Vidyasetu - A Digital Disruption In Engineering Education System In India As An Impact Of Industry 4.0

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Abstract. Engineering education in India facing challenges from very past ages, but the most recent calls of Industry 4.0 may cause huge disruption for the ongoing education system. This change will not cause greater transparency or accountability of the education system, but it will reflect the role of universities, colleges on higher education, and also how people learn. Industry 4.0 described as an automation process for manufacturing in a smart way. So the time has arrived to create a new wave of the education system that only solve bookish problems but can educate the people to solve global issues. This study will discuss the problems of engineering education in India and the required change in the educational process to meet the new millennium needs of Industry 4.0.

Key words: - Learning Management System, E-learning, Digital Platform, Online Examination

1. Introduction

Education could even be crucial to believe in the economic development of any country. India, after being declared as an independent nation, has always focused on improvising the literacy rate of its citizens. Even today the govt. runs many programs to plug Primary and better Education in India. When watching recent data, it's hard to flee the conclusion that although India has enjoyed a high process this has largely been a jobless process. it's imperative for there to be an enormous push within the areas of education and employment in India. this is often the foremost significant policy challenge facing the Indian economy. In the past, competition between students not so high. But now students face massive competition to urge employment. So, we should always change the tactic of learning in education, so as that they're going to substitute that situation. And this learning management system is not only for college students it also helps school students to be familiar with digital technology and the students are lucky enough to grab this chance and flourish themselves.

2. Methodology

2.1 Tracking Of Attendance

Our Learning Management System (LMS) can enable teachers to have their own dashboard where he can perform multiple operations like tracking & reporting of attendance, along with a calendar where he can put any upcoming event. The LMS also allows attendance management and integrated classroom training where administrators can scout as well as analyse attendance records of learners, late arrivals, etc. Teachers can also monitor assignment submission count and impose comments on their performance during the online session. The organization, Administration, and Teacher accounts have access to the Attendance dataset.
2.2 Live Conference With The Teachers Anytime & Anywhere

The teaching-learning process through live streaming helps to engage students more and more in real-time interactions by incorporating co-curricular activities in addition to the syllabus based curricular activities. Challenges include integrating appropriate technology and managing them effectively throughout the course.

2.3 Accessing Online Study Materials & Notes

A learning system with traditional teaching principles but accompanied by electronic resources can be claimed as a better E-learning approach. Through this approach, we are successful in mobilizing the classrooms virtually and connect the teachers and students virtually. The use of computer and the Internet are the two major components of E-learning. Nowadays even in the corporate sectors, e-learning is the most common means of conducting training programs by professionals across the globe. Here employees are having a larger scope of acquiring important skills through face to face interactions from experts sitting miles away. The schools and colleges which are using E-learning technologies are considered to be a step ahead of those which still following the traditional approach towards learning. It is a proven fact that our brain can easily remember and relate things that we see or hear via pictorial presentations or videos. It is often found that visuals or video lectures are retained in the students’ minds for a longer period. Our LMS has a student’s dashboard & also a teacher’s dashboard where the teacher can upload their day-to-day course & the students can access the materials anytime anywhere.

2.4 Reporting Of The Assignments & Assessments

Assignments can help improve students, but time to time reporting of their assignments & assessments can help them to prepare for the even experienced Vidyasetu manages & records all the assessments & assignments. The teachers can upload the assignments & assessments & the students can easily access the assignments. The teacher can easily track the activity of the students whether they’ve submitted or not.

2.5 Parents Can Easily Track Live Status Of The Student

The most important feature that makes our LMS different from other LMS is Parent’s inspection. Our parents can easily track their student’s activities like exams, exam dates, exam marks, exam reports, assessment reports, attendance, bus route, semester points, etc.

2.6 Online Tests & Scheduled Exams

An e-Exam portal helps to conduct an extremely timed and supervised mode of examination, where a candidate can give his/her exam in their own computer containing a standardized operating system. Electronic exams can minimize the stress of marking, reading illegible handwriting, and thus, saves our time. The quiz is one of the most common eLearning patterns for many of the online courses. In Vidyasetu LMS, the teachers can conduct online tests, quizzes & exams where the students can easily attend the exams from home.
3. Experimentation

The problems that are generally faced by Students in current Learning Management Systems in the market.

a) Adaptability Struggle
b) Technical Issues
c) Computer Literacy
d) Time Management
e) Self-Motivation

3.1 Adaptability Struggle

Swapping from the traditional method of learning to digital learning in a virtual classroom using digital gadgets makes the learning experience completely different for students. Their conflict to change doesn’t allow them to adapt to the online learning environment. It takes a lot of time for them to get familiar with the methods of computer-based learning. While passive listening and sharing notes are expected in a traditional classroom, but online classes via digital platforms, demand prompt action. Understanding the benediction of eLearning and even discussing them with their peers, students can accept the new learning contingency with an open mind and heart.

3.2 Technical Issues

Multifarious students fail to catch up with their virtual classmates, during the online classes, because of lower bandwidth or poor internet connection. Their asthenic devices make it hard to grasp the Learning Management System and their learning experience becomes recondite. The only solution to this problem is to know exactly what kind of technical support they will need for a class. As well as outfitting themselves adequately for successful completion of the course.

