

EDTECH STARTUPS CAPITALIZING OVER E-LEARNING MARKET AFTER COVID-19 HIT DISTRESS IN INDIA: THE ROAD AHEAD

Dr. Anurodh Godha

Assistant Professor, Department of Commerce, School of Commerce and Management, Vardhman Mahaveer
Open University, Kota (Rajasthan) India

Email: anurodhgodha@gmail.com, anurodhgodha@vmou.ac.in, M +91 9414673223

ORCID iD: <https://orcid.org/0000-0002-5251-6004>

Dr. Anukrati Sharma

Associate Professor, School of Commerce and Management, University of Kota, Kota (Rajasthan) India Email:

dr.anukratisharma@gmail.com

ORCID iD: orcid.org/0000-0002-2662-3500

ABSTRACT

An increasing number of educational institutes have been shutting down worldwide due to the COVID-19 pandemic to avoid the spread of the Corona Virus. Classroom teaching has been completely abandoned for protecting students from getting. The Coronavirus has uncovered major weaknesses in the education systems around the world and India is not an exception. India is facing uncertainties for the future of education and thus, society needs a varied and flexible education system that should be revamped according to the situation. This paper attempts to find new opportunities for the EdTech market in India and E-learning startups. The researcher has reviewed all the current Indian EdTech startups and their future plans. The perception of 80 students is taken as a strategic tool for collecting the primary data through online questionnaires or surveys. Purposes of EdTech startups on capitalization of Big E-learning market, especially in Rajasthan State have also been analyzed. The result here confirms the significance of EdTech startups in this pandemic situation and even after the pandemic is over. They are found fulfilling the learning needs of coaching class students also. Online learning has a considerable market to leverage and it has been proved to be beneficial as a future course of action for EdTech startups in the post-COVID-19 scenario as well. Ed-tech startups have been found capitalizing on the E-learning market successfully as customers are shifting towards E-learning from traditional classroom learning.

Keywords: COVID-19, E-learning, learning apps, EdTech market, online teaching

2. INTRODUCTION

Several stringent initiatives like lockdown have been placed worldwide and in different parts of our nation due to the deadly COVID-19 and government attempts to discourage its transmission. These limitations made the schools and all educational institutes to shut down for an uncertain period. Teaching has long-term implications for this country's economic future and thus becomes imperative to ensure its continuity. Teaching delivery has transformed and forced policy-makers to speed up on-scale student participation through e-learning approaches. Online learning can be the only solution to this problem created by lockdowns and has been proved to be beneficial for the uncertain future of education and students in India (Nicola, Alsafi, & Sohrabi, 2020)

Earlier parents and students were using limited E-learning platforms before COVID19 due to trust issues, but after lockdowns, they are forced to increase the usage of E-learning platforms that might help them in developing a sense of confidence about the usefulness and efficiency of Online learning and thus their mind-sets of about E-learning before and after COVID19 has might change. E-learning class fulfills the school students ' learning needs for all classes. (Mukherjee, 2020)

Indian EdTech firms are seeing significant increases in their user registration and engagement since the lockdown. EdTech startups rely on online learning to be effectively secured against the downward trend in digitalization after lockdown. It's no wonder the nationwide closure of schools and colleges has helped bring EdTech to the top of the agenda (Lehmann & Chamberlin, 2009). Although it was believed to be leisure previously, online courses are now practically the only choice for users, teachers, and schools. EdTech platforms moved to capitalize on the expansion tide starting from the beginning of India's lockdown period, leading to an extraordinary sharp increase in the registration process and time spent on social networking sites and platforms (Behler, 2020).

The segment registrations also improved as schools and colleges shifted to online classes and resources to continue education amongst the pandemic. Conversion rates experienced an approximate 10 percent improvement after

lockdown and usage patterns also shifted from 70 percent of mobile web users to 52 percent of desktop users during lockdown (Narayanan & Brar, 2020).

