

## Current State and scope of Online Education in India

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### Abstract

As we have seen for the last few years online education has made itself a powerful contender for the future education technology. Although the previous technological breakthroughs that have failed to live up to their initial promise, we strongly believe this time really is different. Various online courses have been run in the recent past that have taught thousands of students across several topics. The human experience of online education is about to transform, we should understand the problems circulating around the phenomena. Technology is touching each and every aspect of society and transforming it dramatically but there is one very crucial and indispensable part of the society that has also been tapped by new developments and discoveries and that is the platform of online education. It is an effective and efficient tool for development of the educational sector in India.

### Introduction

Online education is the future generation tool. In simple terms it is a computer-based program through which courses are imparted partly or completely through the Internet, an intranet or an extranet. Here everything from content to concept is delivered through an online medium. This education medium provides you the comfort of choosing and selecting your own study time from anywhere in the world.

The ability to communicate and interact with students all over the country or even the world provides a unique advantage to the students. Documents, transcripts, live discussions and training materials are all archived and recorded so that they can be retrieved through mail, e-mail or the school's website for reading, downloading, and printing. Professors are also available at convenient times and respond quickly through email. One can earn an online degree at various levels: associate degrees online, bachelor's degrees online, master's degrees online, or even a PhD degree online.

In India online education is in its primitive stage. Though a large number of educational institutes have adopted the process of online admission and

online result announcement, the method of teaching through online medium is relatively slow in India. Now Even some institutes are conducting their exams through online mediums. Reputed national institutes like IIT Mumbai, IIM -Kozhikode, IGNOU, Tamil film University and so many are providing some courses through online mediums.

### Review of Literature.

Cheriyian [2018] has attempted to establish the critical success factors for e-learning in the Indian Tertiary Education Sector with special respect to the students of Christ University, Bangalore. On employing a convenience sampling technique, data was collected from 158 respondents, while the exploratory correlational analysis was used to recognize the important categories of critical factors for the success of e-learning in Indian context. Authors reported five factors viz. technological support, e-learning resources, e-learning support and training, characteristics of student, and characteristics of instructor as critical for the success of e-learning in their order of importance as identified by the students pursuing various higher educational courses starting from undergraduate programmes to doctoral programmes. The study contributes significantly to the present literature because it identifies the factors which will have impact on the success of e-learning. This is often of immense use for the policy makers in such a way that this provides first-hand information about the areas to be focused to form e-learning successful within the country's tertiary education sector. Author's research enables to design as well as implement the e-learning system in a much better way and to possess systematic investments in e-learning. According to the author, e-learning's systematic approach not only saves the resources of educational institutions in terms of labour, money, and time but also enhances the image of such institutions. Thereby, the author suggested to specialize in these factors before designing new e-learning systems or while improvising or enhancing the present e-learning system.

The authors have analyzed the present scenario and the growth prospects of the online education market in India. To calculate the market size, the author considers the revenue generated from online services in segments such as K-12 and higher education. The study is based on an in-depth market analysis with inputs from industry experts. It covers the market and its growth over the coming years and includes a discussion of the key vendors operating in this market. One trend affecting this market is the growing emergence of cloud computing in India. Several educational institutes are moving towards SaaS-based solutions and education software that enhance the learning for students by harnessing all the benefits of online education. According to the author a crucial driver influencing this market is the growing penetration of smartphones and internet connectivity in India. With the advent of digitization, various online learning companies are investing into the potential of the online education market in India. The one challenge affecting this market is the lack of infrastructure and necessary learning environment. Facilities such as high-speed internet are either not available at many locations or are too expensive, which is restricting the growth of the market in the country.

E-learning has seen a boom in the past few years, which has connected various organizations together for the exchange of ideas, collaboration and expertise. Authors believe that e-learning will enable us to achieve the objectives and to bring about all round development by enabling students to learn whenever and wherever they want to. The primary source of education in India is classroom education that is at times supplemented with the use of external technologies such as projectors and stereo systems in order to improve student's experience. India being the second most populous country in the world also is the largest illiterate population. Many organizations and institutes such as IIM Ahmedabad, Symbiosis Centre for Health Care (SCHC) and Amrita University are working towards lowering the illiteracy rate in India. The authors also believe that in future, the number of students enrolled in conventional institutes will be higher, therefore e-learning will help India overcome the issue and help open the world of education to everyone.

