

# India's Emerging E-Learning Platforms: A Strategic Analysis

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**Abstract:** *The primary goal of this research study is to determine the current state of the online instructional platform, as well as the potential and problems that lie ahead. In the field of education, innovation is critical. Chalk-and talk methods do not work in today's technological environment to encourage students to be creative. Teachers must improve themselves and change away from traditional teaching methods to new teaching methods in order to keep up with technology and youngsters. The entire world is at your fingertips students can obtain the material with a single click from any location. Students can learn at their own pace and take their time comprehending things thanks to different feature-oriented education software. E-learning pushes pupils to investigate more and makes learning more engaging. Many schools in India are embracing virtual reality by providing students with online correspondence courses children enjoy using laptops and smartphones, and schools and parents must educate them about the greatest educational apps that can help them build a brighter future. And this study paper has demonstrated the Top 5 educational applications in India that are assisting students and setting a new benchmark in this rapidly increasing market.*

**Keywords:** Education, E- learning, Innovation, Educational apps

## I. INTRODUCTION

Education enlightens a person and puts them in the proper direction. It broadens one's knowledge and improves one's capacity to think critically. With the advancement of technology, both students and teachers must be imaginative in order to apply an innovative way of teaching called online tutoring.

Everything has gone online these days, from ordering food to paying bills, so why not education? Online tutorials are becoming more popular as technology advances. Students used to attend lessons like the question mark in the early twenty-first century, but now, with the help of technology, they can. Students who use technology can find a teacher who is a good fit for them. The term "online tutoring" (or "e-tutoring") refers to a platform where a tutor educates a tutee through the internet. It's a cost-effective and adaptable platform that anyone can access 24 hours a day, seven days a week. The platform uses a variety of strategies to reach out to students, including (Live classes, Webinars and many more).

Students can learn anything from anywhere at any time using online lessons because they are self-paced. Although there will be no face-to-face connection between students, it will allow them to take the time they need to learn topics, as well as assist them establish a positive attitude toward education and find it enjoyable to attend classes.

Many Indian educational institutions are using online tutorials as an alternate platform for engaging students both within and outside of the classroom. Many studies have proven that online lessons help students improve their mental ability, flexibility, and problem-solving skills, all of which will benefit them in their future careers.

Many studies have shown that students' use of educational applications has increased by over 217 percent in the last year, with pupils viewing online tutorials as a mainstream for education. Cloud computing is becoming more prevalent in online education systems. With the growing use of smart phones and the internet in India, E-learning applications have attracted a speculative customer base. Despite the fact that India's traditional education system is still in place, many institutions and universities are turning to online education for skill development and other services that are not offered on site. More than 77 percent of higher education students use online tutorials to help them understand the material,

prepare for tests, and improve their skills. Students deemed educational programmes such as (BYJU'S, Unacademy, Vedantu, Khan Academy, and White Hat Jr.) to be very promising in terms of improving their academic and practical knowledge. These online tutorials are succeeding in this competitive market by incorporating cutting-edge technology such as Artificial Intelligence, Block Chain, and Data Analytics to enhance the learner's experience, and by providing value-added services such as internships, live projects, and career counselling sessions with special mentors. Trends such as "Gamification" have resulted in a significant increase in student involvement and attentiveness.

Students rely on meaningful material where they may get more information, in addition to the academic syllabus, to build knowledge on their interested themes and a willingness to acquire some learning tools and practises. Nonetheless, Indian educational institutions are advising their students to use Edapps to boost efficiency and flexibility in their learning. These apps are divided into three categories: preprimary, primary, and secondary education, as well as platforms like iOS, Android, and Windows.

Learners are encouraged to use educational applications because of features such as saving movies, audios, and notes. Users claim that these apps provide a variety of benefits, including a flexible schedule, lower costs, less time commitment, and environmental friendliness.

According to the 2022 education apps market report, the increased demand for STEM apps is due to the fact that many students are choosing STEM topics.

According to some estimates, India's online education market is predicted to reach INR 360.3 billion by 2024, growing at a CAGR of 43.85 percent between 2019 and 2024. The online primary and secondary supplemental education market in India is estimated to reach INR 123.65 billion by 2024, growing at a CAGR of 46.48 percent between 2019 and 2024, with the majority of demand coming from tier II and tier III cities.

The adoption of digital payment methods has increased as technology and infrastructure have improved. The online test preparation market is estimated to reach INR 94.75 billion by 2024, growing at a CAGR of 50.84 percent over the 2019-2024 timeframe. These figures are increasing at an exponential rate, indicating that online tutorials are exploding. Students in grades 1 to 5 spent 32% more time studying online, while students in grades 6 to 8 spent 15% more time.

As a result, we can claim that online tutorials are changing Indian traditional teaching practises and establishing a commercial strategy. Online tutorials will be a very significant part of every educational institute in India in the future.

