Major Research Project on

A Study on A Decade of Edtech in India: Analyzing Educomp, Byju's and YouTube for Industry Insights and Future Prospects

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DECLARATION

I Ishika Sikka, student of Masters in Business Administration hereby declare that the dissertation titled **"A Study on A Decade of Edtech in India: Analyzing Educomp, Byju's and YouTube for Industry Insights and Future Prospects"** which is submitted me to Delhi School of Management, Delhi Technological University, in partial fulfillment of the requirement for the award of the degree of Masters in Business Administration has not been previously formed the basis for the award of any degree, diploma or other similar title or recognition.

Ishika Sikka

<u>CERTIFICATE</u>

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This is to certify that the dissertation titled **"A Study on A Decade of Edtech in India: Analyzing Educomp, Byju's and YouTube for Industry Insights and Future Prospects"** which is submitted by **Ms. Ishika Sikka** to Delhi School of Management, Delhi Technological University, in partial fulfillment of the requirement for the award of the degree of Masters in Business Administration is an original contribution with existing knowledge and faithful record of work carried out by him/her under my guidance and supervision.

To the best of my knowledge, this work has not been submitted in part or full for any Degree or Diploma to this University or elsewhere.

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<u>ACKNOWLEDGEMENT</u>

EXECUTIVE SUMMARY

The last twenty years have been years of great changes in human activities around the world, as well as in all technology-related industries. If we talk about India, people are more dependent on technology and adaptability. The past decade has witnessed a significant evolution from decades of traditional education to technology-enabled education. This has led to the rapid development of EdTech, facing many challenges.

This study will analyze and examine various aspects of the industry as changes and relevant stakeholders. Factors such as the rise of the internet and access to smartphones have triggered this development, leading to the integration of modern technologies such as artificial intelligence and virtual reality into learning processes. However, the sector has faced challenges such as achieving technological parity, adapting to the changing landscape, and creating a landscape that stands out, especially in rural areas.

Users' attitudes towards Educational Technology are generally positive and users benefit from the convenience offered by digital learning. However, difficulties continue, especially in rural areas where infrastructure prevents adaptation to the Internet. The learning process has become more interactive and personal, with continuous assessment and rapid feedback becoming important components. Despite their long-term optimism, investors are cautious about the Educational Technologies sector due to the uncertainty in the legislation. They prioritize innovation and look for startups that show a desire to stay ahead of a competitive market.

The trajectory of India's Education Technology sector will depend on policy reforms, commitment to transparency, and the sector's ability to embrace emerging technologies. Overall, the past decade has laid the foundations for a thriving and thriving Education Technology environment in India, with potential for sustainable growth and a positive impact on education.

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Chapter 1

INTRODUCTION

1.1 Background

The past decade has seen remarkable changes in education technology (ed-tech) in India. As technological advances revolutionize the way we access information and learning, the technology industry has evolved exponentially and become a cornerstone of the educational landscape. This study aims to delve into different aspects of this evolution by examining the main trends, developments, and key outcomes for education at different levels while taking into account the financial and stakeholder implications. The education technology movement in India has been shaped by the rapid expansion of digital infrastructure and connectivity. The spread of affordable mobile phones and the availability of accessible Internet services have ushered in a new era in learning simple mathematical models. In addition, the online learning platform has become a catalyst for change by offering students a variety of educational resources, from standard courses to specialized skill development courses.

1.1.1 Evolution of Edtech industry

It all started with the collaboration of an educational institution with a passion for incorporating technology into students' daily learning lives. They emphasized how audiovisual aids support and enhance learning and long-term retention of information in the student's mind. For example, schools and colleges in India are undergoing a digital transformation by adopting learning management systems, classrooms, and collaboration tools.

The shift to digital transformation has not only facilitated distance and blended learning but also paved the way for more dynamic and dynamic learning experiences. The integration of artificial intelligence and data analytics has made learning more personalized, ensuring that educational content meets students' needs.

This situation has led to the acceptance of Educomp's services in student life. It was a nice change and the lessons currently offered were more clearly organized. This

situation excited everyone, from teachers to students and even parents. The creatures became more interesting and the usual boring history turned into a story-like story.

Initially, the industry faced significant gaps; Oversaturation led to intense competition, lower prices, and margins, as well as contraction and reduction of industry funding for edtech startups in 2022-2023, which impacted the bottom line. investors.

Source: Tatvasoft

Figure 1.1 EdTech Challenges

The education technology (ed-tech) sector in India has experienced significant growth in the past decade, thanks in large part to the increasing number of internet users and the widespread use of smart devices and mobile phones with improved connectivity. The expansion of the industry has been further fueled by the popularity of online content among Indian audiences. Ed-tech startups now offer a variety of video-based products to cater to the rising demand for video content. Efforts to implement the National Education Policy 2020 present opportunities for public-private partnerships in the ed-tech sector, which could contribute to its revival and growth. The adoption of technology has also helped address challenges in the traditional education system, such as the scarcity of teachers, particularly with around 26% of India's population being under the age of 14. The COVID-19 pandemic in 2020 accelerated the need for a hybrid model of education, leading to the global expansion of ed-tech companies and further boosting the industry in India. This growth has led to the emergence of new

companies in the sector, as well as the expansion of existing ed-tech companies through diversification of products and participation in mergers and acquisitions targeting the global market. In conclusion, the ed-tech industry in India has seen substantial growth due to high internet penetration, increased demand for skilled professionals, and greater consumption of online content.

Over the past decade, India has seen phenomenal growth in EdTech (educational technology) programs. This increase can be attributed to several important factors:

- **Accelerated digitalization:** India's digital infrastructure has grown exponentially with increasing internet and mobile usage. This has created a fertile ground for EdTech platforms to reach more people in the country.

- **Increasing demand for quality education:** There are a large number of young people in India who are willing to receive quality education. EdTech's website provides an easy and convenient way to complete your school curriculum or take professional development courses.