[Manu Sood, Virendra Singh et al., 2014] have aimed to understand the meaning of E-learning, the issues associated with it and have attempted to

highlight the usage of the various tools of E-learning, especially among students of higher education in technical courses in north India using both qualitative and quantitative approaches. Specifically, the authors have used descriptive statistics and factor analysis methods to understand the impact of the factors on the usage of E-learning. The authors have collected the data from the students using questionnaires to find out the usage of six E-learning tools namely videoconferencing, emails, search engines, audio/video tapes, virtual classrooms or CDROMs/DVDs. From this, the authors have inferred that barring the emails and search engine, all the other tools were not popular among the population of the data source. Next, the authors conducted response analysis of students to understand the issues faced by them while using the E-learning tools. For this, 11 issues were picked up and a distinction was made between the average responses of two sets of students. They found out that the perception of the set of students using E-learning in addition to traditional methods on all these eleven issues was significantly different from the perception of those students who only used the traditional learning methods.

The process of imparting education has gone through a drastic change over the past few years. The objective of the study is to understand the concept of online education and its future in India. The paper is exploratory in nature and a secondary method of research is adopted under which data has been collected through books, journals, periodicals etc. Online education increases the applicability power of an individual. Social media has also helped as a tool through which students can critique, share feedback, engage and learn more. Online education is breaking numerous barriers that are preventing students in the rural parts of the country from receiving quality education. Since there are no fixed timings, it will help working students to not limit their work schedule and help them to not lose out on wages that they can potentially earn. It can help conserve time and because of the growth of online education people can receive quality education outside the physical boundaries of the classroom. Whether it is a career and technical education or project-based learning, It gives a more live and interactive experience. Despite all the positives, there are a lot of challenges faced by online education such as lack of infrastructure and hardware facilities, the problem of finding willing skilled labour in rural parts of India and also the lack

of computer-based courses in government schools reduce the opportunities of students to engage in online education.

#### 4. Research Methodology and Design

##### A. Research objectives

The focus of this research is to determine the current usage of online education in India.

1. To understand Online education in India.
2. To understand parent's perception towards education apps for their children at school level.
3. To determine why students at higher education level follow online education.
4. To understand the pros and cons of online education.
5. To determine the effectiveness and efficiency of online education.
6. To determine the reasons for not using online education.

##### B. Hypothesis

H1: Lack of resources has a direct impact on use of online education in India.

H2: Parents can influence the perception of use of online education in India.

H3: Students at higher levels of education make more use of online education.

H4: Lack of awareness has a direct impact on use of online education in India.

##### C. Research Design

To determine the current status of online education in India, we have conducted descriptive research under which we have used multiple cross-sectional methods to get a sample representative of the population we want to generalize with.

##### D. Sample Selection

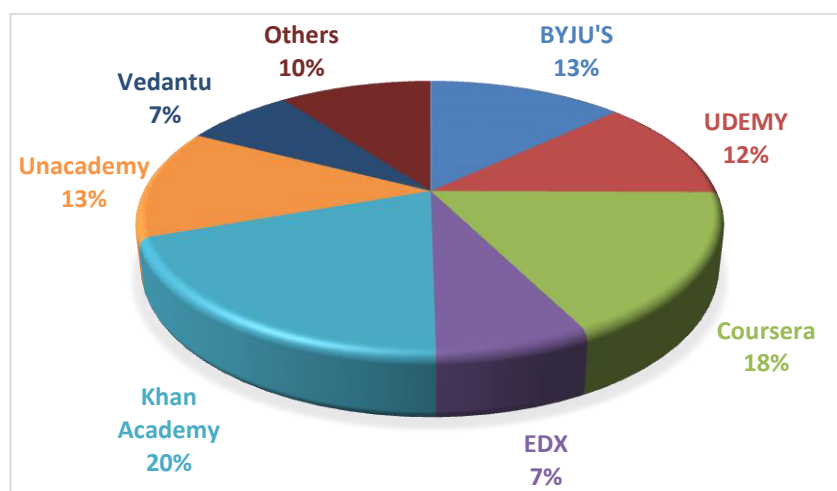
1. The sample selection method is Quota convenience sampling.
2. A sample of 153 people was selected for the study.
3. Sample consisted of students at school level, college level and those who are pursuing higher studies.

