Byju's Learning App in the COVID-19 Outbreak to Analyze Online Education-A Case Study

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ABSTRACT

Background/Purpose: *Byju's e-learning App is one of the most used online learning mobile applications in India. Byju's app operations began in 2011. It is launched by two business entrepreneurs Byju Raveendran and Divya Gokulnath. The Company's head office is in Bengaluru, India. The app slogan is "Fall in love with learning." Byju's app brings new and innovative trends in education, specifically in online education. In the beginning, the Byju e-Learning app consists of all kinds of students, all state boards in India, especially from grades first to 12th. Furthermore, the app provides unique services to graduates attempting to pass competitive tests like GATE, JEE, NEET, UPSC, and Bank Exams. The application's main segment is to provide an electronic learning platform with numerous examples to improve students' concentration. It is Indian's fastest electronics app, focused only on learning the concept by various methods and through various animated videos, more straightforward and effective, where to get the best outcome in learning mathematics and science subjects.*

Objective: *In this paper, we analyze Byju's app's influence on students during the COVID-19 pandemic, and to know whether its subscription increased or not in the Covid 19 outbreak. This paper also analyzes how e-learning apps can focus on enhancing the experience of students and helping to improve customer focusing and subscription rate.*

Design/Methodology/Approach: *A survey is conducted in a semi-urban area to analyze different aspects related to online education through Byju's app during COVID 19 pandemic. In addition, analyze the information collected from the survey and from various scholarly articles and by using the SWOT analysis framework.*

Findings/Results: *During the COVID-19 pandemic, for online education, Byju's app stands as a leading online education brand, with 85% of parents subscribed to this mobile application for their child's education. So, coronavirus crisis helped Byju's app to become a leader in online education providers in India.*

Conclusion: *From the conducted survey-increased subscription rate of the app was seen and noticed that customers are loyal to Byju's App. Also, it is found that most of the students in the semi-urban area use Byju's app for their studies during the Covid 19 pandemic. By SWOT analysis, we have given some suggestions that can be added to Byju's Learning App as a business strategy.*

Paper Type: *Case study-based Research Analysis*

Keywords: Online Education, Online learning, Byju's App, personalized learning, Technology, Learning Apps, and COVID-19 Education, Distance Education, Ed-Tech

1. INTRODUCTION :

Byju's app is a Bengaluru-based global educational firm. The company was established by Byju

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Raveendran and Divya Gokulnath in 2011. The Company's head office is in Bengaluru, India. The app slogan is "Fall in love with learning." The Byju's App is the most important technology education company in the world and a pioneer to all other online education apps. Byju's international market valuation is about dollar 16 billion. Think and Learn Pvt Limited, India, which was founded by Byju Raveendran, the parent company of Byju's app, developed Byju's app. In 2006, Raveendran, who had been trained as an engineer, started training mathematics examinations for students. In 2011, with the support of his students and his wife, Byju Raveendran established a learning firm that offered an online video training program for the K12 segment. The company debuted Byju's: The Learning App in August 2015, following four years of development. In 2017, Byju's Math App Kids and Byju's Parent app for parents to monitor their child's progress in learning were released by Think and Learn. It had over 70 million premium customers and around 3 million paid customers in India by 2021. In the middle of 2019, Byju's app gained sponsoring permission for the Indian cricket team jersey. Malayalam film industry actor Mohanlal and Hindi film industry actor Shah Rukh Khan are the brand ambassadors for Byju's App [1] [9]. This app provides high-quality animated videos with appealing visualizations, as well as an effective learning program for various student groups. This software is designed to make learning topics easy for young minds by using visualization and real-life experiences. While the app concentrates on LP, UP, high school students, also it includes competitive exam classes, such as JEE/NEET, UPSC, IAS, and GATE. And a course will start with RS.5000, and also students in classes 4 to 12 will receive a scholarship. Byju's app provides online conceptual understanding classes, personalized education, and personal attention from counselors. Moreover, because of the new education system in India, Byju's app made a new investment in Whitehat Jr, which teaches coding. The application's main segment is to provide an electronic learning platform with numerous examples to improve students' concentration. It is Indian's fastest electronics app, focused only on learning the concept by various methods and through various animated videos, more straightforward and effective, where to get the best outcome in learning mathematics and science subjects. The biggest challenge currently faced by Byju's e-learning application is keeping the existing students up and increasing the number of new students, and also an increase in the competition provided by other online education suppliers like Unacademy, 90+, Vedantu, Doubtnut for making the best e-learning content. To overcome these challenges Byju's App can use Data Science, Data Analytics, and Virtual Reality for their new innovative operations. By use of these technologies, Byju's app can impress its users. There are 12 sections in this paper. Section 1 gives a brief overview of Byju's app. The objectives of this case study are explained in the second section. The methodology used to conduct the study is described in the third Section. Section 4 explains the development of Byju's app business model and compares its business pattern with other e-learning applications. Section 5 describes the survey conducted to examine the impact of Byju's app on student online education during the Covid 19 pandemic. Section 6 explains Byju's success history. Section 7 explains the SWOT analysis of Byju's App. Section 8 explains the new challenges faced by Byju's app. Section 9 provides the latest technological developments in Byju's app. Section 10 explains the Covid 19 impact and challenges faced by Byju's app. Section 11 talks about the results of the study. Section 12 presents suggestions and proposals and last, this paper concluding in Section 13.

