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CONSULTING  
— SGGSCC —

# Ed-Tech

Industry Analysis Report  
2020

We are all influenced by our educational experiences. Sometimes with fondness, other times with anxiety, we can recall memories from kindergarten through high school, and from college to HR training at a new company. Although we might think of education as a one-room, red-brick schoolhouse, it has evolved and grown into a globe-spanning industry poised for rapid growth.

## WHAT IS ED-TECH?

Education Technology (popularly known as EdTech) could be applied to the area of technology dedicated to the development of digital tools (including software, hardware, and processes) intended to enrich the educational experience and improve educational methods.

Although Ed Tech is in the early stage of development, yet it shows a great promise of revolutionising the traditional approach of learning. Since different students have have different abilities, interests, digital learning proposes a method of customising the curriculum by introducing new content at a pace that would be more natural to students.

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# INDIAN ED TECH INDUSTRY

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From classrooms to smart devices, the medium of education and learning in India has gone through a paradigm shift. With over 665 Mn wireless internet subscribers (Q3 2019), India has seen a massive 14% increase in the addressable base for internet services in just one year. This rate of adoption has meant great things for startups and digital products and services and has given rise to personalisation and convenience when it comes to the school curriculum and off-classroom learning.

The Indian Edtech startups recorded an investment of \$433 Mn in 2019, taking the total funds raised by the startups to \$1.8 Bn, in the recently released “The Future Of India’s \$2 Bn Edtech Opportunity” report.

Going beyond supporting school curriculum and helping candidates prepare for tests, Edtech today has spread its wings far and wide. From K- 12 and test preparation to skilling and learning management systems, edtech startups have branched out to cater to various submarkets.

This has a significant impact as the otherwise fragmented, and conventional education system has failed to address many crucial questions, which have a direct effect on the economy. From skill development and reskilling to upskilling, university-level courses and even B2B models, edtech has shown the potential to disrupt the entire value chain.

In terms of skilling, more than half of India’s workers will require reskilling to meet the talent demands of industrial revolution 4.0 by 2022. The emerging skill requirements are primarily focused on areas such as technology-led design and programming, complex problem solving, reasoning, ideation, emotional intelligence, critical thinking, and analysis.

With the working-age population in India making up 67% of the total population (1.3 Bn), the market offers great opportunities for reskilling, skill development and upskilling. The right tech skill sets and certification are the two most important parameters for tech employment. It is to be noted here that the demand side of edtech is robust, thanks to the rising unemployment in India.

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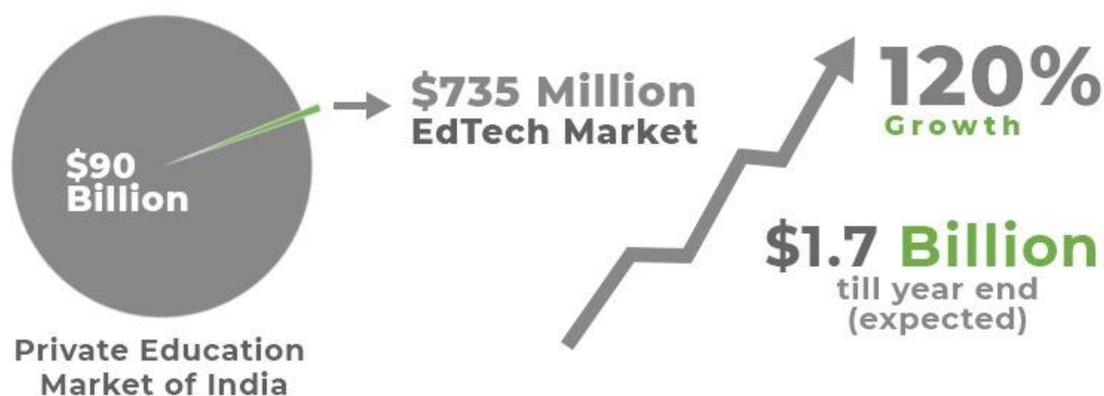
# ED TECH MARKET

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## MARKET SIZE

The Indian edtech startups recorded an investment of \$433 Mn in 2019, taking the total funds raised by the startups to \$1.8 Bn

In FY 2018, the gross merchandise value of edtech startups was above \$120 Mn was a surge of 48% compared to the previous year. This indicates that edtech startups are poised for bigger growth as the market conditions and reception for the products and services are likely to increase.

