# Perception of Students towards Virtual Mode of Learning in Pandemic: A case of Haryana

**Gunjan Malik[1]**
Assistant Professor, IHTM, MDU, gunjan.
ihtm@mdurohtak.ac.in

**Anoop Kumar[2]**
Assistant Professor, IHTM, MDU,
anoop@mdurohtak.ac.in

**Jyoti[3]**
Assistant Professor, IHTM, MDU,
jyoti.ihtm@mdurohtak.ac.in

**Shilpi[4]**
Assistant Professor, IHTM, MDU,
shilpi.ihtm@mdurohtak.ac.in

**Ms. Purvi[5]**
Research Scholar, IHTM, MDU,
purvisaini7@gmail.com

## Abstract

Present pandemic has made virtual classes an inevitable reality of education, which has become a new normal. But this change has many strands positives, challenges, pedagogy, platform etc. In the present study an attempt has been made to identify the responses of students studying in different colleges and universities of Haryana regarding their experience of virtual classes. A total of 796 respondents were administered through online questionnaire and SPSS 20.0 version was used to analyse the data. In the study it was found that Google meet is the most preferred platform, lecture method is the major component of pedagogy used by teachers in Haryana and students in Haryana are sufficiently technically skilled for attending online classes. Certain challenges established in the study are internet speed, lack of classroom environment, lack of gadgets and proper space etc. With an average or positive experience of online classes maximum of the students would not wish to continue with this mode post pandemic. The study would help the administrators in policy making and developing efficient learning systems.

# Introduction

Information technology and human life go hand in hand with a strong relationship and even a greater impact on education. Learning process came to a sudden halt because of the pandemic which led to closure of educational institutions all over the world but the show must go on and the solution to keep the learning continuous, was running online classes. Students as well as the institutions accepted and acknowledged the online medium as a quick fix for the threatening pandemic situation. Indeed, this pandemic generated opportunity to demeanour this vast experiment with online learning in academic establishments. But it has not been embraced as a substitute to the real mode of offline learning rather the ongoing pandemic necessitated to have recourse to electronic learning world over. Now, the world has realised that this pandemic is here to stay. So, the educational organizations as well as the governing bodies are trying to traverse to make the students and teachers comfortable to work in this new normal. This learning and teaching methodology is a new wave and the various stakeholders are in process of adjusting to it. **Berge (2007)** when there was no pandemic, realized and stated that your keenness to use technology is not important as online learning is going to stay. The knowledge society which is expanding at a fast pace has made technology an inevitable method to handle online education and training.

India where 700 million users of internet exist, acts as an aid for the growth of online education at a fast pace. According to a report by Coursera (an online education provider) there are a total of 44 million registered users and out of which 4.8 million are from India which is the second largest market after US. Even though e learning is experiencing an enormous growth at a fast pace but it is still at the early stages. In this scenario, the two major stakeholders, students and teachers are of supreme importance and acknowledging their point of view and perception towards this new teaching and learning modus operandi is crucial to learning and motivation. (**Koohang and Durante, 2003)**. In Medical and Health Science field many researches have been conducted studies like **(Meng et. al. 2020; Gondauri et. al, 2020; Abdulamir and Hafidh, 2020)** however less work has been done in the field of management and Hospitality and Tourism. So, in the prevalent situation of virtual learning which seems to continue for long as a new normal and is a revolution in learning and teaching methodology, it becomes very crucial to understand the perception or opinion or preferences of students towards this novel methodology and also recognize the challenges experienced by students in the same. In this paper researcher has tried to record the opinions and perceptions of students studying in various UG and PG courses in colleges and universities of Haryana on various dimensions as mentioned in objectives by using percentage analysis in SPSS. Results are discussed in analysis section in respect of each objective with the help of pie charts.

**Poole (2000)** declared convenience as one of the benefits of attending online classes as compared to offline mode in which many students drop out due to family commitments. Online classes also furnish balanced lifestyle to students. **Petrides (2002) and Schrum (1998)** also hinged that one of the substantial advantage of online classes is the pliability it provides to the students as well as teachers. In a similar context, **Roper (**2007**)** expressed that students can attend online classes with great flexibility from different locations and at different times and can even follow their hobbies and interests as they learn time management skills. **Croxton** way back in **2014** in his research asserted that online learning entice to a sizeable number of students and it will endure to be an essential part of higher education. The study also confirmed that accessibility, flexibility in participation and convenience as some of the boons of online education. **Garnham and Kaleta (2002)** stated that online classes have a special advantage for introvert students who remain supressed in face to face class as they actively engage in online mode. **Roy et. al. 2005** also stated in their study that virtual classes leads to remarkable reduction in carbon footprint as there is trimmed pollution, energy use and waste. **Michael (**2012**)** conducted a research in which online classes were piloted in School of accounting and finance in 2010 for certain semesters. The study found certain benefits and challenges of online classes like reduced travel costs, flexibility for the staff. It also reduces paper waste, leads to effective time management, balanced lifestyle, increases the accessibility to learning material etc. but the technical challenges cannot be ignored as stated by song et. al. also in 2004. **Fedynich (2013)** in his article unearthed numerous advantages of online learning because of anachronistic environment it provides where students can drop messages, look through and respond to messages. They also have time to review responses, amend interpretations as well as alter the primary perceptions. **Nguyen (2015)** in his