2. OBJECTIVES OF THE CASE STUDY :

Below are the main aim of the case study
1. To understand the history of Byju's learning App.
2. To study the business model and strategy of Byju's learning app.
3. To understand the new techniques that are used to deal with challenges faced by competition.
4. To understand the reasons that helped become BYJU's app a national success.
5. To understand the impact made by the Byju's app on students during COVID 19 pandemic.
6. Use SWOT analysis for Byju's app performance evaluation.

3. RESEARCH METHODOLOGY :

The main purpose of this research study is to figure out how Byju's learning app affected students' education during the COVID-19 crisis. The research is conducted on the basis of the various sources available in a semi-urban area in the Idukki district in Kerala state. The main sources are Byju's

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website, different journal articles, different websites referred for SWOT analysis. A survey is conducted to analyze different aspects related to online education through Byju's app during the COVID-19 pandemic. Google Scholar and Research gate are mainly used as search engines to retrieve data related to the research-based case study.

4. BYJU'S THE LEARNING APP BUSINESS MODEL: OVERVIEW :

Byju's app was the main competitor for other e-learning apps, which is into the business of student education through online mode. Other online education websites and applications also give classes in the form of videos, lessons, and other forms of materials so on. However, when a student opts for Byju's app for their learning, they get a personalized experience with their subject interest and the students can use OSMO technology for their studies. In addition, Byju's application offers a free talking session with their counselors at the student's residence, allowing them to understand better and choose the course of their choice [10]. Byju's app was Unacademy's main competitor. Unacademy is a Bangalore-based Indian educational company. Gaurav Munjal makes a YouTube channel in 2010, followed with the help of Munjal, R Saini, H Singh were founded Unacademy in 2015. The organization employs more than 50,000 educators and provides study materials for a variety of entrance tests. Unacademy app's teaching is available as live classes, also get both free of charge and subscription basis [11]. By comparing both apps, Byju's app is more learner-centric. At a young age, Byju's App aims at presenting online classrooms. Their educational programs are simple to create and can be used to educate anyone from kindergarten students to job candidates practicing for competitive tests. Furthermore, Byju's learning application allows both students and parents to track their performance statistics in real-time. For younger subscribers, Byju's app conducts mock tests to evaluate a student's performance. So Byju's programs effectively strengthen the basics of young learners and lay a foundation for education. Unacademy, on the other hand, focuses on students currently in class 9 and up and those who take competitive examinations. Additionally, it also offers user-based performance statistics in mock tests. The application provides an in-depth report and notification. However, Byju's has an easy-to-use interface, which provides you with complete feedback on your strengths and weaknesses [13]. Each business should follow a unique strategy to develop in this type of competitive world. Byju's app has also follow some new methods to develop in the competitive world. It uses the B2C marketing strategy and promotion. Byju's app is aimed at young minds as their clients, it is the trusted, online learning, self-motivated, and self-studying app for students who try cracking competitive exams. Instead of spoon-feeding the Byju's app provided more memorizing methods for the students. Byju's app support students to enhance their skills, intelligence, and mental capacity. It has been a success in the plus 2 education too. By student association, the firm did the journey a grand success. Byju's app grew quickly within the education industry, capturing the largest market share in both the business-to-customer (B2C) and customer-to-customer (C2C) segments. It had occurred not only as a result of the e-learning software but also as a result of the faith and confidence that both the parent and student had in the firm's dedication to the enhancement of children in the country [4]. And in COVID 19 pandemic situation, Byju's app gained more users than other e-learning apps. During the lockdown, Byju's app becomes the pioneer of the other popular learning app. In the COVID-19 outbreak, most parents were worried about their child's education. So, parents' trend to online education and sign up for a subscription to educational apps to support their students' education during the crisis. Furthermore, during the COVID -19 crisis, Byju's app released its video content free for all students. Byju's app stands out as a major name among the digital platforms utilized for education during COVID-19, and 85% of parents subscribed to this app for their child's education. As a result, firm Byju's app has risen to the top among India's online education providers during the COVID-19 pandemic [12].

