

A Survey on Online Classes during COVID-19 Pandemic

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ABSTRACT

COVID 19 made a serious impact on many aspects of everyday life. The world saw a paradigm shift in the education system favouring online learning during the constraints of pandemic. Engineering College across the India and it caused a halt to the education system. To overcome this problem, the central and state governments have allowed continuation of education through the “online classes” or “e-learning”. The online classes started in some parts of India from third week of August and gradually the trend spread across the country. This transition to online learning has impacted not only students who had to adjust to a new learning environment, but also the faculty who teaching them have had to deal with this emerging technology and monitoring. To understand this, we carried out an online survey. For this we conducted a study among 1000 undergraduate students of various institutes attending online classes through the student online portal of different Engineering colleges across Andhra Pradesh.

Keywords: Covid-19, Online learning, Classroom learning , Data Analytics.

I. INTRODUCTION:

COVID 19 made a serious impact on many aspects of everyday life. World Health Organisation (WHO) announced COVID19 as a global public health emergency of international concern on 30th January 2020 [1] and declared it a pandemic on 11th March 2020 [2]. The education system is one of the most impacted aspects of routine learning and daily life. The world saw a paradigm shift in the education system favouring online learning during the constraints of pandemic. Yet, the effects and efficacy of online education and the capacity to successfully teach digitally is questionable. This sudden and rapid transformation from an environment of



conventional learning to virtual learning has made a great impact on the attitude of the students towards learning [3].

Technology making things easier today, especially the World Wide Web (WWW), which makes this world a small home that is connected and makes it simple and secure in this covid-19 pandemic situation. The technology that makes even education to process its academic calendar without any break in the current calendar year. First and foremost, we would like to highlight the internet, which we are using today, helps students continue with their academic careers without any pause/risk during this pandemic situation. During these virtual classes, students are utilizing devices like laptops, desktop, tablets, and mobile phones. For these online classes, we have surveyed how students are getting satisfaction through this type of teaching or interact in a face to face teaching. The survey a sample of 1000 student's information taken from different locations in Krishna district of Andhra Pradesh. This paper contains the methodology and statical data analysis of the survey.

II. METHODOLOGY

Earlier data needs many Data Analysts for processing the data, whereas now there are a bunch of high-speed Analytical tools that can run on massive amounts of data. Analytics not only adds value to business operations and drives profitability but also offer a wealth of possibilities if utilized effectively. Data remains siloed in disparate systems and departments, sourcing and data cleansing are typically manual, data experts are scarce, while data complexity and privacy regulations continue to increase. Data and analytics are invaluable when it comes to decision making for any business. They provide insights on whether the business is headed in the right direction or something needs to be done to steer it on the desired track. It helps identify market trends and needs while finding why specific products or services are faring well while others lag behind [4].

For discovery information to which is useful, we do data inspections, data cleaning, data transformation, and data modelling in data analytics. Data Analytics is a scientific process of analyzing the raw facts to conclude the information available in the form of surveys. It helps us to optimize performances, analyze customer trends, and satisfaction. The growth rate of data and information is increasing rapidly, that the information available today is not predictable. Social media is one of the examples that has increased the growth of data. While there are many business intelligence and data visualization tools available in today's market. Tableau has been a top leader in the data visualization space for 6 years. Interactive Dashboards, easy to use, mobile-friendly dashboards are some of the reasons for choosing tableau over other tools

For this technology like machine learning methods are used

Types of Data Analytics

1. Descriptive
2. Diagnostic
3. Predictive
4. Prescriptive



Descriptive:

Descriptive analysis is the first step, and will result in the visualizations and other simpler graphical displays. It helps analyze the value and impact of course design and learning resources. And Identify gaps and performance issues early - before they become problems

Diagnostic:

Diagnostic analytics is a form of advanced analytics that examines data or content to answer the question, “Why did it happen?” It is characterized by techniques such as drill-down, data discovery, data mining, and correlations. Diagnostic analytics lets you understand your data faster to answer critical workforce questions

Predictive:

Based on the current data, we need to predict what happened in the future for this historical data need to be identified and used. The predictive analysis gives statistical information about the data which we gather from previous occurrences.

Prescriptive:

Prescriptive analytics is a data-driven approach, where it helps to decide in the face of uncertainty. It uses to find a pattern from the data sets. Using this, we can analyze past decisions and events.

III. RESULTS

We have conducted research based on an extensive survey with 1000 students across multiple colleges from this results we generated a dash boards for this study with Data Analytics

III.I STUDY CONDUCT

The designed questionnaire consisted of set of questions to know the attitude of undergraduate students regarding online vs classroom learning and to know what are the reasons for their likes and dislikes about online and class room learning [5].

The questionnaire was based on the opinion of students towards classroom and online classes, Which one is advantage, preferable, How many classes are attending daily and how many hours there spending daily in online classes, is intervals/breaks in between the classes, Internet connection used during the online classes and its bandwidth is sufficient for online classes, is there can share the ideas/discuss with the classmates, is online content is accessible them at any time, understanding level of topic through online, willing to come to college in this pandemic situation and finally satisfied with online classes.

