

Indian Institute of Information Technology - Vadodara



# **Online Learning & Its Impact on Society**

By

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&

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## **Acknowledgment**

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We would like to thank our friends and families for taking a moment of their precious time and letting us know their take on online learning. Without them, this study wouldn't have been successful. They were a great source of motivation and encouragement for us both.

## **Abstract**

Due to the outbreak of the COVID-19 pandemic, the lockdown was implemented and academic activities of every educational institution come to a cease. Offline classes were shut down and its adverse effects could be seen on the learners. Students could no longer attend classes physically and the need for an alternative to the conventional offline teaching method arose. It was at that moment that we realized the importance of Online Learning. Fortunately, our technological advancements were able to provide the scope for connecting students with their teachers from their homes by providing a bridge, that was virtual classrooms.

After almost two and a half years, online learning has become an integrated part of our lives. Students have moved on from their customary methods of learning and have now adapted to this modern learning model. However, during this transition period we also realized that just like offline learning, online learning comes with its own set of pros and cons.

This study focuses on understanding these aspects of online learning. Through the help of a survey, we try to understand the influence of online learning on students and its impact on society. We discuss various factors that make a learning model satisfactory, and whether or not online learning complies with them. These factors include student-teacher interaction, student collaboration, skill enhancement, time management, etc. We try to provide the distinction between online and offline learning based on these features and whether it makes online learning a better alternative to offline learning. We also discuss how the technology involved in online learning affects the environment and the students, both mentally and physically.

**Keywords:** Online learning, Blended learning, Ideal learning model, Student-teacher interaction

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## **CHAPTER – 1**

### **Introduction**

Online learning is a method of education where students learn in a fully virtual environment through the help of electronic technologies and media. In simple language, online learning can be defined as “learning that is facilitated electronically”. A typical online learning environment is managed via the Internet, enabling students to access their learning materials online at any place and time.

#### **1.1 History**

We can trace online learning back to the 1960s when Donald L. Bitzer introduced the first computer-based training system known as PLATO - Programmed Logic for Automatic Teaching Operations. However, it was not until the 1990s that the term online learning was officially introduced. Online learning was first used in India by Andhra Pradesh Open University (now B R Ambedkar Open University) for offering a bachelor’s degree in library and information science courses. It was further used by other institutions later on.

#### **1.2 Objective**

The main purpose of this study is to explore the various aspects of online learning, including its influence on people and its impact on society. We will discuss various advantages and disadvantages of online learning. At last, we will try to answer whether or not online learning can be employed as an ideal learning model.

#### **1.3 Relevance**

Learning is an important part of everyone’s life. It is the most important factor that contributes to the growth of human resources. Therefore, easy access and usage of learning are very necessary. Online learning makes it possible to access learning resources at any time and place in the world provided one’s device is connected to the Internet. Students can access any online course at any time according to their convenience and learn at their own pace. It helps students to create and communicate new ideas. It provides a person with a chance to uplift their skills by participating in various extracurricular activities. Majorly,

online learning helps students to gain advanced skills in a more time-saving and cost-efficient manner that isn't just possible with conventional teaching methods.

#### **1.4 Problem**

During the lockdown, students were completely dependent on online learning for their studies. As we have already discussed some of the pros of online learning, it has its cons as well. These disadvantages include –

- a. Limited student-teacher interaction,
- b. Lack of self-motivation and self-discipline,
- c. Social isolation,
- d. More distractions,
- e. Declination of mental and physical health, etc.

Now that we have mentioned some of online learning's pros and cons, "Can we treat online learning as an ideal learning model?".

#### **1.5 Hypothesis**

Online learning solely cannot be employed for efficient learning. The best way to utilize the features of online learning is to use it blended with offline learning, which we often term 'hybrid learning or blended learning'.

## **CHAPTER – 2**

### **Literature Review**

#### **2.1 The efficacy of online learning**

The main purpose of any learning model is to achieve a certain result within a certain period. Students may choose any mode of learning as per their convenience, whether it is offline, online, or hybrid, but in the end, there is always the desired result that needs to be achieved. A study by Heather Kauffmann conducted in 2015 explored various factors that predicted the success and satisfaction of students in an online learning model. Kauffmann noted that the outcomes of online learning programs are comparable to those of face-to-face programs. In another study, Van Portfliet and Anderson note that academic achievement by students in hybrid programs is consistently higher than that of students engaged in purely online programs.

#### **2.2 The importance of building a learning community**

Research about online learning by Jonathan Beale suggested that when faculty actively interact and engage students in a face-to-face classroom, the class evolves as a group and develops intellectual and personal bonds. According to Michigan Virtual Learning Research Institute's Teacher Guide to Online Learning, creating a human-to-human bond with your online students, as well as with their guardians is critical in determining student success in your online course. This can be accomplished through effective individual and group communication, encouraging course engagement, taking regular feedback, and providing multiple opportunities for students to ask questions and learn in a way that is meaningful to them.