5. BYJU'S APPLICATION: SURVEY AND ASSESSMENT :

Byju's app is one of India's most popular online learning mobile apps. The purpose of the survey is to see how Byju's app affected students' e-education in the Covid 19 outbreak. The information is gathered using Google forms and evaluated with the Statistical Package for the Social Sciences (SPSS) program. Figure 3 shows the graph regarding student education 2020-21. In the semi-urban area, 60% of students use both school and various e-learning apps for their education during the COVID-19 pandemic situation.
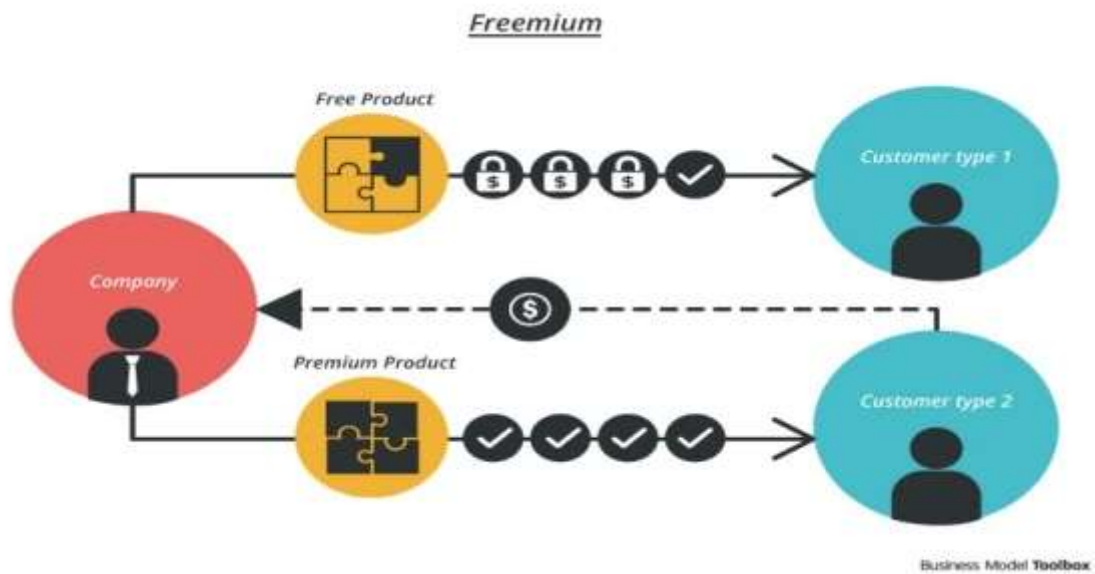
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Fig. 1: Byju's: The Learning App Business Model [10]
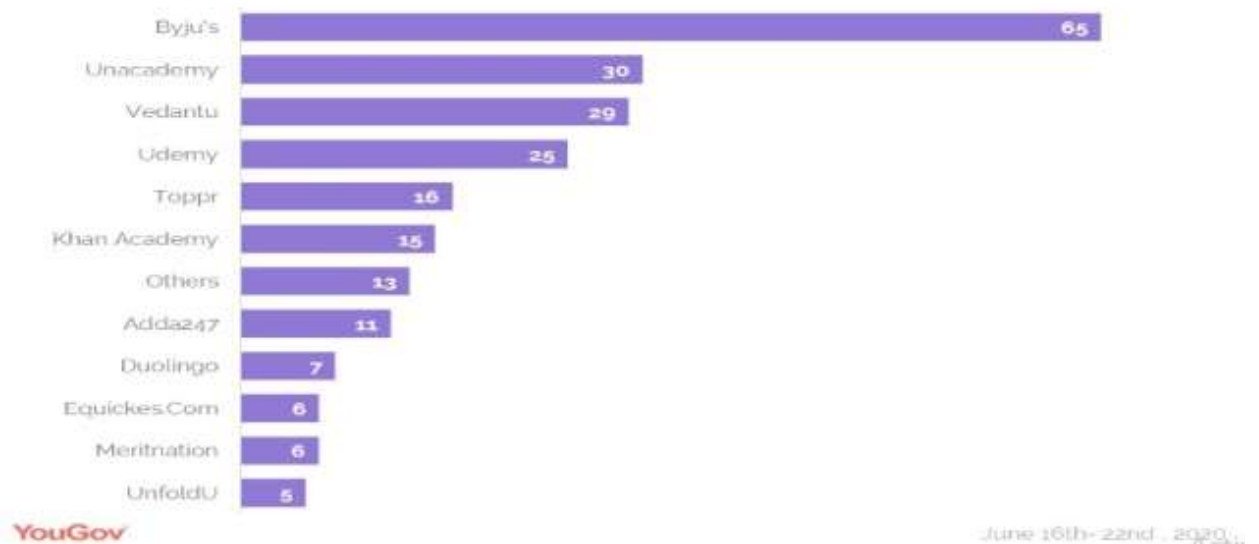
Fig. 2: Representative survey carried out on Indian adults in 2020 by YouGov [4]

