



# IJRASET

International Journal For Research in  
Applied Science and Engineering Technology



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# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

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**Volume:** 11      **Issue:** IV      **Month of publication:** April 2023

**DOI:** <https://doi.org/10.22214/ijraset.2023.50883>

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# A Study on Student's Satisfaction towards Byju's Learning Application with Reference to Coimbatore City

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**Keywords:** learning, Disney, students, Whitehat, Teaching.

## I. INTRODUCTION

A lot of research exists on the consumer buying behavior and consumer satisfaction. Understanding the expectation and perception of consumers is gaining more attraction in the current business world. Also, various researches and studies have been done to understand the learning-teaching methods. The modern approach of learning-teaching is Constructivism which recognizes the learners' understanding and knowledge based on their own experiences. The modern methodologies of educating and learning are exceptionally established in Constructivism. The facilitators build the information through the dynamic cooperation of students. They direct their students to discover answers for an issue. Educators utilize present-day conveniences like projectors, various media helps, and online classes for educating. The way of teaching and learning has been continuously changing in the past few years. The teacher or faculty is not just content providers, they are now mentored and guide. Students need to develop critical thinking, analytical, and problem-solving ability to enhance their knowledge. Learning through videos has been a great way to develop these skills and digital technology is playing a big role in creating and delivering such interactive videos. There has been a shift in demand in the learning experience, parents and students are more comfortable with online learning since it can be accessed from anywhere and anytime. As valuation touches \$8B, BYJU'S become the 3rd largest unicorn in India as of January 2020. BYJU'S is leading the Indian Ed-Tech industry by generating maximum revenue of around \$205M as of March 2019. The company has been growing at a rate of 100% year on year for the last three years. It has 3 million subscribe users in India. BYJU'S is solving the core problem in the Indian education system by providing quality content across the nation through the internet which is accessible to most of the population.

The way of teaching and learning has been changed in the past few years. The teacher or faculty is not content providers they are also mentors and guide. Students need to develop critical thinking, analytical and problem solving skills to enhance their knowledge. Learning through videos has been a great way to develop these skills.

### A. Statement Of Problem

E-learning plays a vital role in India and it is new to India and growing popularity of smart phones and internet connectivity has given a platform to digital education. Byju's app is subscribed by 3 million people all over the country. In the market there are more competitions among different e-learning apps. So it is important to know whether the subscribers of Byju's happy and satisfied with the app.

### B. Objective

- 1) To identify the satisfaction level of BYJU'S learning application.
- 2) To know about the performance and quality of BYJU'S learning application.
- 3) To find out the factors motivating students to prefer BYJU'S learning application.
- 4) To find the problems faced by the students while using the BYJU'S learning application.

### C. Research Methodology

This study is based on the students satisfaction towards minds byju's learning app with reference towards Coimbatore city. The methodology of study includes:

### 1) Data Collection

The purpose for all data collection is to capture best proof that then translate to wealthy data analysis and provides the correct and credible solution to questions that has been put-forwarded. There are two types of data collection.

- a) *Primary Data*: Primary data is collected directly from the people with the help of the questionnaire for the first time and that are original in nature.
- b) *Secondary Data*: Secondary data is collected from various sources such as books, journals, articles, newspapers, websites, published research papers in international journals and existing literatures.

### 2) Area Of The Study

The area of the study refers to Coimbatore city.

### 3) Source Of Data

It includes both the primary data and secondary data. The questionnaire is prepared and issued to the consumers to get the responses and it is required for the research. Secondary data is collected from journals, articles, books, and websites.

### 4) Sample Size

152 questionnaires were collected from different respondents in Coimbatore city.

### 5) Statistical Tools

Tools used for the study are:

- Simple percentage method
- Rank analysis
- Chi- square

### D. Scope Of Study

The Study attempts to understand the behaviour of BYJU'S app subscribers towards the subscription and services, their satisfaction towards the products, usage pattern and any variation in the actual as compared to their expectations. The study is confined to Coimbatore district.

### E. Limitations

- 1) This study was conducted within one geographical area that is in Coimbatore city.
- 2) The sample size of this study is to restricted to 152 respondents.
- 3) The study was conducted on a small sample of customers hence the findings cannot be generalized accurately.
- 4) The result of this research depends on the quality of responses received.

