

Disruption Exacerbating Student's E-Learning Process - An Empirical Work

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ABSTRACT- Since the early spring of 2020, Educational Foundations have been encountering a remarkable huge movement from conventional in-class face-to-face education to online education. Due to the far-reaching of Coronavirus (COVID-19) in the world, after the administration's necessities of relentless instructing and learning, most Educational Foundations have begun online classes and are still continued. In a short period, a large number of instructors started to teach before a PC screen, and their students need to stay at home and take the classes through the Web. Online Education isn't as normal as talking into the receiver toward one side, and interfacing a PC and tuning in on the other, there are difficulties faced at both ends of the spectrum i.e. teachers as well as students. This paper aims to highlight problems faced by students in online classes. It also intends to identify if e-learning has any impact on the effectiveness of students. Data has been collected from primary sources wherein self-designed questionnaire was floated. Once the data is collected, the Cronbach Alpha test is performed to check the reliability and validity of data. The author used factor analysis to narrow down the variables and later used regression analysis to determine the most influential factors affecting the effectiveness. As part of the conclusion, the author made a framework which can be considered by educational institutes as well as Ed-tech companies to cope up with these challenges.

Keywords – Disruptions, E-learning, Online classes, Online Education, Online Teaching, Students

I. INTRODUCTION

COVID-19 is achieving an entire arrangement of new difficulties in each conceivable domain; education being only one. Given the quickly advancing circumstance around the pandemic, has this constrained move from offline to the online method of teaching-learning. Online

classes are step by step conquering the education world. Students see them as comparable to the traditional ones. Their rising fame persuades an ever-increasing number of individuals to pick along these lines of examining. India holds an important place in the global education industry. India has one of the largest networks of higher education institutions in the world. However, there is still a lot of potential for further development in the education system. Technology empowered teaching is unquestionably the future we are looking towards it. It is important to identify the key challenges faced by teachers in the current scenario and come up with a possible solution. This study focuses on finding the main problem faced by students in an online setup.

II. LITERATURE REVIEW

Pravat Kumar Jena (2020) Virtual education is the most preferred mode of education at this time of crisis due to the outbreak of Covid-19. The post Covid-19 education seems to be an education with widely accepted online/virtual education which may perhaps be a parallel system of education.

Deepika Nambiar (2020) Higher education in India is currently restricted by a lack of clarity when it comes to regulating online channels of education. Teachers and students' comfort with online class design, structure, level of interaction between students and faculty, the quality and amount of class content, technical support, and overall experience with online class delivery impact the overall teaching and learning experience and determine the ultimate success or failure of online mode of education

Nahid Khalil Elfaki et. Al, (2019) It is important to note that this is an interesting, but perhaps not surprising observation, which suggests that the generation of students in their study may be still are traditional learners and have not yet resorted to such learning.

Aman Jindal & (2018) Online education can change the whole future scenario in education if it can be implemented in joint collaboration with industry, universities, and government. Drastic changes in the course curriculum are required to bridge the gap so that students are industry-ready after passing out.

Lily A. Arasaratnam –Smith (2017) Online learning context is unique and not necessarily the ‘poor cousin’ of on-campus learning that continually requires defense and justification. In fact, in some cases, it may be a viable alternative to, and improvement on or replacement for face-to-face learning.

Anna Qian Sun (2016) Throughout the entire review study, They found that one of the primary challenges in online education is to develop a sense of community in the online environment. To establish such a community, several studies they reviewed pointed out the significance of promoting social presence, interaction, and collaboration they thus argue that both learners and instructors have to make a joint effort to get deeply involved in constructing interaction and collaboration between the instructor and students and among students to create an effective online learning community.

Dr. Garima Singh (2016) Teachers need to be prepared themselves for the changing role that technological development has brought. Fair use of ICT would lead to an effective transition to the knowledge society in the globalized world and would also create a better teaching and learning environment in society.

Martin D. Beer, et al (2015) Instructors need to have a good grip on technology and encouraging attitude towards e-learning for a positive learning outcome. Student attitude and experience is important, to use technology for learning, if students do not have the right training and support then academics will be the first line of contact to help with technical problems.

Brittany Gilbert (2015) Compared to traditional classroom settings, online course work requires and promotes the use of online research and resources. Traditional settings may be limited in their technological capacity to meet the needs of all students; therefore, the routine use of technology in a traditional classroom may be inhibited by a cost barrier to the school district. In this study, the structure of online learning expanded the students’ use of technology and surpassed the technology used in the students’ traditional classroom settings.

Pearl Jacobs (2013) Research suggests that students prefer to pace themselves through a

course rather than having to adhere to a schedule. It is also apparent that online learning is as effective as traditional classroom learning. How much or how well a student learns is determined by the quality of the online instruction. If an instructor tries to take a traditional classroom course and fit it into an online format without significant adjustments, it can only lead to failure.

Research Gap

There is less empirical work done with respect to challenges in online learning in India considering teachers/instructors.

