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A STUDY ON PERCEPTION OF STUDENTS TOWARDS VIRTUAL LEARNING ENVIRONMENT IN HIGHER EDUCATION DURING AND POST COVID - 19

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Abstract

Virtual learning is trending due to the pandemic COVID-19. It is a platform through which students take their regular classes and learn through online platforms. Virtual learning has several pros and cons both. Now, when students are highly involved in virtual learning therefore it is necessary to know the perspective of students towards virtual learning. This study is an attempt to know the perception of students toward virtual learning environments in higher education due to COVID-19. For the study, primary and secondary data are used and based on the responses of the students, results are drawn. The study also provides some ways and means through which virtual learning can be implemented more effectively.

Keywords: COVID-19, Higher Education, Students, Virtual Learning

Introduction

Virtual learning refers to the learning platform in which there is the use of a computer and the internet. Instead of going physically to the classroom to attend the class students' study through the internet in virtual learning platforms. There are many virtual learning platforms through which students join online learning. Virtual learning can be joined by sitting at any place and it can access at any time which suits the learner. It provides various options for the learners like online courses, online classes, online assessments and online assignments, etc. The process of virtual learning is possible only with the help of technology.

Due to COVID-19 in all over the world virtual learning is trending these days. COVID-19 is a pandemic which affects the whole world since the start of this year 2020. Due to this pandemic, WHO declared some precautions to save ourselves from the disease. The major precaution includes social distancing from people around. Therefore all schools and colleges in the different countries are closed since March 2020 (www. government. economictimes. indiatimes. com). This is one of the biggest turning point in every life where the studies of the students get affected.

To prevent students from this pandemic every country has declared to shut down schools and colleges and adopt an online way to teach students (www. indianexpress.com). The pandemic of COVID-19 has affected 91% of all over the world students. In many countries, teachers and students are encouraged to use a different mode of virtual/online learning (www.investindia.gov.in). Classes of students are going through Zoom meetings, Google meet and Skype, etc. and it became the norm and daily routine of teachers and students

to make use of such platforms (www. thehindu. com).

To prevention from disease all over India, 'Stay Home Stay Safe' and social distancing norms are implemented by the government. In India schools and colleges are closed since lockdown one (http://bweducation.businessworld.in/). Demand for virtual learning is seen increasing day by day and students enjoy learning through virtual platforms. They feel free from traveling tiredness and other unnecessary tiredness (http://bweducation.businessworld.in/). Virtual learning has changed the entire educational system. It is most liked by students these days because it offers flexible schedules to learn and study (www.cae.net).

Virtual learning has several advantages and disadvantages because every aspect has some or other pros and cons. But due to the lack of proper systems in virtual learning, educational institutes and students are facing some problems. The unpredictable situation of COVID-19 brings a disastrous change in the educational pattern but educational institutions are continuously working for the improvement of virtual learning.

Literature Review

Due to the pandemic COVID-19 virtual learning is trending these days. Every college and university provide virtual learning platforms to students so that study of students does not get interrupted. It is also essential in today's time. Many researchers have studied the concept of virtual learning platforms (Mahajan and Kalpana, 2018). In this rapidly growing environment, every higher education institute is offering online courses for a better understanding of the students (Astani, Ready and Duplaga, 2010). Due to the increasing importance of technology every higher education institution is focusing on an e-learning environment so that students can get more advantages from the institutions (Popovici and Mironov, 2015).

Many researchers proved that e-learning influences students in a positive manner (Popovici and Mironov, 2015; Mahajan and Kalpana 2018; Nasir et al., 2015; Matsunaga, 2016). E-learning has changed the way of teaching and learning process.

Earlier students have no option of learning online and they only have to join their college/university daily for the study but now students can study by sitting anywhere and anytime (Astani, Ready and Duplaga, 2010). The virtual learning process shaped the structure of learning environment as well as assessments in online learning (Armstrong, 2011). It also provides a lot of growth opportunities to students for their careers and learning avenues.