#### **2.3 Does online learning work better for some students?**

Heather Kauffmann noted that students with the capacity for self-regulated learning tend to achieve better outcomes from online learning, as more responsibility is placed on the learner in online learning. A 2019 review of 35 studies into online learning by Jacqueline Wong et al suggested that in online learning environments, where the instructor presence is

low, learners have to make their own decisions regarding when to study or how to approach the study materials. Therefore, learners' ability to self-regulate their learning becomes a crucial factor in their learning success.

#### **2.4 Can online learning support the development of self-regulated learning?**

A controlled study in 2018 conducted by Ruchan Uz and Adem Uzun with 167 undergraduate students, on a programming language course compared hybrid learning with a traditional learning environment. The study found that to develop self-regulated learning skills, hybrid learning was more effective than traditional learning. In a 2011 review of 55 empirical studies, Matthew Bernacki, Anita Aguilar, and James Byrnes noted that technologically enhanced learning environments provide an opportunity for students to build their ability to self-regulate, and for some, utilize their ability to apply self-regulated learning to acquire knowledge.



## **CHAPTER – 3**

### **Analysis**

#### **3.1 Methodology**

The survey for this study was conducted online with the help of google forms. A series of questions were generated to determine how the integration of technology in learning affects the students and society. It contained 21 multiple choice questions that were divided into 3 sections based on their motive.

##### **3.1.1 Section – 1**

This section contained 5 questions. The first three questions were intended for the respondent's personal information. The last two questions were intended to determine the availability of a proper internet connection in their home.

##### **3.1.2 Section – 2**

This section was intended to determine the respondent's preferred features in a learning model. It contained 11 questions. The main purpose behind asking for the respondent's preferred choices was to determine if online learning has all the features that are required in an ideal learning model. When we talk about an ideal learning model, what we are trying to imply is that the model's advantages far outweigh its disadvantages and it can be solely employed for efficient learning.

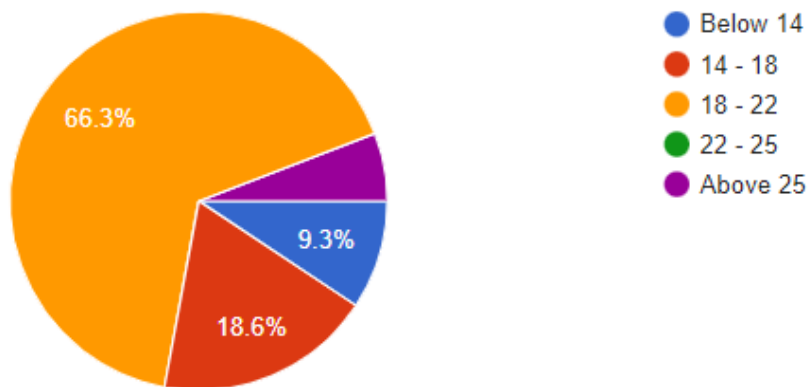
##### **3.1.3 Section – 3**

This section contained 5 questions that focused on finding out the impact of online learning on humans and society. The impact of online learning usually concerns the usage of the technology involved, like the Internet among many others.

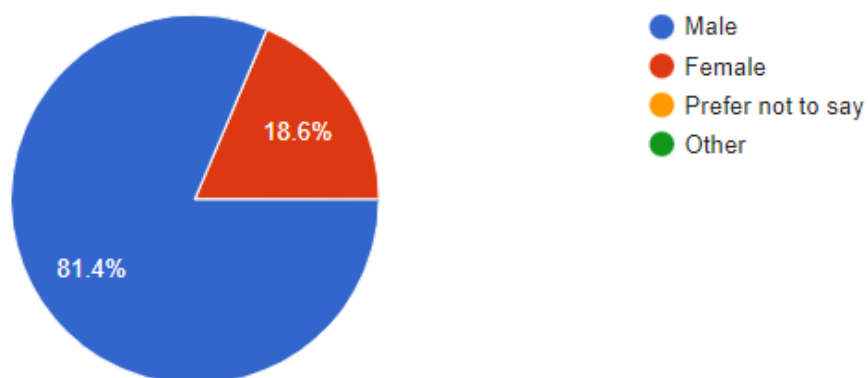
### **3.2 Results**

The following results are based on the responses given by 86 respondents.