Thus this study is performed to find out how the EdTech Startups in India are Capitalizing Over E-Learning Market after Covid-19 Hit Distress (Echegaray, 2020). It also attempted to find out the perception of customers/learners/students about different EdTech startups and shift from traditional to E-learning due to the Covid-19 pandemic. This research paper presented the review of literature on COVID19 outbreak and education system as well as on transition from conventional teaching to online teaching in India (Waks, 2016). The paper then attempted to put light on profiles of the top ten Ed-tech startups in India that have gained exceptional popularity after the pandemic. Further in the study, how COVID 19 can be leveraged by EdTech startups as an opportunity is discussed (Owusu-Fordjour, Koomson & Hanson, 2020). The paper further discussed problems in promoting e-learning and traffic share of top EdTech companies before and after lockdown. Moving further in the paper the researcher shed some light on the post-pandemic scenario of EdTech that how they will be alive even after the COVID19 period.

Further, the research objectives were defined and followed by the research methodology where data collection is done using the primary method and hypothesis analysis will be performed using "One sample T-test". At the end of the paper, the study will be concluded with a discussion of the study's findings and results.

3. REVIEW OF LITERATURE

Covid-19 prompted the closure of schools and colleges around the world. The schools had been closed by over 200 nations, affecting billions of students. This hasty transition inspired educator worldwide to switch their courses online (Viner, Russell, Croker & Booy2020).

COVID19 has hit all areas of society enormously. Though it has been relatively easier for MNCs to embrace work from home as the new normal, the times have been going to be difficult for the worldwide education system (Bansal, Bingemann & Oppenheimer 2020). Together with disruptions everywhere, as stated by Peters, Jandric & McLaren (2020), several concerned scholars support the need to re-imagine and reinvent the system of education. So the online education programs are approached.

According to Hargreaves & Fullan (2015), traditional teaching has been replaced by E-learning due to schools' and coaching classes' adoption of the online learning system. Although the crisis is devastating, it is making technologically advanced our schools, and even our coaching classes. No doubt, as learning has always been in the schools, students and teachers had to bring major changes (Hunter, 2020).

According to Kiran Dham, Globus Infocom Ltd CEO, A crucial aspect of dealing with Covid-19 is making sure that learning remains essentially a continuous operation. Connecting students and teachers through digital platforms is the latest transformation in education attempting to eliminate teachers' or classrooms' physical needs. This would be a perfect time to acknowledge E-learning to make education delivery more efficient for students and make it more productive through online learning and evaluation (Tripathy, & Devarapalli, 2020).

Since the shutdown prompted the rapid adoption of digital technologies, educational institutes and online training tools were required to coordinate. Most educational institutions see this as a perfect time to experiment with and implement emerging technologies to make delivery and transition to online education feasible and meaningful (Bingham, & Conner 2010).

Dhamstated Technology has shifted education from only teacher-centric to teacher as well as student-centric education. Today, virtual classrooms enable us to make the engagement between teachers and students as close as possible to a real, in-class experience. Technology-based education allows a more open and equitable education system. However, in pandemic generated situations, it cannot be denied that COVID-19 has accelerated the adoption of technology to make a shift from traditional learning to online learning. Due to the COVID-19 pandemic, all education institutes like schools, universities, and colleges are being shut down in the wake of protecting students from being infected and preventing the spread. Online education has seen a massive boost since the lockdown. Almost every other online platform has opened up its content for free making it accessible for all students (Chen et. Al 2020, Lily et. Al. 2020). Even in a challenging environment, EdTech is expected to remain a very hot sector of VC investment, said a KPMG report.

According to Nagar (2020), after the lockdown as the date of lockdown was getting extended, education institutes realized they needed to switch their teaching methods to continue the education of students and so, they went online.

