

# THE ROLE OF TECHNOLOGY INNOVATION IN TEACHING ON HIGHER EDUCATION– BEFORE AND AFTER COVID19

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# Abstarct

The paper presents the most significant study on how pupils view the effects of the COVID-19 crisis wave is presented in this essay. The COVID-19 infection was first discovered in Wuhan, China, in late December 2019. It quickly spread throughout the world, and on March 11, 2020, the WHO proclaimed it to be a pandemic (WHO, 2020). Face-to-face sessions have been replaced with online learning platforms as a result of the abrupt shutdown of on-campus facilities as a social. This has thrown the focus on utilising eLearning tools and platforms for effective student engagement which may have limitations of accessibility and affordability for many students. The pandemic has exposed the shortcomings of the current higher education system and the need for more training of educators in digital technology to adapt to the rapidly changing education climate of the world. In the post-pandemic situation, the use of eLearning and virtual education may become an integral part of the higher education system. The higher education institutions and universities need to plan the post-pandemic education and research strategies to ensure student learning outcomes and standards of educational quality.

Keywords: COVID-19, higher education, eLearning, virtual education, teaching

### Introduction

The whole educational system from elementary to tertiary level has been collapsed during the lockdown period of the novel coronavirus disease 2019 (COVID-19) not only in India but across the globe. The pandemic is thus having a massive impact on educational activity. In a matter of weeks, entire education systems from elementary to higher education had to completely transform activity to evolve to an online teaching-learning scenario. According to UNESCO, higher education institutions (HEIs) were closed completely in 185 countries in April 2020, affecting more than 1,000 million learners around the globe. As students and staff started working from home, HEIs turned to technology and the Internet to keep operating under the new circumstances. This rapid transition from brick and mortar to completely online environment created challenges for the technological solutions and infrastructure, students, and the teaching and supporting staff. Education is no exception. Students from privileged backgrounds, supported by their parents and eager and able to learn, could find their way past closed school doors to alternative learning opportunities. This crisis has exposed the many inadequacies and inequities in our education systems – from access to the broadband and computers needed for online education.

# Objectives

- ➤ To find out the role of innovation after Covid-19 on higher education sector
- ➤ To Explain various emerging approaches for higher education
- ➤ To give few suggestions for continuing online educational activities.

# The Role of Technology Innovation in Teaching on Higher Education

> The effect on Education and especially Higher Education According to UNESCO, on 1 April 2020, faculties and higher education institutions (HEIs) had been closed in 185 countries, affecting 1 542 412 000 learners, which represent 89.4% of overall enrolled learners.



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> At the start of May, a few countries, experiencing lowering numbers of instances and deaths, commenced lifting confinement measures. However, on 7 May (the time of writing the report), faculties and better training institutions had been nonetheless closed in 177 countries, affecting 1 268 164 088 learners, which represent 72.4% of overall enrolled learners. In order to higher apprehend the disruption due to COVID-19 on better training and to research the primary measures undertaken with the aid of using better training establishments round the sector to reply to the crisis, the International Association of Universities (IAU) determined to release the IAU Global Survey at the effect of COVID-19 on better training round the sector. It turned into to be had online and open from 25 March till 17 April 2020.

> . The IAU Global Survey is neither the primary nor the simplest survey at the effect of COVID-19 on better schooling. Different organisations, as for example the Institute of International Education (IIE) within side the USA or the European Association for International Education (EAIE) and the Erasmus Student Network (ESN) in Europe, carried out surveys as well. These surveys are thrilling due to the fact they goal unique stakeholders in better schooling which includes global IAU – COVID-19 Global Impact Survey | nine relation officials or students. They predominantly attention their evaluation at the effect of COVID19 on global schooling.

> The American Council on Education (ACE) in the US conducted surveys from a broader perspective, examining the impact of COVID-19 not only on international higher education, but on higher education in general. All of the above studies are national or regional in nature. What makes the is Global Survey unique is that it seeks to describe the impact of COVID-19 globally and on higher education more comprehensively, including all areas of university and other higher education (HEI) activity. Teaching and learning, research and social commitment.

> The IAU Global Survey is by no means a complete or exhaustive analysis of the impact of COVID-19 on higher education. However, it offers the first analysis of the phenomenon on a global scale. The results deserve further investigation and, by their very nature, the results are only for a specific period of time.

### Methodology

A short survey was done for the undergraduate students studying in different colleges by using the online Google form to collect the primary data after the post covid19. The study was conducted to identify the pros and cons of the education level for undergraduate students, which they face during or after the covid19. The total of 57 samples was collected by the well-structured questionnaire through online sources regarding the problems or benefits of online education which they receive during and after the covid19. The percentages, cross tabulation and regression analysis were used for this study.