## II. REVIEW OF LITERATURE

A literature review is a survey of scholarly sources (such as books, journal articles, and theses) related to a specific topic or research question. It is often written as part of a thesis, dissertation, or research paper, in order to situate your work in relation to existing knowledge.

- 1) RR Chavan, Abhishek Shukla (August, 2018) New Generation E-entrepreneurship- A Case study of BYJU's, SUMEDHA Journal of Management: <sup>1</sup> Using technology as an enabler and unique combination of media and content adopted by BYJU'S helps it to create a learning app for students. This paper also discusses the approach of e-entrepreneurship taken by the founder of BYJU'S to start Edtech Company to serve maximum students through a digital platform. Also, the emerging digital technology will provide new opportunities to a new venture in different business sectors.

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<sup>1</sup> RR Chavan, Abhishek Shukla (August, 2018) New Generation E-entrepreneurship- A Case study of BYJU's, SUMEDHA Journal of Management: <https://www.indianjournals.com/ijor.aspx?target=ijor:sjm&volume=8&issue=3&article=24>

- 2) RitanjaliPanigrahi, PraveenRanjan Srivastava, Dheeraj sharma(2018) Online learning: Adoption, continuance, and learning outcome—A review of literature. International Journal of Information Management:<sup>2</sup> The use of Technology to facilitate better learning and training is gaining momentum worldwide, reducing the temporal and spatial problems associated with traditional learning. Despite its several benefits, retaining students in online platforms is challenging. Through a literature review of the factors affecting adoption, the continuation of technology use, and learning outcomes, this paper discusses an integration of online learning with virtual communities to foster student engagement for obtaining better learning outcomes. Future directions have been discussed, the feedback mechanism which is an antecedent of students' continuation intention has a lot of scopes to be studied in the virtual community context. The use of Apps in m-learning and the use of cloud services can boost the ease and access of online learning to users and organizations.
- 3) Ann Marie Casanova (2018) [20] BYJU'S<sup>3</sup>: How a Learning App is Promoting Deep Conceptual Understanding that is Improving Educational Outcomes in India, IFC World Bank: in her paper, "Case study - Cultivating a love of learning in K 12: BYJU's: How a Learning App is Promoting Deep Conceptual Understanding that is Improving Educational Outcomes in India (English)," elucidates that Byju's App "wants to revolutionize the way millions of students think and learn" (P. 21) effectively. The app makes sure to foster a generation of students who have desire to learn more, dream more, and grow more.
- 4) Radovan, Vrana (2018) [19] Acceptance of mobile technologies and m-learning in higher education learning: an explorative study at the Faculty of Humanities and Social Science at the University of Zagreb.PP. 1-6, 2018:<sup>4</sup> in Acceptance of Mobile Technologies and M learning in Higher Education Learning: "An Explorative Study at the Faculty of Humanities and Social Science at the University of Zagreb," says that the use of mobile technology by students is deeply ingrained in both their personal and professional lives. The paper contends that educational institutions ought to support M-learning by including it in their curriculum.
- 5) Prof. Gaurav Hans , Harsha Sidana (2018)"mobile learning applications and its usage among students in education":<sup>5</sup> this research literature is on operating mobile learning applications is on trend and it plays a crucial rule in the education system and up bring new technologies in an institute like ERP software. This research helps in understanding the current important scenario of mobile learning.
- 6) Nortvig et al. (2018), A literature review of the factors influencing E-learning and blended learning in relation to learning outcome, student satisfaction and engagement", Electronic Journal of E-Learning<sup>6</sup>: found that (1) digital learning community with positive and engaging interactions between teachers and students, (2) strong self-confidence in learning ability, (3) appropriate teaching environment (both online and offline) with a strong educator presence as a mentoring figure, and (4) a course design quality, all influence the learning outcome, in particular the satisfaction with e-learning
- 7) Motilal (2018), Level of Satisfaction using Moodle as an E-Learning Tool for Students in B-School. Global Journal of Computer Science and Technology,<sup>7</sup>: The research results on the level of student satisfaction with the e-learning system service with the name Moodle-based Flexible Learning (F-Learn) in online learning +are supported by showing that students are happy and satisfied using Moodle-based E-Learn as a learning tool from anywhere and anytime.