“EdTech startups are seeing their numbers grow by the minute. In March alone, Byju's saw 6 million new students' access free lessons on its platform, while unacademy recorded 1 billion watch minutes. Another EdTech Topper saw 100% growth in free engagement in March”. (Rajkumar & Ganapathy, 2020)

Zishaan Hayath, CEO & co-founder, Toppr.com, stated that this transition from traditional learning to E-learning is here to stay permanently even after the pandemic is over. Online learning is on-demand, convenient, and personalized. As parents and students across the country are trying online learning as a go-to learning resource in these difficult times, they also realize that it is a lot more powerful than an offline coaching class (Burch & Miglani, 2018).

4. INDIA'S MOST POPULAR EDTECH STARTUPS



Figure 1: India's most popular Edtech startups:

Source: Created by Authors

(i) Vedantu

Founded by Vamsi Krishna, Anand Prakash, and Pulkit Jain in 2014, Bengaluru-based online EdTech startup provides students with opportunities to learn the way they desire, by providing personalized teaching.

(ii) BYJU'S

“BYJU’S Classes is a learning app that provides coaching for competitive entrance exams like IIT-JEE, CAT, UPSC, GMAT, GRE, Engineering & Medical, and supplement courses of grades 6th to 12th. BYJU’S is an Edutech startup in Bangalore, which was founded by ByjuRaveendran in 2011. Its current total equity is \$5.4 billion”.

(iii) Unacademy

“Started by Hemaash Singh as a YouTube channel in 2010, Unacademy is now a renowned name on India's education technology market. Unacademy is one of India's startups for e-learning. Unacademy aims to provide all of the world's education for free and has ventured into numerous fields such as Banking, CA, CAPE, UPSC, CLAT, CAT, JEE, Pre-Medical, etc. Unacademy is a Bangalore-based tech company that has an online learning marketplace for courses founded by Heemash Singh, Sachin Gupta, and GauravMunjal”.

(iv) UpGrad

“UpGrad is an online EdTech platform that provides higher education programs. They provide an immersive learning experience with the latest technology and well-designed courses. UpGrad was founded in 2015 by Ronnie Screwvala, Mayank Kumar, PhalgumKomapalli and RavijotChugh”.

(v) Toppr

“Toppr is an online exam preparation platform for K-5 to K-12 students focused on school curriculum syllabus and entrance examinations like JEE, UPSC, NEET, SAT, etc. Toppr is a Mumbai-based company founded by ZishaanHayath in 2013. It offers courses for medical and engineering examinations, board examinations, and Olympiads”.

(vi) Meritnation

“Meritnation is an online education startup based in Delhi which was founded by Pavan Chauhan in 2008. It has grown to be one of the most useful websites for online education. They provide learning content for students for classes 1st to 12th – CBSE, ICSE, and leading state boards”.

(vii) Camp K12

“Camp K12 provides entrepreneurship and app development programs to school students during their vacations and weekends. Anshul Baghi founded CampK12 in 2010. The company was started as a coding boot camp for kids. As of today, CampK12 has taught to 50,000+ students from its inception”.

(viii) Cuemath

“Cuemath is a program that teaches math to children. Their only focus is on math. It was founded by Manan Khurma in 2013. The fee range from Rs. 2500- Rs .3000, depending upon the region of the country”.

As stated by Teja Gudluru, the Founder and CEO of UDO-now.com, educational technology is one of those methods that will help improve the quality and method of education in India. With the current pandemic, opportunities for infrastructure improvements across the K12 and coaching classes have increased. Knowing the circumstances of lockdown, one can envision that many EdTech companies would see and possibly take the opportunity to bridge the vacuum which may take place in trying to bring more schools, students, and learners to the digital platform. As unlikely as it might appear, digital learning will become India’s latest standard over the next five years. (Blum-Ross et. Al. 2018).