study instituted about the positive outcomes of online learning as greater accessibility to course material, lesser peer pressure as there is diminished withdrawal or failure. **Dillon and Gunawardena (1995) ; Leidneer and Jarvenppa (1993)** in their research bracketed that to attain opportunities from online learning three major dimensions: student attributes, teacher traits and technology have strong impact on the effectiveness of online learning. Similarly, **Collis (1991)** ascertained that faculty attributes play a pivotal role in effective online delivery. In virtual learning environment for thriving articulation of lessons there are many factors which are noteworthy like technology gadgets, program outline, effective faculty, rational curriculum and endorsing stakeholders. **(Bar & Miller, 2003). Rovai et. al. (2007), Shroff and Vogel (2009)** in their study compared online students and suggested that both at undergraduate and postgraduate level online students are inherently motivated as compared to their counterparts. **Brown and Liedholm (2002)** conducted a study on microeconomic course students to evaluate the learning outcomes of online classes and found inferior performance as compared to the traditional and conventional format. **Gautam, D.K., Gautam, P.K.** conducted their study Nepal in 2020 and accentuated that 79% of the students acknowledged that shortage of infrastructure facilities at home is one of the major challenge in online classes which includes internet speed, power cuts, hardware devices like laptops, earphones, smartphones etc. the study also found that maximum students recognized flexibility in context of time, easy access to teaching material as well as sitting arrangement as benefits of online classes. Almost all the students suggested that universities or government should provide intense internet facility at low cost to all so as to make online teaching effective. Study also recommended that universities need to prosper a curriculum which is education friendly, technology has to be updated, faculty needs to be inducted and also an enterprising administration is required. **Basilia and Kvavadze (2020)** in their study manifested the need for preparedness of academic organizations to remodel and reshape the offline courses and classes into online in this turmoil of pandemic as it is the only way out for continuing education, maintaining social distancing and preventing spread of virus. **Alawamleh, Twait and Saht (2020)** in their research highlighted certain benefits and challenges of online learning. The advantages accentuated were flexibility, convenience, active participation, cost effectiveness and problems as isolation, decreased cognitive abilities and creative thinking, low engagement were established. So, the literature reviewed above portrays that work has been done on identifying the benefits and challenges of online classes but there is lack of research in Indian context. The present environment where online classes have become an inevitable part of students' life and is here to stay, motivated the researcher to conduct study on the same, covering many other research dimensions as well like widely used platform, level of technical skills amongst students, pedagogy etc. as included in research objectives.

# Objectives of Research

The aim of this study is to analyse the opinion of students regarding online classes covering following parameters.

1.      To identify the commonly used platforms used for online classes.
2.      To recognize the prevalent level of technical skills amongst students for managing online classes smoothly.
3.      To find out the pedagogy used by teachers in online classes.
4.      To scrutinize the benefits and challenges faced by students in online classes.
5.      To understand the opinion of students towards comparison of online classes with traditional mode of teaching.
6.      To analyse the overall experience of the students of attending online classes.
7.      To discern the viewpoint of students' towards attending online classes post covid-19.

# Research Methodology

The prime objective of the research was to analyse the perception of students of Haryana towards online classes. To full fill the objective a descriptive quantitative research design was used to record the opinion of the students. A structured questionnaire was designed to achieve the objective of the research. The questionnaire was designed in two parts; part A of the questionnaire was designed to record the demographic profile of the students however part B was designed to record the opinion of students on various parameters as per research objectives.  To validate the

questionnaire it was send to various academicians for their feedback.  On the basis of feedback received few minor changes were done in the language as well as in the order of the questions. The target population for the research work consists of all the students who are studying in various undergraduate (UG), postgraduate (PG) courses in various universities and colleges of Haryana. The questionnaire was designed with the help of Google Forms and questionnaire link was generated. Simple random sampling was used to collect the opinion of students and they were further informed about the confidentiality of their opinion. The data was collected from August to October 2020. In total 1032 filled questionnaires were received, which were further scrutinized. 236 questionnaires were found incomplete hence were not included in the study.  A total of 796 valid questionnaires were used for analysis.  SPSS 20.0 version was used to analyse the data.

# Results & Discussions

## Demographic Analysis of Students

**Table 1** given below depicts the demographic profile of the students.  Male respondents were more (66.8 per cent) as compare to the female respondents (33.2 per cent). 68.3 per cent of the students were studying in undergraduate programmes, whereas 30.8 per cent students were studying in post graduate programmes. 7 Ph.D students which consists 0.9% of total respondents participated in the survey.  Majority of students (71.6 percent) were aged between 18-21 years, followed by 21-30 years (26.6 per cent), remaining (1.8 per cents) students were above 30 years old.