- **Government Initiatives:** The Government of India has greatly promoted literacy and Educational Technology through various initiatives such as 'Digital India' and 'Skill India'. These efforts have been instrumental in creating an ecosystem that supports EdTech companies**.**

The introduction of Education Technology platforms has dramatically changed the e ducation

- **Accessible:** Students in remote areas or facing geographical limitations can access quality educational resources through online platforms.
- **Engaging:** EdTech platforms use interactive content, gamified learning elements, and personalized learning paths to make education more engaging and cater to diverse learning styles.
- **Affordable:** EdTech provides a cost-effective alternative to traditional education, offering various subscription models and free resources.
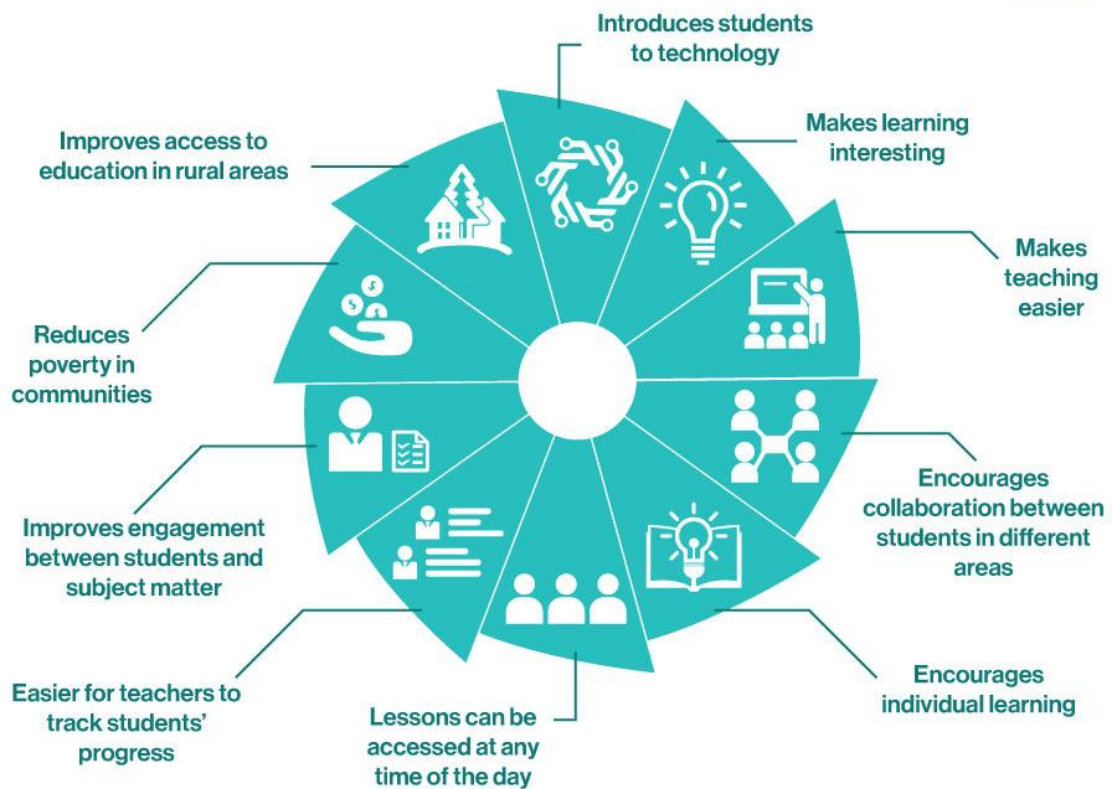
Source: **The ASEAN posts**

Figure 1.2 EdTech Benefits

1.1.2 Funding

India has continued to rise in the innovation and startup ecosystem. Today, India Edtech has launched an ecosystem that uses cutting-edge technology to inspire people, investors, companies, and governments. Many can use prototypes to attract investment. They can invest a lot of money, which increases the level especially during the epidemic period and after the outbreak of COVID-19. The edtech platform offers angels and investors an opportunity to earn financial returns while helping the cause of education in the country. The demand for edtech services has opened up many opportunities for venture capital (VC) investments and share listings. The COVID-19 crisis is not going away and is returning in one form or another. In such cases, it will accelerate investments in Education technology innovation.

According to the latest statistics from Tracxn Technology Limited, a Bangalore-based company that helps investors discover start-ups, there are currently 8,768 EdTech Startups in India (Tracxn, 2021). Four of them – Byju ($16.5 billion), Unacademy ($3.4 billion), Eruditus ($3.2 billion) and UpGrad ($1.2 billion) have now become unicorns (Business Insider India, 2021). How to break into Education Technology companies in India through one or more channels:

a. Joint venture
b. Partnership
c. Franchising
d. Subsidiary as per the provisions of Indian Company Laws.

As per the industry disclosure, out of the top 10 companies that attracted investment ranging from US$ 5 to 200 million in 2020, eight were in the test-preparation segment, one each in K-12, skill development, enterprise solution, and certification. Penetration into the higher education sector is still lacking. The global education venture capital funding for 2021 analysis report published by HolonIQ at the beginning of 2022 indicates that Chinese EdTech investment is collapsing with an incredible surge in investment in the US and Europe. Starting with $1 billion in 2014, the Indian Edtech start-ups reached $3.8 billion in 2021 and placed themselves next to the United States ($8.3 billion). India has now become Asia's investment leader in Edtech start-ups, surpassing Europe, yet the sector is less diversified.

1.2 Problem Statement

The explosive growth of Edtech in India over the last decade, led by companies like Educomp, Byju, and YouTube, creates challenges and opportunities for the education sector. This study aims to analyze its processes, evaluate its impacts, and determine the future, providing comprehensive information on navigating the changing environment.

1.3 Scope of the Study

This study aims to critically analyze the development of educational technology in India over the last decade with the help of three major companies such as Educomp, Byju, and YouTube. By examining technology trends, education policies, innovation contributions, and overall impact on learning outcomes, this study aims to provide a

deeper understanding of the changing trends and stakeholders' perceptions of the technology sector and its impact over the years. Future of education in India.

1.4 Objectives of the Study

    i.   To analyze the growth trajectories of prominent Edtech companies in India, including Educomp, Byju's, and YouTube.

   ii.   To investigate the market dynamics of the Indian Edtech industry.

  iii.   To assess the impact of these Edtech platforms on the education sector in India.

  iv.   To identify key challenges faced by Edtech companies in India, such as infrastructure limitations, digital divide, content quality, and scalability issues, while also uncovering potential growth opportunities in untapped markets and emerging technologies.

   v.   To identify and analyze what the users want and what led to their positive and negative mindset towards the ed-tech platforms.

  vi.   To project future trends and developments in the Indian Edtech landscape.

In Chapter 1- Introduction we summarized the background of the industry to understand the gaps and to understand the evolution of the industry to analyze the objectives of the study and to establish the scope of the study. We will support our study by reviewing the literature published.

Chapter 2

REVIEW OF LITERATURE

Over the past decade, the educational technology (Edtech) sector in India has witnessed exponential growth, driven by factors such as increased internet penetration, smartphone adoption, and a growing demand for accessible and quality education. This literature review explores key themes, trends, and insights from existing research and scholarly discourse on the evolution of Edtech in India, focusing on prominent players like Educomp, Byju's, and YouTube.

