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"LEARNING MANAGEMENT SYSTEM IN SECONDARY EDUCATION"

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ABSTRACT

In today's era technology is the most important aspect of human life. In this era, every sector is connected with technology, Technology has been a very important contribution in every field of arts, business, and science. Similarly, the importance of The Learning Management System has played a very prominent role in the field of education during the pandemic situations like COVID - 19. Today the work of Teachers is not only restricted to teaching only but nowadays he or she should work as a facilitator. Research is mostly focused on the use of Learning Management System in secondary education. The changing patterns of technology have come with new and innovative ideas in teaching and learning. However, the study aims to analyses the impact of LMS on various stakeholders. Although there are still some vernacular and government schools that are not paying attention to the learning management system, they are still adopting their old methods of teaching and learning. It was also found that those institutions which were using the Learning Management System before pandemic found very less difficulties to adopt the new teaching pedagogy during the pandemic situations and are giving a good amount of exposure to their students and also their teachers. For the purpose of research the researcher has taken the area of Mira-Bhayander City which is a part of thane district which is the close to Mumbai city.

Introduction

The Pandemic Covid-19 has played a devastating role in education sector all over the country not leaving a single state, class, gender, region, caste unaffected. The decision to close schools and move traditional classrooms to digital platforms is driving not only the inequality of learning among children, but also the large number

of children out of school due to the digital divide. Aside from learning, school absences also have a lasting effect on children's health and nutrition.

Learning Management is concerned with getting the right knowledge to the right person at the right time which adds value to the firm's knowledge assets to meet organizational goals. A Learning Management System enables the organization to use and share information more effectively. It considers three main organization resources—People, Processes, and Technologies. A Learning Management System comprises a range of practices used in an organization to identify, create, store, represent, distribute, and enable adoption to insight and experience.

The Learning Management System or popularly known as LMS in the community of higher institutions is an online portal that connects lecturers and students. It provides an avenue for classroom materials or activities to be shared easily. It is also a portal that enables lecturers and students to interact out of the classroom, having discussions through forums that could otherwise take up too much of the time supposed to be spent learning in the classroom. (Adzharuddin and Ling, 2018). The outbreak of COVID-19 was unexpected and it forced Peking University to launch live online programs of a total of 2,613 under-graduate online courses and 1,824 graduate online courses in order to ensure the normal teaching operation, with 44,700 students stay at homes or dorms (Shahmir *et al.*, 2011)

There are three broad categories of knowledge i.e. Tacit, Explicit, and Embedded. Tacit referred to like know-how, intuitive, experience-based, dependent, personal and hard to define which requires deeply rooted in action, commitment, and involvement. The absence of attention towards the development of tacit knowledge leads to the reduced capability for innovation. Explicit referred to as codified knowledge which is found in documents, database etc. Information Technology is required to transfer and storage. Embedded knowledge is such which is created by making rules, processes manuals, organizational culture, codes of conduct, ethics.

For the purpose of the research study Mira Bhayander City which is situated in Thane District has a total land area of 79.40 square kilometers and population of 8,09,378 as per 2011 census out of which 53% were male and 47% were female. From the total population 93% of male and 88.59% of females were found literate. From total population 11% were children. However it is to be noted that Mira Bhayander area comes under the jurisdiction of Mira Bhayandar Municipal Corporation. In Maharashtra State there are total 24,834 school out of which 23,491 are State Board, 970 are CBSE. 234 are ICSE, 86 International Board, 53 others.

REVIEW OF LITERATURE

(Beri and Sharma, 2019) It has been found that to some extent teachers have a positive attitude towards ICT tools which is being used in the teaching process. However due to the many complications such as lack of training and technical support from themanagement and government they've not incorporated completely.

(Oulmaati, Ezzahri and Samadi, 2017) Their study reveals that Social Networks and WhatsApp Messenger and MS-Office are the most widely used ICT tools to share and communicate course-related digital documents andideaswith the students. However due to lack of information literacy, unawareness about scientific research tools they find it difficult to make effective use of searched information at the Abdelmalek Essaadi University in Morocco.

(Habib, 2017) In their research they found that ICT plays a vital role as a powerful agent for change among many educational activities. They found that ICT was used for online examinations, online fees payment, reading online books and journals. ICT in higher education thus enhances the learning process, offers online learning facilities to thousands of learners who are unable to benefit from higher education through a number of checks, such as time, expense, geographical location, etc.

(Meenakshi, 2013) The objective of this research is to find out the important issues that need to be addressed both in-service teacher education programs and in-service career development programs. She found that Internet and ICT tools were never or rarely used by the teachers for information gathering or preparation of notes on rare or regular basis, due to inadequate training and access.

RESEARCH METHODOLOGY

OBJECTIVES

- 1) To know the Usage of Learning Management System in Secondary Education.
- 2) To know the Perception of Teachers and Students about LMS in Teaching and Learning.
- 3) To know the impact of LMS in Institutions financial budget and Fees structure.

