terms: Online Learning Platforms, Traditional Learning, Personal Learning, Technology, and Application Applications.

I. INTRODUCTION

At present the learning design of the day is rapidly evolving. Students' personalities also change the way they learn. Self-study is a form of learning where one makes an effort to identify one's learning needs, set learning goals, acquire the necessary resources, and assess one's knowledge. Developing lifelong reading skills is an effective way to gain knowledge and stay ahead of the rest.

CSE TUTOR HUB-Online Learning Platform is an online course and provides online textbooks for computer science and engineering students. Users can log in and have full access to the E-Learning system. They can use the library and download resources to articles available in pdf format and watch videos. The term online learning is defined [1] as "any learning that involves online use". According to [3] online learning should not represent electronic; it should be the acronym "development, development, everywhere, at all times and with everyone".

E-learning theory is built on the principles of cognitive science that demonstrate how the use and design of educational technology can enhance effective learning (David, 2015; Wang 2012) [13]. Theory was developed from a set of principles developed based on Cognitive Responsibility Theory (Sweller, Van Merriënboer & Paas, 2019) [14]. E-learning theory is a major theory of

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Connectivism because it emphasizes how technology can be used and is designed to create new learning opportunities and promote effective learning. Since functional memory has a limited capacity and the brain will suffer from overcrowding when students are introduced to too much information, resulting in dysfunctional learning, it is important to balance these three types of load in order to improve learning efficiency (Clark, Nguyen & Sweller, 2005) [15]. Based on this, Mayer, Sweller, and Moreno (2015) [3] developed 11 design principles designed to reduce external mental burden and regulate internal and internal loads at the appropriate level for technology users (Mayer, Sweller & Moreno, 2015; Wikipedia, 2020) [16]. These types of cognitive responsibility, as well as the principles of design and technology, incorporate e-learning theory.

[4] proposed a system in which FASTRA downloads and data transfers can be carried over a high speed internet network. On enhancement of the algorithm, the new algorithm holds the key for many new frontiers to be explored in case of congestion control. The congestion control algorithm is currently running on Linux platform. The Windows platform is the widely used one.

CSE TUTOR HUB offers new courses directly to you. Take any class, anytime you want, anywhere you want, without the extra software you can download. All a user needs is an internet connection to access information. Learn about your speed and access your computer science and engineering courses if you are ready. This CSE TUTOR HUB project can be helpful to all students to improve their knowledge. CSE TUTOR HUB offers students excellent opportunities to interact with teachers.

They can be contacted via Google Form 24 hours a day 365 days a year. The website is designed in a systematic and easy-to-use way that is convenient and easy for users to learn online resources, and watch videos related to courses and computer science and engineering syllabus. Considering these metrics it is assumed that the built-in website is easy to use.

II. RELATED WORKS

Various assessment and evaluation have led to the adequacy of different educational learning strategies. The educational process of learning has certainly improved over time. The learning process of current education uses a mind-blowing approach. Multimedia learning is a specific e-learning goal, and it asserts that in-depth learning can be developed using two audio formats, visual, and text instead of one or three (Mayer, Sweller & Moreno, 2015) [3]. Previous studies associated with e-learning theory have provided evidence that multidisciplinary media design principles can promote effective reading (Mayer & Moreno, 2003; Moreno & Mayer, 2007) [7]. For example, Mayer (1997) conducted several reviews of multimedia learningand found that multimedia education was effective. To clarify, Mayer (1997) [6] discussed about Reconstruction of Objects with VSN. By this object reconstruction with feature distribution scheme, efficient processing has to be done on the images received from nodes to reconstruct the image and respond to user query..

Personalization is also an important goal of e-learning theory. This principle suggests that introducing words in a conversational and informal style can help promote effective learning (Mayer et al., 2015) [3]. Several studies have shown that making it your own can be effective in learning. For example, Kartal's research (2010) investigated the effectiveness of the design policy of self-employment with 89 college students at the University of Istanbul in Turkey by examining their computer-based teaching content in a personal style, formal style, and formal-neutral. style. The results showed that learning value increased when language style was organized and discussed.