Many studies provide evidence that numerous students have enrolled in e-learning platforms or e-courses (Jones and Blankenship 2015). It is also proved that e-learning is more effective than traditional classroom learning. Many students provide evidence that e-learning is a better study option for them (Koskela et al., 2005). It is also very important that the success of e-learning is depending upon the faculty members of the institution and students of the institution as when faculty and students are not comfortable with any new technology then no new model in learning and teaching can perform effectively (Fadhli, 2008).

Studies proved that the perception of students towards virtual learning is very positive. Students feel it is easy to learn and understand the concepts as compared to classroom study. The studies denote more advantages of virtual learning than drawbacks (Amritesh and Subramanian, 2019). Even studies done on accounting students show positive results of virtual learning and students are highly satisfied (Alcaide, Solis and Galvan, 2019). E-learning is considered as one of the support for students to learn something than doing nothing. Students feel more support for e-learning than traditional learning these days (Veerapen and McAleer, 2010).

Studies show that in an e-learning environment there is a need to implement policies and procedures strictly in order to smooth the running of the learning environment (Alcaide, Solis and Galvan, 2019; Daniels, Sarte and Cruz, 2019). There is a need to strictly monitor and evaluate techniques for students for the better and more effective conduct of e-learning (Daniels, Sarte and Cruz, 2019).

There is also a need to improve the virtual learning curriculum, planning, etc. as many of the fresher students sometimes face difficulty in operating the

systems of e-learning. E-learning platforms should be easy and understandable to operate as many e-learning platforms are not easily able to understand (Smart and Cappel, 2006). There should be an easy procedure for the students or learners on virtual platforms so that everyone who wants to join e-learning can easily participate (Matsunaga, 2016). In this situation of COVID-19 students are not liking much virtual learning just because of a lack of systems and procedures by the educational institutions (Abbasi, Ayoob, Malik, and Memon, 2020).

Research Gaps : No doubt there are many studies on virtual learning and online learning but those all studies are done under normal circumstances. Now COVID-19 period is running all over the world, due to which schools and colleges are closed and students are taking classes through virtual platforms. This study will explore the perception of students toward virtual learning environments in higher education due to COVID-19.

Objectives of the Study

The current study fulfils the following objectives:

- To know the perception of students towards virtual learning environment in higher education due to COVID-19.

- To suggest ways and means to improve learning through the virtual platform in today's time of pandemic.

Research Methodology

Research Methodology is defined as the sequence of methods used to carry out the study systematically and scientifically.

The present study is done by considering both: primary and secondary data into consideration. The study is based on quantitative aspects and explores the perception of students toward virtual learning.

Type of Study: The present study is exploratory in nature. It explores the perception of students towards higher education in COVID-19 times.

Period of Study: The study is done during 2

months period of lockdown in the country. In these 2 months, a questionnaire was prepared and get it filled out by students from higher education institutions.

Location and Type of Respondents: For the present study Punjab region is selected. Various students from different higher education institutions (colleges and universities) are selected.

Instrument Used to Collect Data: To collect data from the respondent's structured questionnaire was used with close-ended and open-ended questions. To get answers to most of the questions 5-point Likert scale was used.

Method of Filling Questionnaire: The questionnaire is filled by respondents through digital tools like Google from etc. Due to the lockdown, personal meeting with students was not possible but some telephonic interviews were taken by the researcher for more clarity on the subject matter.

Data Collection Method for the Study: For this particular study both types of data are used: primary and secondary.

Primary data is used to get the perception of students toward virtual learning environments in higher education due to COVID-19.

Secondary data is also used in the study. It is taken from various reliable and authenticated sources. It includes published journals, websites and various databases like Google Scholar, J-store, Web of Science and Scopus, etc. Apart from this, various reports and articles were also studied on virtual learning as secondary sources.

Research Tools used in the Study

Sample Size for the Study: The present study is done by taking 150 students from various higher educational institutions.

Sampling Unit for the Study: As a sampling unit for the study, students of higher education institutions with UG, PG and Diploma are selected.