Balasubramanian (2020) said, COVID-19 has upset industries and has affected people's daily lifestyle all over India. The lockdown also forced the shutdown of schools, coaching, and teaching centers — leaving students with the only option to move to the virtual world to continue preparation and learning. Several ed-tech firms, including Byju's, Toppr, and Vedantu, provide free access to their sites to make the most of the situation and have witnessed a huge increase in consumer onboarding — an anomaly in an unsettled start-up economy.

The crisis provides an excellent opportunity to acquire customers during and after COVID19 and is also an opportunity for ed-tech companies to monitor the effectiveness of their products. This can be done by leveraging the rich and diverse datasets created as a result of user commitments and re-engineering their business strategy to allow for scale-up. (Engler, 2020)

5. PROBLEMS IN PROMOTING E-LEARNING:

- (i) Skilled Teachers:** A long-drawn challenge has been teachers’ availability particularly those of specialized subjects. This has been overcome by the introduction of groundbreaking applications that render accessible to students interactive guidance from teachers and mentors.
- (ii) Internet penetration:** “Though it is as high as 80% in some Southeast Asian countries, it is only at 39% in Vietnam and other African & Asian countries”.
- (iii) Lack of smartphones and low bandwidth internet:** low internet bandwidth and patchy connections are the biggest challenges to online teaching.
- (iv) Lack of preparation for the new reality:** A study by EdTech Hub and Digital Pathways at Oxford illustrates how unexpected suspensions of schools provided minimal time to update the curriculum for online learning, particularly because no one can yet tell how long the national lockdowns would last (Behera, 2013)

Table 1: Traffic Share of Top EdTech Company before and after Lockdown

Pre Lockdown		Post Lockdown	
Domain	traffic share	Domain	traffic share
vedanta.com	9.75%	udemy.com	17.81%
udemy.com	9.29%	bylus.com	11.37%
learncbse.in	9.20%	courcera.org	10.10%
bylus.com	8.67%	toppr.com	8.81%
gradeup.co	8.25%	unacademy.com	7.58%
unacademy.com	6.79%	learncbse.in	6.13%
embibe.com	6.26%	vedanta.com	5.90%
toppr.com	5.98%	doubtut.com	3.26%
tiwariacademy.com	4.98%	gradeup.co	3.05%
maritnation.com	4.42%	aakash.ac.in	2.96%
study.com	4.16%	khanacademy.org	2.83%
khanacademy.org	2.97%	cheeg.com	2.41%
courcera.org	2.93%	study.com	2.40%
cheeg.com	1.98%	maritnation.com	2.35%
onlinetyari.com	1.71%	embibe.com	1.65%

Source:-<https://inc42.com/features/edtech-startups-look-for-permanence-beyond-the-covid-19-lockdown-boom/>

Moving through the continuing confusion surrounding the opening of schools and universities, these developments also seem to be on their way toward being more connected with consumers. The mindset of customers is changing from traditional to E-learning. EdTech firms also state that due to factors like increased exposure, teaching quality, and relatively low-cost online learning investment will encourage learners to pursue online solutions long after the disease outbreak has stopped. (Di Pietro et. Al 2020)

Even so, educators may need to rethink their teaching methods and learning style to suit the modern learning environment. One of the resonating demands of the educators was the need for more exciting and collaborative EdTech solutions for teachers themselves, to enable better student learning outcomes. This opens up many possibilities for EdTech players, Sequoia Capital India's GV Ravishankar, MD, also mentioned in an earlier discussion with Inc42 that such wide-ranging application of EdTech will also create demand for tools that would allow people to map student engagement levels, perhaps even tools that could read the faces of the people to see how well they comprehended anything or not.

6. EDTECH-POST PANDEMIC SCENARIO

The pandemic creates a different scenario in which accelerated transitions in India's technologically operated education narrative can be created. Across India, Internet penetration is expected to hit almost 735 million by 2021. The smartphone user base is expected to grow with 502.2 million users in 2019, adding around 180 million new users by 2021. (Chamola, Hassija, Gupta & Guizani 2020).