<sup>2</sup> RitanjaliPanigrahi, PraveenRanjan Srivastava, Dheeraj sharma(2018) Online learning: Adoption, continuance, and learning outcome—A review of literature. International Journal of Information Management <https://ideas.repec.org/a/eee/ininma/v43y2018icp1-14.html>

<sup>3</sup> Ann Marie Casanova (2018) [20] BYJU'S: How a Learning App is Promoting Deep Conceptual Understanding that is Improving Educational Outcomes in India, IFC World Bank <https://smartnet.niua.org/content/00e8e724-c3e9-444a-8775-181602aca39c>

<sup>4</sup> Radovan, Vrana (2018) [19] Acceptance of mobile technologies and m-learning in higher education learning: an explorative study at the Faculty of Humanities and Social Science at the University of Zagreb.PP. 1-6, 2018[https://bib.irb.hr/datoteka/939831.Acceptance\\_of\\_mobile\\_technologies\\_and\\_m-learning\\_in\\_higher\\_education\\_learning.pdf](https://bib.irb.hr/datoteka/939831.Acceptance_of_mobile_technologies_and_m-learning_in_higher_education_learning.pdf)

<sup>5</sup> Prof. Gaurav Hans , Harsha Sidana (2018)"mobile learning applications and its usage among students in education"<https://www.jetir.org/papers/JETIR1801186.pdf>

<sup>6</sup> Nortvig et al. (2018), A literature review of the factors influencing E-learning and blended learning in relation to learning outcome, student satisfaction and engagement", Electronic Journal of E-Learning <https://eric.ed.gov/?id=EJ1175336>

<sup>7</sup> Motilal (2018), Level of Satisfaction using Moodle as an E-Learning Tool for Students in B-School. Global Journal of Computer Science and Technology[https://globaljournals.org/GJCST\\_Volume18/2-Level-of-Satisfaction-using-Moodle.pdf](https://globaljournals.org/GJCST_Volume18/2-Level-of-Satisfaction-using-Moodle.pdf)

- 8) The Effectiveness of Byju's Learning App in Enhancing Mathematics Learning among Secondary School Students in India" by S. Aruna and S. Sujatha (2018):<sup>8</sup>This study evaluated the effectiveness of the Byju's learning app in improving the mathematics skills of secondary school students in India. The researchers found that the app was effective in enhancing students' mathematical skills and knowledge.
- 9) The Effect of Instructor Presence on Student Engagement in Online Learning Environments" by Hanan Alharbi and Robert Cheng(2018):<sup>9</sup>The study investigated the effect of instructor presence on student engagement in online learning environments. The authors found that instructor presence had a positive impact on student engagement and that various strategies, such as video introductions, personalized feedback, and frequent communication, could increase instructor presence.
- 10) Liguong Liu, Liyi Zhang, Phighao ye, Qihua Liu(2018) "Influence factors of satisfaction with mobile learning app: an empirical analysis of china":<sup>10</sup>The research on the satisfaction of mobile learning is an important issue in the field of user learning behaviour. In recent years, with the rapid development of mobile network, most existing literature focus on the analysis of current situation, service mode and technical implementation of mobile learning, whereas, rarely involve the satisfaction with mobile learning app. With the wide application of social media, the influence of the integration of mobile app and social media on students learning has become a research focus.
- 11) Kumi-Yeboah A. Designing a cross-cultural collaborative online learning framework for online instructors. Online Learning. 2018;22:<sup>11</sup> To address these challenges, the author proposes a cross-cultural collaborative online learning framework consisting of four key elements: cultural awareness, communication, collaboration, and feedback. The framework emphasizes the need for instructors to be culturally sensitive and to provide opportunities for students to engage in cross-cultural communication and collaboration. The article also discusses the importance of providing feedback to students in cross-cultural collaborative learning environments. The author suggests that instructors should provide regular feedback to students on their performance and encourage them to reflect on their learning experiences.
- 12) Victor Holotescu, Radu VasIU, Diana and one (2018) "A critical analysis of mobile applications for learning. Study case: virtual campus app: "<sup>12</sup> during the last years, the worldwide education has been challenged and innovation by the online and blended learning approaches, and the openness towards social media (SM), open educational resources and massive open online courses. The changing engine is represented by the centre of eLearning, which implemented the virtual campus for supporting the academic programs, and also the uni campus MOOC platforms. We hope that the paper conclusions regarding quality applications for mobile learning will be useful for teachers and developers designing open and mobile learning environments and applications.
- 13) Das, Ankan (2018). "What the Financials" with ARR of \$9.30 Mn and CAGR of 75% - BYJU'S To Breakeven In Less Than 2 Years":<sup>13</sup> The article also predicts that with this impressive growth rate, BYJU'S is expected to break even in less than two years. This means that the company's revenue will cover all of its expenses, and it will begin to generate profits. Overall, the article highlights the strong financial performance of BYJU'S, which has become one of the most prominent edtech companies in India, offering online courses and educational materials to students across the country.