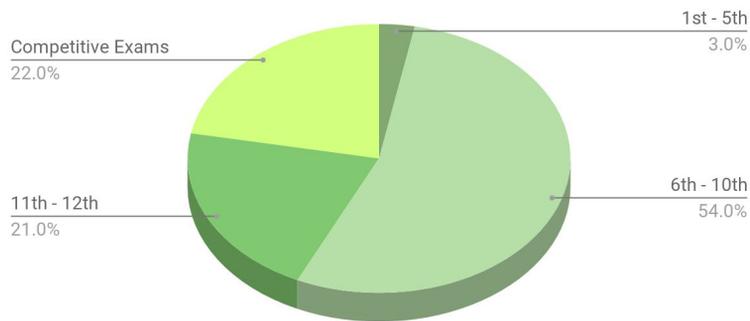


Majority of edtech startups today offer products in a rich multimedia package apart from pictures or text. Given the fact that the share of video consumption to the total internet traffic is slated to rise from 58% (2017) to 77% (2022), the traction of the online educational content in India is also poised to grow exponentially in the coming future.

## MARKET DISTRIBUTION

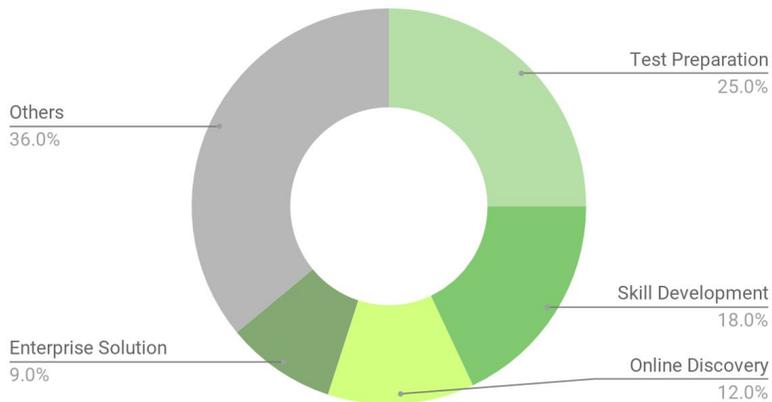
### ACCORDING TO CLASSES

Market Split

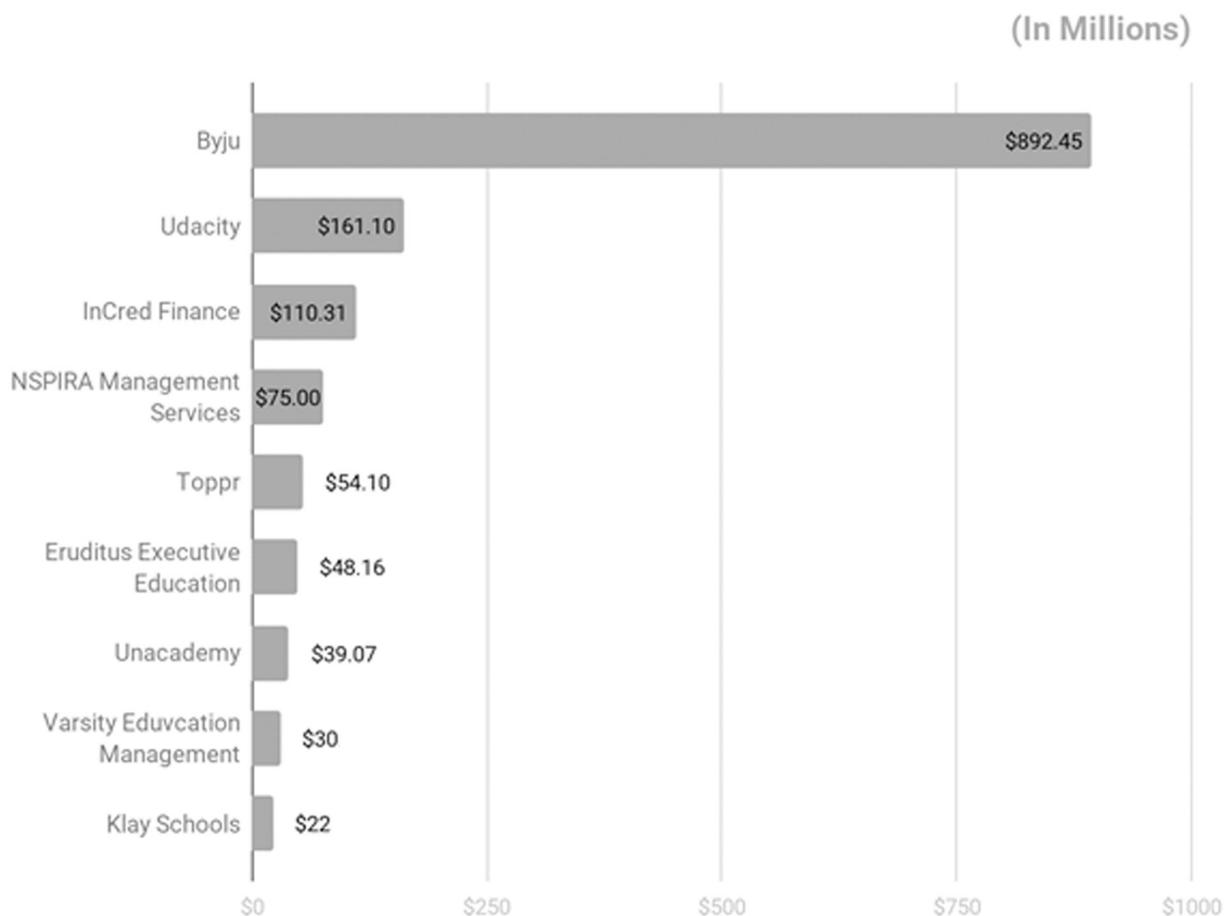


### ACCORDING TO USE

Market Share



## ACCORDING TO COMPETITORS



The EdTech sector is seeing significant investments and expenditure by governments, schools, universities, students and professionals globally. By 2030, it is expected that global EdTech expenditure will grow to USD 10 trillion. The growing popularity of online learning, further necessitated due to the nationwide lockdown, has provided a major push to the sector in India, which is expected to grow at a CAGR of 52% to become a USD 2 billion industry by 2021.

The outbreak has also caused many educational institutions to suspend attendance, delay examinations and hurriedly search for ways to ensure seamless learning and academic study for their students.

Given this scenario, educational technology (EdTech) companies and their services have seen a major increase in their usage. Numerous platforms have been launched, re-advertised, upgraded and made even more accessible to the average consumer due to their growing demand in these unprecedented times. From online classes to live doubt-clearing sessions, learning management systems, mobile applications, e-books, tablets and many other learning tools, services are finding more and more customers and the sector is expanding rapidly.

In India, for example, platforms like Byju's, UpGrad, Vedantu, CL Educate, Imarticus Learning, Simplilearn and Toppr have seen a sharp rise in new users.

This is due to the rising need for EdTech services as well as incentivization by companies. Bangalore-based Byju's announced that its students can download their learning program for free until the end of April; since then, there has been a 60% surge in new student registrations on its platforms.

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# COMPETITIVE LANDSCAPE

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## COMPETITIVE LANDSCAPE IN INDIA ED TECH SPACE

Over \$1.8 Bn has been invested into Indian edtech startups from 2014 to 2019. The test prep segment has the highest capital inflow and the greatest demand in India. India's tech economy growth has pushed the demand for skill development solutions.

From classrooms to smart devices, the medium of education and learning in India has gone through a paradigm shift. With over 665 Mn wireless internet subscribers (Q3 2019), India has seen a massive 14% increase in the addressable base for internet services in just one year. This has also led to a sheer competition in the ed-tech space.

The growing popularity of online learning has provided a major push to two of the top subsectors in the edtech market— test preparation (from K-12 to entrance exams) and online certification. To put this into perspective, between 2014 to 2019, startups in test prep and online certification earned a whopping 88% (\$1.6 Bn) of the total capital inflow in edtech.