Even though the market has continued to rise for “B2C and B2B EdTech startups”, it's impossible to pinpoint if they could continue the current dynamism once unlimited access is terminated. One additional benefit of these online teaching businesses is that owing to enhanced usage. They will also have considerable student data information by the end of the program. Some of them could utilize the data collected and translate these users as full-time potential subscribers once the PANDEMIC emergency is ended, said Ralhan of Next Education (Srivastava, 2020).

The factor most widely reported by ed-tech pioneers is lack of knowledge and a shortage of confidence among parents regarding technology-based education. Parents strongly agree that home-based remote education through face-to-face interactions will not replace the skills that children develop (Mertens). Thus, this COVID scenario has emerged as an opportunity for EdTech startups to convince the parents and build trust in their product to make the product live even after the COVID19 period (Plesner & Husted, 2019).

According to Kishore & Shah (2019), parents are increasingly starting to see ed-tech platforms as complementing their children's learning and growth — as an alternative method of education to one-to-one tutoring after school. By offering free access to their platforms during the crisis, ed-tech firms now get the trial and mindshare they couldn't get earlier. Creating awareness among people is a timely moment and pushing behavioral change by breaking the trust deficit that has always hindered customer acquisition. All of India's EdTech startups are working hard to cash the chance (Seldon & Abidoye, 2018).

Information is the fundamental asset for building evidence and product quality around students' learning outcomes and ensuring the 'right' learning happens. Companies need to accurately monitor their products' consumer actions and outcomes to leverage precious quantities of granular data by conducting periodic evaluations (Mining, 2012).

As per Liu & Lee (2020), the crisis poses an unparalleled opportunity that startups undoubtedly need to grab. Onboarding a significant number of users will generate huge, rich datasets that startups can exploit. The crisis is a perfect playground for different companies to modify, adapt, and contextualize products according to different customers' needs. Therefore, businesses will use this crisis to create the best information possible regarding academic achievement. The system of online learning is like that the customer/students will enjoy learning online and in the future, it will give a challenge to traditional education Selwyn, (2014).

7. RESEARCH OBJECTIVE

- To study the intention of EdTechstartups to capitalize on big e-learning market opportunities during the Covid-19 pandemic.
- To study how COVID19 can be explored as an opportunity by Ed-tech startups in India.
- To study whether the EdTech companies can en-cash this opportunity provided by COVID 19.
- To study the perception of customers/learners/students about different EdTechstartups and shift from traditional to E-learning due to Covid-19 pandemic.
- How this E-learning concept is impacting traditional classroom learning and coaching scenario.

8. RESEARCH METHODOLOGY

The study made use of the primary data collection method for collecting data from online surveys. Questionnaires were designed and disseminated to respondents over their emails to be filled in by them. Sample collection is done using an unrestricted, non-probability sampling technique for selecting 80 respondents as a sample size as it is an accurate representation of the universe population and is large enough to provide statistical reliability. Keeping the sample size for our study greater than 80 will increase the probability of errors and keeping it lower than this will lead to the wrong generalization.

The sample area is selected as Rajasthan and data is collected through the close-ended questionnaire through the mail from the entire Rajasthan. For the analysis of data, "One sample T-test" is used to compare the dependency in various hypotheses framed for achieving the objectives of the study.

9. DATA ANALYSIS

Table 2: EdTech startup opted

Which EdTech startup you use for your study?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BYJU'S.	5	6.3	6.3	6.3
	Doubt not.	13	16.3	16.3	22.5
	Gradeup.	13	16.3	16.3	38.8
	TestBook.	8	10.0	10.0	48.8
	Toppr	13	16.3	16.3	65.0
	Unacademy.	15	18.8	18.8	83.8
	Vedantu	6	7.5	7.5	91.3
	Other	7	8.8	8.8	100.0
	Total	80	100.0	100.0	