**Table 1**
Demographic profile of respondents

| Demographic profile of respondents | Variable | N (%) |
|---|---|---|
| Gender | Male | 532 (66.8) |
| | Female | 264 (33.2) |
| Name of Course | Undergraduate (UG) | 544 (68.3) |
| | Postgraduate (PG) | 245 (30.8) |
| | Ph.D | 7    (0.9) |
| Age | 18-21 years | 570 (71.6) |
| | 21-30 years | 212 (26.6) |
| | 31-40 years | 11   (1.4) |
| | Above 40 years | 3    (0.4) |
| Background | Semi urban | 161 (20.2) |
| | Urban | 429 (53.9) |
| | Rural | 206 (25.9) |
| Type of Institution | University | 547 (68.7) |
| | College | 249 (31.3) |

The students from urban area (53.9 per cent) were more as compared to rural (25.9 per cent) and semi urban (20.2 per cent). In the survey 68.7 per cent of students studying in the universities whereas 31.3 percent of students were studying in the affiliated colleges.

## Objective wise analysis

As the study was conducted to know the answers of various questions regarding online classes. The analysis of students' opinion on various parameters is discussed below.

## Commonly used platform to attend online classes

The very first objective of the study was to find out the most commonly used platform to
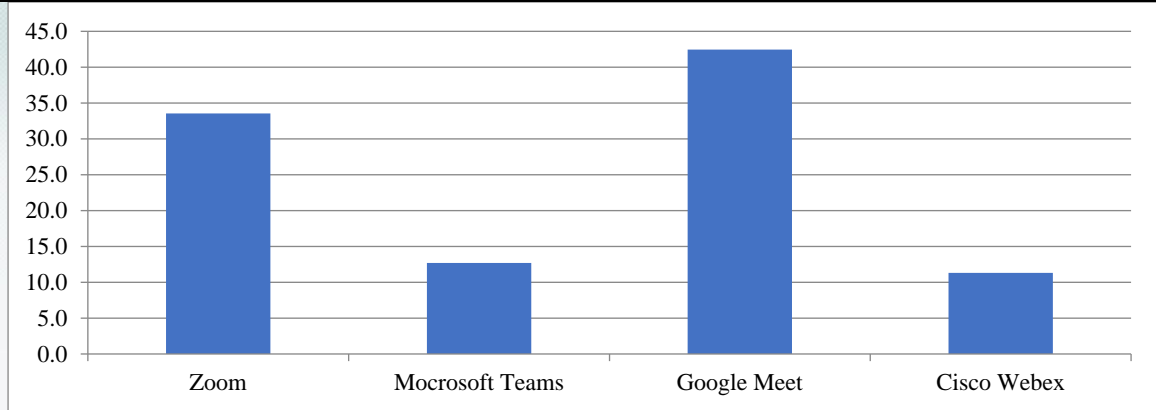
**Figure 1**
Most Commonly Platform to attend online classes

It was found that students in Haryana are using Zoom, Microsoft Teams, Google Meet and Cisco Webex to attend online classes.  It was found that Google Meet is the most preferred platform to attend online classes (N=338, 42.5 percent). Zoom is considered to be the second preferred platform for online classes (N=267, 33.5 per cent). The results of the study are in line with the study conducted by **Kulal and Nayak (2020).** Students also use Microsoft Teams (N=101, 12.7 per cent) and Cisco WebEx (N=90, 11.3 per cent) for their online classes.

## Technical skills to manage online classes

To know the answer of this research question firstly the students were asked whether previously they have attended any online classes or not. Majority of students (74.1 percent) of students have not attended online classes previously and have started attending online classes for the first time in pandemic.
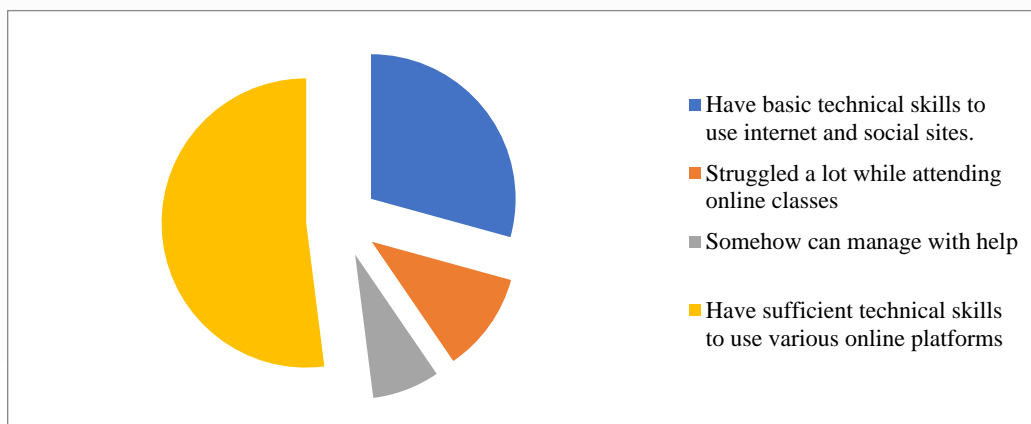


**Figure 2**
Technical skills to manage online classes

Very few (11.2 per cent) students struggled a lot while attending online classes; however 7.5 per cent of students managed online classes with the help of others.  It is pertinent to mention that 29.3 per cent of students were having the basic technical skills to used internet and social networking sites. In fact more than fifty percent students (52 per cent) were found to have sufficient technical skills to attend online classes.

