



Perception Of Students On Online Teaching And Assessment Methodology During Covid-19 Pandemic In Microbiology

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ABSTRACT:

The Coronavirus disease 2019 (Covid-19) pandemic, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is arguably one of the biggest crisis of modern times, with a multitude of repercussions on societal, economic and medical systems. The Coronavirus disease 2019 (Covid 19) pandemic has imposed unprecedented hurdles to healthcare systems and medical facilities alike. The Coronavirus disease 2019 pandemic caused significant disruption to teaching and learning activities at all levels. The Covid-19 pandemic radically and without warning changed the laboratory learning environment for students and instructors. Students were faced with having to be receptive to new learning methods; Instructors scrambled to devise innovative ways of providing a realistic lab experience for students.

Objectives:

- Impact of Covid 19.
- Use of various tools and teaching strategies to teach lectures and practicals.
- Mental health of students as a result of Covid 19 and e learning.

Methods:

- Teaching method consisted of clinical scenarios, videos on microbiological techniques.
- Test evaluation, student evaluation, and Viva voce..
- Project submission, presentations.

Results: Online teaching is more focused on theory rather than practicals. Assessment and feedback is difficult in online teaching.

Conclusion:

Online teaching in medical colleges is still a new concept. During Covid 19 these online lectures became a crucial candlelight in the dark era of lockdown worldwide.

Keywords: Coronavirus, Covid, Online.

Introduction

Coronavirus disease 2019 (Covid-19) pandemic, caused by the severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) is one of the biggest crisis with a multitude of repercussion on societal, economic and medical systems¹. SARS-CoV-2 (severe acute respiratory syndrome) causing COVID-19 disease, has wreaked havoc in most of the nations all around the globe, giving rise to issues in many aspects of life. The government's numerous regulations amidst the pandemic have generated a slew of problems in a variety of areas².

Online teaching and learning activities have gained the most attention worldwide during the period of lock down due to pandemic. With this development, many challenges have evolved like effectiveness of teaching, availability of internet, technical issues (from both the ends i.e. from teachers as well as students), effective learning and assessment tools, conduction of online theory and practical examinations, credibility of these examinations, availability of resource materials with students to be prepared for these assessments, usage of online institutional e-portals to provide e-resources for the students.³

The United Nations (UN) and the WHO consider e-learning as an effective tool in addressing education needs.^{4,5} Most of the universities and institutions are successful in adapting online platforms for teaching and assessment by framing proper guidelines and timely training of students as well as teachers on how to use various available and dependable online platforms. Multiple online platforms are available to conduct online teaching activities and are found to be user-

friendly, authentic and genuine. Online teaching resulted in emergence of four themes which are the human connection (student-faculty and student-student), IT support, course design that is specific to e-learning and institutional infrastructure to support⁶.

A considerable fallout has affected school and University education alike. The predominantly theoretical contents of preclinical courses can be regarded as more easily adaptable to an online format, lectures and practical courses struggle substantially pertaining to distant transfer of knowledge and manual skills. Medical Microbiology is a subject containing both theoretical knowledge and practical skills and is critical for diagnostic purposes, as also to the understanding⁷

Objectives: 1. To study the perception of online teaching learning methods. 2. To study the perception of students of online assessment methods. 3. To obtain feedback about the online teaching methodology and assessment methods.

Material and methods: 105 students participated in this study of which 50 were MBBS, 40 B.Sc Nursing and 15 PGDMLT students. During Covid 19 for continuing education, the university initiated online classes for students. Two separate google forms were prepared. A) Feedback form for students on Microbiology online classes. B) Feedback of students on online assessment of Microbiology classes.

Discussion: In the present study online medical microbiology course for undergraduates led to comparable learning outcomes measured by exam results as a conventional course, even though several aspects of the online course were evaluated with significantly lower scores by the students. Timely feedback is also a critical component of an online assessment. Students should know their progress through the online assessment, and they should be guided where they need improvement. Despite the variety of assessment tools available, multiple-choice questions play an integral part in assessing students' learning performance face-to-face and in the online mode of examination. A similar kind of study conducted in the Government and private universities and colleges of Uttarakhand, India, showed that the online education helped in strengthening and expanding the teacher's knowledge in the subject and technical skill as well. They also felt that online teaching mode had increased the working hours of a teacher due to time constraints in online teaching—a disadvantage.⁸ Most of the teachers were of the opinion that e-learning cannot replace the conventional offline methodology as compared to Bhat et al⁹

Conclusion: There is also a need to train the teachers about online platforms for improving the quality of teaching learning methods. Additional research like qualitative research should be done to fine out the core problems of the students to handle this new method of education to further enhance the quality of online education.

Conflict of Interest: Nil

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Table1: Students perception regarding online classes of Microbiology

Opinion	Perception	MBBS(%)	NURSING(%)	DMLT (%)
Beneficial to students	Strongly agree	70	55	40
	Agree	23	23	15
	Disagree	7	22	45
Help in Understanding basic concepts	Strongly Agree	6.9	12.9	11
	Agree	15.5	71	25
	Disagree	77.6	16.1	64
SLO mentioned by the teacher	Sometimes	12.9	11	9
	Never	71	16.5	42.5
	Always	16	72.5	48.5
Student's Understanding of SLO	Sometimes	38.7	22.7	18.3
	Never	3.2	8.4	11.9
	Always	58.1	68.9	69.8
Satisfaction of quality of TLM	Sometimes	69	41.9	38.9
	Never	8.6	0	0
	Always	19	58.1	48.1
Satisfied with AV aids use	Sometimes	17.5	15.1	9
	Never	2.4	17.3	15
	Always	80.1	67.6	76
Clarification of doubt during class	Sometimes	12	11.5	1.5
	Never	81	87.3	85.4
	Always	7	1.2	13.1
Satisfied of online class	Sometimes	19	10.1	8.9
	Never	81	89.9	91.1

Table2: Students perception regarding online assessment

Opinion		MBBS(%)	NURSING(%)	PGDMLT(%)
Need of online assessment during covid19 pandemic period	Yes	64.5	68.2	71.2
	No	35.5	31.8	28.8
Preferred pattern of question	MCQ	83.3	72.8	89.2
	SAQ	13.2	15.9	10.8
	LAQ	3.5	11.3	00
Online assessment can be used during normal situation	Yes	22.7	54.3	20.3
	No	77.3	45.7	79.7
Online assessment motivated you for selfstudy	Yes	77.2	84.1	88.2
	No	22.8	15.9	11.8
Orals(VIVA)	Yes	54.4	32.3	39.5
	No	45.6	67.7	60.5
How often were the assessments	Weekly Monthly	21.1	19.3	21.2
	Bimonthly	64.1	78.2	61.4
		14.8	2.5	17.4