2.1 Growth and Adoption of Edtech Platforms:

Several studies have demonstrated how quickly Edtech platforms are being adopted and growing in India. The Indian Edtech market has grown dramatically in recent years, with a compound annual growth rate (CAGR) of over 50%, according to **Gupta and Sinha (2019).** A growing middle-class population seeking resources for additional education, greater internet penetration, and students using smartphones more frequently have all contributed to this growth **(Sharma et al., 2020).** Considering the increased government focus on online learning as per the education policy in 2020, **Aaradhi V. & Chakraborty D.'s** study "EdTech applications and their adoption in the Indian education sector–a bibliometric analysis and systematic literature review" aims to investigate how the Indian education sector compares in terms of the research output for the EdTech sector. In their study "Growth analysis of educational technology market in India," **Padale, T., and Vaibhav Patil, D. G. W.** noted that word-of-mouth publicity, TV advertisements, and social media are the main ways that people are learning about the EdTech platform. Teachers, friends, educated relatives, and private tuition instructors all had a significant impact on the EdTech platform services that were purchased. Good video visualization, high engagement, captivating content, and a child's or student's interest are the main factors in the EdTech platform's adoption. Good teacher quality, relevance to the curriculum, and a positive trial experience were the main factors driving the purchase of EdTech platform services.

2.2 Role of Key Players:

As one of the early entrants into the Indian Edtech market, Educomp Solutions has been instrumental in providing educational solutions to schools across the country. However, research shows that Educomp faces challenges in sustainability and expansion due to its resource-oriented model and quality issues **(Dey and Vyas, 2016). Joseph, S. and Nichlavose,** Public Relations Education findings show that Educomp's e-learning solutions have a positive impact on student learning, engagement, and satisfaction. The Educomp platform facilitated understanding and enhanced interaction and learning experiences among high school students through a multitude of online tools and learning experiences. The research highlights the potential of e-learning to complement traditional classroom lessons and enhance the learning experience. It also emphasizes the importance of constantly supporting teachers and developing new Education Technology solutions to meet the needs of students in the digital age. **Jha and Shenoy's (2016)** study on the digitalization of Indian education raises serious questions about the

role of institutions such as Educomp in this changing environment. While Educomp describes the potential of Edtech to transform education, the study emphasizes the importance of distinguishing between development and reality. It highlights the need to critically evaluate Educomp and similar Edtech projects to deliver tangible benefits to students and teachers. Ultimately, the study calls on stakeholders to take a holistic view of education statistics, leverage innovation, and focus on improving learning and access for all.

Byju's, on the other hand, has emerged as a dominant player in the Indian Education Technology market by leveraging innovative delivery methods, adaptive learning technologies, and strategic partnerships to accelerate growth. Research shows that Byju's success can be attributed to its focus on personalized learning experiences, content, and effective marketing strategies **(Singh and Mishra, 2018)**. **Rajan's (2022)** study on BYJU's remarkable journey revealed that one of the most valuable Education Technology companies in the world emerged from India. The research underlines the potential for innovation in education technology by delving into BYJU's unprecedented approach. Rajan's analysis provides valuable insight into BYJU's strategies, challenges, and successes and offers a blueprint for aspiring EdTech entrepreneurs. While the study highlights BYJU's role in changing the global perception of Indian Educational Technology, provides valuable insights into using

technology to transform the learning experience. **Ray, S., Jain, K., Birru, P., and Mohata, R.'s** research not only highlights shortcomings in BYJU's strategy but also reinforces broader lessons for the industry. By examining BYJU's mistakes, stakeholders will gain valuable insight into the complexities of measuring Educational Technology projects and the importance of adaptability, market sensitivity, and sustainable growth strategies. This study reminds us that success in the Educational Technology sector requires constant innovation, a customer-focused approach, and a deep understanding of training needs. **Malik, A.** says that by examining governance challenges, the study highlights the importance of a strong framework for transparency, transparency, and ethical behavior, which is essential to foster growth and investor confidence. Building on lessons learned from Byju and other initiatives, the study underscores the need for effective measures to address governance gaps and strengthen a culture of integrity and compliance. Malik's findings enable stakeholders to prioritize sustainability-related governance practices and long-term trust-building strategies for Indian startups.

YouTube has also emerged as a major player in the Indian Educational Technology ecosystem by providing a vast repository of educational content across various subjects and languages. Research shows that YouTube's role in democratizing education and providing easy learning tools to users from socio-economic backgrounds has played a significant role in changing the educational landscape in India **(Dwivedi and Rawat, 2020). Rudenkin, D. and Grushevskaya, V. (2019)** "YouTube as a Learning Tool in Higher Education: Opportunities and Challenges." In their work titled. Highlight YouTube's potential as a great learning tool, offering a variety of educational content and encouraging student participation. However, it also brings with it issues such as content reliability, sensitivity issues, and intellectual property rights concerns. In conclusion, although YouTube appears to be a promising educational tool, educators must address these issues intelligently to realize YouTube's potential to enhance the learning experience in higher education. **Sah's (2019)** study of YouTube as a new learning environment for 'Generation X' sees the site as an important educational tool that changes the way people access information. With a wide variety of tutorials, tutorials, and educational content, YouTube offers unprecedented opportunities for self-education and self-knowledge. Research demonstrates the transformative impact of YouTube on education and highlights its role in democratizing learning and empowering students of all ages. As YouTube

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continues to grow as a powerful educational platform, its potential to shift the learning paradigm and support lifelong learning journeys becomes increasingly evident. These findings underscore the importance of leveraging the potential of YouTube while recognizing the need for effective assessment and content management to provide a high-quality learning experience.

2.3 Impact on Education:

There is a lot of debate about the impact of edtech platforms on education in India. While proponents claim that these sites are revolutionizing access to quality education, improving learning outcomes, and encouraging innovation in teaching methods **(Balaji & Chandra, 2018),** critics have raised concerns about system fragmentation, and the 'emergence of inappropriate technology and quality' of online content (**Sharma and Kapoor 2019).** A study by **Subba Rao (2006)** provides valuable insights into the impact of Edtech on education while examining the role of Information Technology (IT) in Indian education. The research not only highlights the potential of IT to increase efficiency and flexibility in learning but also highlights the importance of addressing issues of infrastructure and fragmentation. However, research focusing on distance learning may limit the general applicability of Edtech and the findings may not accurately reflect the current state of educational technology. However, the study underscores the transformative power of Edtech and the need for further research to harness its potential to foster inclusive and effective learning. A study by **Yadav, Gupta, and Khetrapal (2018)** on the role of Next Education in transforming education through technology highlights the powerful impact of Edtech on modern paradigms. Their research shows how innovations like Next Education are transforming traditional education methods. to change. education, enhance the learning experience. By leveraging technology, edtech companies are empowering students and educators while solving long-standing problems like access and participation in education. The findings underscore the potential of Edtech to democratize education, close the learning gap, and develop a vibrant and dynamic learning environment. Ultimately, the study highlights the need for continued investment and innovation in Edtech to create a positive impact on global education. In **Ganeshan and Vethirajan's (2023)** study on the impact of technology on holistic education, it is clear that Edtech has significantly changed the nature of education. Findings show that while technology offers many opportunities to improve the learning experience and outcomes, its integration requires careful consideration of