Figure 4 shows the graph regarding the students' online education 2020–21. 60% of students use mobile e-learning apps for their education during the covid-19 pandemic situation. And 10% of students' use the schools owned apps, 25% use live streaming through TV Channels, and the other 5% of students do not use any apps/TV for their education.

Table 1. Apps Used to learn online

Apps Used to Learn Online	Percentage
Byju's App	84.5%
Unacademy	2.3%
Vedantu	3.1%
90+	10.1%

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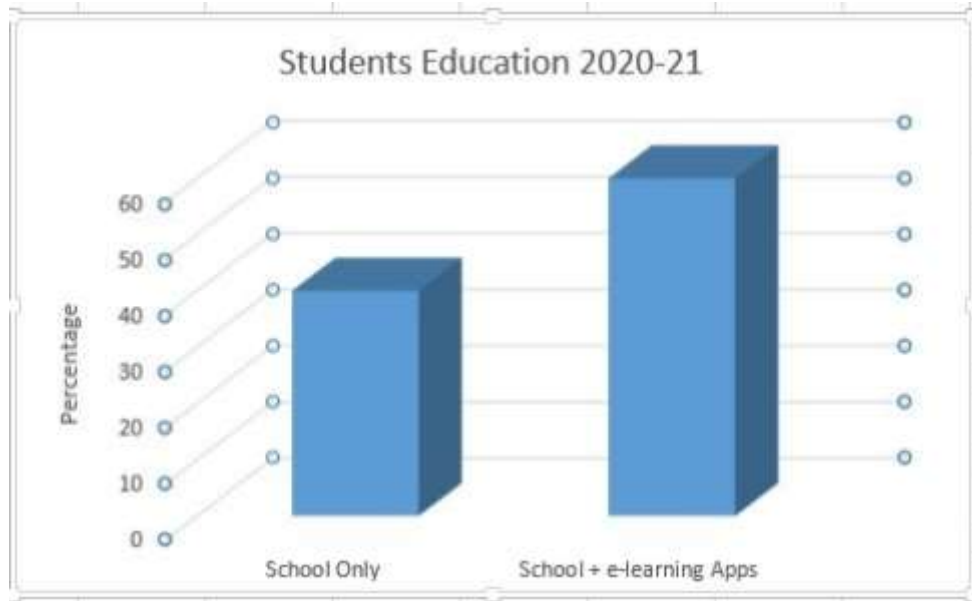
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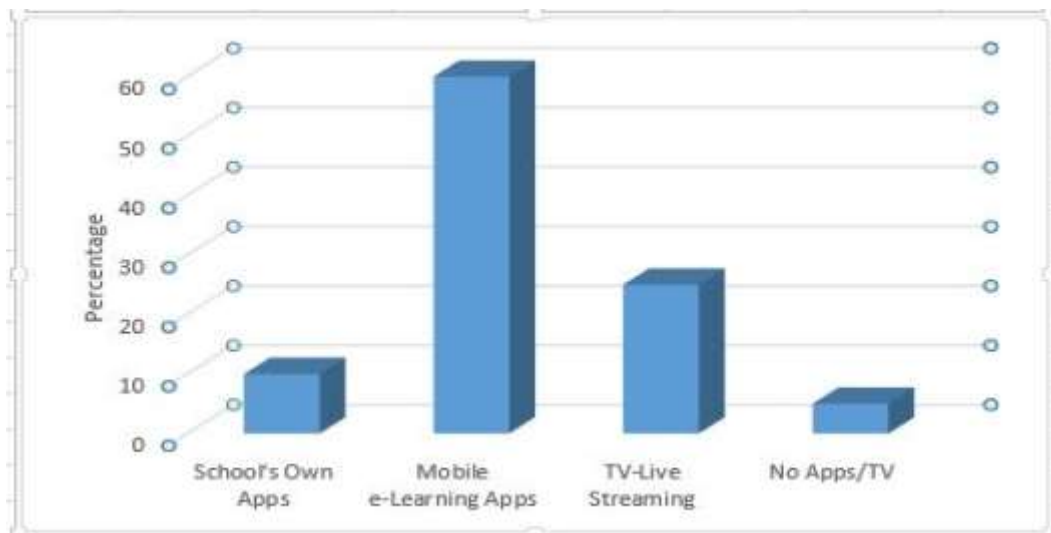**Fig. 3:** Survey conducted in the semi-urban area

Fig. 4: Online education category

Figure 5 shows the graph regarding above table 1. In the semi-urban area, 84.5% of students used Byju's app for their online education during Covid 19 crisis, and 2.3% of students use the Unacademy app, and Vedantu was used by 3.1% of students, and 10.1% of students use 90+ app. So, most of the students use Byju's app for their education.

6. BYJU'S PERFORMANCE ANALYSIS TO AN INTERNATIONAL SUCCESS :

The company has been successfully targeted to the perfect customers/student and provided them with better clarity on the topics, which will help them to clear up entry exams and topics more easily. Nowadays, India's online education system is popular and competitive. It seeks to create a situation where students take the initiative to learn rather than get content fed to them. Byju's app's main goal is to connect the Indian education system with students and help them fall in love with their studies. The content is provided to students in different forms, such as videos, exercises, viewing, and much more than theory.

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Fig. 5: Survey conducted in the semi-urban area- Byju's App Usage