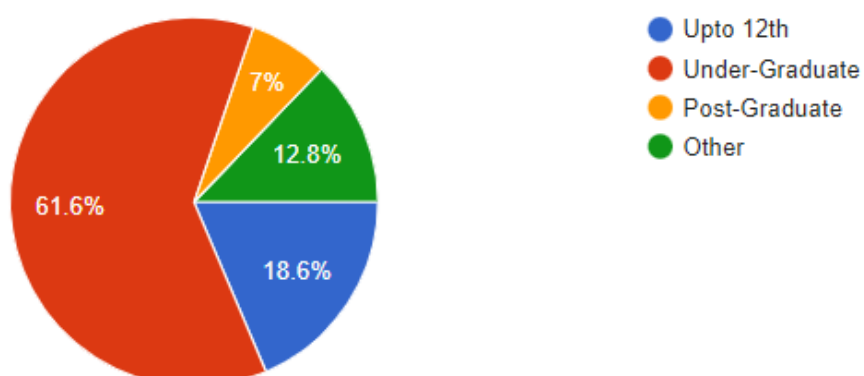
#### **1. Select your age**



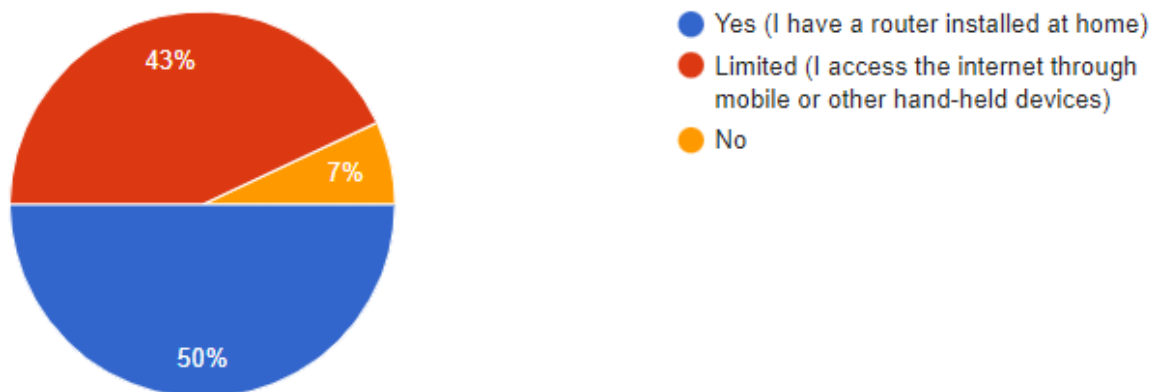
#### **2. Select your gender**



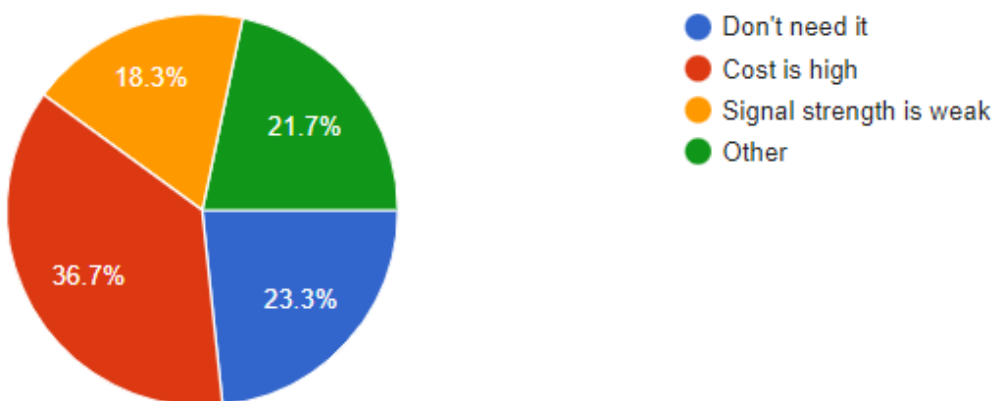
#### **3. Select your education status**



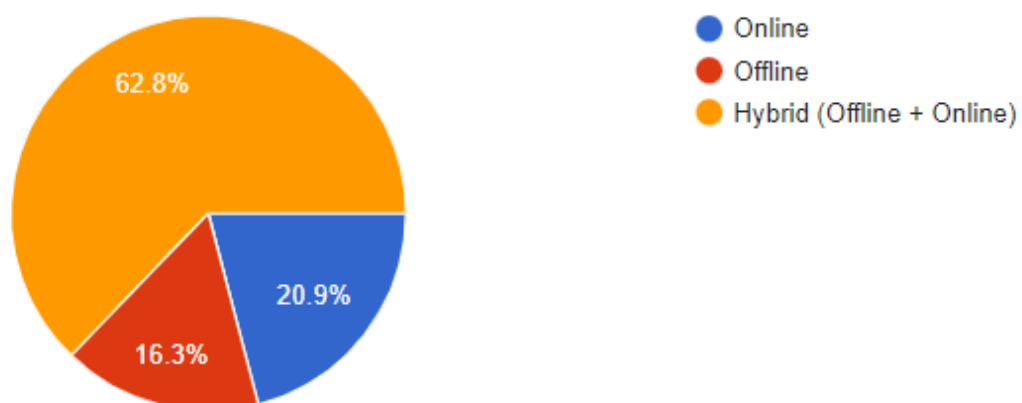
4. Do you have proper internet access at your home?