educational principles and student needs. The research highlights the role of Educational Technology transformation in promoting personalized, inclusive, and engaging learning. But it also highlights the importance of addressing issues such as digital equity and ensuring that technology enables, rather than hinders, inclusive education. Ultimately, their research supports a balanced approach that leverages the power of Edtech while prioritizing the holistic development of students. A study by **Kundu, A. (2018)** highlights the potential of Edtech in improving educational practices and student engagement, while also highlighting the need to address barriers such as infrastructure and resistance to change among educators. Despite its contributions, the study's limitations, such as its focus on a specific population and possible biases in the data presented, require careful interpretation. However, the study provides further research and highlights the importance of a comprehensive approach for the effective integration of Edtech into the education system, both technologically and pedagogically.

2.4 Challenges and Future Prospects:

Even though Edtech is expanding quickly in India, there are still several issues. These include problems with teacher preparation, infrastructure constraints, pedagogical efficacy, curriculum quality, and regulatory frameworks **(Kumar & Sreenivasan, 2021).** Furthermore, the COVID-19 epidemic has shown how critical it is to overcome these issues and quicken education's digital transformation **(Jain & Goel, 2021).**

According to academics, India's Edtech future looks bright, with room for growth in personalized learning solutions, creativity, and teamwork **(Srivastava & Jain, 2020)**. To fully realize the promise of Edtech, however, legislators, educators, industry stakeholders, and tech companies must work together to remove current obstacles and guarantee that every student has fair access to high-quality education.

The literature on Edtech in India highlights its transformative potential in revolutionizing education delivery, enhancing learning outcomes, and addressing the diverse needs of learners. By critically examining the trajectories of key players like Educomp, Byju's, and YouTube, this literature review provides valuable insights into the evolution, impact, challenges, and prospects of the Edtech sector in India, offering a foundation for further research and strategic planning in this dynamic and rapidly evolving field.

Chapter 3

RESEARCH METHODOLOGY

3.1 Research Method

The study has been completed using the Descriptive research technique. In the study, both Primary and Secondary data have been used. The Primary data is carried out with the help of Google Forms. The Questionnaire method was used to know the users' perspective of ed-tech platforms in India. It was distributed among family members and friends of 18 years and above through social media. The respondents were asked to answer all the questions in a very unbiased manner. On the other hand, the secondary data was used to support the primary data through the case study method. It was collected through the journals, websites, and other related books. The secondary data was supported by Case study analysis.

3.2 Sampling

i. **Sample Size**

    Due to time and resource constraints, we have collected 201 samples from the potential users (direct or indirect). It consists of students, graduates, employees, businessmen, and parents. They were taken into consideration to know and analyze the viewpoints as stakeholders of the platforms.

ii. **Sample Area**

    The sample was collected from the Delhi NCR and Gwalior. It was collected through the neighborhood, friends, family, and acquaintances. The questionnaire was circulated over social networking sites.

iii. **Sampling Technique**

    The convenience sampling method was used to collect the data from the users. This technique was used to carry out unbiased and quick research from varied sets of people.

iv. **Hypothesis**

a. **Hypothesis 1: The length of time using edtech platforms is positively associated with perceived effectiveness**

Null Hypothesis (H0): There is no significant relationship between the length of time using Edtech platforms and perceived effectiveness.

Alternative Hypothesis (H1): The longer the duration of using Edtech platforms, the higher the perceived effectiveness in terms of learning outcomes.

b. **Hypothesis 2: The relationship between the income level of the customers and the adoption of platforms.**

Null Hypothesis (H0): The income level has no significant effect on ed-tech platforms' adoption.

Alternative Hypothesis (H1): The income level has a significant effect on ed-tech platforms' adoption.

3.3 Mode of Analysis

To analyze the data collected we have used:

i. Case Study Analysis
ii. Descriptive statistics
iii. Inferential Statistics

With the help of this research methodology, we have carried out our data analysis and interpretation in Chapter 4.

Chapter 4

# CASE STUDY AND ANALYSIS

4.1 Case Study

To support the primary data and to analyze the situation in the context of the three organizations- Educomp, Byju's, and YouTube we have taken the help of their specific case studies to further assess their market situation.

4.1.1 The Introduction of Edtech Platforms

With millions of students, India's extensive educational system has long struggled with issues like a lack of qualified teachers and restricted access to high-quality materials. Learning has been completely transformed by the rise of Educational Technology (EdTech) platforms, which provide personalized learning, accessibility, and interesting content. The Indian EdTech sector has grown astronomically over the last ten years, from 2014 to 2024. During this period, smartphone use and internet penetration have increased significantly nationwide. After the US, India is now the second-largest EdTech market in the world due to the rise in demand for online learning solutions brought about by the digital revolution.

The majority of us have used technology for education. To confirm this, we collected data from 201 potential users and it came out to be true. Out of 201 responses, **89.1% i.e. 179 respondents** have used the platforms in some or the other way. This makes it a very promising sector for investors as well.

Have you or you child used any Edtech platforms for educational purposes in the past decade?
201 responses

- Yes
- No

10.9%

89.1%
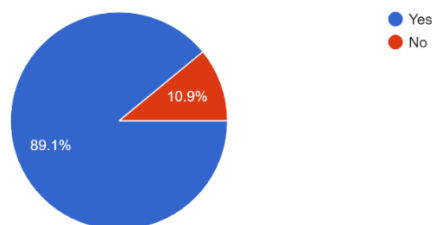
Source: Own source

Figure 4.1 Usage of Edtech Platforms

This case study examines three key players in the Indian EdTech landscape: Educomp, Byju, and YouTube, highlighting their approaches and impact. We will also explore the approaches, successes, and challenges faced by these companies. This analysis will provide valuable insights into the evolution of the Indian EdTech industry and its potential future trajectory.

Company 1: Educomp (Established 1994)

Educomp, an early adopter of EdTech in India, began with content production and practical instruction. They provided vocational training programs, technology-enabled classrooms, and additional learning resources.

- Educomp entered the Indian education sector in 1994, at a period when computer literacy was becoming increasingly popular.

- With its headquarters located in Gurgaon, Haryana, India, Educomp Solutions Limited (ESL) is a worldwide educational technology firm based in India. established in 1994 by Shantanu and Anjlee Prakash as a private limited business.