HYPOTHESIS

[H₀] There is no change in the percentage of annual budget kept aside for LMS facility before COVID 19 and during COVID-19.

[H₁] There is a change in the percentage of annual budget kept aside for LMS facility before COVID 19 and during COVID-19.

[H₀] There is no change in the percentage of annual fees charged by secondary education institution before COVID 19 and during COVID-19.

[H₁] There is a change in the percentage of annual fees charged by secondary education institution before COVID 19 and during COVID-19.

UNIVERSE OF THE STUDY

The Study has conducted in Mira-Bhayander city which is the part of Thane district. The Researcher has taken CBSE, ICSE, State board and international board as the universe of the study. Mira-Bhayander covers the population of almost 8.14 lakhs. Mira-Bhayander has more than 130 secondary section schools.

SOURCES OF DATA COLLECTION

The Research include both primary as well as secondary data. For the collection of primary data structure questions has been asked to various teachers and students of different schools.

SAMPLING

For the purpose of study researcher has selected teachers and students of 52 secondary schools of Mira-Bhayander city.

LIMITATION

- The Geographical limitation of Primary data is bound to the Mira Bhayandar and Thane district only.

- The Primary data which was collected from the secondary schools was between October 2020 to January 2021.

DATA ANALYSIS AND INTERPRETATION

Demographic Background of Respondents (Table No. 1)

Boards	CBSE	State Board	ICSE	International Board	Total
Schools	4	44	2	2	52
Teachers	18	56	17	26	117
Students	50	81	33	72	236

Teachers and Administration Staff Perception (Table No. 2)

SR NO	ITEMS	AGREE		DISAGREE		STRONGLY AGREE		STRONGLY DISAGREE	
		F	%	F	%	F	%	F	%
1	LMS improves the quality of teaching.	64	54.70	12	10.26	36	30.77	5	4.27
2	LMS helps in distributing lecture notes effectively amongst students.	39	33.33	57	48.72	6	5.13	15	12.82
3	LMS consumes more time.	27	23.08	77	65.81	2	1.71	11	9.40
4	Post implementation of LMS the Performance of Students has improved.	78	66.67	4	3.42	23	19.66	12	10.26
5	Post implementation of LMS number Students Admission has increased.	65	55.56	0	0	51	43.59	1	0.85
6	LMS has improved their efficiency in administration work.	56	47.86	19	16.24	32	27.35	10	8.54

As per the responses received from the teachers it was found that 54.70% of the teacher agrees that LMS improves quality of teaching whereas 33.33 % of teachers agrees that LMS enables teachers to distribute the lecture notes effectively amongst the students. 65.81% teachers strongly disagreed that LMS consumes more time. 66.67 % and 43.59 of the teachers agreed and strongly agreed that overall performance of the students and total number of student's admission has increased. Table also reveals that 47.86% of administrative staff agrees that after the LMS implementation has increased their work efficiency.

Student's perception of LMS in Learning (Table No. 3)

SR NO	ITEMS	AGREE		DISAGREE		STRONGLY AGREE		STRONGLY DISAGREE	
		F	%	F	%	F	%	F	%
1	LMS allow you to pay more attention in learning.	123	52.12	5	2.12	96	40.68	12	5.08

2	LMS allow students to express their ideas more effectively.	92	38.98	58	24.58	37	15.68	49	20.76
3	Use of digital lecture notes has created negative impact on their eye sights.	146	61.86	26	11.02	39	16.53	25	10.59
4	Lack of access to LMS tools they face problems in their learnings.	152	64.41	16	6.78	54	22.88	14	5.93
5	Use of LMS has increased overall academic performance of the students.	68	28.81	61	25.85	78	33.05	29	12.29

As per the responses received from the students it was found that 52.12 % and 38.98 % of students agrees that LMS helps them to give attention in learning and share ideas more effectively respectively. Amongst the all students it was found that 61.86% of the students found that use of digital lecture notes has left negative impact on their eye sights whereas 64.41% of the students found that lack of access to ICT tools lead to face the problems in learning. Above table also reveals that 33.05% of students strongly agrees that LMS has assisted them to improve overall academic performance.