## Pedagogy of online teaching

Another objective of the research was to know which teaching methodology, teachers are using in online classes. The results are shown with the help of **Figure 3.**  It was observed that 56 per cent faculty members were teaching by delivering lecture only.  16 per cent teachers were including group discussion along with lectures.  12 per cent faculty members were using group discussion as well as case study method along with the lectures.  8 per cent students said that their faculty

members are using case study method along with the lectures. Role Play methodology is used by 4 per cent of teachers along with lecture, case study and group discussion. Remaining 4 percent are taking the help of simulation techniques along with the other methods.
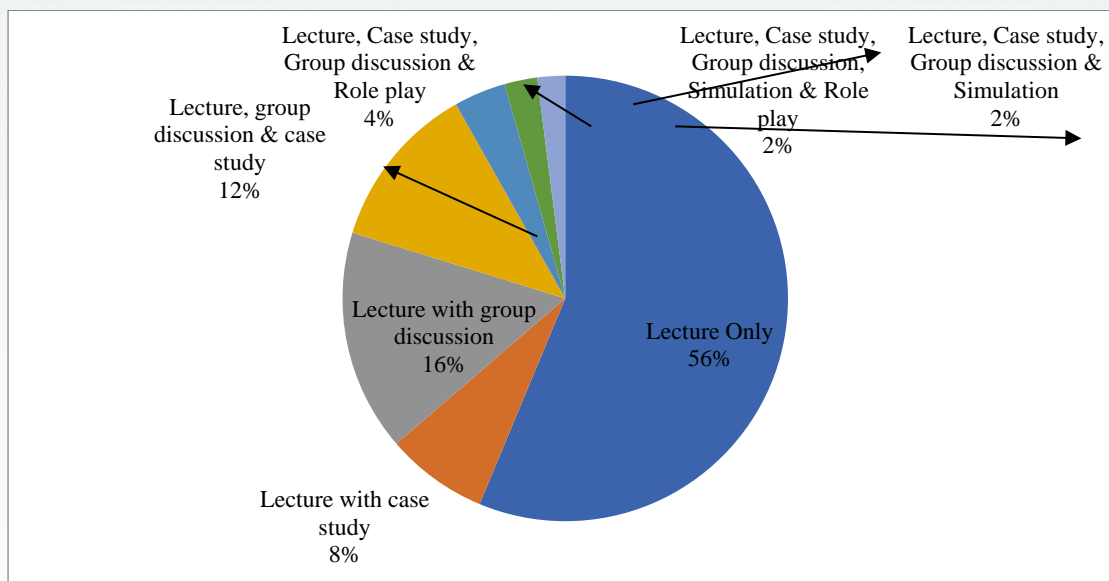