##### E. Data Collection

Data collection for analysis was done through survey. Since our research is quantitative in nature, we chose a questionnaire as the instrument for data collection. A self-designed structured questionnaire consisting of 15 questions was used. A few of the questions have subparts.

#### 5. Data Analysis and Findings

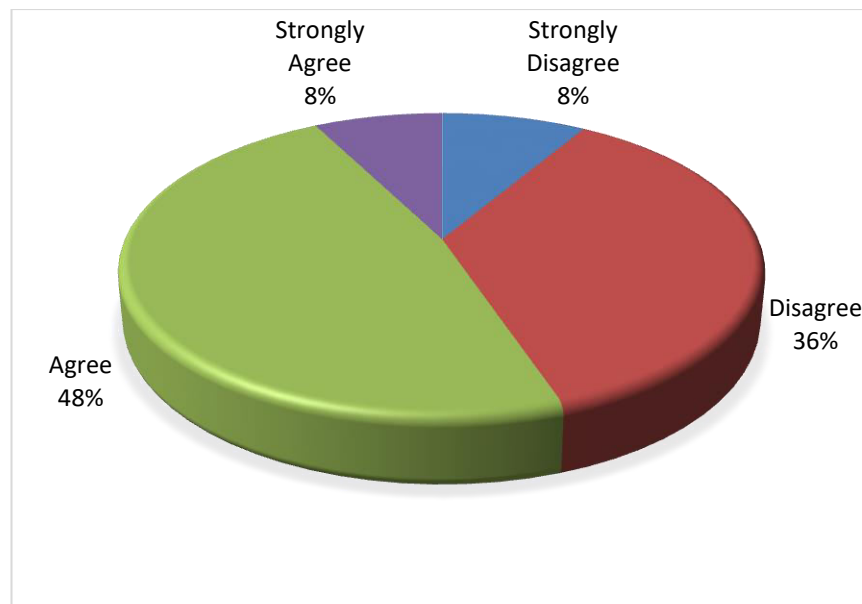
Objective: To understand the preference of the users of E-learning apps.



Choice of apps

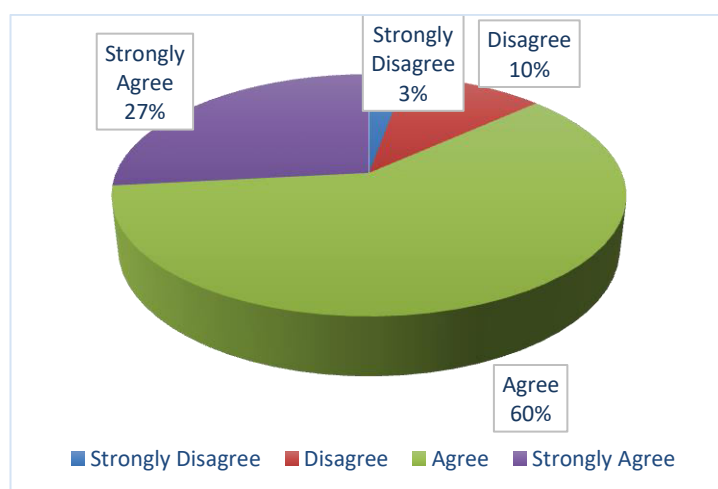
Out of the 105 people using the apps, the most commonly used app is Khan Academy at 20%, followed by Coursera at 18% ,BYJU's and Unacademy are tied at 13% ,12% and 7%,7% preferred UDEMY, Vedantu and EDX respectively. The rest secured 10% user preference. This helped us to understand which apps are most preferred by our respondents.

