

Learning Management System (LMS) Challenges During Pandemic: A Case Study of Google Class Room versus Talent LMS

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ABSTRACT

The recent transitions of online learning during crisis have changed the entire perception of e-learning. Learning Management System (LMS) has occupied a major role in providing resources on learning due to the advancement in technology. There should be a qualitative approach towards learning through online in these services with the aim of sustainable education. This research paper is trying to critically analyse two major platforms for online learning; Google classroom and Talent LMS by stressing the areas like the content management, compliance management, evaluation system, participatory platform, customised learning. The study also brings out the significance of various models and theories including TAM, diffusion of innovation, blended learning in connection to online learning. The researcher has done a case study on the relationship between two major LMS and their role on better education for future generation. There is an area in the study which gave special reference and suggestions for better usability and utilisation of these online platforms.

KEYWORDS: Learning Management Systems (LMS), Technology Acceptance Model (TAM), Google Classroom, TalentLMS

INTRODUCTION

The concept of online classroom has swiftly changed the age old existing image of an ideal traditional class room. As part of the advancement in technology, the numerous benefits of a digital class room brings the entire globe in one click for a teacher which really can be a great advantage. There are still many challenges to be overcome for teachers to excel in digital age.

During the time of a pandemic or a crisis, the digital opportunities are used well by all over the world. The Learning Management Systems (LMS) really brings a plethora of options for education when a crisis hits the humanity. Online learning methods are receiving extraordinary appreciation for continuing the learning process during a pandemic like COVID-19. According to UNESCO more than 2 billion students are affected due to closure of schools worldwide and simultaneously there is a fast demand for online learning platforms also.

E-learning refers to “technology-based learning in which learning materials are delivered electronically to remote learners via a computer network” (Zhang, Zhao, Zhou, & Nunamaker Jr, 2004, p. 76). LMS is such an application or platform which helps to make the reality of e-learning in digital environment. The effective implementation of this tool is important to improve the quality of learning, access to education and training, provide cost-effectiveness and

reduce the cost of education (Bates, 1997). There are many factors which portray the success of the LMS learning method. The factors include behavioural patterns of teachers and students in digital platform, management support and acceptance of the change. In particular, the users of these systems may have a different point of view towards technology adoption and acceptance; therefore, this is important to consider when evaluating technology-mediated online learning systems (Dillon & Gunawardena, 1995). As students are the stakeholders and end users their acceptance and approval of such learning platforms are the major areas to undergo changes.

The evolution of Learning Management Systems (LMS)

The evolution and history of LMS trace back to 1924 along with the invention of teaching machine. According to Ellie (2009) an LMS can be defined as a dashboard or an online platform that facilitates the user to apply learning methods and process, plan and evaluate the process of learning. In other words, the person uses LMS is supposed to develop and manage the educational material in electronic or online format and also by facilitating the learner to use the platform for referring and using course materials for their personal development. A better participatory and interactive mode of learning was expected from such LMS services. Learning management systems were first introduced in the late 1990s, and their adoption has been accelerated by the development

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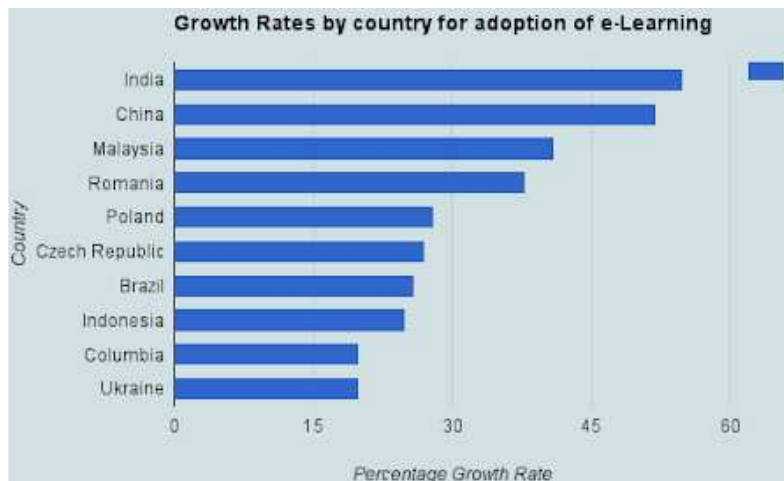


of multimedia and the expansion of the Internet (Coates, James, & Baldwin, 2005). Such learning methods are known before in various types like computer based learning methods (CBM), distributed learning systems (DLS), Content management system (CMS) and Instructional Management Systems (IMS). The main advantage of using LMS is that there lies a participatory approach of teachers, students and administrators for working together. LMS has gained more momentum due to these features.