**Figure 3**
Pedagogy of Online Teaching

## Benefits of Online Classes

The diagram below depicts that maximum percentage of students (29%) i.e 231 students pronounced that online classes save a lot of time and because of that they can devote more time towards family and hobbies as stated by 28.27% respondents and also established in review by **Poole, 2000, Roper, 2007, Michaek, K, 2012.** 11% students also affirmed that online classes gives them confidence to ask questions because of absence of peer bullying also rested by **Garnham and Kaleta, 2002, Croxton, 2004 and Alawamleh, M., Twait, L.M.A., Saht, G.R.A (2020).** 9.67 % articulated that online classes integrates all form of media, print, audio, video and animation so it makes the teaching and learning process better. 6.28% identified that flexibility is also one of the benefits of online learning and the same has been floated by many authors in their previous researches like **Pole, 2000, Petrides, 2002 & Schrem, 1998, Roper, 2007, Michaek, K, 2012, Croxton, 2014, Gautam , D.K, Gautam, P.K., 2020 and Alawamleh, M., Twait, L.M.A., Saht, G.R.A**, **2020.** Only 4.65% said that they have better access to study material because of online classes as also reckoned by **Nguyen, 2015 and Gautam, D.K, Gautam, P.K., 2020.** A very few percentage (1.51) of respondents stated that online classes in future have the capability of increasing the access and reach of education.
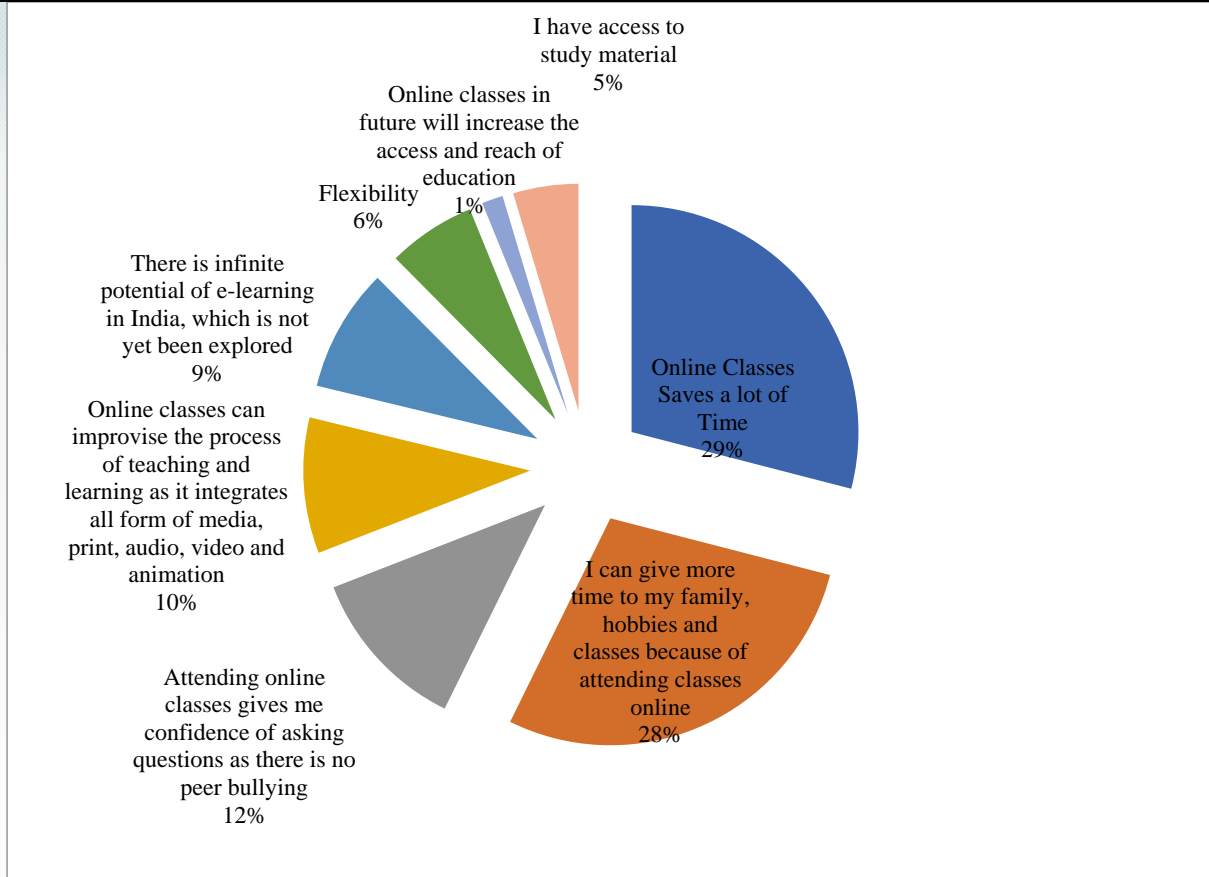
**Figure 4**
Benefits of Online Classes

## Challenges of Online classes

Data furnished in **figure 4** shows that most of the students admitted that online classes can not give class room environment as 42 percent of students considered it as a biggest challenge. 36 per cent of students considered various resources such as internet speed, availability of various equipments such as laptop, webcam, speakers, mike etc. as well as the availability of proper space to attend the online classes as the biggest challenge as found in review as well. (**Gautam, DK, Gautam, PK, 2020**). 20 per cent of students admitted that attending virtual classes is a costly affair and only 2 per cent student replied that trained faculty is a bigger problem while attending online classes also affirmed by **Gautam, DK, Gautam, PK, 2020.**
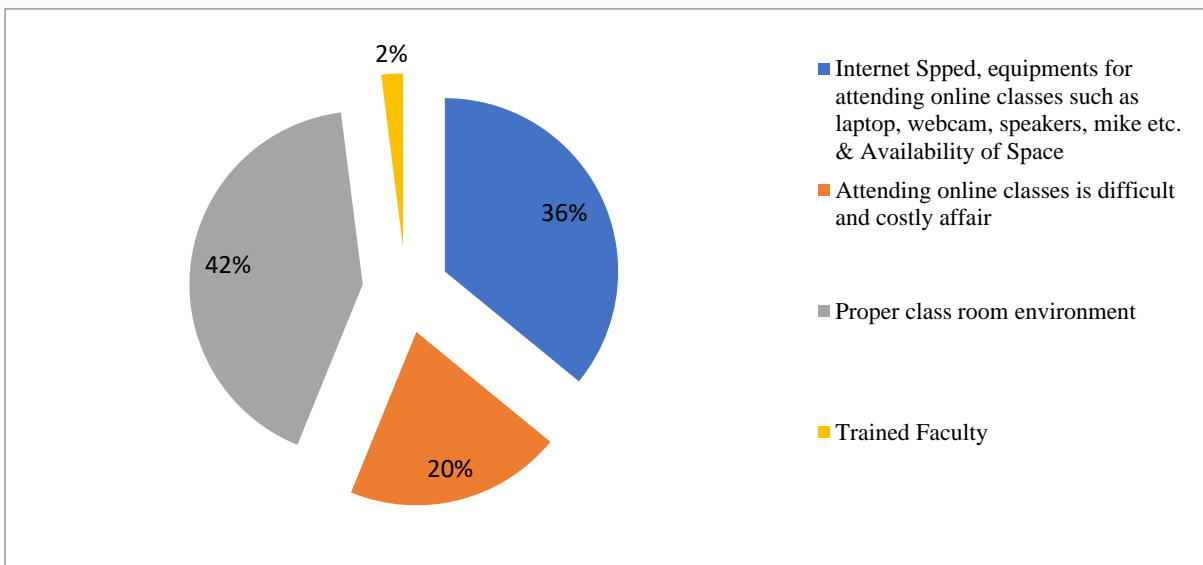