**Objective: To understand the suitability and effectiveness of E-learning apps.**



Suitability for practical subjects

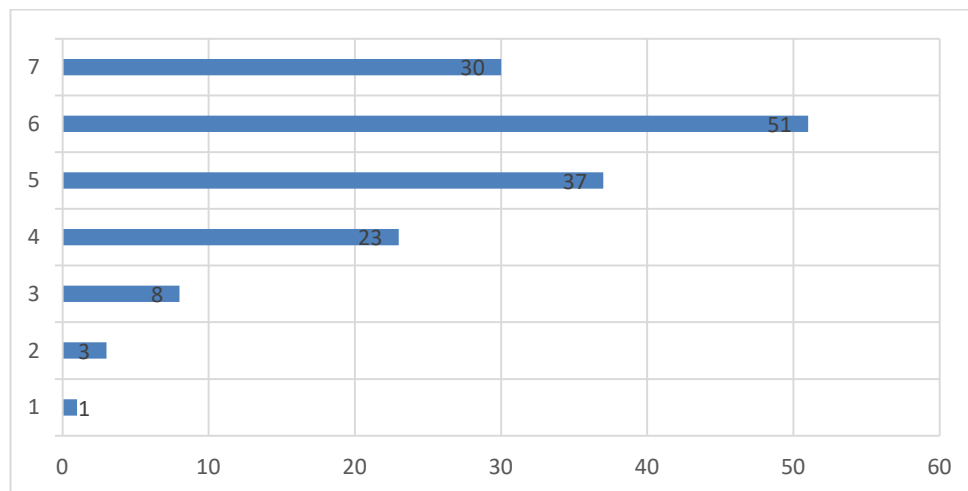
As the chart shows, the highest proportion of people 48% agree that E-learning apps are suitable for practical subjects. However, this cannot be taken as an indicator of high levels of effectiveness in case of practical subjects as 36% which is the next largest portion of people disagreed that they were unsuitable. Interesting to note that, almost the same amount of people (8% and 8%) strongly agreed and strongly disagreed, proving that although the users voted in favour of the E-learning apps, the margin is not very high as the people still have a divided opinion.



Suitability for theoretical subjects

The pie chart clearly shows that E-learning apps are highly suitable for theoretical subjects as a huge majority of the respondents are in agreement (60%) and strong agreement (27%). Merely 10% of the respondents disagreed and an even more miniscule percentage (3%) strongly disagreed.

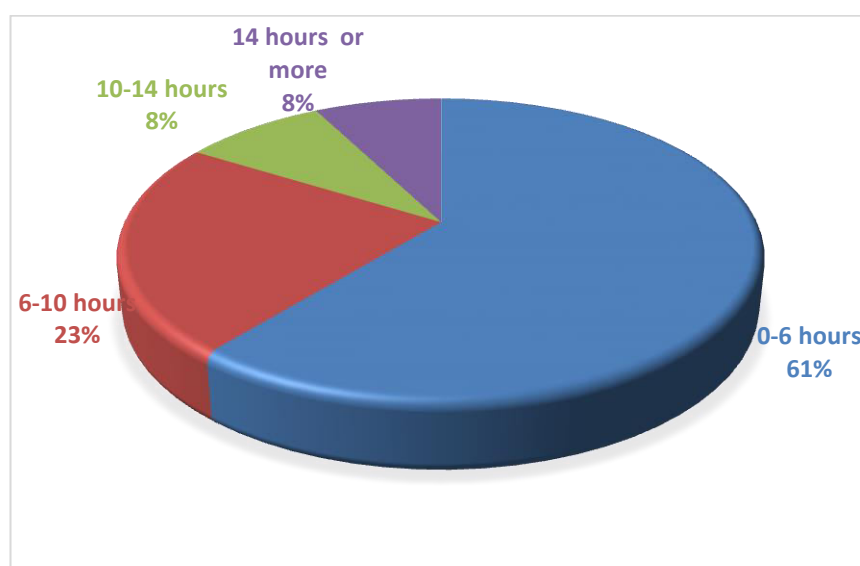
From this, we draw a clear inference that even though it is a representative sample, the users found the E-learning apps to be much more suitable for theoretical subjects as opposed to practical subjects.