Another study by Kurt (2011) [5] has shown consistent results with the study of Kartal (2010). Kurt (2011) [5] evaluated the effect of multimedia content in a formal style with 22 students and a dialogue style with 23

students. [8] discussed about a Secure system to Anonymous Blacklisting. The secure system adds a layer of accountability to any publicly known anonymizing network is proposed. Servers can blacklist misbehaving users while maintaining their privacy and this system shows that how these properties can be attained in a way that is practical, efficient, and sensitive to the needs of both users and services.

Salter et al. (2014) aims to demonstrate thefeatures and benefits of e-education practice in general and especially in pharmacies, where e-education helps to identify pharmaceutical vehicles and tagreed components kattoua et al | international journal of business management and economic research (ijbmer), vol 7 (5), 2016, 754-762www.ijbmer.com757.

The Web app ensures that it grows a generation of students who are curious to learn more, dream more, and become more.

III. SYSTEM REVIEW

CSE TUTOR HUB - An online learning platform often used by users who are involved in the field of Computer Science and Engineering. It is also used by another user who is interested in topics and is used as a reference. We have included Multimedia to better understand Computer Science and engineering concepts for users.

Problems with the existing system are a limited resource and few users are friendly and very difficult for the student while concepts and no teacher in the existing system. No involvement in multimedia makes it too difficult for the user. The solution to the existing problem is provided in our CSE TUTOR HUB. Overcomes traditional system barriers. It incorporates ideas for self-study that enable the reader to read peacefully. As the internet and related technologies become cheaper and more widespread,

more students can easily learn from it. An overview of the project phases is,

A. USER ANALYSIS

Self-help reading became an important focus of the pastor's harp and was clearly divided. By looking at this data, we combine ideas on how to meet these user requirements. Policy and security issues were initially addressed so that guidelines could be followed through prototyping [12].

B. COGNITIVE ANALYSIS

The instructor hub collected information from shared brainstorming and developed a design idea using paper prototypes. [12] This low-level model allows the instructor harp to establish and allow for free continuity of thought. Interface design screens are presented to end users (or) students and any complete requirements are partially identified in this section.

C. IMPLEMENTATION

The instructor hub has updated their system by looking at changes in initial requirements that fill users while they test. In the first phase of use when the system is built the quality assurance will create tests and you will be responsible for correcting the system error throughout. [12] As this project is being developed and guided by how to do evolutionary prototyping. Testing will take place throughout and not at the end of development.

D. EXPLORATION

Testing is important when creating a responsive website. Testing took place throughout the project as a prototype was developed. The website has been accessed by various browsers and updated accordingly.

Many Device Solutions have been tested using the online quirk tools website [11]. This has enabled us to

verify the website in the form of multi-phone, tablet and monitor screens to ensure content images and banner images are well responded to with adjusted screen view.

E. COMPLETION

After the website model was successfully implemented, we ensured that it was fully utilized without errors or defects, and after that it was introduced to end users (or) students [12]. The website was extensively tested to ensure full functionality beforehand. to produce the final version of the fully functional prototype. The final product fully meets the requirements set by the end user (or) students and the user's self-esteem was rated high.

The Google form is used to collect questions from the user. After receiving the form from the students, the teacher's availability is checked and an email is sent to the students. In that email basic information includes such as the Meeting Link, Meeting Time, and a few other basic information. This procedure is performed in 1 day (24 hours). This helps the reader to clarify better.

IV. IMPLEMENTATION

CSE TUTOR HUB-The Online Learning Platform was developed using Three-Tier Architecture [9]. It is divided into three cognitive categories such as: PRESENTATION TIER, APPLICATION TiER, and DATA TIER.

Tier Web Architecture is the unique process of creating a web-based application that works next to a 3-phase model, consisting of a basic website category, a central programming category and a top client category. The "tier" in this case can also be referred to as a "layer" [9]. This complete 3-phase design module is the architecture of many online web applications. This framework helps to separate Business Logic from Application, Data Storage and database. Our knowledgeable and amazingly productive teacher hub special staff promotes the novel and limited

Web Program Development in three tier web design to enhanceour client organizations.

