



**ANALYSIS OF ONLINE MEETING SOFTWARE IN HIGHER
EDUCATION: A REVIEW INSTITUTES IN NORTH
MAHARASHTRA REGION**

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Abstract

COVID-19, has really created a havoc in common man's life. Many business sectors including the travels and tourism at major have hampered due the post-Covid and Pandemic situation. Many sectors took new formations. The sectors like health care, food industries, IT industries are experiencing new challenges like overload, lack of skilled human resources and new targets to meet the market demands. The pandemic situation has forced people to find technology intervenes for their day-to-day operations and business. Education sector has found its own way to educate the pupil by following the rules of social distancing. This has brought a new paradigm in the education sector. Hundreds of colleges, universities, schools, training centers and tutors have moved to virtual classroom settings. Education sector rejuvenate to meet the main challenge of keeping the students connected with class work. The teachers have learned to keep their students engaged in online classrooms.

Though many institutions and public learning spaces are now reopening, hybrid forms of teaching are likely to continue for a while yet. Virtual learning technology plays a fundamental role in the processes of teaching students and the virtual teaching toolkit will largely depend on the size of your student base and organization, your particular role and subject, and any additional learning needs. Budget may not be the problem with larger institutions, but the small-scale institutions face the challenges like required budgetary provisions and skilled technical staff to cope up with the situation. This paper is outcome of the study and review conducted using online question answering mode. An appropriate questionnaire has been designed and distributed to the key-players, Viz. the head of the departments, teachers, technical staff and persons engaged in planning of the institutes' overall run. The major focus of this study is to reveal the use and utility of the different online meeting software, used for higher education in different colleges of North Maharashtra Region. The study highlights the similarity, differences in services, GUI, cost and popularity of different virtual meeting software available in the market.

Keywords: Indian Market, Virtual Learning, Covid19

Introduction

The spread of COVID-19 has led to the closure of educational institutions all over the world. This tested the preparedness of universities to deal with a crisis that requires the help of advanced technology including hardware and software to enable effective online learning. Such closure accelerated the development of the online learning environments so that learning would not be disrupted. Many institutions have become interested in how to best deliver course content online, engage learners and conduct assessments. Hence, COVID-19 while being a hazard to humanity has evolved institutions to invest in online learning. Online learning systems are web-based software for distributing, tracking, and managing courses over the Internet.

It involves the implementation of advancements in technology to direct, design and deliver the learning content, and to facilitate two-way communication between students and faculty. They contain features such as whiteboards, chat rooms, polls, quizzes, discussion forums and surveys that allow instructors and students to communicate online and share course content side by side. These can offer productive and convenient ways to achieve learning goals. In order to teach the students, teachers began to use the meeting solutions (also called collaboration platforms that support live-video communications) including Cisco WebEx, Zoom and Google Meet Etc. Before the pandemic, both teachers and students were unfamiliar with systems such as Zoom and WebEx to

dictate/attend a class, as Skype, Hangout or Whatsapp were typically used to communicate with others. In this context, this paper focuses on analyzing how well the meeting solutions supported users in teaching-learning activities. We evaluated usability and user experience (UX) of this meeting software for their education by considering different parameter.

Literature Review

Otto Parra et. al.[1] proposed a comparison of two (Webex and Zoom) most popular meeting software used for online teaching for higher education during pandemic situation. User Experience Questionnaire and Microsoft Reaction Cards are used to evaluate the user experience and usability of this meeting software. It is observed that Zoom was significantly more attractive than WebEx.

Pravat Kumar Jena discussed usability errors and measures user satisfaction of a dedicated video conferencing system (VCS) in a university. The summative and empirical usability evaluation methods are used for evaluation. Different parameters are considered for study involving observations, semi-structure and unstructured interviews, and discussions enabled qualitative data collection. PACT ((people, activity, context, and technology) framework was applied for analyzing and reporting the context of use.

Angie Del Rio-Chillcce mentioned the survey of different online tools used by teachers and students. The tools consist of Google Meet, Zoom and Microsoft Teams.

Y. Bandung suggested that Information and Communication Technology plays an important role in higher education during pandemic. Google meet was mostly used by students in

work meetings as opposed to teachers who preferred to zoom in on class meetings.

Methodology

Data Collection Method

The data for this study was collected in the form of a survey using an online Google form questionnaire given to head of the department and faculty members of different institute of North Maharashtra University region. The number of respondents was 25 with a total of 21 questions divided into **5 categories. The categories are as follows:**

Category 1: Used of Institute Level Online Meeting Software

Category2: Service quality parameters of online meeting tool

Category3: Effectiveness of Online Teaching and Teaching Pedagogy

Category 4: Content Delivery during Online Teaching

Category 5: Online events and Conferences Organization

4 Results and Discussion

The online survey questions are divided into five major categories as Institute Level Online Meeting Software used, Service quality parameters, Effectiveness of Online Teaching and Teaching Pedagogy, Content Delivery during Online Teaching and Online events and Conferences Organization.

I) Institute Level Online Meeting Software used

In this category after collecting the responses of the respondents it is identified that each institute have more than 4 departments with sufficient faculty in each department.