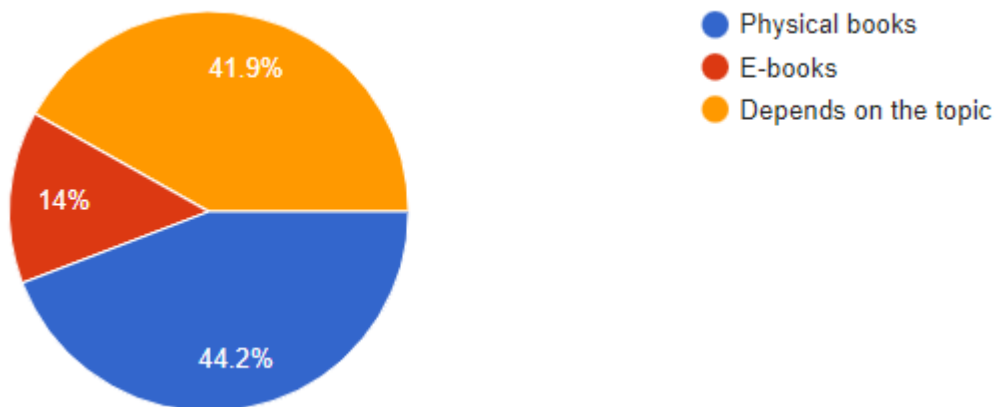
5. What is the main reason that you have limited or no internet access at home?



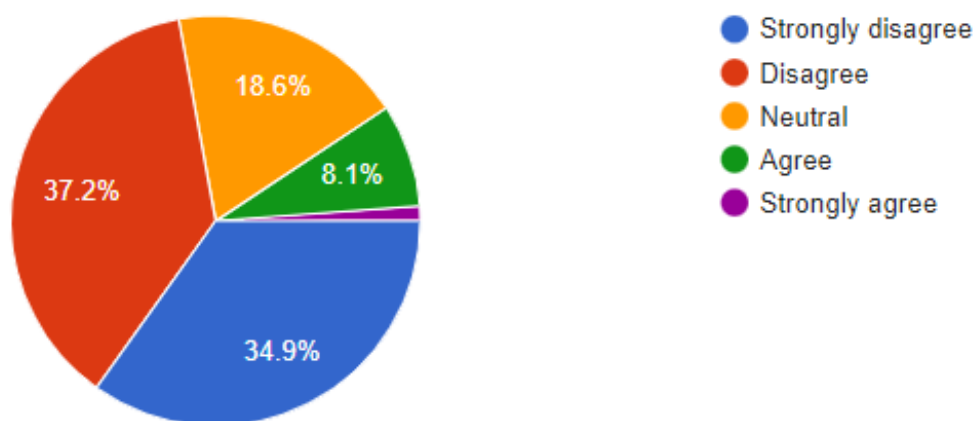
6. Which mode of learning do you prefer?



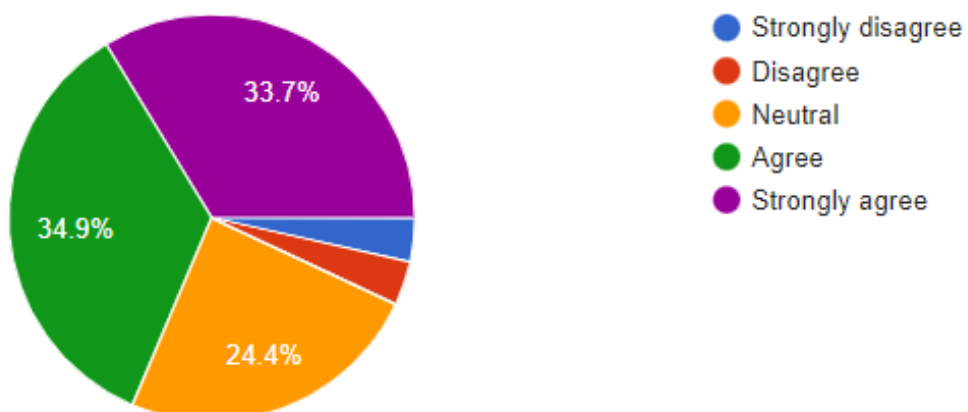
7. Where do you like to read text from?



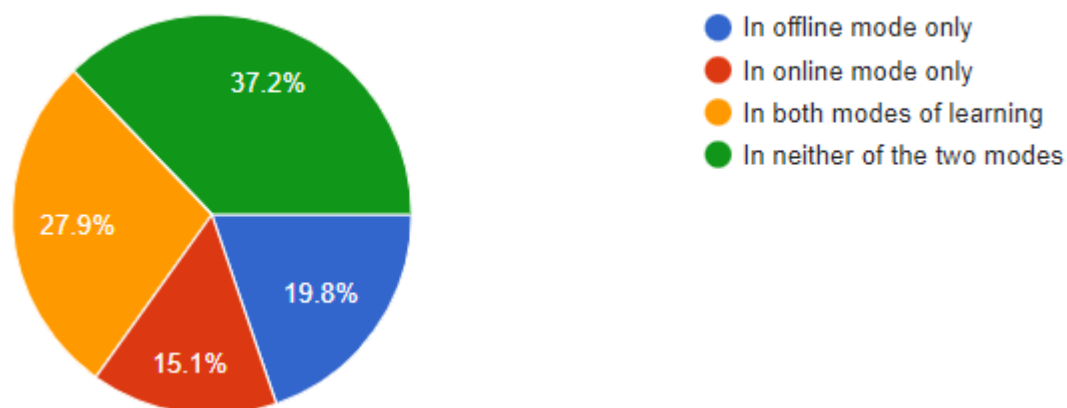
8. Online learning at home and offline learning in class are both the same.