<sup>8</sup> The Effectiveness of Byju's Learning App in Enhancing Mathematics Learning among Secondary School Students in India" by S. Aruna and S. Sujatha (2018) [https://www.researchgate.net/publication/342901964\\_Byju's\\_The\\_Learning\\_App\\_An\\_Investigative\\_Study\\_On\\_The\\_Transformation\\_From\\_Traditional\\_Learning\\_To\\_Technology\\_Based\\_Personalized\\_Learning](https://www.researchgate.net/publication/342901964_Byju's_The_Learning_App_An_Investigative_Study_On_The_Transformation_From_Traditional_Learning_To_Technology_Based_Personalized_Learning)

<sup>9</sup> The Effect of Instructor Presence on Student Engagement in Online Learning Environments" by Hanan Alharbi and Robert Cheng(2018):<https://www.jite.org/documents/Vol19/JITE-Rv19p475-488Park6420.pdf>

<sup>10</sup> Liguong Liu, Liyi Zhang, Phighao ye, Qihua Liu(2018) "Influence factors of satisfaction with mobile learning app: <https://online-journals.org/index.php/i-jet/article/view/8381>

<sup>11</sup> Kumi-Yeboah A. Designing a cross-cultural collaborative online learning framework for online instructors. Online Learning. 2018;22(4):181–201 <https://files.eric.ed.gov/fulltext/EJ1202361.pdf>

<sup>12</sup> Victor Holotescu, Radu VasIU, Diana and one (2018) "A critical analysis of mobile applications for learning. Study case: virtual campus app: [https://www.researchgate.net/publication/335378469\\_A\\_Critical\\_Analysis\\_of\\_Mobile\\_Applications\\_for\\_Learning\\_Study\\_Case\\_Virtual\\_Campus\\_App](https://www.researchgate.net/publication/335378469_A_Critical_Analysis_of_Mobile_Applications_for_Learning_Study_Case_Virtual_Campus_App)

<sup>13</sup> Das, Ankan (2018). "What the Financials" with ARR of \$9.30 Mn and CAGR of 75% - BYJU'S To Breakeven In Less Than 2 Years" <https://inc42.com/features/edtech-startup-byjus-to-breakeven/>