## **II. LITERATURE REVIEW**

1. In his research paper "The Effectiveness of online and one-to-one tutoring in the writing centre on the student's achievement: a multiple case-study," Wessam Al Chibani (2014) stated that students who worked one-to-one or online saw noticeable improvements over students who relied on traditional classrooms, and that students who worked online scored the highest marks.
2. In his research paper "Mobile Learning and Education," Adnan Majeed (2015) stated that online education and apps assist students in improving their skills by allowing them to ask questions of teachers without hesitation. E-books, magazines, e-materials, and video lectures provide students with the ability to read and listen at any time.
3. Kristen Diliberto-Macaluso and Alan Hughes (2016) found that following the excessive usage of mobile phones and the internet, online educational apps became a standard in every student's life in their study article "The use of mobile apps to increase student learning in Introduction to psychology." They also stated that students who use the online apps are more responsive and active in their responses than other pupils.
4. In their research article "Use of Educational App in Classroom Teaching," Dr. Yatendra Pal and Ms. Riddhi Agarwal (2017) said that technology has had a huge impact on children and education. They also noted that educational applications help children understand things more easily. Apps are fantastic tools for including children in studies and other brain exercises; they broaden learning and allow children to progress at their own speed.
5. In their research paper "Review on use of mobile apps for language learning," Ramya Gangaianmaran and Madhumathi Pasupathi (2017) stated that students are more likely to acquire listening skills than any other skill, and they also discussed how mobile apps can be studied from the perspective of self-access learning. Self-access learning allows students to choose when and where they learn using internet resources.

6. In his research paper "An investigation of mobile learning apps in higher education in India," MohdShoaib Ansari (2017) stated that mobile learning apps can engage students with their learning environment at anytime and anywhere, and that in terms of effectiveness, nearly 42.64 percent respondents find mobile apps very effective, while 34.64 percent students find it effective.

7. Learning apps assist the 4C's (Communication, Collaboration, Corporation, and Creativity) & 4S's (Communication, Collaboration, Corporation, and Creativity), according to Shahjad & K. Mustafa's (2019) study article "A trendy analysis on learning apps research" (Speed, Simplicity, Security & Sharing).

8. In their research paper "Effectiveness of Educational Applications and Websites on Students," Ms. Vaishnavi Khandelwal and Dr. Robi Augustine stated that with the widespread use of the internet by people, elearning is experiencing a massive growth, and many educational applications have been introduced for the purpose of learning. With the advancement of technology, both students and teachers prefer to adopt new concepts through online apps.

9. Sruthi Palliyalil & Dr.Sandeepa Mukharjee - (2020), in her research paper "BYJU'S – The Learning App: An Investigative Study On the Transformation from Traditional Learning to Technology Based Personalized Learning," she mentioned that Byju's, India's largest educational app with over 3, 00,000 annual subscriptions, and one of the world's most valuable Ed-tech companies, has played a major role in transforming India's

### **III. IMPORTANCE OF ONLINE APPLICATIONS IN INDIA**

1. **Self Learning** - Teachers find it challenging to focus on just one child in the class. Students can use online tutorials to learn topics that aren't covered in the classroom. Students can finish the topics in the time allotted without feeling tense. Children gain confidence and become more focused as a result of these internet programmes.
2. **Accessible 24 Hours a Day, 7 Days a Week** - Students can get answers to their questions and study materials from anywhere, at any time. These apps are available to students at all times, regardless of their schedule.
3. **Resources for Online Learning** - Despite the availability of physical libraries, smart phones have become a primary source for obtaining any type of knowledge with a single click. By supplying pdf's and e-books, these programmes offered a platform for students who could not afford full-time schooling.
4. **Learning is Enjoyable** - "Gamification" programmes make learning enjoyable and interesting. It also boosts student participation. These Ed-apps motivate students by rewarding them with badges and awards, resulting in a good attitude toward education.
5. **Developing Technical Skills** - Educational programmes assist pupils in developing technical abilities at a young age. Even schoolchildren may learn to code with the help of some apps, laying the groundwork for future IT careers.
6. Online tutorials are less expensive than traditional classroom education, and students can save money.
7. **Parent-Teacher Communication Improved** - With the introduction of mobile applications, the interaction and communication between the teacher and the parents improved significantly. Parents can directly communicate with teachers and ask any questions they have about the courses through mobile apps. As a result, there is more transparency in schooling, and parents are more trusting of their children.

### **IV. RESEARCH OBJECTIVES**

- To investigate the current state of selected educational apps in India.
- To investigate the transfer of conventional education into modern education in India using mobile applications.
- Purpose to investigate the development of educational apps in India.
- To investigate the various opportunities and problems that educational applications face in India.