Byju's app motive does not only focus on the students but also tried to inspire every person to learn. The various reasons that helped Byju's app a national success are:

(a) Its motive that effectively made learning fun

(b) The quality of the product/service

(c) Generating interactive content through the help of technology

(d) The right mindset to target the growing smartphone user count

(e) The initial freemium model ensured a constant flow of leads

(f) Highly aggressive marketing methods

(g) Failure of competitors to create such high-quality content

(h) Brought prominence to 1:1 teacher-student classroom experience [25].

Table 2. Byju's app growth towards a National as well as International Success

YEAR	DEVELOPMENTS
2011	BYJU officially began its operations.
2012	The interactive learning began with other experienced teachers
2014	Created first learning app for class 8-12 students
2015	The first mobile application launched in India
2016	Joined more than 3, 00,000 active students. Google India awarded "Best Self-Improvement". Byju's app also becomes Asia's 1st company to got an investor like Chan- Zuckerberg.
2017	Launched Byju's math app. Also launched Byju's parent connect app, which helps parents to monitor the studies of their children.to help
2018	Byju's app got 15 million users and has become the worlds' most valued Ed-Tech Company.
2019	Byju's app acquired OSMO technology- An United States learning platform to create an interactive platform for education. Also sponsored jersey for the Indian cricket team. Also launched Disney-Byju's early learn application.
2020	Signed to acquire Akash Educational services. Made company's recent investment in Whitehat Jr. The Covid 19 helped Byju's to

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	become the Most valuable app in India and cross the dollar 10.5 Billion values.
2021	Acquired Akash Educational Service. Turned to the most trusted education App. It had over 70 million premium customers and around 3 million paid customers in India by 2021.