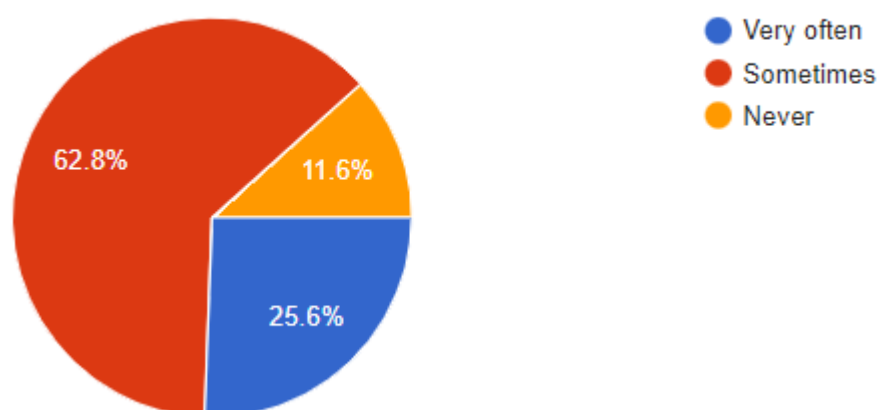
9. Face-to-face interaction with your teacher is necessary for understanding while learning.



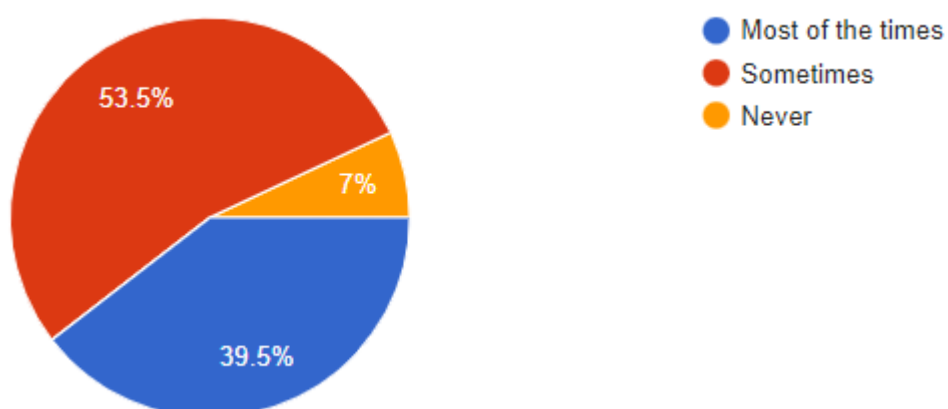
10. Do you feel shyness or hesitation while asking questions?



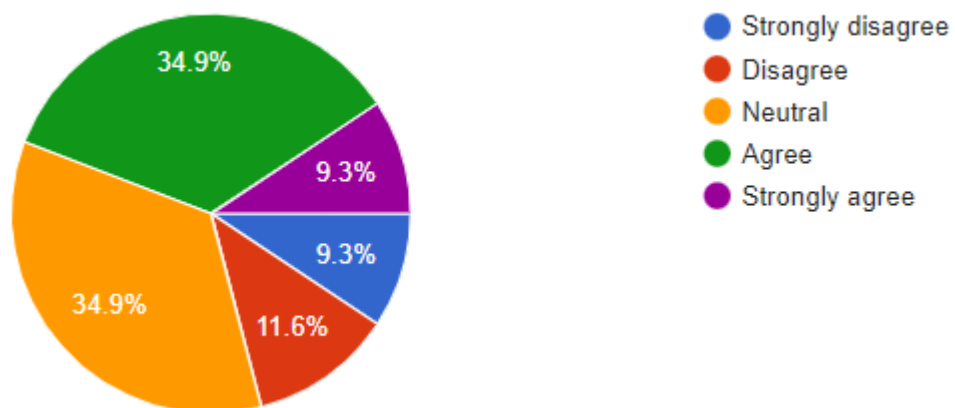
11. How often do you interact with other students through online means?



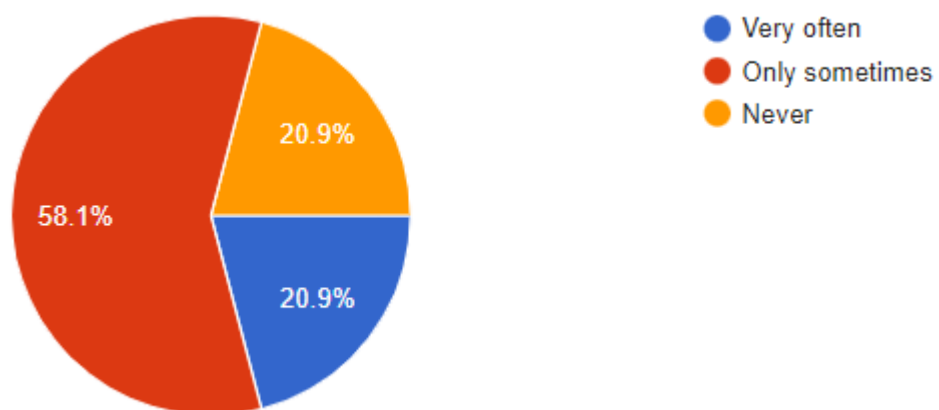
12. Do you work in groups for online activities, whenever required?