### **V. RESEARCH METHODOLOGY**

Secondary research was used to write this research study. News stories, blogs, educational websites, and certain research papers were used to compile the data. The main focus of this research study is on the strategic analysis of online tutorial apps.

### **5.1 BYJU'S**

Byju Raveendran launched BYJU'S, India's leading education tutoring app, in August 2015. It provides children in LKG, UKG, K-12, as well as students preparing for competitive exams such as NEET, IAS, and JEE, with an interesting and highly effective learning programme. The app currently has 70 million students registered and 4.5 million paying memberships. By assigning a whole new way of learning through pictures, this app has become the most popular instructional tool on the planet. It is India's most popular educational app, with kids receiving world-class instruction. BYJU's app is tailored to each learner's individual learning style, taking into account their pace, style, and size of learning, and paving the way for new-age learning tools. Shahrukh Khan, a Bollywood star, is the Brand Ambassador for BYJU.

BYJU's is one of the most well-known Indian Ed-tech firms, with a presence not just in India but also around the world. BYJU bought Osmo, a learning platform established in the United States, in 2019 to broaden its reach. In June of this year, BYJU has partnered with US media mogul Disney to introduce the Disney-BYJU early learning app in the domestic market, which will engage children aged six to eight with popular characters and storylines from Disney classics. This platform has received \$969 million in investment from a variety of investors. During the pandemic, BYJU's took a positive step by making its learning app free for students until the end of APRIL 2020 in order to give uninterrupted learning to their pupils, and the platform attracted new 13.5 billion subscribers.

In India, the trend of online education has grown in recent years, and BYJU has taken advantage of this by focusing on two primary segments: semi-urban and rural locations. The new education strategy has placed a strong emphasis on online education, with the Indian government fully supporting it. This has become a significant benefit for BYJUs. Along with other industries, the educational sector was severely impacted by the pandemic. It has provided a fantastic opportunity for this platform to expand its market. Furthermore, this Ed-tech platform intends to offer technical, professional, coding, and extra-circular activities lessons.

The platform's key problem is that BYJU's business model is easily understood by new start-ups. Because most students are unwilling to pay the amount of money offered by BYJU once the "freemium" model has been completed, this programme may lose active learners. Competition is another significant obstacle for the BYJUs. In this era of online education, competitors such as (Vedantu, Khan Academy, Toppr, Meritnation, Simplilearn) are always a threat.

### **5.2 Unacademy**

Unacademy is another prominent Ed-tech educational portal in India, situated in Bangalore. Gaurav Munjal started the channel as a Youtube channel in 2010 and officially launched it in 2015. This portal offers content for important competitive tests in the form of short films on various themes that are freely available, as well as study materials for applicants to better prepare for competitive exams and promote self-learning.

The Unacademy app, which has over 10,000 registered educators and 13 million learners, is available for 10+2, CAT, GATE, and UPSC students. The Unacademy group includes the Unacademy subscription service, the Let's Crack It brands, Chamomile Tea with Toppers, and wifistudy.

Unacademy is a brand-new 'Unicorn,' with a steady increase of subscribers on both the app and YouTube. It has approximately 2,400 lessons for competitive exams, covering topics from a wide range of subjects. Unacademy's videos have had over 250 million views on YouTube, and the site has hundreds of online educators. Unacademy also has some well-known educators under its umbrella, such as Kiran Bedi, and this Ed-tech platform is progressively expanding to reach the four corners of India in order to empower the youth.

In light of the current situation, Unacademy has announced 20,000 live free classes for all existing and new users. Furthermore, this platform aims to place a greater emphasis on coaching centres, which are prominent in Indian society. Unacademy bought PrepLadder, a Chandigarh-based Ed-tech startup that focuses in courses for medical aspirants in India, in July 2020. With the help of corporate behemoths like Facebook, General Atlantic, and Sequoia Capital, the platform was able to see that this is a once-in-a-lifetime opportunity to grow its business.

The biggest difficulty that this Ed-tech platform faces is "data leakage" — according to some credible claims, the data base of 22 million learners, including Wipro, Infosys, Cognizant, and Google experts, was hacked and put up for sale on the Dark Web in January 2020. Toppr, Khan Academy, Firefly, Tutorvista, and iTutor Group are among Unacademy's main competitors.

### **5.3 Vedantu**

The name "Vedantu" comes from Sanskrit, where "Veda" means knowledge and "Tantu" means network. It is one of India's most popular online tutoring platforms. In 2011, the business began as a joint venture with Bangalore-based Vedantu Innovations Pvt. Ltd. Later in October 2014, Vamsi Krishna, Anand Prakash, and Pulkit Jain, three IITian buddies, formally created an online learning platform. This platform provides learners with live lessons from qualified professors. It has 500+ instructors who have taught over 40000 students in 1000+ cities across 30+ countries for over millions of hours. It primarily serves ICSE and CBSE students in India and the Middle East, ranging from 4th to 12th grade. This platform also claims to offer IIT-JEE, NTSE, PSE, as well as International Mathematics Olympiad and National Science Olympiad test preparation courses. One of the best aspects of this platform is that students and teachers may engage with each other in real time.