India is already the second-largest e-learning market in the world, behind only the US, and it continues to grow as more students leverage the internet, and edtech startups enter the sector to strengthen India's e-learning ecosystem.



ED TECH  
COMPANIES

| Name                 | Byjus           | Unacademy     | Testbook       | Meritnation   |
|----------------------|-----------------|---------------|----------------|---------------|
| <b>Founded</b>       | 2008            | 2015          | 2013           | 2005          |
| <b>Founders</b>      | Byju Raveendran | Gaurav Munjal | Ashutosh Kumar | Pavan Chauhan |
| <b>Total Funding</b> | \$1.4B          | \$199.1M      | \$12.5M        | \$15.3M       |
| <b>Est Revenue</b>   | \$370M          | \$1.5M        | \$<1M          | \$5M          |
| <b>Est Employees</b> | 11,500-12,500   | 750-1250      | 200-250        | 900-1000      |

ED TECH  
COMPANIES

| Name                 | Vedantu       | Toppr          | DoubtNut       | GradeUp           |
|----------------------|---------------|----------------|----------------|-------------------|
| <b>Founded</b>       | 2011          | 2013           | 2016           | 2015              |
| <b>Founders</b>      | Vamsi Krishna | Zishaan Hayath | Aditya Shankar | Shobhit Bhatnagar |
| <b>Total Funding</b> | \$190.9M      | \$112.1M       | \$18.9M        | \$10M             |
| <b>Est Revenue</b>   | \$219M        | \$299M         | \$<1M          | \$6M              |
| <b>Est Employees</b> | 1,000-1,500   | 1,500-2,000    | 100-200        | 500-600           |

\*NOTE: The above figures are estimated and not exact

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# PRICING AND REVENUE MODELS

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## THE 4 MAJOR TYPES OF REVENUE MODELS

### 1. FREEMIUM OR FREE TRIAL

With this model, teachers can begin using your product for free, with an option to upgrade to a paid version. This can work in two ways: through feature limitations (“freemium”), or time limitations (“free trial”).

The great advantage of this model is that you can gain traction quickly and distribute your product straight to your end-user without intermediaries. The main disadvantage is that in education you have a classic principal-agent problem (because teachers who are users can't buy for the institution)—your users and your buyers are generally not the same.

### 2. INSTITUTIONAL

This is the more traditional model of selling to schools through district leaders. The sales strategy is generally referred to as “top-down,” like signing large contracts with schools and universities. The disadvantage is that these contracts take a long time to close, and usually involve competing with other vendors in the “Request For Proposal” (RFP) process.

### 3. CONSUMER

The consumer approach is an emerging business model that allows schools to use a product for free, and then charges families if they want to continue usage at home. This model is suited to companies with products that kids can use on their own. Schools, in this case, essentially become lead generation (or “lead gen”) for consumer adoption.

With this model, it is important to create a “product loop” between school and home, where teachers use the product with kids in school and then also recommend to parents that students continue using the product at home. The advantage of this model is that schools love free (quality) products, which can drive user adoption, and parents tend to listen to teachers’ recommendations for what tools to use at home. This is a great way to establish a trusted brand.

#### 4. SPONSORED

Finally, a less common, but quite interesting model is one where neither schools nor parents pay. Instead corporate or foundation sponsors pay for product placement, usually as part of a corporate social responsibility (CSR) initiative. The advantage of this model is that the sponsor will care mostly about usage, which is likely to be quite high if you're offering a quality, free product to schools.