- 14) Anupam, Suprita (2018). "The Rise Of India's Billion-Dollar Club: Edtech Startup BYJU'S Turns Unicorn".<sup>14</sup> Edtech Startup BYJU'S Turns Unicorn" by Anupam and Suprita was published in Inc42 Media in 2018. The article discusses the success of Indian edtech startup BYJU'S, which had recently achieved unicorn status (a valuation of over \$1 billion). This also states background information on BYJU'S, including its founding and initial growth, and then goes on to discuss the company's recent funding round, which had brought its valuation to over \$1 billion. The authors also discuss the factors that have contributed to BYJU'S success, including its focus on high-quality content and its use of technology to personalize learning.
- 15) IBEF (April 2019), <https://www.ibef.org/research/case-study/byju-s-reinventing-education>:<sup>15</sup> Online education in India is growing fast and many student have access to smart phones, computers, and the internet. Integrating technology is the need of the hour since everything is going digital. India has the largest K-12 students in the world with over 260 million students. Also, there is a rise in low-cost smart phones, accessibility to the internet among the students is increasing.
- 16) Ms. Vaishnavi Khandelwal, Dr. Robi Augustine (2019) "Effectiveness of educational applications and websites on students":<sup>16</sup> The aim of this research is to know till what extent using the interactive features of e-learning increases the motivation of the undergraduate students for the learning process. Quantitative analysis is a methodology adopted by the authors of this research paper. The respondents selected for this research were from British university and Helwan University in Egypt as these two universities have used the e-learning tools to support them in their traditional way of learning. Due to lack of technology and lack of confidence in using a technology is an obstacle for the students for not pursuing e-learning. After analysing the survey it can be calculated that the instructors must understand the student's motivation while they teach in the online classes. Since there is no face to face interaction the teacher can provide the student with an online motivation form and teach them accordingly to keep them motivated in learning online.
- 17) (Singh & Thurman, 2019) How many ways can we define online learning? A systematic literature review of definitions of online learning:<sup>17</sup> Online learning can be termed as a tool that can make the teaching-learning process more student-centered, more innovative, and even more flexible. Online learning is defined as "learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students".
- 18) Ikhsan, Saraswati, Muchardie, and Susilo (2019) The determinants of students' perceived learning outcomes and satisfaction in BINUS online learning. Paper presented at the 2019 5th International Conference on New Media Studies (CONMEDIA). IEEE.<sup>18</sup> found that perceived learning outcomes contributed to student satisfaction and positively influence it in the online environment.
- 19) Subedi, s., Nayaju, S., Subedi, S., Shah, S. K., Shah, J. M. (2020) Impact of e-learning during COVID-19 pandemic among nursing students and teachers of Nepal. International Journal of Science and Healthcare Research, 5(3), 9:<sup>19</sup> E-learning tools have played a crucial role during this pandemic, helping schools and universities facilitate student learning during the closure of universities and schools. While adapting to the new changes, staff and student readiness needs to be gauged and supported accordingly. The learners with a fixed mindset find it difficult to adapt and adjust, whereas the learners with a growth mindset quickly adapt to a new learning environment. There is no one-size fits- all pedagogy for online learning. There are a variety of subjects with varying needs. Different subjects and age groups require different approaches to online learning.

<sup>14</sup> Anupam, Suprita (2018). "The Rise Of India's Billion-Dollar Club: Edtech Startup BYJU'S Turns Unicorn". <https://inc42.com/buzz/the-rise-of-indias-billion-dollar-club-edtech-startup-byjus-turns-unicorn/>

<sup>15</sup> IBEF (April 2019), <https://www.ibef.org/research/case-study/byju-s-reinventing-education>

<sup>16</sup> Ms. Vaishnavi Khandelwal, Shivani bansal Dr. Robi Augustine (2019) "Effectiveness of educational applications and websites on students": [https://www.academia.edu/42246674/EFFECTIVENESS\\_OF\\_EDUCATIONAL\\_APPLICATIONS\\_AND\\_WEBSITES\\_ON\\_STUDENTS](https://www.academia.edu/42246674/EFFECTIVENESS_OF_EDUCATIONAL_APPLICATIONS_AND_WEBSITES_ON_STUDENTS)

<sup>17</sup> (Singh & Thurman, 2019) How many ways can we define online learning? A systematic literature review of definitions of online learning: <https://www.tandfonline.com/doi/abs/10.1080/08923647.2019.1663082>

<sup>18</sup> Ikhsan, Saraswati, Muchardie, and Susilo (2019) The determinants of students' perceived learning outcomes and satisfaction in BINUS online learning. Paper presented at the 2019 5th International Conference on New Media Studies (CONMEDIA). IEEE <https://ieeexplore.ieee.org/document/8981813>

<sup>19</sup> Subedi, s., Nayaju, S., Subedi, S., Shah, S. K., Shah, J. M. (2020) Impact of e-learning during COVID-19 pandemic among nursing students and teachers of Nepal. International Journal of Science and Healthcare Research, 5(3), 9: [https://ijshr.com/IJSHR\\_Vol.5\\_Issue.3\\_July2020/IJSHR0012.pdf](https://ijshr.com/IJSHR_Vol.5_Issue.3_July2020/IJSHR0012.pdf)