Sampling Technique: Simple random sampling technique is used to get data from respondents/students.

Statistical Software: MS Excel, SPSS

Data Analysis Method: Demographic Analysis, Percentage Analysis, Descriptive Statistics.

Analysis and Interpretation

Demographic Analysis

Table 1 Demographic Features of Respondents in the Study

Variable	Description	Frequency	Percent (%)
Gender	Male	62	41.34 %
	Female	88	58.66 %
Age	15-20	56	37.33%
	21-25	92	61.33%
	26-30	2	1.34%
	Above 30	0	0%
Course	UG	48	32%
	PG	90	60%
	Diploma	1	8%

Source : Primary Data

For the present study, respondents are taken from different demographic profiles. A total of 150 respondents filled out the questionnaire. Based on which demographic analysis is done. In the study, both females and males are taken to generate results. From the total of 150 respondents in this present study, 41.34% of respondents represent the male category and 58.66% of respondents represent the female category.

From the 150 respondents, 37.33% of respondents belong to the 15-20 age categories, 61.33% respondents belong to the 21-25 age category, 1.34% respondents belong to the 26-30 age category and in the present study no respondent belong to age above 30.

From the 150 respondents, 32% of respondents belong to the UG courses category, 60% of respondents belong to the PG courses category,

and 8% of respondents belong to the Diploma category in the present study.

Fig. 1 : Use of Gadget/Device at the Time of Virtual Learning
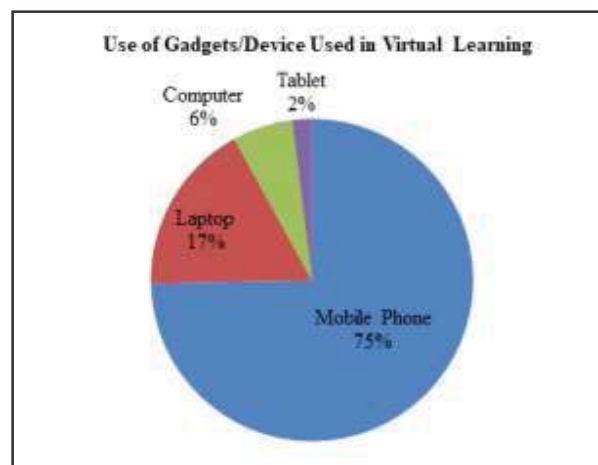
Source : Primary Data

In virtual learning, gadgets play a boundless role in the study. Without these online or virtual learning is not possible. In the present study, most of the students (75%) use mobile phones while taking virtual classes. 17% of respondents use laptops as a gadget in virtual learning, 6% of respondents use computers or PC and only 2% of respondents use tablets while virtual learning.

Fig. 2 : COVID-19 Affected the Study of Students
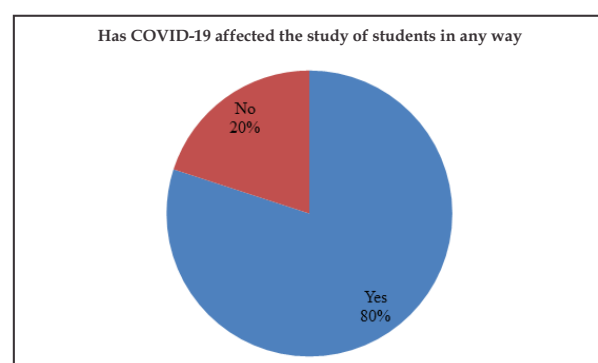
Source : Primary Data

In the above figure, it is clearly stated that 80% of respondents (students) agree that their study is affected due to the pandemic COVID-19. But 20% of respondents (students) feel that their studies are not affected by the pandemic.

Descriptive statistics for Perception of Students towards Virtual Learning Environment in Higher Education Due to COVID-19

For the present study 5-point Likert scale is used. Where 1 represents strongly disagree and 5 represents strongly agree. In the descriptive statistics, the perception of students is identified towards virtual learning environment in higher education due to COVID-19.