Overall effectiveness of the apps

The highest frequency that is 37% (has given a rating of 5 on a 7 point scale of effectiveness of the learning apps. This is followed by 51% students who gave a rating of 6 and 30% gave a rating of 7. From this we conclude, these apps have been successful in effectively communicating the concepts to the students.

Here, it is important to acknowledge that this rating has certain limitations, that is error of central tendency and error of leniency are both a possibility in this survey questionnaire.

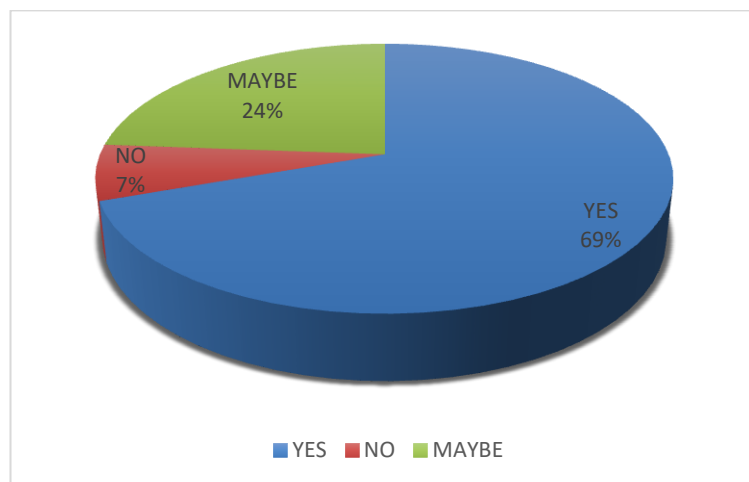


Average weekly usage of E-learning apps

More than half of the respondents (61%) use the E-learning apps for 6 hours or less in a given week. This is followed by 23% students using these apps for 6-10 hours in a given week. This means that a vast majority of the students use these apps for a maximum of 2 hours on an average (with the exception of Sunday). Compare this to the duration of tuition classes which is a lot higher, thus, the usage of online apps is still very less in India.

Despite this, (8% and 8% )students use these apps for 10-14 hours and more than 14 hours in a week respectively.