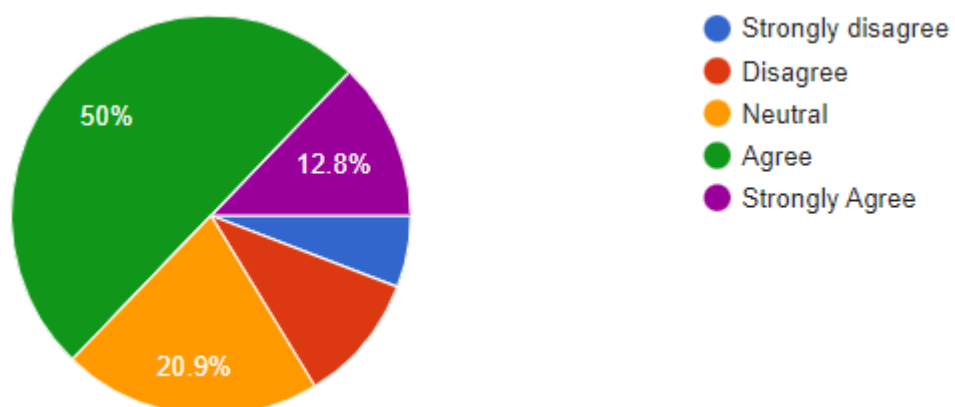
13. Online learning provides a more competitive environment for students.



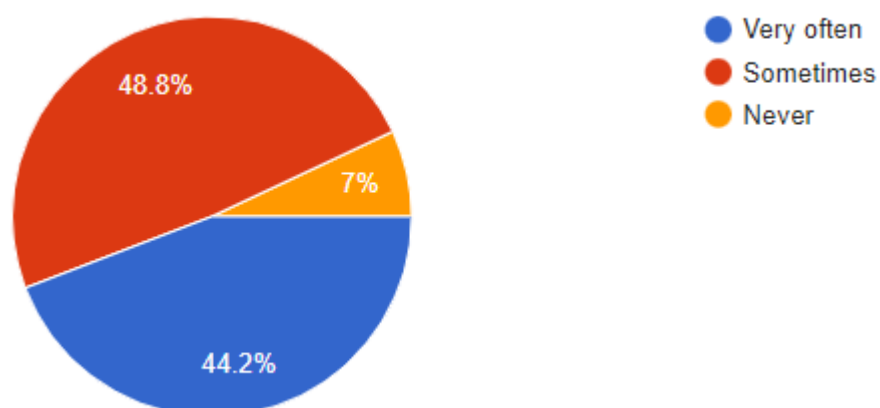
14. Do you often cheat in online quizzes and exams or copy assignments from other students?



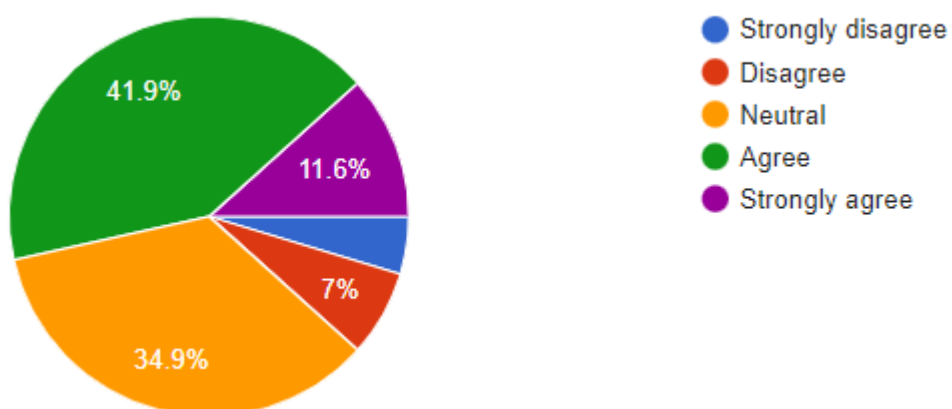
15. Time can be managed efficiently while learning online.



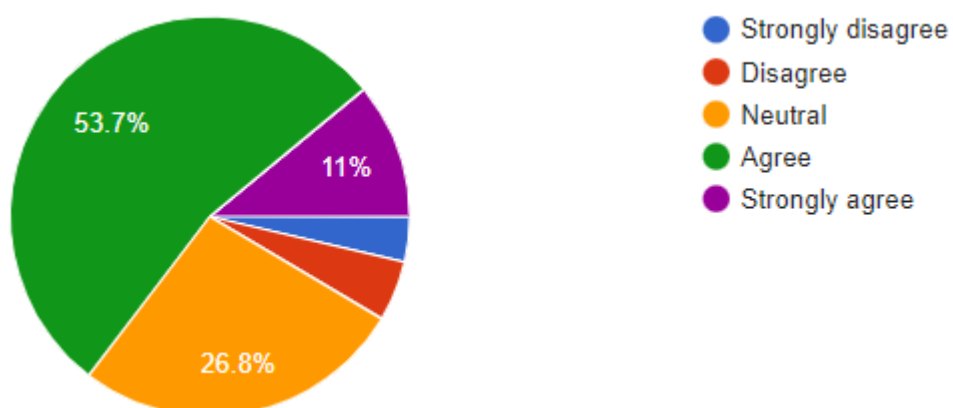
16. How often do you get distracted while learning online?