### Most Popular Revenue Models in Edtech

| Types of Revenue Models  | Preferred Sectors  | Advantages   | Disadvantages   |
|--------------------------|--|--|---|
| Freemium - Pay as you go | <ul style="list-style-type: none"> <li>Test preparation</li> <li>Skill development</li> </ul>                                | <ul style="list-style-type: none"> <li>High traction</li> <li>Wider engagement</li> <li>Increased popularity</li> </ul>  | Eventually, a large proportion of users don't turn out to be buyers   |
| Only pay as you go       | <ul style="list-style-type: none"> <li>Online certification</li> <li>Test preparation</li> </ul>                             | <ul style="list-style-type: none"> <li>Cost advantage in product offerings</li> <li>Wider options range for customers</li> <li>Quality user base</li> </ul>        | Relatively lower traction due to unavailability of free trials  |
| Subscription             | <ul style="list-style-type: none"> <li>Skill development</li> <li>Online certification</li> </ul>                            | <ul style="list-style-type: none"> <li>Recurring revenue</li> <li>Substantial customer engagement</li> <li>Stability in revenue inflow</li> </ul>                  | Difficult to maintain the value creation in customers mind if the USP of the offering is not prioritised        |
| Enterprise Sales         | <ul style="list-style-type: none"> <li>STEAM kit</li> <li>Performance assessment providers</li> <li>ERP solutions</li> </ul> | <ul style="list-style-type: none"> <li>The higher ticket size of revenue</li> <li>Post sales revenue</li> <li>The purchasing power of the buyer is high</li> </ul> | Higher dependency on traditional education enterprises & Unwillingness of the buyer to adopt new-age technology |

SOURCE: DATA LABS

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# CONSUMER BEHAVIOUR

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While schools, colleges and tuition centres are on a halt due to the coronavirus outbreak, ed-tech firms are leaving no stone unturned to help students, who are at home now. To leverage the opportunity for acquiring new users, different platforms have come up with the strategies of offering services.

As per the findings in the Economic Survey 2017-18, the income elasticity in relation to PFCE (private final consumption expenditure) for healthcare stood at 1.95 whereas in the case of education-related commodities it was 0.93.

The fundamental reason why Indians are more willing now to pay for educational services is that the income elasticity towards the expenditure on education-related products is lower than healthcare indicates that at various income levels, Indian consumers would prefer compromising on healthcare expenses rather than education.

The key growth drivers propelling EdTech in India are the ability to serve a large audience at significantly lower costs compared to traditional in-classroom learning, significant growth in internet and smartphone penetration across India, steady rise in disposable income of the Indian households, and a large consumer base with over 37% of India's around 1.35 billion population falling in the 5-24 age bracket.

This indicates how across various income levels, Indian consumers are willing to invest in value-added online learning products and platforms. The 'freemium' model has also led to the rise of paid models by facilitating free trials for better decision-making on the consumers' end.

The 10 factors that Influence the buying decisions are:

- Implementation.
- Competing priorities.
- Foundational resources.
- Implementation plans.
- Professional learning support.
- School culture.
- Teacher agency/autonomy.
- Teachers' beliefs about their tech ability.
- Technological pedagogical content.
- Vision for how tech assists in learning.

## FACTORS THAT HAVE AIDED THE GROWTH OF ED TECH:

### 1. FELT AND STATE CONSUMER NEED:

With the proliferation of technology and ease of access – regional, economic and social barriers have blurred to give a greater number of people access to a greater amount of content. The consumer has become more discerning in terms of quality, which is a direct result of the mobility of information in society. Parents and students have seen first-hand that there is better teaching available beyond the local school or tutor, and hence they are proactively looking for educational aids online.

### 2. PROLIFERATION OF HANDHELD INTERNET:

In 2002, the world saw the first smartphone. With the proliferation of smartphones, there has been a significant shift towards mobile-first solutions and products. In the edtech space, mobile-first approach will become central for learner experience. There are many effective ways for mobile learning to be tapped into which can provide consumers an enhanced experience within a short-time span.

### 3. GLOBALLY DECLINING DATA PRICES:

Data network pricing has been reducing both as a factor of scale as well as competitive forces in the marketplace. In emerging economies, the data network is available at pricing as low as USD 0.20 per GB of data, with India providing some of the lowest data pricing in the world in the post-Jio era.

### 4. DECLINING DEVICE COST:

Between 2008 and 2016, the average price of an Android device has halved. This means, economically speaking, there would be more than twice as many takers of connected devices now as compared to that a few years ago.