**The percentage of annual budget kept aside for LMS facility PRE COVID-19
(Table No. 4.1)**

Percentage of Budget	CBSE	State Board	ICSE	International Board	Total	Percentage (%)
0-5 %	1	8	0	0	9	17.31
5-10%	1	30	0	0	31	59.62
10-15%	1	3	0	0	4	7.69
15 % & Above	1	3	2	2	8	15.38
Total	4	44	2	2	52	100

**The percentage of annual budget kept aside for LMS facility DURING COVID-19
(Table No. 4.2)**

Percentage of Budget	CBSE	State Board	ICSE	International Board	Total	Percentage (%)
0-5 %	0	5	0	0	5	9.62
5-10%	2	32	0	0	34	65.38
10-15%	0	2	0	0	2	3.85
15 % & Above	2	5	2	2	11	21.15
Total	4	44	2	2	52	100

(Table No.4.3)

	BEFORE COVID 19	DURING COVID 19

Mean	2.2115	2.365384615
Standard Deviation (SD)	0.9147	0.9294
Observations	52	52
Pearson Correlation	0.5531	
Hypothesized Mean Difference	0	
df	51	
t Stat	-1.272	
P(T<=t) one-tail	0.1045	
t Critical one-tail	1.6753	
P(T<=t) two-tail	0.209	
t Critical two-tail	2.0076	

To test the hypothesis paired T test was performed from table no 4.1 & 4.2. It evident that mean range and standard deviation of the percentage of annual budget kept aside for LMS facility budget of Secondary education institution before COVID (Mean 2.2115, SD 0.9147) and after COVID (Mean 2.3653, SD 0.9294) also the P value (0.1045) is less than significance level, so it indicates that rejecting Null Hypothesis. It means there is changes in percentage of annual budget during the COVID 19. For the purpose of this research schools of four boards have been taken into consideration mainly CBSE, ICSE, State and International board. From the above table, it is clear that majority of the schools of all boards i.e. 59.62 % has kept 5-10% of their annual budget for the LMS Facility from which 30 out of 44 i.e. 68% of state boards schools has kept their annual budget ranging from 5-10% for implementing LMS system into their institution. Whereas very few have managed to keep 10-15% of their annual budget for LMS Facility.

Fees Structure before implementing LMS pre COVID 19
(Table No 5.1)

Fees Increase Percentage	CBSE	State Board	ICSE	International Board	Total	Percentage (%)
0-5 %	3	1	0	0	4	7.69
5-10%	0	40	0	0	40	76.92
10-15%	1	1	0	0	2	3.85
15 & Above	0	2	2	2	6	11.54
Total	4	44	2	2	52	100

From the above table it is clear that majority of the schools of all boards i.e. 76.92 % has increased their fees from 5-10% after implementing LMS in their institution from which 40 out of 44 institution i.e. 91 % of state boards schools have increased the fees ranging from 5-10%.

Changes in Fees Structure after implementing LMS during COVID 19
(Table No 5.2)

Fees Increase Percentage	CBSE	State Board	ICSE	International Board	Total	Percentage (%)
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0-5 %	0	0	0	0	0	0.00
5-10%	3	40	1	0	44	84.62
10-15%	1	2	1	0	4	7.69
15 & Above	0	2	0	2	4	7.69
Total	4	44	2	2	52	100.00

(Table No 5.3)

PARTICULARS	BEFORE COVID 19	DURING COVID 19
Mean	2.1923	2.153846154
Variance	0.5505	0.211161388
Observations	52	52
Pearson Correlation	0.6016	
Hypothesized Mean Difference	0	
df	51	
t Stat	0.4679	
P(T<=t) one-tail	0.3209	
t Critical one-tail	1.6753	
P(T<=t) two-tail	0.6419	
t Critical two-tail	2.0076	

To test the hypothesis paired T test was performed from table no 5.1 & 5.2. It evident that mean range and standard deviation of the percentage of annual fees structure charged by Secondary education institution before COVID (Mean 2.1923, SD 0.7419) and after COVID (Mean 2.1538, SD 0.46) also the P value (0.3209) is less than significance level, so it indicates that rejecting Null Hypothesis. It means there is changes in percentage of annual fees structure of Secondary education institution during the COVID 19.

CONCLUSION

Teachers using a Learning Management System to improve their quality of teaching found that it helps them to distribute lectures notes effectively. But somehow it is also noted that the use of technology affects student's health, especially on their eye sights. Use of Learning Management System reduces time and efforts required for the administration. It is found that by using technology in learning, students can express their ideas effectively that improves overall academic performance of the students. The observation of this study says that majority of the schools under State Board are not concerned about the implementation of the Learning Management System in their institution, as compare to CBSE, ICSE and International Board Schools and the amount invested by State Board Schools are very less. It is also found that majority of secondary education institution has changed their fees structure by nominal percentage.

SUGGESTIONS

- Schools under State Board shall increase their annual budget allocation for effective Learning Management System integration which provides effective learning.
- The management shall give more importance on training aspect of the teachers, which makes teachers well versed with computer and other technological tools which can be used to make teaching and learning more efficient.
- The State Board shall frame curriculum in such a way that gives maximum exposure towards Information and Communication Technology to students.
- An offline remote access of the lectures notes shall be given to the students to overcome the problem that they face in their learning.
- Secondary education institution may also focus on open source learning management system software such as Fedena, FeKara, Gibbon, OpenSIS, Moodle Modular Object-Oriented Dynamic Learning Environment for effective management of school administration for creating batches, attendance and lecture reports generation, staff management, rubrics, assessments, planner tools, and library catalogues,

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