**Objective: To understand families' perception of the online education apps for their child.**

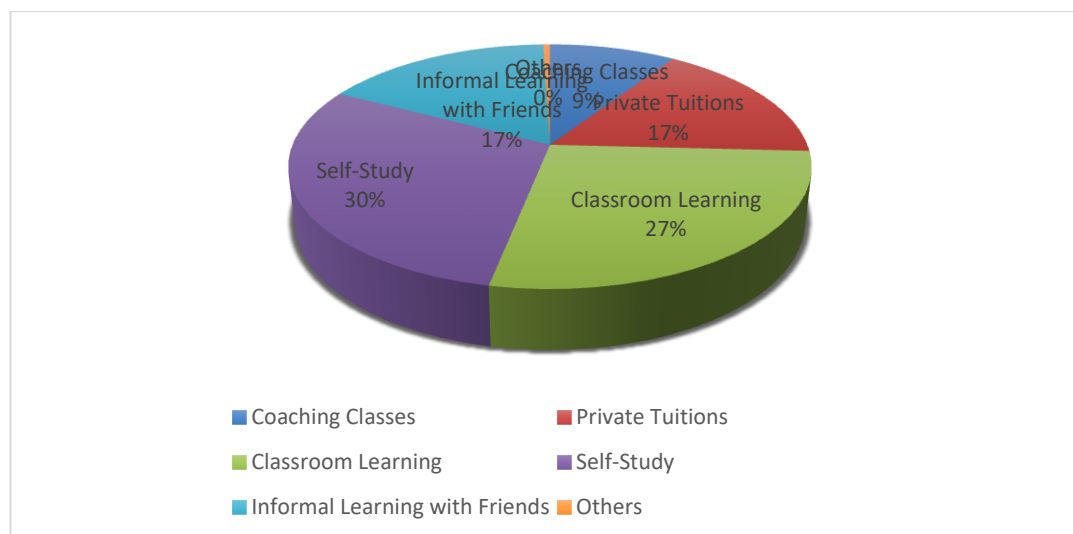


Family support of apps

From this, we aim to understand the acceptability of E-learning apps among the families of the respondents. Parents play an important role in the decision making process in a country like India and our secondary research showed that 33.5% families are joint families in India which have an impact in the educational choices of Indian students.

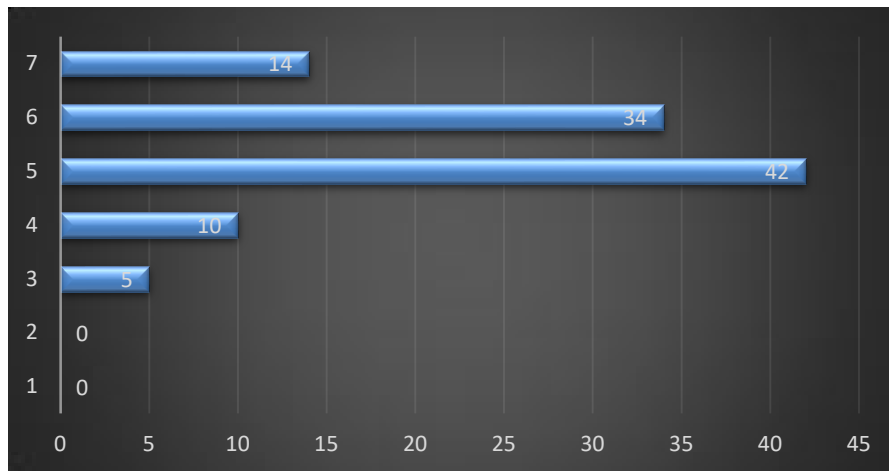
Almost 69% respondents' families approved of the usage, while 24% students chose maybe. This shows a positive step in the direction of E-learning apps as the future of modern education. Only 7% families did not approve of the usage of these apps.

**Objective: To understand the reasons for not using E-learning apps.**



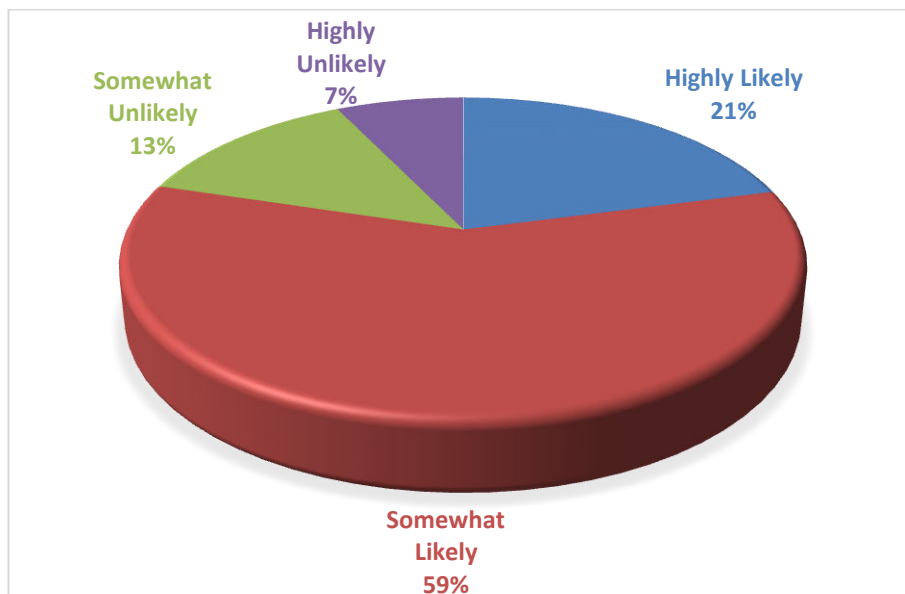
Modes of offline education

This chart helps us understand which modes of offline education are most used by the students that do not use E-learning apps. This was a multiple choice question as most students use more than one mode. From the chart we can see, the highest frequency is allotted to classroom learning and self-study. Private tuitions and informal learning with friends are tied at 67 students each. Coaching classes were preferred by only 9% of the respondents.