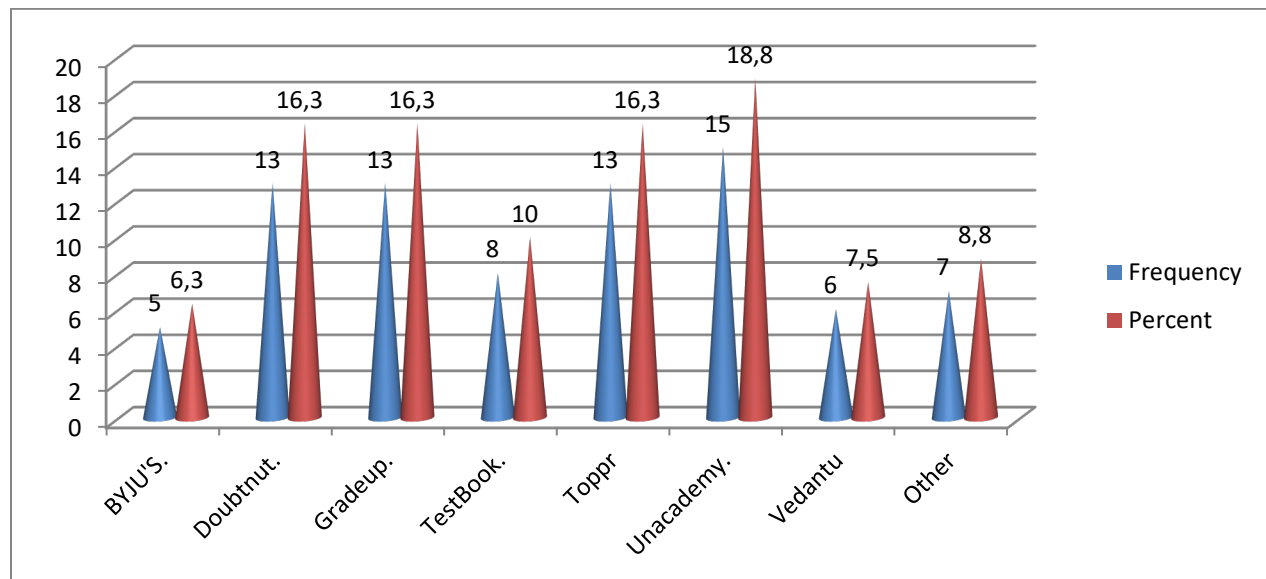


Figure 2 - Frequency graph of which medium you use for your study?

From the data given above it is clear that respondents are using all the EdTech startups. Unacademy is most popular among all the startups. However, Doubtnut, Gradeup, and Toppr are found equally popular amongst the users. From data, we have BYJU'S as the least popular app owing to its high cost.

10. HYPOTHESIS

(Major Hypothesis)

H_{0N}: The use of technology and the internet, including web browsing, does not help learn during the COVID-19 pandemic.

H_{1A}: The use of technology and the internet, including web-browsing helpful for learning during the COVID-19 pandemic.

(Hypothesis – Parameters)

H₀₁: Ed-tech companies are not able to en-cash this opportunity provided by COVID 19

H₀₂: Online learning market does not have a big opportunity after COVID-19.

H₀₃: There is no significant difference among the mindsets of learners about E-learning before and after COVID19

H₀₄: Online medium of education is not impacting school education

H₀₅: Using technology including internet browsing is not impacting the coaching scenario.