- The company's first focus was on offering IT training courses and computer instruction. Students looking to advance their professional abilities in areas such as computer hardware, software, and programming languages were the target audience for these programmes. The organization was engaged in the business of setting up and maintaining computer labs in private schools under the BOOT model and in government-run schools under subcontracts awarded by Indian government undertakings.

- In 2002, the company launched LearningMate in collaboration with US-based educational technology company Blackboard Inc., marking its entry into the Indian e-learning sector. It introduced the Educomp Smart class in June 2003.

The early integration of technology in teaching by Educomp was one of its main advantages. However, because it relied on physical infrastructure, its business model found it difficult to scale up successfully in the digital era.

Company 2: Byju's (Established 2011)

Once a leading EdTech unicorn Byju's started as a classroom initiative providing interactive test preparation for competitive exams. It was centered on making animated content that was both interactive and interesting for K–12 and competitive exams. They provide live question-answering sessions, customized learning plans, and online courses. It made use of technology to develop a captivating online learning environment complete with individualized learning resources and video lectures. It became a leader in India's thriving ed-tech sector thanks to its quick expansion and creative strategy.

- Founded in 2011 by Byju Raveendran, Byju's emerged in the Indian EdTech landscape at a time when digital learning was gaining momentum.

- Unlike Educomp's focus on vocational training, Byju's core offering centered around providing **supplementary learning materials and test preparation** for competitive exams like JEE (engineering) and NEET (medical).

Byju's reached a larger audience by utilizing celebrity endorsements and the power of mobile learning. Additionally, they have grown by making wise acquisitions to meet a range of educational requirements.

Indian Edtech startups were the third most favored funded industry in 2020 after raising US$ 4.7 billion in 165 agreements. The top two most funded industries are Fintech ($8 billion) and e-commerce ($10.7 billion). Byju's, an exceptional Edtech start-up in India, raised $1.9 billion in capital in 2020. The following were the main elements of their initial phase:

- **Personalized Learning Approach:** Byju's differentiated itself by offering a unique learning experience. Their platform utilized engaging animation, interactive elements, and adaptive learning technologies to cater to individual student needs and learning styles.

- **Focus on Quality Content:** Byju's built a reputation for high-quality educational content, delivered by experienced and passionate teachers. This focus on quality resonated with students and parents seeking effective exam preparation solutions.

- **Strategic Use of Technology:** Byju's leveraged technology effectively to create an interactive and accessible learning platform. This included mobile apps, online learning modules, and data-driven progress tracking.

- **Shifting Parental Preferences:** A growing segment of parents in India sought alternatives to traditional rote learning methods. Byju's approach to engaging and effective learning resonated with these changing preferences.

Company 3: Youtube (Established 2005)

In India, YouTube has grown to be a major source of educational content even though it is not a designated EdTech platform. Its extensive library consists of tutorials, educational channels, crash courses, and talks by well-known educators. For children from all socioeconomic levels, YouTube is an invaluable resource since it provides free access to a wide variety of educational materials. Finding trustworthy sources and producing high-quality content, however, can be difficult.

Enthusiastic teachers and subject matter experts were able to produce and distribute instructional videos in a variety of subjects thanks to YouTube's open platform. This included:

- **Subject-specific tutorials:** Explanations of complex scientific concepts, historical events, or literary works.
- **Skill development videos:** Tutorials on coding, animation, musical instruments, or art techniques.
- **Exam preparation resources:** Lectures and practice problems for competitive exams, language learning, or skill-based assessments.

Factors Contributing to YouTube's Impact:

- **Accessibility and Affordability:** YouTube offers free or low-cost educational content, making it accessible to students from diverse backgrounds and economic situations.

- **Variety and Flexibility:** The platform provided a vast library of content catering to different learning styles, interests, and educational needs. Students could learn at their own pace and revisit specific topics as needed.

- **Engaging Formats:** Educational creators on YouTube utilized various content formats like animation, live sessions, and interactive quizzes to make learning more engaging and enjoyable.

4.1.2 The Downfall

Company 1: Educomp (Established 1994)

For a company that almost single-handedly created the hype around money-making opportunities in school education, its stock is down 67 percent over 2012; 84 percent over two years; 91 percent over three years. Its market capitalization has fallen from Rs 7,000 crore in November 2009.

Things have been bleak internally as well during the last two years, with even employee salaries being held up at both Educomp and IndiaCan, its joint venture with Pearson Plc.

Of the $150 million in new funding, it raised in July 2012 from three foreign investors, two-thirds would go to pay back a five-year-old foreign currency loan it couldn't repay on its own, given the debt and liabilities on its stressed balance sheet.

Challenges and Missed Opportunities:

- **Slow Adaptation to Changing Market Dynamics:** The Indian EdTech landscape evolved rapidly, moving beyond computer literacy towards K-12 supplementary learning and personalized learning experiences. Educomp struggled to keep pace with this shift.
- **The Rise of New Players:** EdTech competitors emerged with more engaging and personalized learning formats, leveraging advancements in mobile learning and gamification.
- **Focus on Traditional Delivery Methods**: Educomp's initial focus on classroom-based training limited their reach in an increasingly mobile-first learning environment.
- **Failure to Innovate Content:** As user preferences shifted towards interactive learning, Educomp's content offerings might have become outdated or less engaging compared to competitors.

Consequences and Outcomes:

Educomp's market share and user base declined significantly. The company faced financial difficulties and underwent restructuring efforts. Their brand image, once synonymous with computer education, lost its relevance in the evolving EdTech landscape.

Lessons Learned:

Educomp's story serves as a cautionary tale for EdTech companies. While they were a leader in their time, failing to adapt to a dynamic market led to their decline. The EdTech industry demands constant innovation and a commitment to providing engaging learning experiences. By understanding the factors that contributed to Educomp's downfall, EdTech companies can learn valuable lessons and ensure their long-term success in fostering a future of effective and accessible education in India.

Company 2: Byju's - From Rise to Reevaluation?

Factors Contributing to the Downfall

- **Aggressive Marketing and Expensive Acquisitions:** Byju's employed high-profile celebrity endorsements and sponsorships, coupled with potentially aggressive sales tactics. Additionally, the company embarked on a series of acquisitions, not all of which were strategically sound. These actions strained Byju's finances and diverted resources from core educational development. At the beginning of 2022, Bjyu's has acquired 10 Edtech start-ups to have a first-mover advantage in the industry with a cost of over 4 billion. These ten Edtech start-ups belong to different segments viz. exam-preparation-2; K-12-2; On-demand tutoring - 3; reading platform -1; and computer vision/Augmented Reality (AR)-1.