The significance of online platforms for learning have arrived in a global importance where by using technologies can bring down the complexities in work for all the ones connected to each other in virtual age. Online learning is used in diverse fields of education due to the increase demand due to pandemic. Online education can be used for class management, material or resource exchange, preparing for course, evaluation system and even feedback system from end users and data storage level.

Online education scenario in India

It is clearly found out that the online education in India is increasing tremendously from past years to coming years (2016-2021). When we come to the potential preference of online education there are major five features in online education market (KPMG, 2016)



Source: stratbeans.com

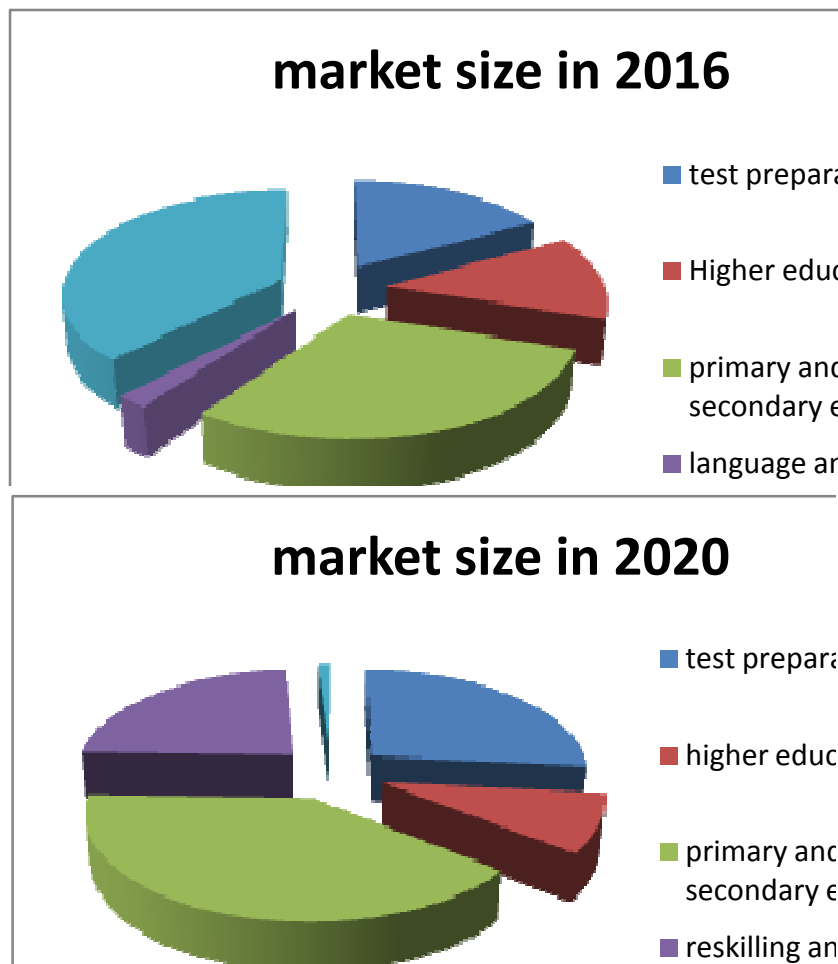
The features of online education market can be described as

- Make the user skilled with online certificate courses
- Primary, secondary and supplementary education
- Test preparation or evaluation
- Higher level of education
- Language and causal learning

Making the end user self-sufficient with skills and online courses occupies the major role in online education market along with the benefits of primary and supplementary education is also a growing area in this field. Even there are many higher education reforms in progress by Government still higher education through online platforms occupies the fourth position. There is a major trend to be noted that test preparation or evaluation system holds a better position in online learning market than all other casual learning.

Online learning market has flourished so far due to many factors including less expensive mode of learning, creation of qualitative learning perspectives, the target audience are youth who are fully advanced with technology in the age group of 18-30 years, the mode of employability in new media, authorities facilitation for digitalisation and high level of increase in internet users.