3.3 Computer Literacy

Although students are generally tech-savvy, and they can handle computers well, but in some areas, computer literacy is a major issue among students today. Many of them cannot operate fundamental programs such as Microsoft Word and PowerPoint. However, technical proficiency is a must for online classes, as it habituates students to manage their assignments and assessments in an organized manner without struggling.
3.4 Time Management

Time management is a difficult task not only for e-learners but also for the upcoming generation, as everything is becoming digitalization requires a lot of time and intensive work. Rather than students, adults who relish technology-enhanced learning programs for their place and time flexibility, they sporadically have the time to take the classes due to their daily burdens. A regular schedule planner would be an eloquent help to these learners, as they could even set reminders for their classes and assignments.

3.5 Self-Motivation

Self-motivation is an eLearning obligatory requirement; however, many online learners lack it. After attending a few online classes many amateurs fall behind and nurture the illusion of giving up. Students have to find the motivation to supplant the new educational trends, also properly groom themselves for future remonstrances in their careers. Only a positive attitude will help them conquer the qualm in eLearning. eLearning is good to prompt, but at its initial stage, it bounces anonymous menaces to students.

The problems that are generally faced by Teachers in current Learning Management Systems in the market.

a) Inspiring students to be more self-directed
b) Improving Learning Outcomes
c) Differentiating and personalizing teaching
d) Having students exposed to do their job
e) Having the opportunity to take on administrative duties
f) Parental Involvement

3.6 Inspiring students to be more self-directed

Teachers are having a gristly time getting students to be more self-conceited. They are insinuating for a way to ease the pressure of students by keeping them engaged and making sure that the students might encapsulate the new learning method. They also have to ensure that learning takes place in a more conducive, less-tense, less-pressured environment, caricatured to improve their weaknesses.

3.7 Improving Learning Outcomes

Digital Learning is something new and an effective way to expedient students' potential. Negotiating those learning outcomes and having valid indicators to prove this, all the while easing the paperwork and the excel sheets of the teachers have become debatable. Even if these are terminated well, teachers still don’t get that 360° view of how good their students. Furthermore, it is of paramount importance to figure out the best way to optimize this process by analysing its real-time outcomes.

3.8 Differentiating and personalizing teaching

Teachers have acknowledged this but have very few opportunities to assess to ensure that multiple aspects of ability are measured. It is essential to have a new wave of evaluations and how the teaching is carried out. Newer sort of questions, media-enhanced assignments, and the like are what teachers are striving for; diversifying teaching but at the same time keeping it straightforward is a hard to qualitative approach.
3.9 Having students exposed to do their job

Students learning at schools/colleges/universities, is just a fraction of the commitment that needs to be put in for academic success. Keeping that in mind, teachers have the additional responsibility to enable learners outside the classroom in the extra effort. Teachers are trying to figure out ways to motivate learners to study while having fun, and not make it seem as if seeking information is a daunting activity.

3.10 Having the opportunity to take on administrative duties

It takes a lot of time and attempts to develop a program, teach, engage with classrooms, respond to questions for assessments, spend some quality time (and even weekends) correcting and reviewing those assessments, and then spend hours conducting surveys, review, strengths, drawbacks, and other strategic objectives.

3.11 Parental Involvement

Getting the students’ parents engaged and aware is one of the major areas in which teachers have a hard time keeping up. Teachers are looking for a convenient way to make parents a part of their child’s education and have a clear grasp of their capabilities and consistently track their performances.

4. Results and Discussion

In the Vidyasetu LMS, Students will have complete control over their lessons. They're going to learn as per their own pace and learning capacity. Each student learns and memorizes differently. Some might be quick learners, while some might take time to understand a specific topic. During a classroom, the teacher explains concepts and answers doubts, but there are only a few students that get the opportunity to do so. There might be students whose doubts remain unanswered. Some students might feel that the teacher’s pace of teaching is simply too fast for them. It’s impossible for a teacher to pay individual attention to each student. Education through digital means addresses this massive headache by providing additional information and summarized explanations via eBooks and other online study materials. Students don't get to await the teacher to start out or finish a chapter, they’re going to roll in the hay themselves. Online learning allows them to need control of their own learning process. they will undergo the content, re-read chapters, hear audio-books, or take help from external links. Online education helps students in becoming active learners, rather than passive learners while taking full responsibility for his or her own studies.

Figure 2. Attendance Report of Vidyasetu LMS
5. Conclusions

Observing the popularity of Digital Learning in the lockdown period, it is proved that though online education is not a new thing, during the COVID-19 pandemic it is gaining more importance. Students are learning a lot, which is a great bonus. There are many benefits of online education, including the fact that it gives them the freedom to learn at one’s own pace at any time anywhere. E-learning platforms provide high-quality courses, no ads, and no other distractions. In the online learning platform, one can access daily assignments, participate in group discussions, and many more events. It is a great opportunity to unlock one’s creativity or think beyond the curriculum. In this pandemic situation, the web learning management system is so beneficial for college kids in their studies. Online Learning Management System may be a useful part of the e-Learning and development process, especially if you’ve got an outsized audience and a bunch of resourceful study material to deliver. E-Learning content opened up over different hard drives and devices, the scholar can store all of your eLearning materials in one location. This reduces the danger of losing important study material and makes it easier to know your e-Learning topics. Once e-Learning course materials are uploaded onto the LMS and publish them, your audience can access the knowledge once they need it. Not just for the tutorial institution you'll use it in industrial learning. As such, your corporate learners can always remember the newest compliance rules that they have to remember in order that your organization can avoid costly penalties.

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