III. RESEARCH METHODOLOGY

A. Data

Data is collected through a primary survey and various secondary. Self-designed questionnaire was used and was sent through e-mail, Facebook, and WhatsApp to around 250 students. Out of those 200 responded. After collecting the data, the author cleaned the data and has done the data analysis using the statistical technique of Cronbach alpha and Principal Component Analysis.

B. Variables

Technical issues- Numerous students are not given the high bandwidth or the solid web association that online classes require. Their frail screens make it difficult to follow the Course The board Framework and their learning experience gets dangerous

Software Adaptability- Changing from traditional classroom and face to face educator preparing to PC based preparing in a virtual homeroom makes the learning experience altogether extraordinary for students. Their resistance to change doesn't permit them to adjust to the internet learning condition, while it takes effort for them to get acquainted with Course Management Systems and the methods of computer-based education.

Sleepy in comfort area- Procrastination is something that even the best of students can fall into the enticement of and this is the reason numerous students feel more good working or learning inside a more expert or instructive setting. To comprehend this point better one can essentially consider the way that on the off chance that the person is attempting to concentrate in their bed or sofa then the individual in question would wind up resting or dawdling in some other way sooner than later.

Communicate with Batch Mates- In the event that a student is solicited to let one know from their best recollections inside a homeroom then most students answer that it is learning inside a

gathering. There are numerous advantages that students can get when learning a gathering and perhaps the greatest advantage is that students get the chance to share and see each other's thoughts. This can't occur with regards to online learning.

Communicate with teacher- Maybe the most common challenge students face in online degree programs is the absence of face to face commitment with teachers and different students. Online courses are ordinarily directed through a virtual learning stage. The absence of in-person correspondence can get problematic for students who are struggling to understand the course material.

Internet Distractions- Students who take online classes are presented to a bigger number of interruptions than in face-to-face classes, a circumstance that influences their scholastic execution, students who take online courses are presented to a bigger number of interruptions than in face-to-face classes, a circumstance that influences their scholarly presentation. In the solace of home, online students are bound to send instant messages, answer messages, talk on Facebook or WhatsApp, watch recordings on YouTube, surf on Google, play computer games or tune in to music while taking an online course, contrasted with an instructor managed class.

C. Conceptual Framework

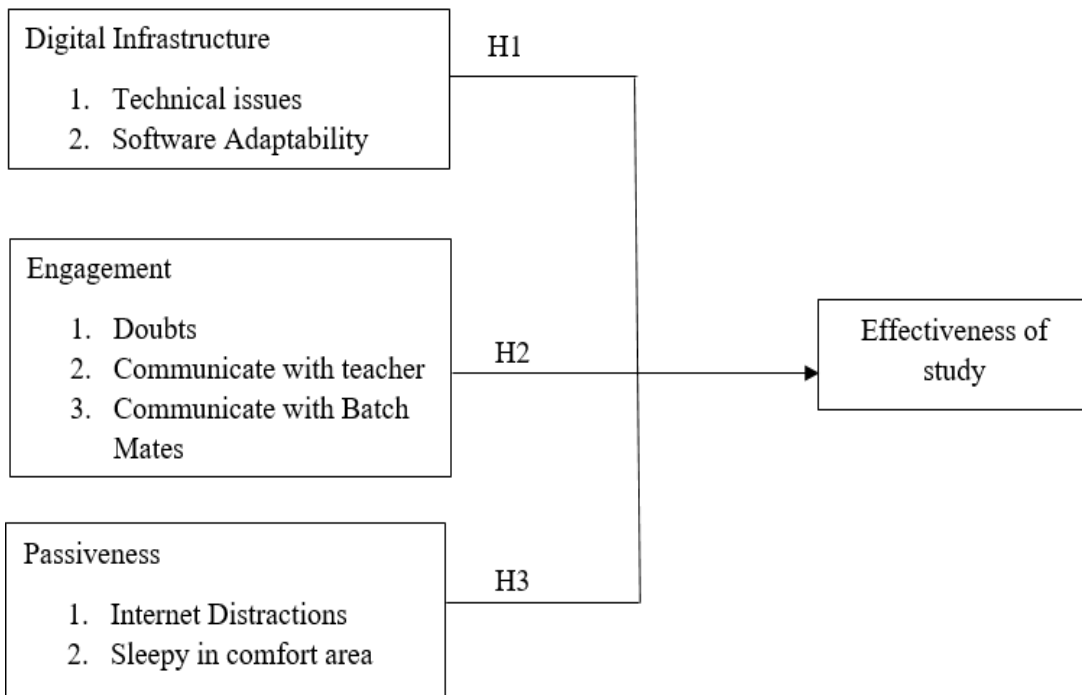


Fig 1. Conceptual Framework

A Likert scale is used to identify if online teaching has any impact on the effectiveness of teachers and students in the teaching-learning

process. The responses obtained from the questionnaire are then changed into a numerical scale (see table 1 below).