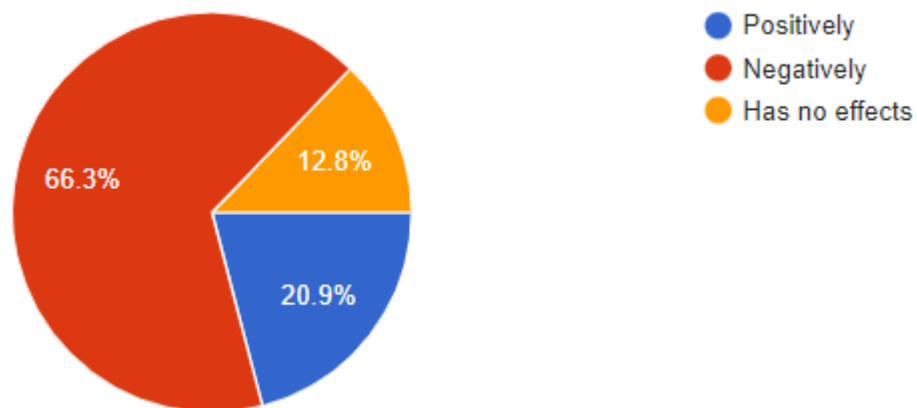
17. Online learning is eco-friendly.



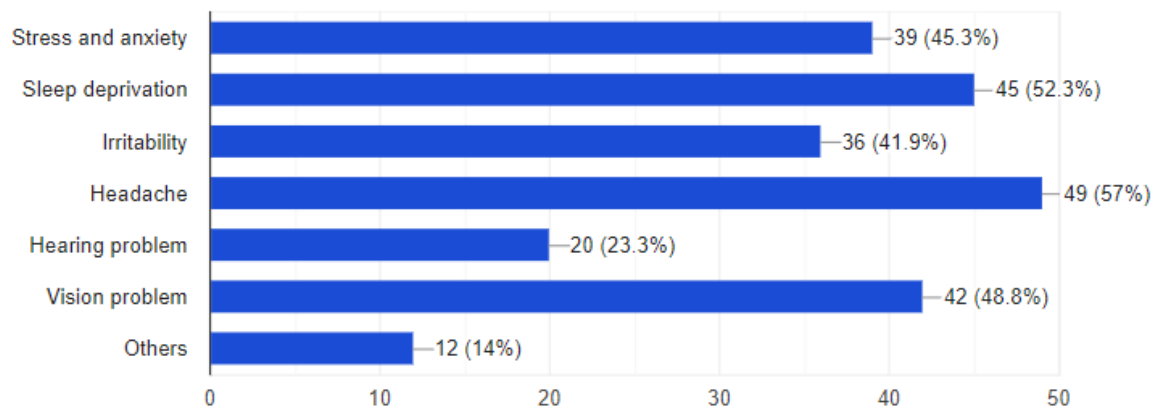
18. Due to the digital divide in society, the gap between literate and illiterate people is also increasing.



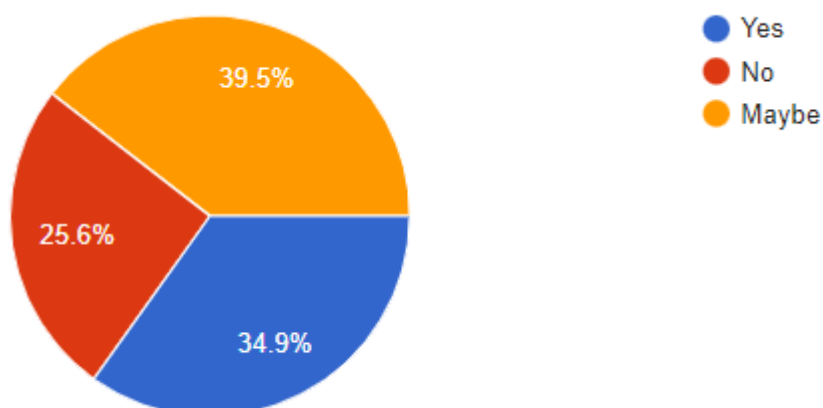
19. How does online learning affect the human body?