Category wise details of online education market in India(source KPMG,2016)

Source: KPMG, 2016

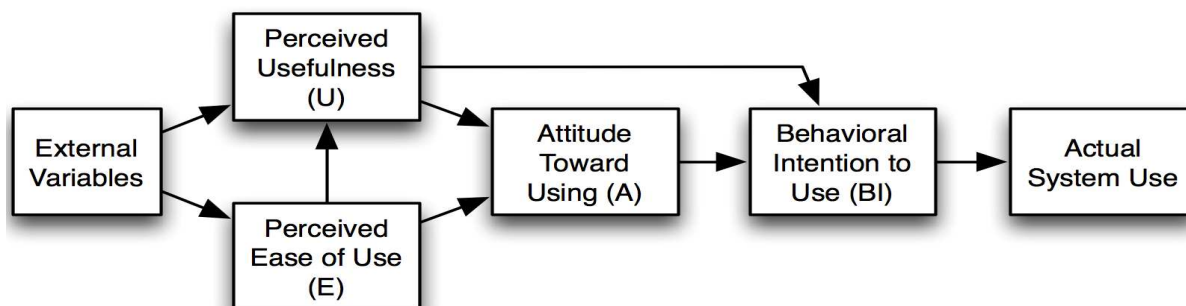
Emergence of LMS significance during Pandemic in India

Due to the forced paradigm changes in life style due to pandemic, there is a severe changes been happening in all the sectors of life. In the field of education, the redesigning of learning methods to online mode of learning form age old traditional method is in the infant stage. Due to staying in indoors for a long time, the trend and need of e-learning developed in all irrespective of ages. When a pandemic like COVID-19 demanded everyone to maintain strict social distancing, it indirectly accelerated the growth of online education market. Internet, big data, Artificial Intelligence, 5G, and cloud-based platforms, among other technologies, have been put into service of education.

This unexpected shift from traditional teacher centric method of learning to student centric activities like discussions, participative and interactive learning needs complete conceptual thinking and makeover for teaching styles, learning methods (Jandric, 2018). There needs a constant research to be done in the quantitative and qualitative level of these modes of learning even after pandemic ends so that a futuristic approach for better tomorrow can be built easily. Successful sustainable online pedagogy should be updated along with building virtual learning environment foe better online learning in the coming years.

Structural model of learning, Student's Adoption of learning, quality of learning in online learning

Researchers of different areas had studied the behavioural patterns of the one who are benefited by online learning to understand the various levels affecting the acceptance or rejection of these technologies. These studies use Technology Acceptance Model (TAM Davis et al., 1989) as theoretical base as it is proved as one of the effective model in providing knowledge on information technology.



Source: The Technology Acceptance Model, version 1. (Davis, Bagozzi & Warshaw 1989)

According to this model which was first introduced in 1949, it says that the success and acceptance of a new information system (IS) is only based on the patterns of behavioural changes or Intentions (BI), Attitude to Use (A) and perceived usefulness (U), finally based on perceived easiness in use (E).

Diffusion of Innovation Theory

Medlin (2001) and Parisot (1995) viewed that Rogers' diffusion of innovations theory is the most appropriate for investigating the adoption of technology in higher education and educational environments. This theory gains momentum in the era of digital learning because Rogers (2003) had defined an innovation as an idea, object and idea that is perceived to be novel by the individual and diffusion as the process by which innovation is communicated through several channels over time among other social members.

The Innovation Decision process steps

- Knowledge
- Persuasion
- Decision
- Implementation
- Confirmation

According to Rogers (2003) there will be different stages for innovation for everyone and that will keep changing based on the social factors of respective people. Based on the innovativeness criterion, the degree to which an individual is relatively earlier in adopting new ideas than other members of a social system, the distribution of various adopter categories forms a normal, bell-shaped curve that illustrates Innovator (2.5%), Early Adopter (13.5%), Early Majority (34%), Late Majority (34%), and Laggards (16%).

Blended learning and Google class room

The term blended learning refers to a wide range of definitions where it can be considered as blend of pedagogic approaches (Oliver and Trigwell 2005) or even it is referred as the blend of didactic ways and delivery methods (Kerres and De Witt 2003). Driscoll (2002) defined blended learning in four different ways: the blend of modes of web-based technology; the blend of various pedagogical approaches; the blend of any type of instructional technology with face-to-face teaching and the blend of instructional technology with actual job tasks.



Source: CVO Europe, life sciences consultancy website

Google class room had adopted blended learning and its nature of educational interactive tool which creates a highly informative rich education environment by Google Docs text editor, Google Drive cloud storage, Gmail and other applications (YouTube, Google Sheets, Google Slides, and Google Forms). Under this blended learning method, Google classroom have an effectiveness in blending students inputs and tasks into thematic modules by providing constant pedagogical support to teaching methods.

Talent LMS model of learning

With the arrival of computer and internet facilities in late 20C has paved the clear way for e-learning to get expanded in India. Online learning always needs to focus on collaborative atmosphere to students where there are chances for building peer group relationship along with learning. Teachers and students can also build a interactive platform and relationship along with the thrill of learning in these LMS platforms. The following diagram helps to explain the relevance and phases of online learning and its advantages which majority of LMS platforms like TalentLMS tries to imbibe in their style of operation.