- **Financial Mismanagement:** Byju's relied heavily on debt financing to fuel its expansion. The company's failure to achieve profitability and delays in filing financial reports raised concerns about its financial health. This led to a loss of investor confidence and loan defaults.

- **Shift Away from Core Mission:** Byju's initial focus on quality education seems to have waned. Critics argue that the company prioritized selling hardware like tablets over its core educational services.

Current Situation

Byju's is facing significant challenges. The company is struggling with high debts, mass layoffs, and a decline in investor confidence. It is exploring ways to raise funds, including potential asset sales.

Lessons Learned:

Byju's serves as a cautionary tale for high-growth startups. The company's downfall highlights the importance of balancing expansion with financial sustainability and maintaining a focus on core values. Byju's future success depends on its ability to address its financial woes, rebuild trust, and deliver on its original promise of high-quality, accessible education.

➢ **Challenges faced by YouTube**

Educomp and Byju's: Both companies faced similar issues:

- Aggressive Expansion: Uncontrolled growth through acquisitions burdened finances. Educomp diversified into non-educational areas, while Byju's made questionable acquisitions.
- Financial Mismanagement: Reliance on debt and failure to achieve profitability led to financial strain and investor distrust. Both companies faced delays in filing financial reports.
- Shift in Focus: Educomp strayed from its core K-12 segment, while Byju's may have prioritized sales over quality education.

Youtube's EdTech Platform: Youtube itself isn't facing a downfall, but its free educational content creates challenges for paid platforms like Byju's.

- Monetization: Difficult to compete with YouTube's vast free, ad-supported content library.
- Content Quality: Inconsistent quality of YouTube content requires users to sift through reliable sources.

4.2 Data Analysis

To check and analyze what the end users want and what are their requirements and perspectives of the past, present, and future of the edtech. Is it the business model's fault, the marketing fault, or the users' preferences changed, we will use the primary data collected through the questionnaire method.

As mentioned before as well, the rise and the fall of the industry is based on how the organization handled the situation. They were stuck in a bubble that eventually burst.

Our main objective of the study was to study the users' perspective and what they want out of this industry. So, when we collected the data, the majority of the people rated their satisfaction level from 2-3 (Figure 4.2), which means they were not completely satisfied with what they offered. However, we may also see that many of the people have recently started using the platforms (Figure 4.3).

How would you rate your overall satisfaction with the Edtech platforms you have used?
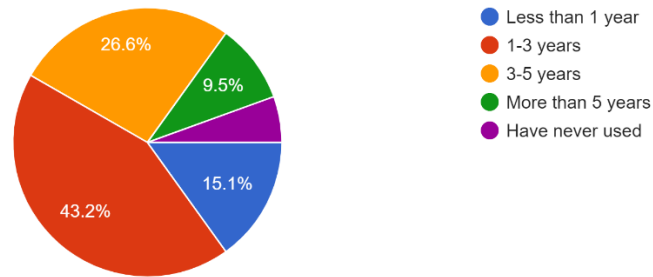198 responses
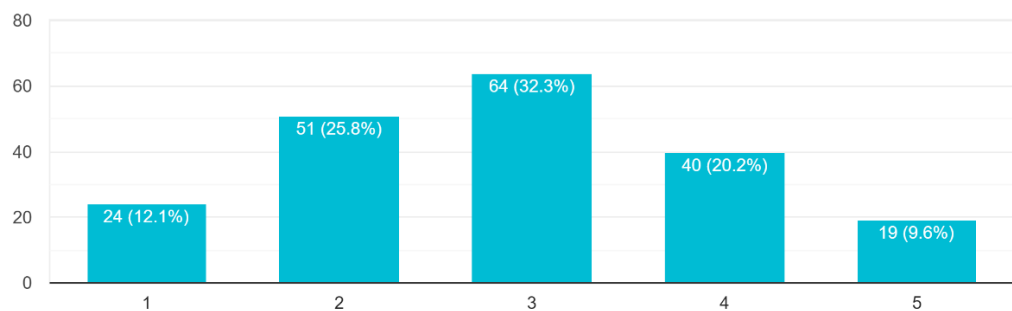
Source: Own source

Figure 4.2 Overall Satisfaction

How long have you been using Edtech platforms like Educomp, Byju's, or YouTube for educational purposes?
199 responses

- Less than 1 year
- 1-3 years
- 3-5 years
- More than 5 years
- Have never used

26.6%
9.5%
15.1%
43.2%

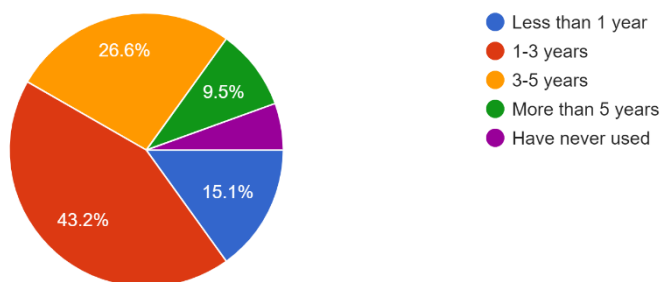*Source:* Own source

Figure 4.3 Duration of usage

In the above pie chart, it is evident that people have started using the edtech platforms in the last 3-5 years, which means from around 2018. This sudden growth in the users can be because of the following reasons-

i. **Internet availability –**Jio in the 2016s disrupted the market and made people in India use the Internet aggressively. This led to opening of the opportunities for tech-based industries.

ii. **Pandemic –** The majority **(43.2%)** of the respondents started going towards edtech around 1-3 years back which was the COVID-19 era. It was the perfect time for the industry to boost its growth. It was the same time when Byju's gained popularity and huge funding from investors.

The primary data collection also gave us the insight as to how the external environment affects the overall industry. Therefore, to analyze the relationship between the time the users started using the edtech platforms and the external environment. In the below figure, it is clear that the majority of the respondents started using or adopting the technology in their education and learning not more than 5 years ago.

How long have you been using Edtech platforms like Educomp, Byju's, or YouTube for educational purposes?
199 responses

Source: Own source

Figure 4.4 Duration

We analyzed these timelines with the help of case studies, journals, and the actual external environment for each of them.

More than 5 years	▪ Computer literacy ▪ Digital India Campaign by the Government of India (In the year 2015). ▪ Startup India Schemes (2016). ▪ Reliance Jio's free internet (2016).	19
3-5 years	▪ COVID-19 pandemic era.	53
1-3 years	▪ Post-Covid era	86

Findings:

The above table shows that although it was the government's initiatives over the past 10 years to increase the technology-based services or to boost the startups in India, it was the natural event that led to the disruption in the edtech or tech-based startups in general.