The three-phase Web Architecture is designed to provide a high degree of flexibility and increased security that can be tailored to each service at each level. This unique web application development framework with 3tier web architecture also ensures that there is more work as work is shared between servers. Web 3-Tier architecture is a link to the design of three links that contribute to the smooth operation of a website.

The presentation phase is the user interface (UI) and application interface layer [9], where the end client interacts with the application. Its main purpose is to show data and collect data to the client. This advanced category can work in an Internet browser, such as a workplace application, or a user interface (GUI), for example. Web presentation categories usually appear using HTML, CSS and JavaScript.

The system phase, also called the rational tier or intermediate phase, is the core of the system. At this stage, the data collected in the presentation phase is processed - in some cases compared to other data in the data section - using the business mindset, a specific set of business rules. The application category can similarly add, delete or edit data in the data section [9].

[2] discussed that Helpful correspondence is developing as a standout amongst the most encouraging procedures in remote systems by reason of giving spatial differing qualities pick up. The transfer hub (RN) assumes a key part in agreeable correspondences, and RN choice may generously influence the execution pick up in a system with helpful media get to control (MAC).

V. RESEARCH AND RESULTS EVALUATION

The colleges have not been able to start their regular classroom teaching due to the veracity of the pandemic, still out there. It uses the Quantitative

Methodology of research to analyze data collected through questionnaires that were sent through Google Forms.

The objectives of the study include:

➢ To see how online learning helps students to learn effectively.

➢ Investigating learner and student feedback.

➢ Finding out how the CSE TUTOR HUB web application improves reading.

➢ The safety of students and professionals alike is of paramount importance, both nationally and socially. [10] We have tried to understand the response from both students and scholars.

➢ 66% of students and 59% of professors want a combination of online and offline classes to send the epidemic. This opens up a new paradigm in the field of education.
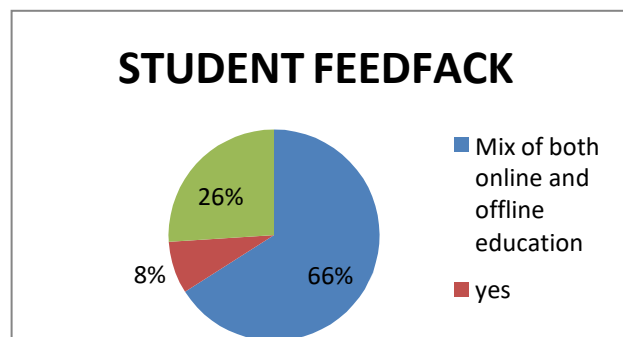

Fig 1.Student Feedback
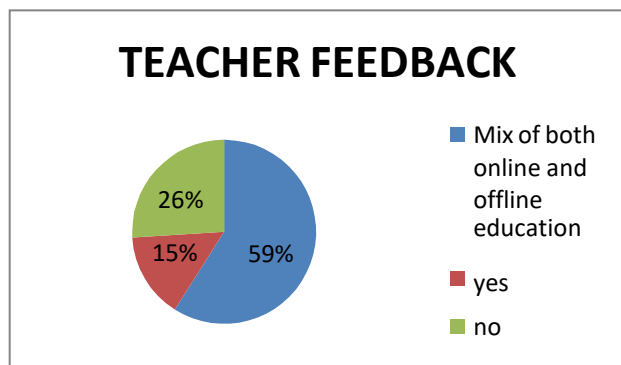

Fig 2. Teacher Feedback

A. ADVANTAGES OF ONLINE LEARNING

An explanatory question was posed to both teachers and students about the benefits of online education.

Their responses are enclosed in parentheses in different headings and the findings are listed below;

Point	Convenient and comfortable	Travel Time Reduced	No Advantage
No.of response	34	17	6

Table 1: Advantages faced by students

The following may be considered in the answers listed in Table 1,

1. Most students have found that the idea of learning online is convenient and comfortable, which helps them choose the setting and the environment in which they will study. Most readers cited the Covid epidemic as well.