#### 5. GREATER NEED OF PERSONALISATION:

With time, the industry has evolved from global to local to hyperlocal to “glocal”. The need of the hour is to enable scale by sourcing globally while serving localized needs. Edtech is the education sector equivalent of having the sleeve of a shirt stitched in Vietnam because it amplifies economies of scale. After all, Pythagoras’ Theorem remains the same across states, countries, and Boards of education.

## CURRENT TRENDS INFLUENCING BUYING DECISIONS:

### 1. MOVING FROM TEACHING TO LEARNING:

Edtech content development has moved from replicating classroom lectures to offer greater engagement through offering an environment conducive to learning.

### 2. ASSISTANCE AND SOCIAL INTERACTION DURING LEARNING:

The process of learning, even if done online, is an inherently social activity. Teacher-student and student-peer interactions and doubt resolution are central to participation, informal education. It allows learners to get a better understanding of subjects and motivates them to come back and learn more.

### 3. GAMIFICATION:

Increasingly, across products, learning is being gamified. Leaderboards, competitive evaluation, reward systems, etc. all contribute to creating a game-like environment as part of the product experience.

### 4. RETURN OF THE TEACHER:

For the last few years, most edtech content has moved away from an instructor-led system to a passive resource mechanism. Recent research has shown that the human presence aids learning and recall, and newer products have been using a hybrid of instructor-led storytelling aided with animation and graphics.

### 5. COMMERCIAL INNOVATION:

Edtech flourishes in communities where the number of quality educators is insufficient to cater to a large number of students. However, given the initial outlay demands of content creation, most products expect an up-front annual subscription and hence price themselves beyond the market average. Latest products in edtech have innovated commercially to offer monthly and PAYG pricing to lower the barriers to adoption.

## 6. MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE:

As higher-order thinking gets recognized by the tech portals, it becomes imperative to offer more customized and personalized solutions. Evolution of Analytics, Big Data, Machine learning, and AI have all aided the development of learning systems that provide learning paths and guidance using these technologies.

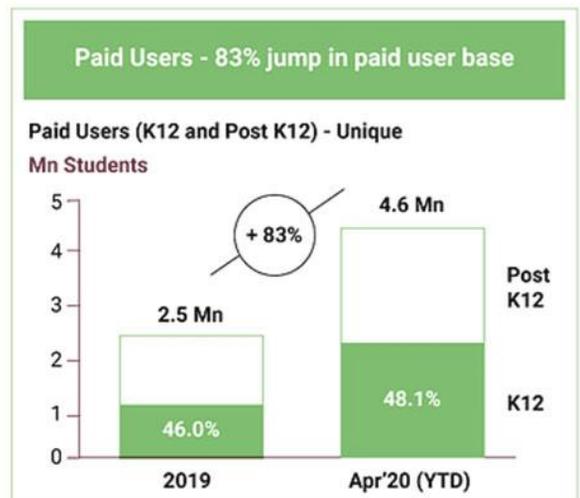
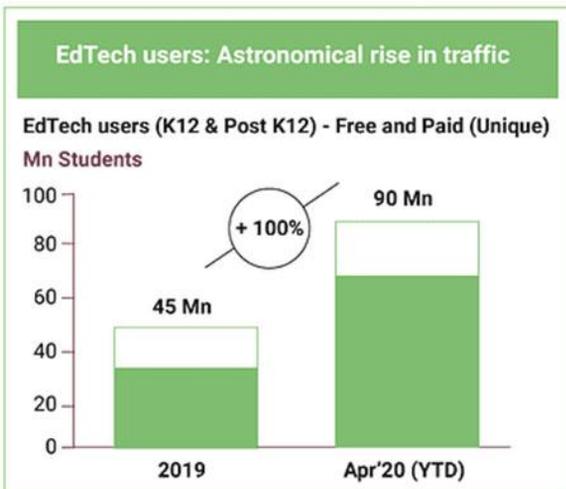
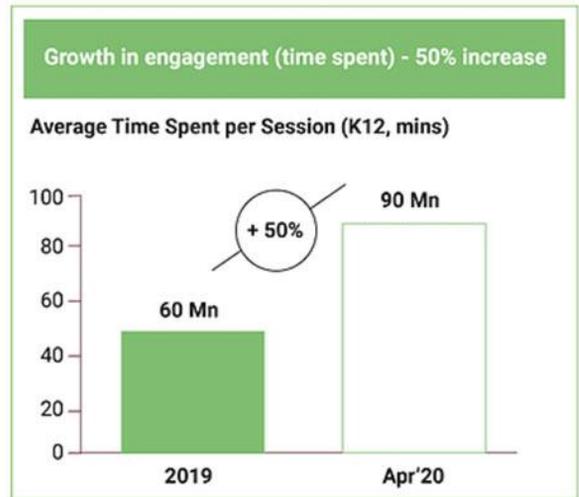
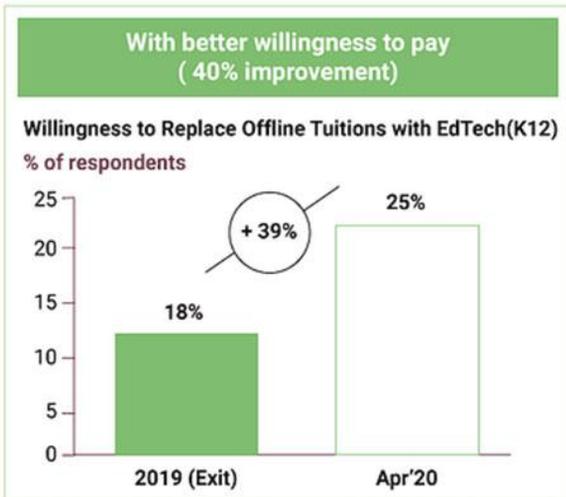
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# IMPACT OF COVID-19