TABLE I: Conversion of Likert Scale into Numerical Scale

Likert Scale	Number
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

D. Hypotheses:

- H1: Effect on study is due to Digital Infrastructure
- H2: Effect on study is due to Engagement
- H3: Effect on study is due to Passiveness

IV. DATA ANALYSIS & INTERPRETATION

A. Reliability Test- Author have used Cronbach Alpha for testing the reliability of data collected by the respondents.

Table II: Reliability Statistics

Cronbach's Alpha	N of Items
.766	8

The results shown in Table II represent that data is reliable as the value of Cronbach's Alpha is 0.766 which states that data is reliable.

Table III: Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Technical issues	3.57	1.068	200
Adaptability struggle	2.87	1.157	200
Not able to communicate with teachers	3.37	1.077	200
Not able to communicate with batchmates	3.61	1.173	200
Easily distracted	3.44	1.222	200
Sleepy	3.66	1.180	200
Doubt asking	3.32	1.167	200
In-person contact	3.63	1.145	200

Results shown in Table III describes that there is less deviation among the responses.

Table IV: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.810
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	312.469
	28
	.000

Table IV – This test represents that the data and sample is adequate as the value is 0.810 which represents 81% adequacy and significance

level is then 0.005 which means that data fits the model and normality is achieved.

Table V: Total Variance Explained

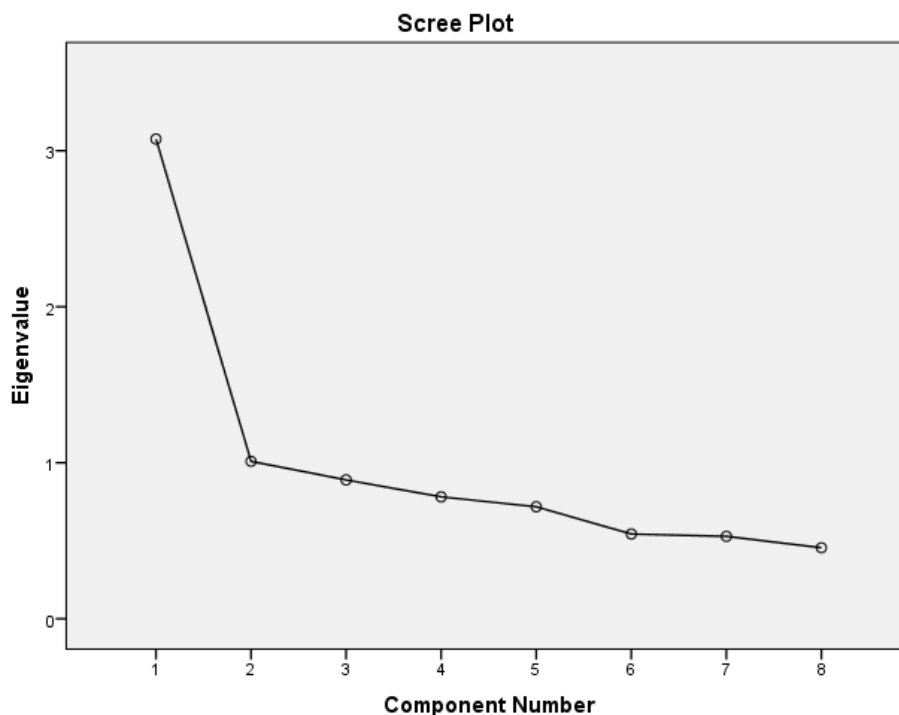
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %
1	3.075	38.441	38.441	3.075	38.441	38.441	2.215	27.692	27.692
2	1.009	12.614	51.056	1.009	12.614	51.056	1.869	23.364	51.056
3	.890	11.126	62.182						

4	.781	9.767	71.949					
5	.718	8.971	80.920					
6	.543	6.788	87.708					
7	.528	6.602	94.310					
8	.455	5.690	100.000					

Extraction Method: Principal Component Analysis.

The above table shows that the model is able to explain 51.056% of variance and the mentioned variance is explained by only 2

components which are Technical Issue and Ineffective communication with teacher in virtual classroom.



The above scree plot also justifies the table of variance as only two components are above Eigen Value 1.

V. CONCLUSION AND FINDINGS

The important points that can be concluded from the above study are that there are two issues i.e, Ineffective Communication and Technical issues which are prevailing in virtual classroom. It further indicates that lack of personal touch at the end of instructor and learners is also a hitch in virtual set up. It is also possible to state that only online teaching method can be affecting effectiveness of students, so the institutes can come up with Hybrid learning methods. These issues are to be looked upon because student are spread across India due to Pandemic and facilities might not be same everywhere. DEP model can be considered by Ed-Tech companies so that they can

come up with seamless solutions to the problems faced by students on the virtual platform. Major recommendations to Ed tech companies can be to improve digital infrastructure with more user-friendly software that can be used with low bandwidth, which in turn can be helpful in increasing engagement.

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