20. Select the symptoms you have felt while learning online.



21. Do you see a future where online learning has completely replaced offline learning?





### **3.3 Discussion**

- One of the basic requirements of online learning is the availability of a proper internet connection. According to the survey, 43% person of people only have a limited internet connection in their homes, and 7% of people do not have an internet connection at all. The main reason behind this is its expensive cost (36.7%). Another major reason is the weak signal strength (18.3%) in various regions.
- 20.9% of people prefer online learning, 16.3% of people prefer offline learning, while the rest 61.8% prefer blended learning. This result is per the fact that hybrid learning utilizes the advantages of both online as well as offline learning. The cons of offline and online learning can be neglected with the use of a hybrid mode of learning.
- Student-teacher interaction is the basic requirement of a good learning model. This fact can be confirmed by our survey, as 68.6% of people agree that face-to-face interaction is necessary for understanding a topic. Though 7% of people disagree with this, 24.4% of people are comfortable by any means.
- The key to efficient learning is asking questions. According to the survey, 57% of people are comfortable asking questions in online mode, 52.3% of people are comfortable asking questions in offline mode, while 27.9% of people are uncomfortable asking questions in either of the two modes. With the employment of blended learning, the active participation of students can be increased to 72.1%.
- The findings of the survey suggest that 1 out of every 10 students is socially inactive while learning in online mode.
- Skill development can only be facilitated through a competitive environment. According to the survey, 44.2% of people believe that online learning provides a more competitive environment than the offline mode of learning, 20.9% of people are in favor of offline learning, and the rest believe that both modes of learning are equally competitive. However, our findings suggest that almost 4 out of every 5 students cheat in their exams or copy assignments from other students.
- 93% of people get distracted often while learning online. These diversions can be subsided through the surveillance of a teacher or a guardian.
- Not all people in our society can afford to buy devices needed for online learning or to get a proper internet connection. This is what we term the 'Digital divide'. People

who are not able to afford these facilities are disbarred from the opportunity of learning online. Hence, the gap between literate and illiterate people keeps on increasing due to the digital divide in our society. According to the survey, 64.7% of people believe that the digital divide is one of the causes of the increasing gap between the literates and the illiterates.

- According to the survey, online learning has affected the physical health of 66.3% of people negatively, 20.9% of people positively, and the rest are not affected at all. Around 48.8% of people suffer from vision problems and 23.3% suffer from hearing problems due to online learning.
- The findings of the survey suggest that almost every person's mental health is negatively affected by online learning. 57% of people have regular headaches, 52.3% of people suffer from sleep deprivation, 41.9% of people feel irritable, and around 14% suffer from other mental health issues.

## **CHAPTER – 4**

### **Conclusion**

Online learning has many advantages. It is time-saving, cost-efficient, eco-friendly, and not limited by geographical barriers among many other benefits. However, there are certain key features that it lags in. Face-to-face interaction between students and teachers is one of the basic and most important requirements of a good learning model. But online learning doesn't encourage student-teacher interaction which reduces the active participation of students in class, hence decreasing the efficiency of learning. It leads to the social isolation of students which leads to the declination of social bonds. Although online learning provides a highly competitive environment, it cannot lead to skill development without the self-regulation of students. Therefore, we cannot solely employ the online mode of learning for the long run, as it will ultimately lead to a lack of quality learning.

These limitations of online learning can be minimized by employing the blended mode of learning. A blended model of learning fulfills all the advantages that online learning has. Furthermore, it increases student participation in class by facilitating face-to-face interaction between students and teachers and amongst the students. Since students are under continuous surveillance of a teacher, their skills are enhanced as they candidly participate in challenges.

With further technological advancements, the future of online learning will continue to see exponential growth. As more online learners start to recognize the importance of online learning worldwide, its role in education will only continue to rise. Online learning already has numerous benefits in education. With the introduction of new technologies, these benefits will only increase in number and the application of online learning in education will increase furthermore. Hence, creating a whole new set of features to explore. Online learning is limited by technology. With a more technologically advanced future, online learning can be taken to new heights.

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**APPENDIX – I****(Questionnaire)**

Given below are the questions that were asked in the survey to study online learning and its impact on society.

1. What is your age?
2. What is your gender?
3. What is your education status?
4. Do you have proper internet access at your home?
5. What is the main reason that you have limited or no internet access at home?
6. Which mode of learning do you prefer?
7. Where do you like to read text from?
8. Are online learning at home and offline learning in class both same?
9. Is Face-to-face interaction with your teacher necessary for understanding in learning?
10. Do you feel shyness or hesitation while asking questions?
11. How often do you interact with other students through online means?
12. Do you work in groups for online activities, when needed?
13. Does online learning provide a more competitive environment for students?
14. Do you often cheat in online quizzes and exams or copy assignments from other students?
15. Can time be managed efficiently while learning online?
16. How often do you get distracted while learning online?
17. Is online learning eco-friendly?
18. Is the gap between literate and illiterate people increasing due to the digital divide in society?
19. How does online learning affect the human body?
20. What are the symptoms you have felt while learning online?
21. Do you see a future where online learning has completely replaced offline learning?

**APPENDIX – II****(Survey Records)**

The survey form generated for this study was filled out by 86 respondents. For the sake of anonymity, their email ids and names were not collected. The responses given by all these respondents are arranged in a spreadsheet that can be accessed through an official IIITV email id only.

[Click here](#) to view the spreadsheet.