TalentLMS is an online educational platform which primarily emphasis on learners retention by highlighting the policy of really learning less properly is more. According to talentlms short learning sessions are highly effective than long continuous ones and the retention power will be more for

the former one. In the e learning modules they stresses more on creating content in the form of a narrative to bring better understanding for the end user. Another area is the highlight of proper evaluation methods in regular intervals for quick feedback for betterment. These communities in

Major features of TalentLms

The major features of talentlms is being categorised into four.

- Collaborative Administration
- User-friendly content creation
- Proper management of user needs and expectation
- Customisation

In the case of administration this LMS serves the purpose of providing helpful videos, interactive online board, and calendar for instructor to plan the activities and extreme

automation engine. The lms also provides a platform for e-content buying from other applications and also arranges online teaching and meeting through zoom, Google meet. Regarding the content creation talentlms, there is an array of features like authoring capabilities; no restriction in storage size, individual evaluation method, automatic reassignment of courses and finally data will be stored in Google drive for future uses.

When the feature of proper user management comes, this lms observes areas like safe account creation and bulk user management are provided by lms Customisation is considered as the main area for maximum satisfaction through the custom login pages for different branches, even integrates with various other resource management devices and prevents the user to login from multiple devices at a time.

Model of working of Google classroom

Google classroom possess many features like separate and single view on students progress evaluation and tracking of improvement individually, flexible reorganising and re-ordering of classes specifically on participatory approach, proper grading system for individual development.

There is a special feature of creating class rooms in this lms. Classroom can be created by one teacher where he can add the rest teachers in the same group without separate platforms which consumes very less time. There is also a system of unique class code which will be created along with classroom creation and accessibility is only possible through the proper channel.

Comparison of Talentlms over Google classroom in the case of specific features based on end users experience

The end users were reluctant in delivering their experiences on the use of these LMS but finally the details are presented based on eight features of both lms and users satisfaction level.

1. Course Management System

In the case of integrated learning, Google class stands in front than any other online learning methods as it provides wide opportunities for learner and instructors in one single window. Talentlms is integrated with Slack through Zapier. Regarding the content exchange

- Instructional objectives are supposed to become individual learning
- Blended online education needs to be focussed and
- Learner centric approach should be high which is seen for talentlms in a wider angle which has a corporate style in learning also.

The performance of Google classroom is considered as better in the areas of communication, interaction, perceived usefulness, ease of use, and overall students' satisfaction (Shaharane, Jamil, & Rodzi, 2016)

Similarly, (Espinosa, Estira, & Ventayen, 2017) has evaluated the efficiency and functionality of Google classroom as a Learning Management System (LMS). The study found that cost was the primary reason for the adoption.

2. Evaluation system includes majorly

- Constructive based instruction

- Individual attention
- Personalised assessment

It is found that in the case of evaluation system, Talentlms showed more efficiency as they adopt Phillips ROI model where the level of returns after training and when evaluation is carried out is emphasised well.

3. Collaborative online platform for users where parents teachers and students complete involvement was highlighted is seen in both the LMS in a very efficiently managed.

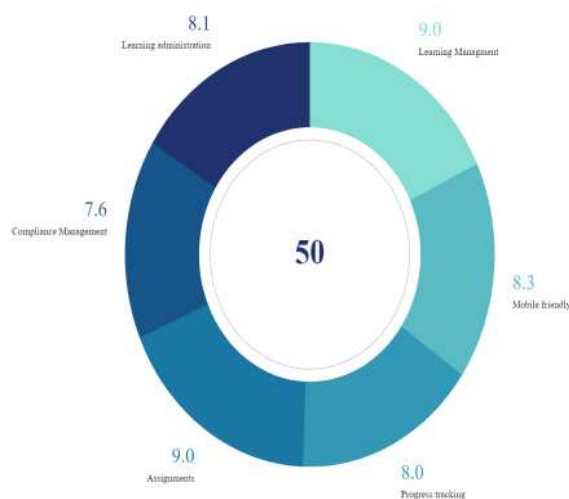
4. Customised Learning including

- Adaptive sequencing
- Online discussion board
- Flexible data management are seen extensively in Google classroom than any other online learning platforms.