- 20) Petrie, C. (2020) spotlight: Quality education for all during COVID-19 crisis (hundrEDResearchReport#01).UnitedNations.<https://hundred.org/en/collectios/quality-education-for-all-during-coronavirus>:<sup>20</sup> The use of suitable and relevant pedagogy for online education may depend on the expertise and exposure to information and communications technology (ICT) for both educators and the learners. Some of the online platforms used so far include unified communication and collaboration platforms such as Microsoft Teams, Google Classroom, Canvas and Black board, which allow the teachers to create educational courses, training and skill development programmes (Petrie, 2020). They include options of workplace chat, video meeting and file storage that keep classes organized and easy to work. They usually support the sharing of a variety of content like Word, PDF, Excel file, audio, videos and many more. These also allow the tracking of student learning and assessment by using quizzes and the rubric-based assessment of submitted assignments.
- 21) (Bao, 2020; Halim, Hashim, & Yunus, 2020; Hodges, Moore, Lockee, Trust, & Bond, 2020; Yee, 2013; Zhu, Chen, Avadhanam, Shui, & Zhang, 2020):<sup>21</sup>The pandemic of COVID19 has pushed every educational institute towards online learning, although nobody was ready for this transition. Many studies recognized the shift towards online learning as forceful, but important for continuing the learning process.
- 22) Zhu, Wang and Du (2020) research on the Influencing Factors and Promotion Strategies of Online Learning Satisfaction of College Students. Journal of National Academy of Education Administration:<sup>22</sup> evaluated the online learning satisfaction with 6709 freshmen to seniors in universities based on the results-oriented education and constructivist learning theory. The results of regression analysis showed that students' satisfaction was mainly affected by course introduction, learning objectives, teacher-student interaction, positive value transmission, teachers' attention to students' progress, knowledge system construction, and achievement degree of independent learning ability cultivation. The second strand of study has been carried out from one single dimension that impacts learning satisfaction
- 23) Wang and Li (2020) Wang, W. P., & Li, W. (2020). Regional Differences and Influencing Factors of Chinese College Students' Online Learning Experience: Based on the Analysis of Survey Data from 334 Colleges in China. Open Education Research: investigated the influence of region on online learning satisfaction with Chinese college students. The findings showed that students in the east were most satisfied, followed by students in the middle and then came students in the west. The regional gap of technology platform was the most influential factor contributing to students' satisfaction.<sup>23</sup>
- 24) Rajabalee, Y. B., & Santally, M. I. (2021). Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy. In Education and Information Technologies<sup>24</sup>: Regardless, it is vital to analyze e-learning can avail the needs of teachers and students, whether the e- teaching and learning can accomplish the teaching-learning exercise with high service quality and propose recommendations to promote the expansion of e- education according to the research results. However, scant amount of literature is available on the factors that affect the students' satisfaction and performance in online classes during the pandemic of Covid-19.
- 25) Dr.Sangeeta Mukherjee(March 2020) Byju's The Learning App: An Investigative Study On The Transformation From Traditional Learning To Technology-Based Personalized Learning, International journal of scientific & technology research volume 9:<sup>25</sup> The technological innovations that are adopted by BYJU'S are highly helpful to students to understand basic and complex concepts in a very short time. The BYJU'S App uses web-based learning, visual learning, and personalized learning which altogether provide an immersive learning experience to students. One of the findings is that the advertisement claims that the App makes an interactive learning experience. The premium subscription is a bit costly for the average earning Indian consumer.

<sup>20</sup>Petrie, C. (2020) spotlight: Quality education for all during COVID-19 crisis (hundrEDResearchReport#01).UnitedNations.<https://hundred.org/en/collectios/quality-education-for-all-during-coronavirus>: [https://hundred-cdn.s3.amazonaws.com/uploads/report/file/15/hundred\\_spotlight\\_covid-19\\_digital.pdf](https://hundred-cdn.s3.amazonaws.com/uploads/report/file/15/hundred_spotlight_covid-19_digital.pdf)

<sup>21</sup> Bao, 2020; Halim, Hashim, & Yunus, 2020; Hodges, Moore, Lockee, Trust, & Bond, 2020; Yee, 2013; Zhu, Chen, Avadhanam, Shui, & Zhang, 2020): [https://www.researchgate.net/publication/344735919\\_Determinants\\_of\\_Students\\_Perceived\\_Learning\\_Outcome\\_and\\_Satisfaction\\_in\\_Online\\_Learning\\_during\\_the\\_Pandemic\\_of\\_COVID19](https://www.researchgate.net/publication/344735919_Determinants_of_Students_Perceived_Learning_Outcome_and_Satisfaction_in_Online_Learning_during_the_Pandemic_of_COVID19)