Table1,Gender								
Frequen Perce								
	cy nt							
Male	24	42.1						
Female	33	57.9						
Total	57	100.0						



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Gender*Age Cross tabulation							
		Age					
Gender		Below1 7	18- 22	Above2 2	Total		
Male	Count	9	13	2	24		
	% of Total	15.8%	22.8 %	3.5%	42.1%		
Female	Count	14	17	2	33		
	% of Total	24.6%	29.8 %	3.5%	57.9%		
Total	Count	23	30	4	57		
	% of Total	40.4%	52.6 %	7.0%	100.0%		

Gender*where do you live? Cross tabulation							
		Where do you live	e?				
Gender		rural	city	Total			
Male	Count	12	12	24			
	% of	21.1	21.1	42.1%			
	Total	%	%				
Female	Count	12	21	33			
	% of	21.1	36.8	57.9%			
	Total	%	%				
Total	Count	24	33	57			
	% of	42.1	57.9	100.0			
	Total	%	%	%			



# The Role of Technology Innovation in Teaching on Higher Education– Before and after covid19

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	Gender*Disciplin	ne Cross tabulation		
			Discipli	
			ne	
Gender		B.Com	Other	Total
Male	Count	22	2	24
	%Within	40.7%	66.7%	42.1%
	Discipline			
Female	Count	32	1	33
	%Within	59.3%	33.3%	57.9%
	Discipline			
Total	Count	54	3	57
	%Within	100.0%	100.0%	100.0%
	Discipline			

	Gende	er*How Did Cov	vid19 Affected You	r Study Cross tabula	ation	
			How Did Covid Your Stu			
Gender		Greatly Affected	Moderately Affected	Considerably Affected	Not Affected	Total
Male	Count	9	5	2	8	24
	%	42.9%	38.5%	20.0%	61.5%	42.1%
Female	Co unt	12	8	8	5	33
	%	57.1%	61.5%	80.0%	38.5%	57.9%
Total	Count	21	13	10	13	57
	%	100.0%	100.0%	100.0%	100.0%	100.0 %

Gender	* which elect	ronic device do you us covidi	e to study online 19Crosstabulatio	<b>_</b> /	ter			
	which electronic device do you use to study online Before & amp; aftercovid19							
Gender		Smart Phone	Lapto ps	Book sand Notes	Total			
Male	Count	22	1	1	24			
	%	40.7%	50.0%	100.0%	42.1%			
Female	Count	32	1	0	33			
	%	59.3%	50.0%	0.0%	57.9%			
Total	Count	54	2	1	57			
	%	100.0%	100.0 %	100.0%	100.0%			



Gender <sup>:</sup>	*which vi	rtual learning too	ols do you use	during and after o	covid19 Cross	tabulation		
		Which virtual learning tools do you use during and						
				after covid19				
Gend		Online	E-	YouTube	All	Total		
er		Classes	Books	Videos	Above			
Male	Coun	13	1	4	6	24		
	t							
	%	50.0%	100.0	26.7%	40.0%	42.1%		
			%					
Femal	Coun	13	0	11	9	33		
e	t							
	%	50.0%	0.0%	73.3%	60.0%	57.9%		
Total	Coun	26	1	15	15	57		
	t							
	%	100.0%	100.0	100.0%	100.0%	100.0%		
			%					

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Gend	er*whicł	ı online learning ap	p do you use d	uring and after covid	l9Crosstabul	ation		
		Which online learning app do you use during and						
				aftercovid19				
Gender	ler	Google Meet		Skype/Whats App	Others	Total		
Male	Count	17	6	1	0	24		
	%	60.7%	40.0%	11.1%	0.0%	42.1%		
Female	Count	11	9	8	5	33		
	%	39.3%	60.0%	88.9%	100.0 %	57.9%		
Total	Count	28	15	9	5	57		
	%	100.0%	100.0 %	100.0%	100.0 %	100.0%		

which online learning app do you use during and aftercovid19*How do you rate online education after covid19 Cross tabulation									
	How do you rate online education after covid19								
Which online learning app do		Low	Mediu	High	Total				
you use during and after covid19			m						
Google Meet	Count	6	17	5	28				
	%	50.0%	45.9%	62.5%	49.1%				
Zoom	Count	3	11	1	15				
	%	25.0%	29.7%	12.5%	26.3%				
Skype/What's App	Count	2	5	2	9				
	%	16.7%	13.5%	25.0%	15.8%				
Others	Count	1	4	0	5				
	%	8.3%	10.8%	0.0%	8.8%				



### Before and after covid19

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#### Recommendations

 $\succ$  Use physical whiteboards for students to show their thinking. Allow students to share their screen to showcase their work and explain how they solved a problem. Use virtual whiteboards for increased engagement.

 $\succ$  Improve the audio and visual communication more...and way of teaching should put a effort extra while taking online classes then only student also can make them to be conscious in the online classes.

 $\succ$  Allow students to share their screen to showcase their work and explain how they solved a problem. Use virtual whiteboards for increased engagement.

 $\succ$  Board to teach and allow the student clear the doubt and teach some separate student to teach and separate for doubt and white teach even the simple should be taken in detail most give rest to student because it take headache or eyes pain problem per day is one or one-half hours is better and the network problem is cause for some time for that student we should conduct separate class or send video for that student. IS IMPORTANT (online class should record after the over record should be send to that related student) because network problem or any other problem is cause the record is helpful to all the students.

 $\succ$  However the online education is comfortable to learn from home it will not come to the extent of offline education. So there is no idea about it.

 $\succ$  Interacting with students and staff with best way to improve the online education and class will not get bore.

➤ Government can give the phone or laptops for poor students.

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