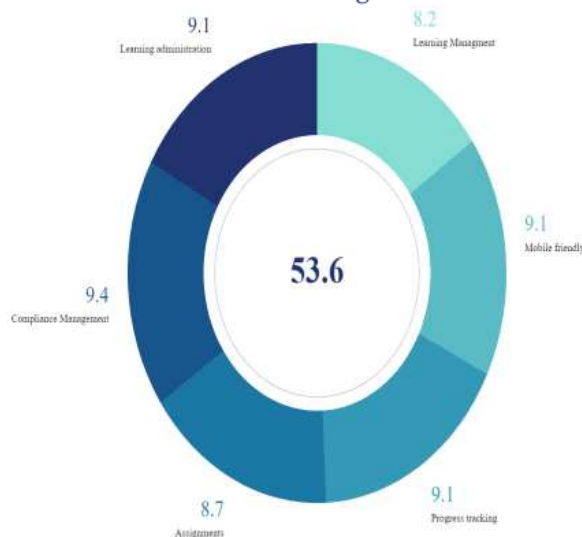
5. Online education provides a low cost alternative
It is clearly found (KPMG, 2016) online courses are the acceptance of online courses will increase tremendously in coming years.

Comparative Analysis of Google class room over TalentLMS

Google class room, rating out of 10



TalentLMS rating out of 10



Source: trustradius.com

While comparing the two learning platforms, regarding learning management as a whole, Google classroom is accepted by users more and when coming to the facility of mobile friendliness TalentLMS is considered as more convenient for the users. Tracking the progress of student regularly is another feature of TalentLMS where managing assignments are the speciality of Google class room. Excellent learning administration and compliance management are other features of TalentLMS. Usability and implementation level is more seen in Google class room than the other.

In general, the two LMS services possess their own features distinct from each other, but the behavioural intentions of the user plays as the most for determining the acceptance and rejection of such services.

Future of LMS Learning

Finally if we observe the changing phases of upgrading technology such as social media and other new media it is crisp clear that due to increased development of mobile networks and telecommuting the e-learning will sustain in the coming years more extensively. Traditional classroom enrolment has decreased over the years when compared to the increase in student enrolment into online learning environments (Imhof, et al., (2018). The mushrooming of immense number of tools for creative interactive e-learning, emergence of informal tools for education brings the image that e-learning in spite of its expensive nature will rule the education scenario in coming years. But still there should be some initiatives for better effective and qualitative e-learning to make the end user attracted to this service.

Unlike traditional method of teaching the e-learning possess many advantages like micro-learning which stresses on micro learning activities through online media which is highly accepted nowadays.

Another area where there is tremendous improvement was the personalised area which is the mix of curriculum with pedagogy to meet the users easily. And the advantage of personalisation lies in the freedom and liberty of the end user and the degree of choice and acceptance given by the user. These all are based on behavioural intentions study which made online learning unique and simple in usage.

All these types of automatic learning might not be acceptable for few but the real fact is that its benefits are seen in multiple levels when used in the proper manner.

To conclude,

There is interesting saying, *In order to create an engaging learning experience, the role of instructor is optional, but the role of learner is essential.* - Bernard Bull, the saying which is the best one to evaluate the use and usefulness of online

learning and Learning Management Systems(LMS). The proverb even makes us to go back to the roots of Technology Acceptance Model(TAM) which also says that the effectiveness of online learning we need to study the end users acceptance and rejection level for the new mechanisms. LMS also needs to evaluate this proverb that the need of quality based teaching style with the power to make the end user involve effectively in it is what the real success of LMS operations. So every time they need to go for phases of research and development on the feedback of end user for their existence and sustaining in the market.

According to the author these LMS services are supposed to pay more attention in five key areas for increasing their performance standards in coming years

- Sustainable improvement for enhancing quality of learning
- Provide better facilitating conditions and voluntariness of use
- Need to focus on research in the field of technology acceptance behaviour of end user
- Early stages of implementation should stress more on better LMS enabled blended distance education learning

Teaching note

- [1] LMS depends largely on end user acceptance. Do you think you will easily earn approval for a new technology among mass users?
- [2] Google classroom has the problem of no automated updates or feeds which makes the user to take effort for each time to log in to see the updates. Do you think this can easily create a end user raise a dispute over live notifications and ineffective feedback system
- [3] Do you think user satisfaction of Google classroom can be increased in the future to control the competition with other LMS?
- [4] As the best LMS award was received by Talent LMS for the year 2019, what are the better initiatives taken by your team for longer sustainability in the competitive market
- [5] Why did Google classroom didn't go for many features like instructor-led courses, power point conversion, self paced courses like that of Talent LMS, Is there any plans for future expansion of services
- [6] Talent LMS is mostly into corporate organisation and training employees. Do you feel that this mix will destroy the authenticity of education and learning?
- [7] Google LMS is seen excelled in assignment management and effective evaluation system than TalentLMS. In the competitors list what is your opinion about who will be excelling as the best LMS.