In 2019, Vedantu unveiled its "WAVE" platform, which uses AI and Machine Learning to address the key issues that Ed-tech platforms face, such as low course completion rates due to low engagement. Vedantu is addressing this by increasing its focus on live interactive classes in order to make its classes more participatory. During the lockdown, this platform grew by 220 percent, with more than 2 million students participating in live courses. It also took the initiative to give Free Live Interactive Classes with curriculum for grades 1 through 12, as well as for competitive exams like JEE/NEET. According to an Economic Times article, Vedantu is the second most valuable company in India's Ed-tech sector.

According to a Livemint report, Vedantu invested \$2 million in Instasolv, an Ed-tech business that resolves problems for high school, IIT-JEE, and NEET students as a supplement to doubt resolution. With investors including as Omidyar Network, Accel, Tiger Global Management, and GGV Capital on board, Vedantu professes 1,50,000 students on its platform each month.

The key difficulty that this top Ed-tech platform faces is the potential of data theft, as well as market rivalry. BYJU'S, Meritnation, Toppr, Worldscool, and simplilearn are vedantu's primary competitors.

### **5.4 Khan Academy**

Khan Academy is a non-profit educational organisation founded in 2008 by American educator Salman Khan with the objective of developing a set of online tools to assist students in their learning. This portal contains over 10,000 video lectures on a variety of academic areas, mostly mathematics, science, history, art, and economics, as well as K-14 and test preparation content (SAT, Praxis, LSAT). This website, which is free for both students and teachers, contains thousands of interactive exercises, resources, and videos covering a wide range of k-12 disciplines. Khan Academy is used by more than 18 million students in 190 countries and in more than 40 languages. More than 2 lakh educators take advantage of their free teacher resources.

This platform has expanded dramatically during the last 13 years. Khan Academy collaborated with NASA, MIT, and the Modern Museum of Art to provide specialised information to students outside of the classroom. During the pandemic, Khan and his colleagues created daily home education plans that included online learning, personal writing, and offline reading, as well as teaching the children about social distancing through Google Meet, Zoom, and Skype. The biggest difficulty that Khan Academy has is that because anybody can visit the site, data may be lost. And competing against BYJU's, Meritnation, Unacademy, and Toppr.

### **5.5 White Hat Junior**

Karan Bajaj founded White hat jr. in 2018 as a Live 1:1 online educational platform. This platform teaches youngsters the fundamentals of coding structure and algorithm thinking in order for them to produce a creative result. This site is aimed for children aged 5 to 12, with the goal of teaching them coding skills and transforming them from consumers to creators. Hrithik Roshan, a well-known Bollywood actor, is a brand ambassador for White Hat Jr.

White Hat Jr's platform had a tremendous increase in revenue during the pre-lockdown phase, going from Rs. 1 crore to Rs. 10 crores. Since the lockdown, the value has begun to rise. The revenue rate was \$75 million dollars before the acquisition of BYJU'S in June, but it jumped to \$220 million within one month.



In India, the company is growing thanks to its all-female teacher base. As this platform had expected to hire 22,000 teachers, it is now employing roughly 220 teachers per day. The biggest difficulty that White Hat Jr. faces is student disconnection, as most students are unable to pay the fees due to the high fees. Coding blocks, coding with kids, and camp 12 are the company's primary competitors.

#### **VI. FINDINGS**

1. BYJU's objective is to instil a love of learning in kids; this app primarily focuses on mathematics and science, with topics attractively taught through the use of modern digital animations and drawings.
2. The major goal of Unacademy is to offer a large number of courses in a variety of languages for students all around the world.
3. Vedantu provides students with nice and passionate tutors who can adapt to their level of understanding.
4. The objective of Khan Academy is to provide a free world education to everyone on the planet. This platform thinks that combining videos, materials, and practise will benefit students.
5. White Hat Jr. is number five. It is aimed to develop creativity and problem-solving skills in children by teaching them how to code.

According to my observations, these apps are fiercely competitive. And all of these platforms are dedicated to the global growth and development of pupils.

#### **VII. CONCLUSION**

We have demonstrated the growth, potential, and rivals of these educational apps in our research study. The key difficulty identified throughout the study is that learners are turning away due to the high cost of these platforms; as a result, all of the applications are striving toward the same aim of providing education to their users. Apart from that, they have encountered numerous social media issues, but with their win-win philosophy, they have surmounted all of these obstacles and are now focusing on future chances that can bring a revolutionary transformation in Indian education.

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