7. SWOT ANALYSIS OF THE COMPANY: BYJU'S APP :

SWOT analysis is a well-known internal analysis framework for company analysis [15-17]. SWOT analysis has been conducted on Byju's App industry to understand the strengths, weaknesses, opportunities, and threats faced by the company during the COVID-19 crisis. SWOT analysis is a technique that can be used to evaluate the internal and external environment of the industry to develop strategic business planning. The SWOT analysis report is framed out as per the criteria declared in the company analysis case study [18–24].

Company: Byju's App: Think and Learn Pvt Limited, India.
CEO: Mr. Byju Raveendran.
Year founded 2011.
Founders: Byju Raveendran and Divya Gokulnath.
Headquarter: Bengaluru, India **Industry:** Mobile Application **Public or Private:** Public
Ticker Symbol: BYJU'S: The Learning App
Market Cap (2019): $13Billion
Annual Revenue (2019): $14.8 Billion
Products and Services: Byju's mobile app, Online Education
Competitors: Unacademy, 90+, Vedantu, Doubtnut

7.1 Strengths:
- Established Brand Names.
- Deep sales network.
- Strong Customer base all over India.
- Strong intellectual property rights.
- Strong finance.
- Successful tracking of student progression.
- Successful marketing of product.
- Video tutorials: available formats -stories, visuals, and theories. Available in local languages.
- Product innovation.
- Good quality products/services: High quality-animated videos with attractive visualization
- Good student monitoring service by education experts from Byju's.
- Strong Brand awareness-Byju's app has the most recognized brands in the Indian domestic market and it plays an important role in attracting new customers.
- Client commitment: Customers believed in the company because of the good quality. Byju's app to increase its international marketing strength.
- Byju's App can compete on the international market with other global education providers.
- Recently Byju's App has brought White Hat Jr. They will therefore offer students programming lessons together.

7.2 Weakness:
- Bad Reviews: Unsatisfied customers made bad reviews.
- Expensive for economically weaker students.
- No proper inventory management.
- No wide range of international markets.
- Lack of development of Artificial Intelligent (AI), Blockchain technology and Augmented Reality
- Lack of new technology implementation

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- Behavioral analytics not used.
- Complaint mechanisms are not well developed.
- Poor Internet connectivity in rural areas.
- Too much endorsement of celebrities for advertisement.

7.3 Opportunities:
- Expansion into other countries including the US and China.
- Partnerships: Make partnerships with different service providers.
- Earn revenue from advertisements.
- Use of behavioral analytics for attracting clients.
- Use growing digitalization opportunities in India
- Increase in standardization.
- Use study anywhere & anytime theory: Education trend changed in
- Use the Education situation in the COVID-19 pandemic.
- Keep an eye on the New Education Policy 2020 in India encourages online education.
- Introduce online certification courses like SWAYAM, Coursera, etc.
- An increasing number of smartphone users.
- Globalization can help Byju's App to get a prime position in the international market.
- Nowadays machine learning and the rise of artificial intelligence are changing technology patterns, and Byju's App can take these technologies to improve efficiencies, cut costs, and producing new innovative products.

7.4 Threats:
- Increased local and International Competitors: Other online education Apps like 90+, Vedantu, Unacademy are entered in online education.
- High subscription price leads students to switch to other online education providers.
- The global economic slowdown will affect Byju's App entering into International Market.
- Privacy of data –keeping the privacy of data is essential for Byju's app.
- Changing Government Regulations– Byju's App should keep clean monitoring on the fast-changing Government Regulations in the COVID- 19 crisis.
- Byju's app Business pattern can be easily copied by other education providers.
- High lead time to create a one-course structure.

8. CHALLENGES :

8.1 Maintaining Customer Relationships
Customer relationships describe a company's ways to enhance the customer experience with its customers. Byju's app develops a positive client relationship through online classes, direct meetings, and phone calls from their marketing experts.