➢ **Trend after covid:**

• **Hybrid teaching mode**

    o Previously due to any external event like the rainfall the schools were off, but today the teaching doesn't stop.

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- o Teachers and students carry out the same practices from their homes.
- o This has brought the trend to learn through YouTube, as it is convenient and teachers who do not have the degree or certifications but have the zeal to teach are excelling on this platform.
- **Recorded sessions and Virtual Sessions** have become a new offering.
- **Coaching and tuition are now one touch away**
  - o Even though your neighborhood or city does not have a skilled teacher for the particular course, one can always learn from a distance now.
  - o Many tech-based platforms provide the entire portal for such offerings.

To further understand the relationship between the long-term use of such platforms and their related satisfaction level and overall experience, we conducted the hypothesis testing using the Spearman Rank Correlation method.

4.2.1 Hypothesis Testing

a. Hypothesis 1: The Length of Time Using Edtech Platforms is Positively Associated with Perceived Effectiveness

Null Hypothesis (H0): There is no significant relationship between the length of time using Edtech platforms and perceived effectiveness.

Alternative Hypothesis (H1): The longer the duration of using Edtech platforms, the higher the perceived effectiveness in terms of learning outcomes.

Values	
correlation	0.245198694218787
p_value	7.2020427064798e-05
significance_level	0.05
tau	0.245198694218787

Source: Own source

Figure 4.5 Correlation Result

A Kendall's Tau of **0.0245** for **Hypothesis 1** suggests a positive correlation between the length of time using Edtech platforms and the perceived effectiveness in terms of learning outcomes.

Direction of Association: Since the coefficient is positive, it indicates that higher values of one variable tend to be associated with higher values of the other variable.

Thus, we reject the null hypothesis and there exists a relationship between the duration of time a person uses a platform and the satisfaction level. Here's how to analyze this finding:

Interpretation:

- The correlation coefficient supports the hypothesis that longer usage of Edtech platforms is associated with higher perceived effectiveness. The positive value of the coefficient indicates that there is a tendency for users to perceive Edtech platforms as more effective as they spend more time utilizing them.

- It indicates users' perceptions of effectiveness might be significantly influenced by the duration of Edtech platform usage.

Findings:

i. **Learning style differences:** Users with different learning styles might benefit from Edtech platforms to varying degrees, regardless of time spent using them.

- Here difficulty in understanding things virtually got 29.4% i.e. 59 responses out of 201 responses. Although Educomp Solutions and Byju provided teacher support and guidance YouTube being a free source has no such mode of understanding. But Educomp Solutions being available only on the school's premises was a big issue as students still required another mode of learning at home.

- Lack of personal interaction was one of the major issues in the challenges being faced by the users.

- Lack of concentration when you are surrounded by gadgets is a little tricky task. Although for this Byju's brought in their own set of gadgets, but that too is difficult to focus on as students still have their own set of gadgets in hand. Educomp which focused on audio-visual tackled this task of concentration with their interactive voice and visual interface.

ii. **Quality of platforms:** The effectiveness could depend more on the quality and design of the platform itself, rather than just the amount of time spent on it.

- Technical issues are inevitable. There were times when the entire class used to pass by and the teacher was unable to switch to the interactive mode, or it was that the modules were not loaded or were not running then.

iii. **External factors:** Other factors like student motivation, teacher support, and home environment could play a larger role in influencing learning outcomes.

- Lack of concentration can also arise due to the environment which is comfortable for a student to learn in, there are noises at home, and parents or siblings come in and disturb the student. The mindset to study at home is difficult to make up. For this Byju's tied up with Akash Institutes and gave an option of physical mode, which somehow contradicted their business model.

What are the major challenges or downsides you have faced while using such platforms?
201 responses
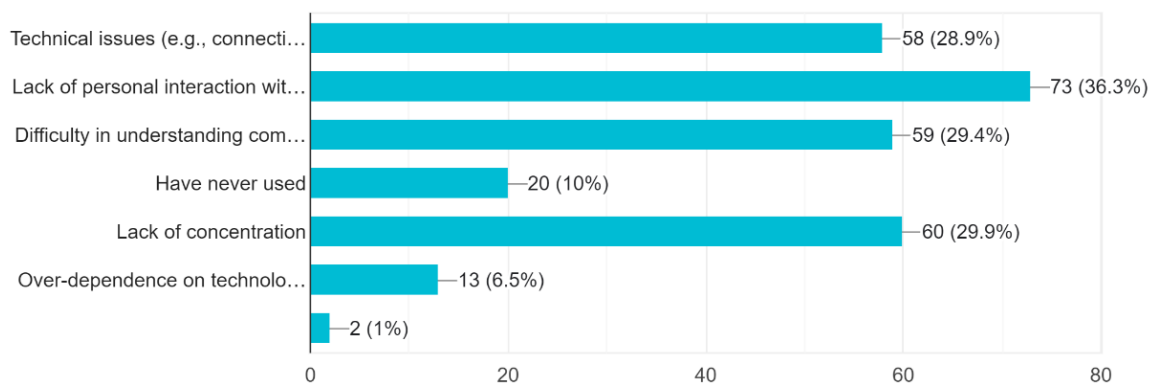
Source: Own source

Figure 4.6 Challenges Faced

b. **Hypothesis 2**

To analyze the relationship between the income level and the usage and adoption of ed-tech platforms we have converted the income level to ranks to quantify the data (fig. 4.7). We also converted the use of platforms which were answered in the form of "Yes" and "No" to 1 and 0 respectively.
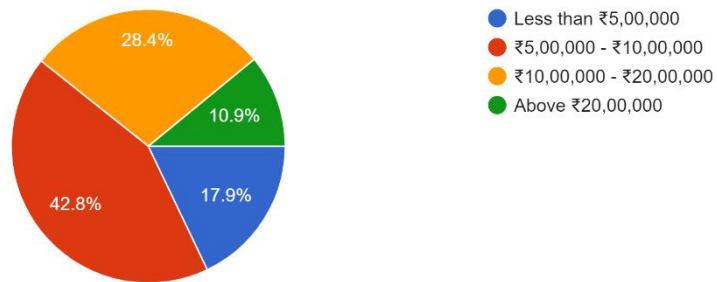
Table 4.1 Quantification of income

Range of Income	Ranking
Less than ₹5,00,000	1
₹5,00,000 - ₹10,00,000	2
₹10,00,000 - ₹20,00,000	3
Above ₹20,00,000	4

Source: Own

Your Annual Household Income?
201 responses

- Less than ₹5,00,000
- ₹5,00,000 - ₹10,00,000
- ₹10,00,000 - ₹20,00,000
- Above ₹20,00,000

28.4%
10.9%
42.8%
17.9%

Source: Own

Figure 4.7 Household Income

Analysis

We used a correlation test to examine the link, and the results showed that the null hypothesis was rejected, indicating that there is a relationship between household income and the use of edtech platforms.