The following are the Insights from the above Tableau Dashboard:

- Only 39% of students are satisfied with online classes
- 52% are willing to come to college and join their regular classes



- Almost 72% prefer regular classes over Online classes
- Below mentioned are some of the challenges facing by students during online classes.
- The average time spent by students for Online classes is 6 hrs
- Online classes don't help students understand better
- Less than 50% of the student's internet bandwidth is not sufficient and connectivity issues for their online classes
- More than half of the students feel that they cannot share ideas with their classmates
- Students can't access their online classes content whenever they want

Students don't feel that online classes are an added advantage in this pandemic situation. Although most of them are willing to take a risk of coming to college for their regular classes instead of online classes

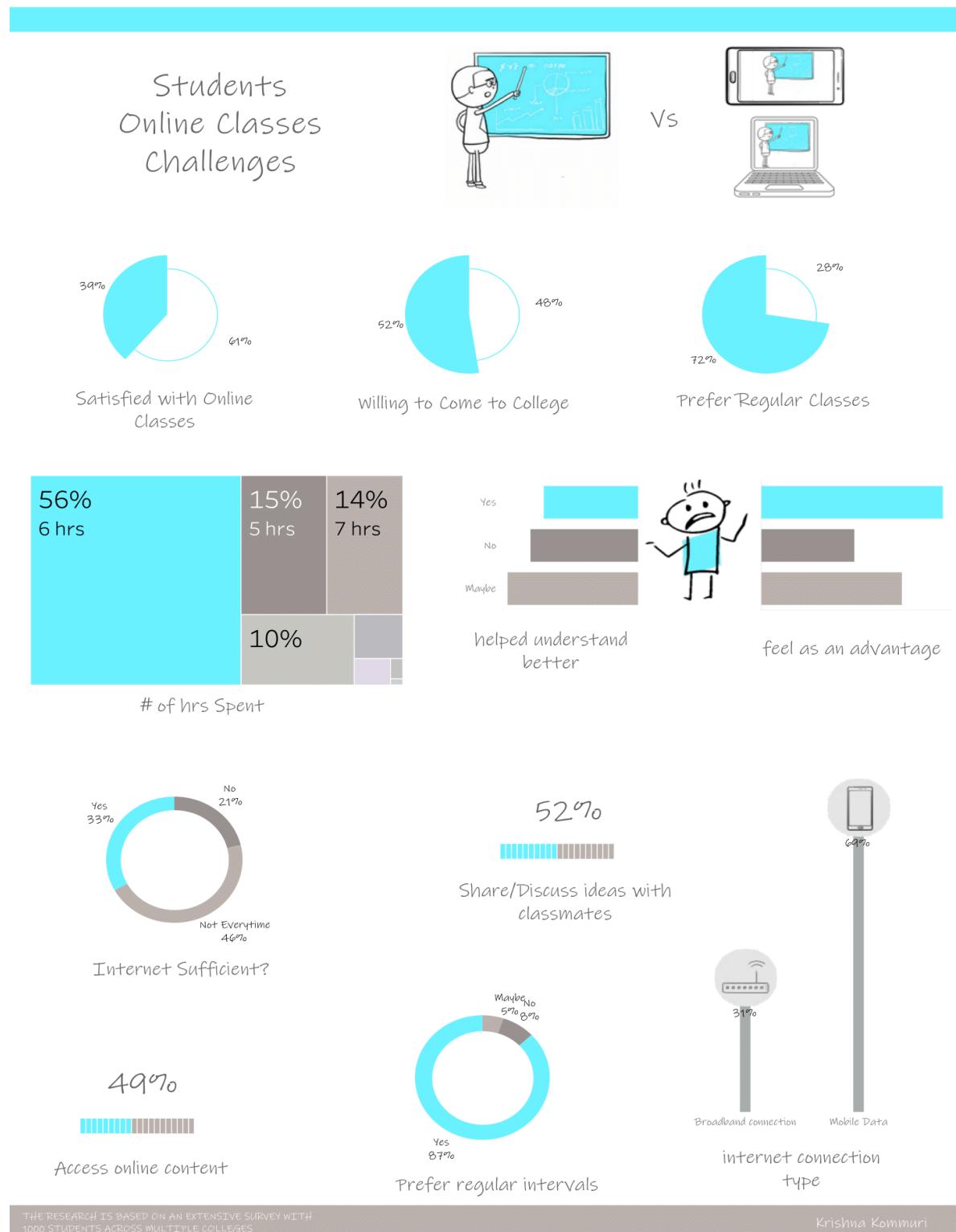


Figure 1: Dashboard of the Online classes Survey results



IV. CONCLUSION

But in this apprehensive socially distanced period of COVID-19 pandemic, one must embrace the alternative to classroom learning to keep up with one's academic development. Though the replication of classroom learning is not completely attainable through online learning, yet it is a convenient method with ease of participation, sustaining the academics and maintaining the student teacher interaction amidst pandemic. A combined approach can be considered post pandemic for a finer learning with more innovative methods. And finally Students don't feel that online classes are an added advantage in this pandemic situation. Although most of them are willing to take a risk of coming to college for their regular classes instead of online classes

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