Table 2 : Descriptive statistics for Perception of Students towards Virtual Learning Environment in Higher Education Due to COVID-19

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
(Item 1) Virtual Learning is better than traditional classroom learning.	150	1.00	5.00	2.7933	1.34262
(Item 2) Is the Quality of Virtual learning Satisfactory for you?	150	1.00	5.00	2.2333	1.19516
(Item 3) Do you think it's easy for you to study practical modules using virtual learning environments?	150	1.00	5.00	2.0933	1.17208
(Item 4) Is it easy for you to recollect the learning you did in Virtual Platform?	150	1.00	5.00	4.3667	.73655
(Item 5) Do you enjoy being in a virtual learning environment and learn new things using a virtual learning environment?	150	1.00	5.00	4.3267	.81510
(Item 6) Do you think your fear of classroom study has gone away due to virtual learning environments?	150	1.00	5.00	4.1267	1.11906
(Item 7) Do you feel enthusiastic when you have a virtual learning environment?	150	1.00	5.00	3.7133	1.26564
(Item 8) Do you feel bored in the virtual learning environment?	150	1.00	5.00	4.0067	.93763
(Item 9) Do you think virtual learning is positively impacting you?	150	1.00	5.00	2.5467	1.42172

(Item 10) Do you think student and teacher interaction is less through virtual learning?	150	1.00	5.00	4.1267	.95043
(Item 11) Would you like to study in the future through virtual platforms after COVID-19?	150	1.00	5.00	2.2000	1.23158
(Item 12) Are you satisfied with the virtual learning environment?	150	1.00	5.00	2.2333	1.17819
Valid N (listwise)	150				

Source : Primary Data

In the above table perception of students is measured towards the virtual learning started by higher education institutions due to COVID-19. The mean of Item 1 (Virtual Learning is better than traditional classroom learning) shows a 2.7 mean point which is near to 3 on 1 to 5 scale so it means students do not much agree with the statement that virtual learning is better than classroom learning.

The mean score of item 2 (Is Quality of Virtual learning Satisfactory for you) shows 2.23 mean point, from 1 to 5 scale so it means students disagree with the statement that the quality of virtual learning is satisfactory for them.

The mean score of item 3 (Do you think it's easy for you to study practical modules using virtual learning environments) shows a 2.09 mean point, from 1 to 5 scales so it means students disagree with the statement that it's easy to learn practical modules using virtual learning environment.

The mean score of item 4 (Is it easy for you to recollect the learning you did in virtual platform) shows 4.36 mean point, from 1 to 5 scales so it means students agree with the statement that it's easy to recollect the learning in Virtual Platform.

The mean score of item 5 (Do you enjoy being in the virtual learning environment and learn new things using a virtual learning environment) shows 4.32 mean point, from 1 to 5 scales so it means students agree with the statement that they enjoy being in the virtual learning environment and learn new things using virtual learning environment. The mean score of Item 6 (Do you think your fear of classroom study has gone away due to virtual learning environments) shows 4.12 mean point, from 1 to 5 scales so it means students

agree with the statement that fear of classroom study has gone away due to virtual learning environments.

The mean score of item 7 (Do you feel enthusiastic when you have a virtual learning environment) shows 3.71 mean point, from 1 to 5 scales so it means students are close to agree with the statement that they feel enthusiastic when they have a virtual learning environment.

The mean score of item 8 (Do you feel bored in virtual learning environment) shows 4.00 mean point, from 1 to 5 scale so it means students agree with the statement that they feel bored in a virtual learning environment. The mean score of item 9 (Do you think virtual learning is positively impacting you) shows 2.54 mean point, from 1 to 5 scales so it means students disagree with the statement that virtual learning is positively impacting.

The mean score of item 10 (Do you think student and teacher interaction is less through virtual learning) shows 4.12 mean point, from 1 to 5 scales so it means students agree with the statement that student and teacher interaction is less through virtual learning. The mean score of item 11 (Would you like to study in the future through virtual platforms after COVID-19) shows 2.20 mean point, from 1 to 5 scales so it means students disagree with the statement that they like to study in the future through virtual platforms after COVID-19.