**Figure 4**
Challenges of Online Classes

## Online teaching vs. traditional mode of teaching

**Figure 5** explains that while comparing online teaching with the offline teaching 39 per cent of students said that online teaching is better as compared to offline teaching.  32 per cent of students found no change in online as well as offline teaching.  While 29 per cent students found online teaching less effective as compared to offline line teaching.
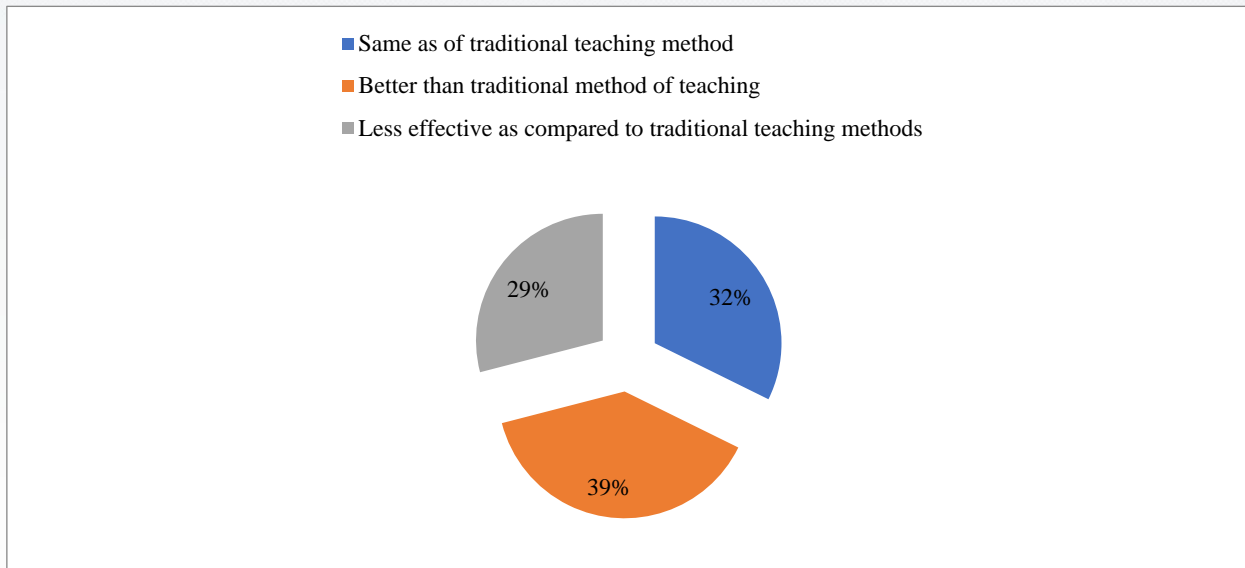


**Figure 5**
Online vs. Traditional mode of teaching

## Over all experience of online classes

The overall experience of attending online classes of 39.9 percent of student was found average. Experience of 22.6 per cent of students was good whereas 12.1 per cent of students reported their experience as excellent. The experience of 14.7 per cent of student was found poor and 10.7 per cent of students reported their experience as very poor.
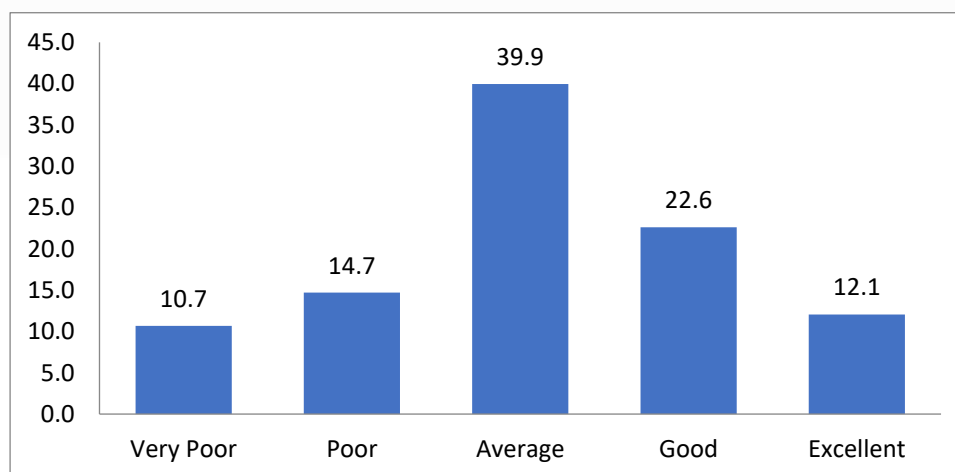