- H₀₆: The E-learning class isn't useful for school students ' learning needs.
H₀₇: The E-learning system should be adopted as an ad hoc device for teaching-learning.
H₀₈: The system of E-learning will not give the challenge to classroom learning in the future

Table 3: One-Sample Statistics

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Ed-tech companies are not able to en-cash this opportunity provided by COVID 19	80	1.6	0.493	0.055
The online learning market does not have a big opportunity after COVID-19.	80	1.6	0.493	0.055
There is no significant difference among the mindsets of learners about E-learning before and after COVID19	80	4.44	2.055	0.23
Online medium of education is not impacting school education	80	1.98	0.779	0.087
Using technology including internet browsing is not impacting the coaching scenario.	80	2.61	1.258	0.141
The E-learning class isn't useful for school students ' learning needs.	80	2.21	1.312	0.131
The E-learning system should be adopted as an ad hoc device for teaching-learning.	80	1.92	1.055	0.118
The system of E-learning will not give a challenge to classroom learning in the future	80	2.03	1.035	0.121

The above figures show the one sample statistics for the collected data indicating mean, standard deviation, and several respondents who participated in the study. From the figure given above it is evident that the highest mean is recorded for the variable “The use of technology and internet including web browsing helpful for learning during COVID-19 Pandemic”.

Table 4-One-Sample Test

One-Sample Test						
	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Ed-tech companies are not able to en-cash this opportunity provided by COVID 19	29.029	79	.000	1.6	1.49	1.71
The online learning market does not have a big opportunity after COVID-19.	29.029	79	.000	1.6	1.49	1.71
There is no significant difference among the mindsets of learners about E-learning before and after COVID19	19.312	79	.000	4.438	3.98	4.89
Online medium of education is not impacting school education	22.674	79	.000	1.975	1.8	2.15
Using technology including internet browsing is not impacting the coaching scenario.	21.321	79	.000	1.213	1.70	1.95
The E-learning class isn't useful for school students ' learning needs.	21.674	79	.000	1.972	1.78	2.13
The E-learning system should be adopted as an ad hoc device for teaching-learning.	18.577	79	.000	2.613	2.33	2.89
The system of E-learning will not give a challenge to classroom learning in the future	17.166	79	.000	2.025	1.79	2.26

11. FINDINGS;

“The Sig. (2-Tailed) p-value in the above table is (.000) which is less than 0.05 for all variables". Thus the null hypothesis has been rejected in each case and interprets all of them by accepting alternative hypothesis with findings as follows;

- Ed-tech companies are en-cashing this opportunity provided by COVID 19
- The online learning market will offer a big opportunity to the E-learning market even after COVID-19.
- There is a significant difference among the mindsets of learners about E-learning before and after COVID19
- Online medium of education is impacting school education and classroom teaching.
- Using technology including internet browsing is impacting the coaching scenario.
- The E-learning class is useful for fulfilling school students ' learning needs.
- The E-learning system should be adopted as a permanent device for teaching-learning.
- The system of E-learning will surely give a challenge to classroom learning in the future.

12. CONCLUSION

From the analysis, it becomes apparent that stringent measures such as national lockdowns and social distancing resulted in the adoption of E-learning apps by several educational institutions in India to prevent the transmission of the Coronavirus. EdTech startups have developed as an alternative to educational delivery, with E-learning as the way forward, these EdTech apps were adopted to ensure the consistency of the classes and also to build a powerful system of education. COVID19 and lockdown have offered a big opportunity to the learning market. We have gone through different kinds of EdTech startups and studied their popularity for concluding that Unacademy is the most popular EdTech startups followed by DoubtNut, Gradeup, and Toppr. From results, we have BYJU'S as the least popular app owing to its high cost. Also, Ed-tech companies are en-cashing this opportunity provided by COVID 19 and capitalizing over the E-learning market. The online learning market will offer a big opportunity to the E-learning market even after COVID-19 as the schools are planned to open only on alternate days, therefore for stay-at-home days schools as well as students prefer E-learning through ed-tech startups and adopt this system permanently. The study discloses that the probability of replacing traditional teaching with modern online e-learning tools has been increased and this provides a huge market for the ed-tech startups in India. The study material provided by ed-tech startups is also assisting students of class 12th for their IIT and JEE coaching classes, therefore using technology, including internet browsing, impacts coaching scenarios also up to a greater extent. Thus the system of E-learning will surely give a challenge to classroom learning in the future.

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