Table 1: Results of Institute Level Online Meeting Software used

Sr. No.	Category Question	Year	Score							
			1	2	3	4	5	6	7	
1)	Institute support teachers with online meeting software?	2019-2020	16 (Y) (64%)	9 (N) (36%)	-	-				
		2020-2021	19 (Y) (76%)	6 (N) (24%)						
2)	Faculty used their own online Meeting software?	2019-2020	17 (Y) (68%)	8 (N) (32%)	-	-				
		2020-2021	21(Y) (84%)	4(N) (16%)	-	-				
3)	On which of the following platforms you run the online classes/ Meetings?	2019-2020 and 2020-21	6 (GM)	7 (GMZ)	1 (GMCW)	3 (Z)	3 (MT)	2 (GMMTZ)	3 (MTZ)	

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4)	Have your college subscribe/purchase above online tool for teachers?	2019-2020	10 (Y) (40%)	15 (N) (60%)	-	-			
		2020-21	12(Y) (48%)	13(N) (52%)					
5)	The plan of online meeting platform allows no of participants simultaneously?		15 (up to 100) 60%	7 (>100) 28%	3 (>500) 12%				
6)	Meeting time allowed by the tool?		45 Min 7 (28%)	1 Hour 3 (12%)	2Hours 1 (4%)	Unlimited 14 (56%)			

GM-Google Meet, GMZ- Google Meet and Zoom, GMCW-Google Meet and Cisco WebEx, Z-Zoom, MT-Microsoft Team, GMMTZ- Google Meet, Microsoft Team and Zoom and MTZ-Microsoft Team and Zoom

II service quality parameters

Table 3: Results of Service quality parameters

Sr. No.	Category Question	Score						
		1	2	3	4	5	6	7
		Very Good	Good	Satisfied	Unsatisfied			
1)	Network/ Internet Consumption	9 (36%)	13(52%)	3 (12%)	-			
2)	Audio visual quality	12 (48%)	9 (36%)	4 (16%)	-			
3)	User friendly	11 (44%)	11 (44%)	3 (12%)	-			
4)	Auto recording facility?	15(Y) 60%	10(N) 40%	-	-			
5)	Auto attendance facility available?	17(Y) 68%	8(N) 32%					
6)	Support for live streaming on YouTube/ Facebook?	18(Y) 72%	7(N) 28%					

III. Effectiveness of Online Teaching and Teaching Pedagogy

Table 4: Effectiveness of Online Teaching and Teaching Pedagogy

Sr. No.	Category Question	Scores					
		Parameters	1 (Satisfied)	2 (Unsatisfied)			
1)	What do you think the effectiveness of online teaching as compared to the traditional offline	Notes	22 (88%)	3 (12%)			
		Assignments	23 (92%)	2 (8%)			
		Quiz	25 (100%)	-			
		Lecture Delivered	21(84%)	4 (16%)			
		Student-Teacher Interaction	12 (48%)	13 (52%)			
		Student	9 (36%)	16 (64%)			

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	teaching with the following factors?	Responses					
		Student Attendance	15 (60%)	10 (40%)			
		Student Attentiveness	9 (36%)	16 (64%)			
2)	Do you think that the online teaching can be made more effective by considering the above factors?		18 (Y) (72%)	7 (N) (28%)			
3)	How effectively teachers are using following facilities in their online teaching pedagogy?	Parameters	Not at all	Rarely	Not Frequently	Frequently	Very Frequently
		Audio conference	3 (12%)	7 (28%)	1 (4%)	11 (44%)	3 (12%)
		Videoconference		5 (20%)		17 (68%)	3 (12%)
		Documents posted on the platform (Word, Pdf, PowerPoint)	1 (4%)	3 (12%)		15 (60%)	6 (24%)
		Forum discussions	1	6	3	12	3
		Chat discussions	1	4	2	15	3
		URL addresses (to other web sources)		7	3	12	3
		Glossary of terms	3	7	5	9	1
		Course audio-video registered sequences	6	6	2	10	1
		Tasks in word/pdf format (that only the teacher could see)	1	4	5	10	5
		Task posted in databases (that were seen by the entire class)	1	4	4	8	5
		Documents were the whole class could work on in the same time	1	7	2	10	5

IV. Content Delivery During Online Teaching Table : Content Delivery During Online Teaching

Sr . No .	Category Question		1	2	3	4	5
			Dissatisfied	Neither satisfied nor dissatisfied	Very satisfied	satisfied	
1)	Teacher's		7(28%)	7(28%)	4(16%)	7(28%)	

	opinion regarding content delivery for practical courses is easy in online mode?							
2)	Content Delivery of theory courses is easy in the online mode?		Very little extent	Little extent	Neither little nor great measure	Very great extent	great extent	
			2(8%)	7(28%)	4(16%)	4(16%)	8(32%)	
3)	Which were the difficulties that you encountered while the courses/seminar were developed online?	Parameters	very frequently	frequently	nor frequently	nor rarely	rarely	not at all
		Difficulties while connecting to the platform	4	6	2	1	11	1
		Losing signal during videoconferences	3	4	2	2		14
		Delayed visualization of messages communicated on the platform	2	5	2		14	2
		The sound is not clear (there are interruptions)	2	3	2	2	15	1

V. Online events and Conferences Organization

Table : Online events and Conferences Organization

Sr. No.	Category	Parameters		1	2
				Satisfied	Unsatisfied
1)	How many events such as Webinar/ Conferences/ Workshops successfully organized by the institute during 2019-20 and 2020-21?	-	5	-	-
2)	Do you think that the online meeting tools are more effective for successful organization of the above events as compared to the offline?	Participants Attendance		19	6
		Participants Attentiveness		11	14
		Resource Person Availability(National/International Level)		24	1

	Which factors are important:	Cost Saving		24	1
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Conclusion References

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