**Figure 6**
Overall experience of online teaching

## Continuing online classes post covid-19

While asking to the students whether they want to continue attending online classes post covid-19.  Figure 7 shows that 41.6 per cent of students don't want to attend the online classes. 36.4 per cent of students are ready to attend online classes even post covid-19, however 22.0 per cent
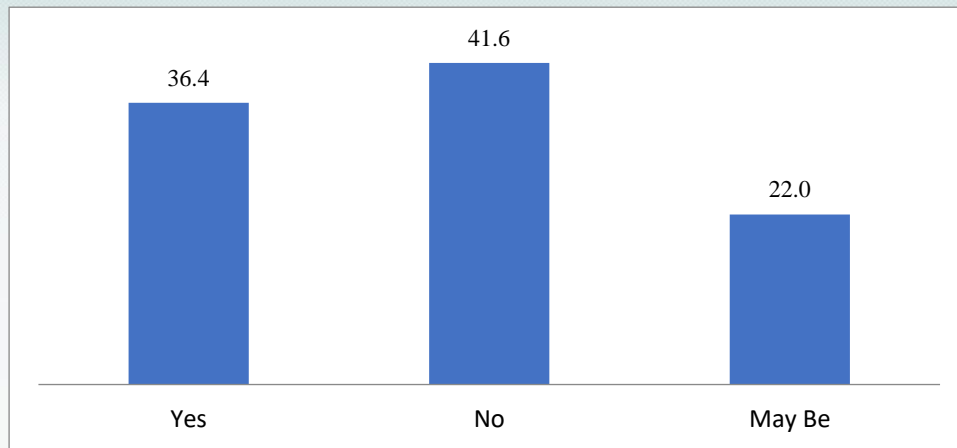
students were not sure about their answer.



**Figure 7**
Continue to attend online classes post covid-19

## Conclusion and Recommendations

It was found that the most preferred and used platform for attending online classes is google meet. Students in Haryana are having sufficient technical knowledge to attend online classes as it is an era of social media and students are internet and technology savy. The reason could also be that more than fifty percent of respondents were from urban and semi urban background. It was also accentuated that teachers in Haryana are using lecture method as a major component of pedagogy and very few of them are using role play, group discussions or case study in pedagogy. Benefits of online classes as perceived by students of Haryana are it saves time and students can devote time to their family, friends and hobbies, gives more confidence to introvert students, can improvise the process of teaching and learning but very few recognized flexibility as an advantage. The major challenge in online classes found in the study are absence of the actual classroom environment, internet speed, accessibility of gadgets like laptop, webcam, speakers etc. Another challenge faced by the students in Haryana is lack of proper and peaceful space at home for attending classes. Few students also stated that attending online classes is a costly affair. A very few percentage of students (2%) expressed that trained faculty is also a problem.
A mixed response was found in comparison of offline and online classes in which maximum percentage said that online classes are better than offline (39%) whereas 32% found no change in both the modes and 29% found online mode to be less effective than offline. In case of overall experience, students of Haryana expressed a positive or average ordeal with online classes. Even if the experience was average or good but maximum of the students do not wish to continue with online classes post pandemic. The research recommends that internet speed and accessibility to the gadgets if made available to the students from government or the education institution can give a boost to online education as many benefits have been outlined in the study and students possess enough technical knowledge for attending classes virtually. The study has been conducted in Haryana state only, future researchers can do the same in other states or can also do a comparative analysis in different field of studies.

## References

Abdulamir, A.S. and Hafidh, R.R. (2020). The possible immunological pathways for the variable immunopathogenesis of COVID-19 inflections among healthy adults, elderly and children. Electronic Journal of General Medicine, 17(4); Doi :10.29333/ejgm/7850

Alawamleh, M., Al-Twait, L.M, Al-Saht, G.R. (2020). The effect of online learning on communication between instructors and students during Covid-19 pandemic. Asian Education and Development Studies, Emerald Publishing Limited, 2046-3162; Doi:10.1108/AEDS-06-2020-0131.