2. Travel time is reduced from waking, walking, and moving to classrooms.

Point	Work-life balance	flexibility	No Advantage
No.of response	13	30	3

Table 2: Advantages faced by teacher

The following may be considered in the answers listed in Table 2

1. Most responses have been found to encourage teachers' flexibility in choosing online learning.

2. Much of the same was associated with adequate work life balance.

B. DISADVANTAGES OF ONLINE LEARNING

While online education or reading has its advantages, there are a few disadvantages from the perspective of students and teachers. The most common disadvantages a teacher and students face are;
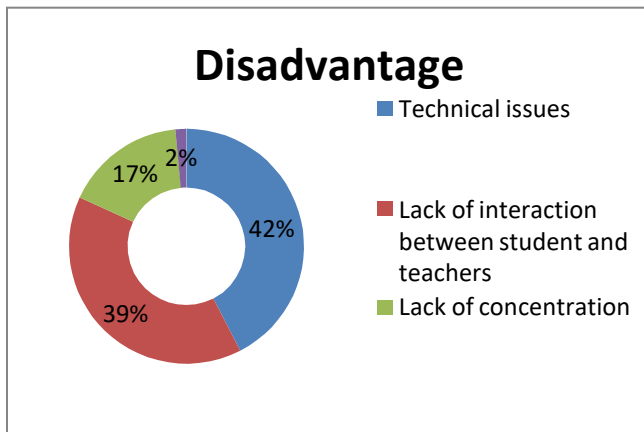
Fig 3. Disadvantages of online learning.

The following can be drawn from the answers listed in the graph above,

1. About 42% of responses from students to face the challenge of technical issues. They felt that technology (computers, cell phones, tablets, etc.) and the Internet connection were an ongoing source of obstacle to learning.

2. 39% of respondents reported that student-teacher interactions were not limited to the online system.

3. 17% of students' responses were that they could not focus on online classes.

Numerous studies have shown how the effective use of web-based learning can help increase students' motivation, and participation. It should also increase student participation and improve behavior and performance in important subjects. [11] One of the key factors in the success of students in the online learning process is self-motivation.

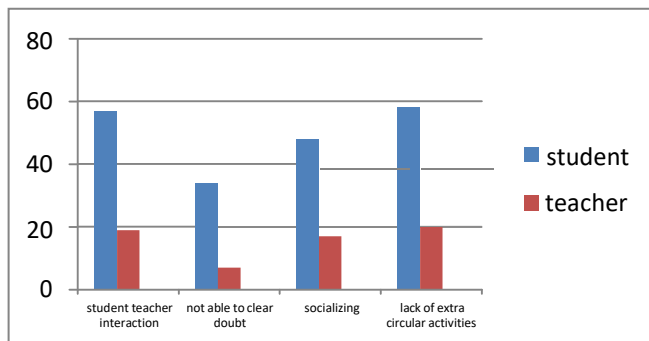Typical barriers to the above study are shown in the graph given below;

Fig 4: common lacks between teachers and students

1. The main thing for teachers or professionals who miss the lack of interaction between them and students, this point is very important due to the lack of immediate response to online lessons.

2. Lack of additional circular activities: Colleges have evolved to provide not only educational space but also other fields such as sports, questions, examples, and paper presentations, which miss most of them.

The CSE TUTOR HUB contains a few advantages and has many functions in it. Helps students earn a degree in Computer Science and engineering at their best. This web application also provides collaboration with teachers which is the basic result of the above research.

VI. CONCLUSION

The increasing use of online grade teaching technology opens up new opportunities that go beyond the provision of more sophisticated delivery tools. This CSE TUTOR HUB is very helpful for students to understand the concepts and enable them to prepare well for the exam. Through self-study, teachers can to a greater extent capture, unravel, and unravel the complexities of teaching that can lead to a deeper understanding of both practice and student learning processes.

E-learning theory is about designing educational technologies that are used to promote effective learning by reducing external and internal mental and physical burdens at appropriate levels for students.

The main purpose of the CSE TUTOR HUB-Online learning platform is to overcome the barriers to normal learning. Both methods of study have both advantages and disadvantages. My vision is to integrate both learning styles into a more comprehensive and participatory learning process.

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