Effectiveness of offline medium

As the chart shows, 34 respondents gave a rating of 6 on a 7 point scale of overall effectiveness, which is the highest frequency. 42 and 14 respondents gave a rating of 5 and 7. This proves that most people using the offline medium have given a positive rating.

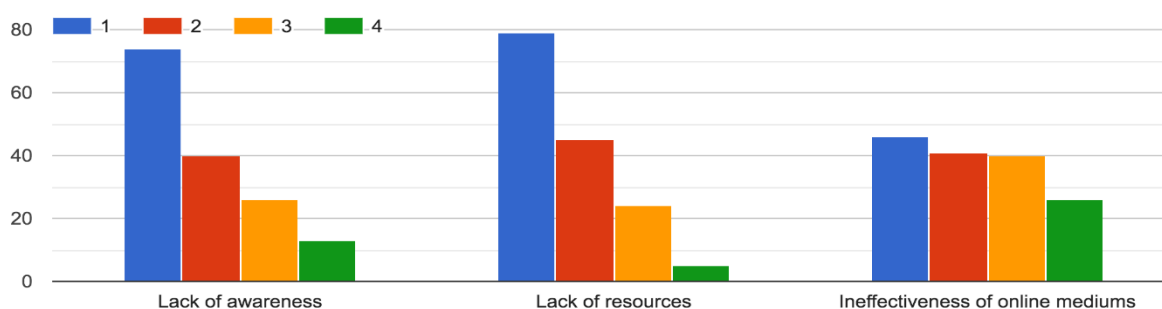


Likeliness of switching to online apps



A vast majority of students are somewhat likely and highly likely to opt for E-learning apps (59% and 21% students). This is a clear indicator of dissatisfaction among the students with respect to the offline mediums. E-learning apps are decidedly the future of education with advancement in technology and more people wanting to switch to online methods.

What is your reason for not using online apps? (1 being the lowest and 4 being the highest)



Reasons for not opting for E-learning apps

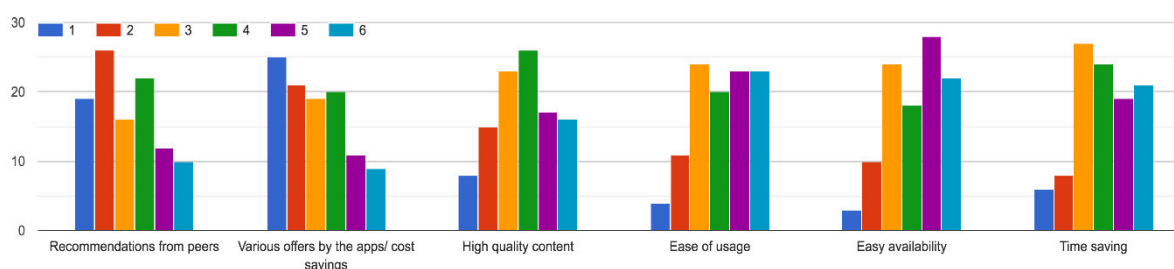
Mean and rank of the reasons

| Reasons                   | RATING |    |    |    | TOTAL RATING | RESPONSES | MEAN       | RANK |
|---------------------------|--------|----|----|----|--------------|-----------|------------|------|
|                           | 1      | 2  | 3  | 4  |              |           |            |      |
| LACK OF AWARENESS         | 74     | 40 | 26 | 13 | 232          | 153       | 1.51633987 | III  |
| LACK OF RESOURCES         | 79     | 45 | 24 | 5  | 261          | 153       | 1.70588235 | II   |
| INEFFECTIVENESS OF MEDIUM | 46     | 41 | 40 | 26 | 352          | 153       | 2.30065359 | I    |