8.2 Maintaining value Propositions
There are some valuables offered by the Byju's app, such as access to high-quality education, quality educators for all students, good video quality, fully syllabus-oriented content, and 1:1 teacher-students proportions.

8.3 Increasing the new students' counts

The biggest challenge currently faced by Byju's e-learning app is in their increasing number of new students, competition given by other online educators like Unacademy, 90+, Vedantu, topper for making the best online education content. To overcome these challenges Byju's App can use Data Science and behavioral Analytics for their new innovative operations. By use of the technologies, Byju's app can understand the users and provide a recommendation accordingly.

9. THE LATEST INDUSTRIAL DEVELOPMENTS IN BYJU'S APP :

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9.1 Technology trends:

In the day-to-day lives of human beings, COVID-19 has accelerated technology adoption, resulting in huge demand for online education. In the Byju app, data science is used to provide personalized experiences in learning. Interestingly, when an app successfully establishes a client's style, the app can personalize the learning instructions using the "Exhaustive Learning Graphics" technique. Also, Byju's app uses OSMO technology to attract students' attention [25].

10. COVID-19 IMPACTS AND CHALLENGES ON BYJU'S APP :

The Covid-19 crisis has affected the worldwide education system. Classes were canceled in India, schools shut down and examinations postponed in the Covid-19 pandemic. The majority of academic facilities in India come from online learning and schools adapted online teaching to continue education during the crisis. In this severe education situation, Byju's app makes a social initiative by providing high-quality education through their app, for children residing in underprivileged areas during the pandemic situation. However, in India, around 250 million children have lost connection to education, referring to a recent report by UNESCO. Also In relation, another 28 million pre-school children in Anganwadi centers were affected by the COVID-19 pandemic [26]. Byju's online education app gives students free access to their app until the end of April 2021. Byju's the learning app and Disney-Byju's early learn application can be downloaded without cost and can access full study content. Byju's application became a valued e-learning app after the COVID-19 outbreak, and its valuations reached $10.5 billion.

11. FINDINGS OF THE STUDY :

* From the study, it is found that Byju's App usage increased during the Covid 19 outbreak.
* The animated graphics in Byju's app has resulted in great customer satisfaction.
* Byju's App subscription increased during Covid 19 pandemic.
* The OSMO technique has helped Byju's App in its great success in its production.
* Covid 19 pandemic situation has helped Byju's App to be the leader of the education market.

12. SUGGESTIONS FOR FURTHER INNOVATION :

From the SWOT analysis, some suggestions are given below:
* Byju's App can use behavioral analytics, Data Science, VR Techniques to improve the customer experience.
* Develop Artificial Intelligence in Byju's app, also integrate augmented reality (AR) and virtual reality (VR) in online education.
* It is suggested to reduce the subscription cost of Byju's app. Then only ordinary people can use it.
* Limit advertisements to compensate for the loss of revenue.
* Expand its access to other countries including the US and China.
* Expand to Multinational Company (MNC).
* Provide offers to loyal customers, and introduce scholarships to advanced students.
* Make offline video available to the students, then they can use the app while there is no Internet. It will increase the app subscription.
* Produce more original content lecture videos on regional languages.
* Use fingerprint or facial recognition [27–31] authentication techniques for students' authentication.

13. CONCLUSION :

This research study, discussed Byju's app education pattern and compared it with the business model of other e-learning apps, and examines how Byju's app become a leading online education provider in the world. The Covid 19 outbreak has delayed the students' education and, in this situation, Byju's app helped the children continue their studies during the Covid 19 situation. Byju's APP has taken several proceedings to overcome the education crisis in India during Covid 19 outbreak and took necessary steps to help their students. For online education, Byju's App offers access free to its learning content to students until the last of April 2021. It helped students a lot to continue their education in the Covid

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19 crisis. From the conducted survey increase in the app, the subscription can be seen. In the conducted survey, monitored that client are reliable to Byju's App. Also, it is found that most of the students in the semi-urban area use Byju's app for their studies during the Covid 19 pandemic. Finally, analyzing challenges by SWOT analysis, we provided few suggestions to Byju's app to enhance their education pattern.

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