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The coronavirus pandemic has been a watershed moment for India's edtech sector. The lockdown and fear of COVID-19 spread has taken schools, colleges, and educational institutes online. A report by RedSeer and Omidyar Network India has mapped the growth in usage from 2019 to 2020. It revealed that edtech users - both paid and free unique users - in the K12 and post K-12 segment have seen an increase, with the user base doubling from 45 million to 90 million.

There also has been a 50 percent increase in time spent, which has gone up from 60 minutes to 90 minutes. The report also noted a 40 percent increase in willingness to pay and a massive 83 percent jump in the paid user base. Online education offerings across Classes 1 to 12 are projected to increase 6.3 times by 2022, to create a \$ 1.7 billion market. The post-K12 market is set to grow 3.7 times to touch \$1.8 billion. This will create meaningful opportunities for incumbent players and space for multiple new startups. Namita Dalmia, Director, Investments Omidyar Network India, said, "The lockdown has provided massive tailwinds to the growing edtech space. Edtech offerings have helped millions of students across the country to continue their learning from home. These solutions are better, more convenient, and affordable alternatives for students and parents." She added that the lockdown had also spurred growth in the B2B space where, unlike earlier, schools, colleges, and tuition centres were aggressively adopting tech-based solutions.



DATA:: REDSEER AND OMIDYAR NETWORK

## KEY CHANGES IN THE SCENARIO POST COVID

### THE PRESENCE OF MULTIPLE WINNERS:

Differentiation will rest chiefly on the broad verticals of syllabus, language, pricing, pedagogy, offline support, and teacher training. India's current edtech addressable population of 150 million students cuts across city tiers, income groups, language proficiencies, and curricula. The multitude of sub-segments and their varying preferences will make it less probable for edtech companies to cater to large swathes of the population. The levers will be across pricing, offering, coverage, delivery, offline support elements, and teacher training services. Innovation around pricing and sales The report said pricing innovation will be key for wider paid adoption, particularly as edtech reaches smaller towns and lower income segments.

### THE RISE OF PARTNERSHIPS:

Partnership building will be key for edtech players to win varied customers. Institutional and cross-sector partnerships will enable wider reach as edtech players attempt to expand their user base. There needs to be a push towards expansion to cater to lower tier cities and lower income groups, representing close to 70 percent of the addressable student population. The partnerships include Indian language platforms for increased reach. These have approximately over 300 million monthly active users and close to 70 percent users in Tier II cities. Device partnerships are also needed as access to devices is a key bottleneck for edtech adoption among lower income groups. Partnerships with institutes will increase reach. Investment in original content ,investment in original production and/ or acquisition will be key – particularly for the user base with lower grades and in the Indian language segments.