<sup>22</sup> Zhu, Wang and Du (2020) research on the Influencing Factors and Promotion Strategies of Online Learning Satisfaction of College Students. Journal of National Academy of Education Administration: <https://francis-press.com/papers/3275>

<sup>23</sup> Wang and Li (2020) Wang, W. P., & Li, W. (2020). Regional Differences and Influencing Factors of Chinese College Students' Online Learning Experience: Based on the Analysis of Survey Data from 334 Colleges in China. Open Education Research: <https://pubmed.ncbi.nlm.nih.gov/36429879/>

<sup>24</sup> Rajabalee, Y. B., & Santally, M. I. (2021). Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy. In Education and Information Technologies: <https://link.springer.com/article/10.1007/s10639-020-10375-1>

<sup>25</sup> Dr.Sangeeta Mukherjee(March 2020) Byju's The Learning App: An Investigative Study On The Transformation From Traditional Learning To Technology-Based Personalized Learning, International journal of scientific & technology research volume 9: <http://www.ijstr.org/final-print/mar2020/Byjus-The-Learning-App-An-Investigative-Study-On-The-Transformation-From-Traditional-Learning-To-Technology-Based-Personalized-Learning.pdfs>

### A. Research Gap

A research gap is essentially an unanswered question or unresolved problem in a field, which reflects a lack of existing research in that space. The previous research are made in the field of content adopted by byjus, conceptual learning, growth rate improving skills and knowledge the current study analysis is done to prove the objectives of the study. The analysis is made the satisfaction and the problems faced by the students while using the byjus learning application.

## III. COMPANY PROFILE

### A. Introduction

India's education sector offers a great opportunity with approximately 29 per cent of India's population being between the age group of 0-14 years. India's higher education segment is expected to increase to US\$ 35.03 billion by 2025. The education sector in India is estimated at US\$ 91.7 billion in FY18 and is expected to reach US\$ 101.1 billion in FY19. As of December 2018, internet penetration in India had reached 46.13 per cent. Increasing internet penetration will help in education delivery. India has over 250 million school going students, more than any other country. It also has one of the largest networks of higher education institutions in the world. Number of colleges and universities in India reached 39,050 and 903, respectively in 2017-18. India had 36.64 million students enrolled in higher education in 2017-18. Gross Enrolment Ratio in higher education reached 25.8 per cent in 2017-18. In December 2018, the government of India published that 3.43million candidates had enrolled in the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2016-20.

### B. History Of Byju's App

BYJU'S was founded in 2011 as Think and Learn Pvt. Ltd by teacher and engineer Byju Raveendran and Divya gokulnath. Its headquarters is in Bangalore. The company quickly grew into one of the world's largest ed-tech companies and one of the registered students around the world, with 6.5 million annual paying subscribers. Students top 5 most-valued private internet companies in India. Its flagship product, BYJU'S - The Learning App, was launched in India in 2015 and now reaches more than 100 million spend on average 71 minutes a day learning from educational content on the platform. In 2019, the Disney. BYJU'S Early Learn App was launched in India to offer personalized, interactive programs for young learners. Most recently, BYJU'S has introduced their first suite of products in North America for grades Pre-K to 3rd, BYJU'S Learning App and BYJU'S Magic Workbooks featuring Disney. BYJU'S currently employs more than 10,000 people worldwide, including a content and research team of 2,500+ highly qualified educators and learning science experts who research and develop the curriculum. A digital-first company, BYJU'S continues to revolutionize education with strong partnerships from Tiger Global, Naspers Ventures, CPPIB, private equity firm General Atlantic, Chan-Zuckerberg Initiative, Tencent, Sequoia Capital, Lightspeed Venture Partners, Sofina, Verinvest, Owl Ventures, and Times Internet.



### C. Company's Mission And Vision

- 1) *Mission:* Their aim is to become one of the most preferred education technology platforms across the globe.
- 2) *Vision:* They believe in the power of one-to-one learning that addresses every child's learning needs, allows students to be holistically involved in their education and be active, lifelong learners.