In the table, the mean of ineffectiveness of medium is the highest, followed by lack of resources and lack of awareness. By this, it can be inferred that most people do not opt for E-learning apps because they perceive it to be ineffective as compared to the offline medium. The next most common reason was lack of resources and lastly lack of awareness. This shows that the awareness for the E-learning apps is not a factor as most people are informed about the apps due to TV commercials and other advertising mediums. However, this is a representative sample, where the respondents are students of urban areas and the factors may differ in the rural areas where awareness and resources are scarce.



What was the reason for switching from offline medium to online medium? Rank the following factors as pros of online apps. (1 being the lowest and 6 being the highest)



Factors responsible for switching from offline medium to online medium

Table 2: Mean and rank of the factors

| Reasons                  | RATING |    |    |    |    |    | TOTAL OR RATING | RESPONSES | MEAN       | RANK |
|--------------------------|--------|----|----|----|----|----|-----------------|-----------|------------|------|
|                          | 1      | 2  | 3  | 4  | 5  | 6  |                 |           |            |      |
| Recommendation from peer | 19     | 26 | 16 | 22 | 12 | 10 | 327             | 105       | 3.11428571 | V    |
| Various Offers           | 25     | 21 | 19 | 20 | 11 | 9  | 313             | 105       | 2.98095238 | VI   |
| High Quality Content     | 8      | 15 | 23 | 26 | 17 | 16 | 392             | 105       | 3.73333333 | IV   |
| Ease of Usage            | 4      | 11 | 24 | 20 | 23 | 23 | 431             | 105       | 4.1047619  | II   |
| Easy Availability        | 3      | 10 | 24 | 18 | 28 | 22 | 439             | 105       | 4.18095238 | I    |
| Time Saving              | 6      | 8  | 27 | 24 | 19 | 21 | 420             | 105       | 4          | III  |

As the table shows, the mean of the ranks from most to least important are as follows: Easy availability, Ease of usage, Time saving, High quality content, Recommendations from peers and Various offers.

Students switched over from offline to online medium mainly for due to convenience factors and high-quality content. E-learning apps not only save the time that a student would otherwise waste in commute, but they can be used from the comfort of one's home. They're easily available and have high content quality. We also conclude that students did not use these apps from peer pressure and the offers also do not may a major role.

## 6.Conclusion

From our research, we understood the preferences of the students using the E-learning apps. The most preferred apps were Khan Academy, Coursera, BYJU's and Unacademy.

The research also helped us to interpret the suitability and effectiveness of the E-learning apps. According to the responses, the apps were more suitable for theoretical subjects than for practical subjects.

The highest frequency that is 37% (has given a rating of 5 on a 7 point scale of effectiveness of the learning apps. This is followed by 51% students who gave a rating of 6 and 30% gave a rating of 7. From this we conclude, these apps have been successful in effectively communicating the concepts to the students.

Furthermore, we realized that the average usage of the apps by 84% students was not more than 10 hours in a given week which was a lot lesser than that of any offline modes of learning.

The research throws light on the families' perception of the online education apps for their child. We inferred that most of the respondents' families were in support of the E-learning apps which is crucial in

a country like India where families play a huge role in the decision-making process.

We also focused on the modes of offline education that were preferred by students not using online medium and their effectiveness. The research proved that besides classroom learning and self-study, students preferred to take private tuitions and informal learning with friends was also a common mode. In terms of effectiveness most students gave offline modes a positive rating of more than 3 on a 7 points scale.

Despite this, we understood that a vast majority of students were willing to switch from offline medium to E-learning apps in the near future.

The students' reason for not using the apps were mainly their perceived ineffectiveness of these apps and lack of resources.

We also conducted an in-depth analysis into the factors that worked as pros of the E-learning apps and were responsible for the switch over from offline medium to online apps. The factors that played the most essential roles according to the respondents were easy availability, ease of usage, time saving and high-quality content.

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