## CHALLENGES

While the sector is growing and India is currently home to the second highest number of EdTech companies, there is a lot of room to improve India's market share in the EdTech space globally, which is only around 2.09%. Factors such as tangled regulations governing the education sector, lack of uniform government policies, lack of financial incentives for research and innovation in the EdTech space, patchy internet connectivity especially in rural India and other socio-economic barriers are some of the impediments to the growth trajectory of this sector in India. The lack of central regulator for all aspects governing the sector and the lack of coordination between the centre and the state as well as various boards and institutes also remain major stumbling blocks, which warrants a sharper focus and attention from economic and regulatory perspective. That said, the EdTech sector is growing significantly and, with careful planning and legal assistance, investors can navigate through the web of legal and regulatory challenges in the sector and see significant returns on their investment.

## GOVERNMENT INITIATIVES TO PROMOTE ONLINE LEARNING

One of the many initiatives taken by the GOI to promote online learning was through the SWAYAM programme. This initiative is designed to achieve the three cardinal principles of the Education Policy – access, equity and quality. The objective of this program is to bridge the digital divide for students who have not been able to join the mainstream knowledge economy. Through SWAYAM, 82 undergraduate and 42 post-graduate non-engineering courses are to be offered in the July 2020 semester.

DIKSHA is another initiative which serves as a National Digital Infrastructure for teachers. DIKSHA leverages existing highly scalable and flexible digital infrastructures, while keeping teachers at the centre to ensure that they are well equipped to impart quality education to the students.

Due to restrictions on classroom learning in view of the Covid-19 pandemic, the GOI has also been encouraging the heads of Higher Educational Institutions to switch to online methods of education and ensure that the academic sessions are not interrupted.

The GOI also took an interesting initiative by launching an AI-powered mobile application on May 19, 2020, called the National Test Abhyas App created by the National Testing Agency for students preparing for JEE (Mains) and NEET entrance exams.

Further, the GOI has also launched the 'Aatmnirbhar Abhiyan' (self-reliant India initiative) on May 17, 2020. As part of this initiative, the GOI announced the E-vidya programme to promote multi-mode access to digital education.

## THE ROAD AHEAD FOR STARTUPS

The massive adoption of edtech has showcased infrastructure constraints due to poor connectivity and low-end devices. It has also demonstrated the need for affordable offerings to drive wider adoption. Entrepreneurs should look to build solutions that address these challenges, keeping in mind the end goal of improved learning outcomes. This will help serve students across income segments. Startups must focus on better onboarding, student engagement, and delivering on outcomes through their products. This will ensure that the uptick is retained (or churn is minimal) after restrictions are lifted. Along with investment in content production (particularly for users from younger grades and vernacular segments), edtech players will also need to innovate on sales and pricing to cater to a wider student base. The focus in a post-COVID-19 world will be on limiting customer churn. 40 percent of customers expect they will stop using edtech after restrictions are lifted, which will lead to a fall in time spent and engagement on edtech platforms. Startups will also need to work on improving customer onboarding and experience. The lack of formal onboarding and expectation mismatch has led to a drop in NPS Levels across customer cohorts during COVID-19 (compared to earlier). To combat this, startups will need to focus on sales innovation, pricing innovation, an expansion in user base, and Indian language content.

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# SUMMING IT UP

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The online assessment platforms or ed tech companies are continuously striving to improve their products. Much has been planned and implemented and more improvement is underway.

The tremendous use of technology in teaching amidst crisis will lead to a new era in the education sector wherein the best of faculty will be available from across the globe to students. Quality of faculty, quality of IT infrastructure and familiarisation of the faculty with digital teaching technologies are important parameters foreseen in the future. There is no doubt that the crisis has accelerated the adoption of technologies to deliver education and will help strengthen the country's digital learning infrastructure in the long run.

The impact of COVID-19 will remain for years, if not longer. The new normal will be that significantly larger numbers of students will attend classes from home. While this trend was already on the uptick, it will receive a massive impetus because of COVID-19.

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# REACH US

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