The mean score of item 12 (Are you satisfied with virtual learning environment) shows 2.23 mean point, from 1 to 5 scales so it means students disagree with the statement that they are satisfied with the virtual learning environment.

Discussion and Findings

From the analysis part, some findings are identified by the study. It is seen that students do not feel that virtual learning is better than classroom learning. The reason behind it is COVID-19, as no one is aware of the pandemic so education institutes are not ready with the virtual learning platform. Due to instant arrangements and preparation of virtual platforms students are not much more satisfied with virtual learning than classroom learning.

It is also observed from the study that students do not feel satisfactory quality of virtual learning. They are not happy with the virtual learning provided to them by their educational institutes. Practical modules are very difficult to learn through virtual learning because when students perform any practical experiment on their own then only they can understand the concept with clarity. In the present study, it is also observed that due to a lack of practical exposure they feel virtual learning is boring. In virtual learning, continuously listing to the teacher and sitting in the same place is difficult for students. As in classroom learning students meet with their peer friends, talk with them and play with them, etc. But in virtual learning, all such things are quite difficult.

According to some students' opinions, virtual learning is not positively impacting them as due to all day sitting on a mobile or laptop is harmful to the eyes and physical health. In virtual learning, there is no physical activity done by students which also impact adversely the health of students. It is good that the study continues despite the pandemic also but its adverse impacts cannot be ignored. As per the opinion of students, their interaction with the teacher is decreased because now through the virtual platform it is difficult for teachers to interact virtually with every student.

But apart from all such things in virtual learning, there are some benefits or good points such as students can recollect the learning material. In virtual learning recording of all the lectures and courses is done so students can recall any material whenever they feel. Despite this, students enjoy and get enthusiastic about virtual learning as they learn new concepts. They have multiple options in virtual learning to learn. Their learning area gets vast.

Due to all such issues of the pandemic, the students also feel that the fear of classroom study has gone away due to virtual learning environments. As students do not have much fear of the teacher as they feel while classroom learning. In virtual learning physical punishment to students has gone away and students are not that concerned about their studies.

According to many of the students they like to learn through classroom study in the future as many of them are not satisfied with the virtual learning platform. One reason for this can be they do not have a habit of learning through virtual platforms.

Ways and Means to Improve Learning Through Virtual Platforms In Today's Time of Pandemic

Based on the literature survey and students' suggestions this section is included in the study. To improve learning through virtual platforms in this pandemic period, educational institutes are advised to follow the below ways and means. By adopting the following ways, virtual learning can be more satisfying and interesting for students.

• To improve the quality and satisfaction of virtual learning, educational institutes need to bring specific virtual learning platforms for students during this time of pandemic. As the study is important for students otherwise their courses or degrees get affected.

• For an effective understanding of practical modules, teachers need to visualize the practical demonstration of the experiment. Also, students' queries should be handled wisely and answered properly.

• For effective understanding and to ensure the presence of students in the virtual classroom there should be proper policies and procedures for attendance and assessment of students learning.

- To make virtual learning more interesting and understandable, teachers need to teach the concept interestingly. They can demonstrate some real-time examples and show some videos to students.

- Considering the physical health and mental health of students there should be a specific time for virtual learning and teachers should advise students to do physical exercise to avoid adverse impacts.

Conclusion

Due to the pandemic COVID-19, there is a boundless impact on the education industry. Almost every student is studying through virtual platforms. The present study put light on the perspective of students towards virtual learning due to the closure of schools and colleges. It is observed from the study that students are not satisfied with the virtual learning environment and they feel classroom study is better than virtual learning. Some of the reasons for not preferring virtual learning are the non-systematic approach of virtual platforms. Students feel bored while attending virtual classes. They are also concerned about their physical health and feel they get more understanding of the concept when they interact face-to-face with teachers. To solve all these problems teachers and education institutes are advised to follow some ways and measures so that in this time of pandemic studies do not get interrupted.

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