This implies that the usage rate rises in tandem with the household income. Thus, edtech companies need to devise a solution to close the gap and capture the market that is for the lower-income segment. Even while YouTube is a popular free source platform, its primary usage is not in the field of education.

According to Table 4.2, **p-value<correlation value.**

Table 4.2 Values

Correlation	0.1001
Z-Score	1.4137
P-value	0.0787

Source: Own

As per the research, various actions are not being taken by such platforms, few of them are:

- **Accessibility and Affordability**: Some platforms may not offer flexible pricing or discounts for lower-income households, making it less accessible.
- **Lack of Financial Assistance:** Absence of scholarship programs or financial aid for families with limited financial resources.
- **Content Relevance**: Not providing content that resonates with diverse socioeconomic backgrounds, leading to low engagement among certain income groups.
- **Digital Literacy:** Not offering sufficient support for users who may have limited digital literacy skills.

To tap the market, the platforms should always conduct research and development, filling in any gaps, and updating their products. Edtech platforms can better serve users from a variety of socioeconomic backgrounds and provide a more inclusive and equitable learning environment by addressing these areas for development.

Chapter 5

CONCLUSION AND FUTURE PROSPECTS

5.1 Conclusion

This study project has explored the Indian Edtech scene for ten years, concentrating on three major players: YouTube, Byju's, and Educomp. We have acquired invaluable insights into the development and trajectory of the Indian Edtech industry, as well as the distinct roles played by these companies, through a comprehensive analysis that encompasses growth trends, market dynamics, educational impact, challenges, opportunities, and user perspectives.

i.   Growth Trends and Market Dynamics:

Our examination of growth trajectories has illuminated the diverse paths taken by Educomp, Byju's, and YouTube over the past decade. While Educomp pioneered the Edtech space in India, Byju's emerged as a frontrunner with its innovative learning solutions, and YouTube facilitated widespread access to educational content. Market dynamics, including technological advancements, regulatory changes, and shifts in consumer behavior, have shaped the strategies and successes of these companies.

ii.   Impact on Education:

The study has underscored the transformative impact of Educomp, Byju's, and YouTube on the education sector in India. Educomp's pioneering efforts laid the foundation for digital learning, while Byju's innovative approach revolutionized the concept of online education. YouTube, as a ubiquitous platform, democratized access to educational content, empowering learners across demographics and geographies.

iii.   Challenges and Opportunities:

Despite their achievements, Educomp, Byju's, and YouTube face distinct challenges and opportunities. Educomp has navigated through financial turbulence and market competition, while Byju's continues to scale its operations amidst heightened competition and regulatory scrutiny. YouTube grapples with content moderation issues and balancing educational content with commercial interests. However, each

company also possesses unique growth opportunities, including expanding into untapped markets and leveraging emerging technologies.

iv. Users' Perspective:

Understanding users' perspectives towards Educomp, Byju's, and YouTube is critical for evaluating their effectiveness and addressing user needs. Our analysis has unveiled insights into user preferences, motivations, and concerns with our questionnaire. We analyzed the satisfaction of the users and we also analyzed and have come to the conclusion that there exists a relationship between the duration of time the users are using and the satisfaction level. We also checked the reasons why they are using these platforms. We also understood the users' perspective on the factors and features that affect the most.

v. Future Trends:

Looking ahead, the future of Educomp, Byju's, and YouTube in the Indian Edtech landscape is promising yet challenging. Technological advancements, changing demographics, and evolving consumer preferences will continue to shape the industry. Educomp must innovate to regain its market position, Byju's must navigate regulatory complexities while maintaining its innovative edge, and YouTube must balance its role as an educational resource with its commercial interests.

To sum up, the histories of YouTube, Byju's, and Educomp capture the dynamic development of the Indian Edtech sector. These businesses, being trailblazers and innovators, have made a substantial impact on changing India's educational environment. Going forward, maintaining growth and influence in a constantly changing Edtech ecosystem will require strategic alliances, flexible tactics, and user-centered methods. Through tackling obstacles, grasping chances, and remaining aware of user requirements, YouTube, Byju's, and Educomp can keep promoting successful educational outcomes and societal influence in India and other countries.

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QUESTIONNAIRE

Section 1: Introduction

Q1. What is your age?

- 18-25
- 26-35
- 36-45
- 46-55
- 56 or above

Q2. Where do you live?

- Urban area
- Semi-urban area
- Rural area

Q3. Your Annual Household Income?

- Less than ₹5,00,000
- ₹5,00,000 - ₹10,00,000
- ₹10,00,000 - ₹20,00,000
- Above ₹20,00,000

Q4. What is your highest level of education?

- High School
- Bachelor's Degree
- Master's Degree
- Ph.D. or equivalent

Q5. Are you a _____

- Parent
- Student

Section 2: Experience with Edtech Platforms

Q1. Have you or your child used any Edtech platforms for educational purposes in the past decade?

- Yes
- No

Q2. How would you rate your overall satisfaction with the Edtech platforms you have used? (1 being the lowest satisfaction and 5 being the highest satisfaction)

Very dissatisfied

1

2

3

4

5

Very satisfied

Q3. What are the main reasons you use Edtech platforms? (Select all that apply)

- ☐ Supplement traditional education
- ☐ Convenience
- ☐ Access to quality resources
- ☐ Interactive learning experience
- ☐ Have never used
- ☐ Others

Q4. Which features do you find most valuable in an Edtech platform? (Select all that apply)

- ☐ Video lectures
- ☐ Interactive quizzes
- ☐ Personalized learning paths
- ☐ Live classes

☐ Discussion forums

☐ Have never used

☐ Others

Q5. Have you heard of the following Edtech companies: Educomp, Byju's and YouTube?

- Yes
- No

Q6. How long have you been using Edtech platforms like Educomp, Byju's, or YouTube for educational purposes?

- Less than 1 year
- 1-3 years
- 3-5 years
- More than 5 years
- Have never used

Q7. What are the major challenges or downsides you have faced while using such platforms?

☐ Technical issues (e.g., connectivity problems, platform crashes)

☐ Lack of personal interaction with teachers/instructors

☐ Difficulty in understanding complex topics without face-to-face interaction

☐ Have never used

☐ Lack of concentration

☐ Others

Q8. How likely are you to continue using these Edtech platforms in the future? (1 being the lowest probability and 5 being the highest probability)

Very unlikely

1

2

3

4

5

Very likely

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