Barr, B. and Miller, S. (2013). Higher Education: the online teaching and learning experience. https://www.google.com/url?sa=t&source=web&rct=j&url=https://files.eric.e

d.gov/fulltext/ED543912.pdf&ved=2ahUKEwiS3tKI2N3oAhUm2EKHfNoCR8QFjABegQIAxAB&usg=AOvVaw10SaI8UOXPU8DFS3h782jT.

Basilaia, G. and Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 Coronavirus (COVID-19) pandemic in Georgia. Pedagogical Research, 5(4), 1-9; Doi: 10.29333/pr/7937.

Berge, Z.L. (2007). Barriers and the organization's capabilities for distance education. Distance Learning, 4 (4), 1.

Brown, B.W. and Liedholm, C.E. (2002). Can web courses replace the classroom in principles of microeconomics? American Economic Review, 92(2), 444-448.

Collis, B. (1991). Anticipating the impact of multimedia in education: lessons from the literature. Computers in Adult Education and Training, 2 (2), 136–149.

Croxton, R.A. (2014). The role of interactivity in student satisfaction and persistence in online learning. MERLOT Journal of Online Learning and Teaching, 10(2), 314-325.

Dillon, C.L. and Gunawardena, C.N. (1995). A framework for the evaluation of telecommunications- based distance education. In Steward, D. (Ed.). Selected Papers from the 17th Congress of the International Council for Distance Education. Open University, Milton Keynes, E-Learning, 6(3), 413-432.

Fedynich, L.V. (2013). Teaching beyond the classroom walls: the pros and cons of cyber learning. Journal of Instructional Pedagogies, 13, 1-7.

Garnham, C. and Kaleta, R. (2002). Introduction to hybrid courses. Teaching With Technology Today, 8(6), 1-5.

Gautam, D.K., Gautam, P.K. (2021). Transition to online higher education during covid 19 pandemic: turmoil and way forward to developing country of South Asia- Nepal. Journal of Research in Innovative Teaching & Learning, Emerald Publishing Limited, 2397-7604; Doi 10.1108/JRIT-10-2020-0051.

Gondauri, D., Mikautadze, E., Batiashvili. (2020). Research on COVID-19 virus spreading statistics based on examples on the cases from different countries. Electronic Journal of General Medicine, 17(4), em209; Doi https://doi.org/10.29333/ejgm/7869

Koohang, A. and Durante, A. (2003). Learners' perception toward the web-based distance learning activities/ assignments portion of an undergraduate hybrid institutional model. Journal of Information Technology Education: Research, 2(1), 105-113.

Kulal, A., and Nayak, A. (2020). A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District. Asian Association of Open Universities Journal, 15(3), 285-296.

Leidner, D.E. and Jarvenpaa, S.I. (1993). The information age confronts education: case studies on electronic classroom. Information Systems Research, 4, 24-54.

Meng, L., Hua, F. and Bian, Z. (2020). Coronavirus disease 2019 (COVID-19): emerging and future challenge for dental and oral medicine. Journal of Dental Research. 1-7 00(0); Doi: 10.1177/0022034520914246

Michael, K. (2012). Virtual classroom: reflections of online learning. Campus-Wide Information Systems, 29(3), 156-165; Doi 10.1108/10650741211243175.

Nguyen, T. (2015). The effectiveness of online learning: beyond no significant difference and future horizons. Merlot Journal of Online Learning and Teaching, 11(2), 309-319.

Petrides, L. (2002). Web-based technologies for distributed (or distance) learning: creating learning-centered educational experiences in the higher education classroom. International Journal of Instructional Media, 29(1), 69-77.

Poole, D. (2000). Student participation in a discussion-oriented online course: a case study. Journal of Research on Computing in Education, 33(2), 162-177.

Roper, A. (2007). How students develop online learning skills. EDUCAUSE Quarterly Magazine, 30(1), 62-65.

Rovai, A.P., Ponton, M., Wighting, M.J. and Baker, J. (2007). A comparative analysis of student motivation in traditional classroom and e-learning courses. International Journal on E- learning, 6(3), 413-432.

Roy, R., Potter, S., Yarrow, K. and Smith, M. (2005). Towards Sustainable Higher Education: Environmental Impacts of Campus-Based and Distance Higher Education Systems. The Design Innovation Group, Milton Keynes.

Schrum, L. (1998). On-line education: a study of emerging pedagogy. New Directions for Adult and Continuing Education, 78 (Summer), 53-61.

Shroff, R.H. and Vogel, D.R. (2009). Assessing the factors deemed to support individual student intrinsic motivation in technology supported online and face-to-face discussions. Journal of Information Technology Education, 8, 59-85.

Meng, L., Hua, F. and Bian, Z. (2000), "Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine",     Journal of Dental Research.
Meng, L., Hua, F. and Bian, Z. (2000), "Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine",     Journal of Dental Research.
Meng, L., Hua, F. and Bian, Z. (2000), "Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine",     Journal of Dental Research.
Meng, L., Hua, F. and Bian, Z. (2000), "Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine",     Journal of Dental Research.
Meng, L., Hua, F. and Bian, Z. (2000), "Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine",     Journal of Dental Research.