### D. Best Teachers & Engaging Content

The byju's learning programs provide students a holistic learning experience. Students across regions can access the best teachers and see concepts come to life. Every detail of a student's journey is planned and executed at the deepest level with subject matter experts, teachers and tools like videos, interactive animations, quizzes and assessments. The app integrates these well crafted lessons from our teachers and assessments along with analysis And recommendations, personalized to suit each student's learning style.

Recognizing that people learn in different ways, BYJU'S addressed contextual, visual, and theoretical learners through the platform. By blending all three learning dimensions into one tool, the product became highly effective because it could impact a broader number of students with different learning styles. To make the product captivating, the platform effectively integrates content, media, and technology.

*E. Awards*





#### F. Product And Services

Byju's is an education tutoring app that runs on a fermium model, with free access to content limited for 15 days after the registration. It was launched in August 2015, offering educational content for students from class 4 to 12. and In 2019 Early learning program has started for class 1 to 3. It also trains students for examinations in India such as IIT-JEE, NEET, CAT, IAS and international examinations such as GRE and GMAT. Academic subjects and concepts are explained with 12-20 minute digital animation videos. Byju's reports to have 4 crore (40 million) users overall, 30 lakh (3 million) annual paid subscribers and an annual retention rate of about 85%. In 2019, the company announced that it would launch its app in regional Indian languages. It also planned to launch an international version of the app for English-speaking students in other countries. Recently, Byju's launched new programs in its Early Learn App for students of kindergarten as well. In April 2021, the company also announced the launch of "BYJU'S Future School" to be led by WhiteHat Jr Founder Karan Bajaj. The Future School aims to cross the bridge from passive to active learning with an interactive learning platform blended with coding and other subjects like Math, Science, English, Music and Fine arts through storytelling. BYJU'S will launch the Future School in the USA, UK, Australia, Brazil, Indonesia and Mexico in May.

#### G. How Byju's became the world's biggest ed-tech company during the Covid-19 Pandemic

An Indian ed-tech unicorn has become the world's largest company in the sector during the Covid-19 pandemic by adopting an aggressive acquisition strategy. Byju's, one of India's largest tech unicorns with a valuation of \$16.5 billion, has in the last year made a slew of buyouts that have helped it strengthen its core offerings as well as enter allied segments. These acquisitions range from Bengaluru-based augmented reality startup Whodat to Singapore-headquartered up skilling platform Great Learning to United States-based digital reading platform Epic. Since its inception in 2011, Byju's has spent over \$2.6 billion on acquisitions, data from Tracxn show. The majority of these deals – especially the big-ticket ones – happened after the onset of the Covid-19 pandemic, which gave a massive push to online education. Byju's now has over 10 crore students learning from the app, 65 lakh annual paid subscribers, and a renewal rate of 86% per year. "Byju's seems to be pursuing an inorganic growth strategy keeping an eye on attractive merger and acquisition targets, which it see as a strategic fit for its business expansion plans," Aurojyoti Bose, lead analyst at Global Data, told Quartz. "Its acquisition strategy seems to be around remaining competitive, foraying into complementary segments create better learning products and business expansion. Byju's has been looking for expansion in India as well as international market.

#### H. Marketing

In the early days, BYJU'S classes spread like wildfire through word of mouth but to quickly reach millions of students nationwide, it needed a different tactic that would enable it to rapidly create brand awareness and scale up. It started with a digital marketing campaign. In the last half of 2016, it was generating 9,000 downloads per day, mostly in the large cities. With the objective of getting in the hands of as many children as possible, in 2017, it launched a series of nationwide television campaigns that featured a popular Bollywood star, Shah Rukh Khan. After the television campaigns, app downloads spiked to 50,000 per day. Without any marketing or communications efforts, downloads are currently sustained at about 25,000 downloads per day. The television campaigns allowed it to reach very small towns where there was less access to digital platforms.

### I. Competition

There is no directly comparable digital product on the market. The online market consists of a few players such as Khan Academy, which also offers access to a free library of teaching videos, but it does not generate the same level of engagement because the format replicates a teacher using a blackboard.

The lack of special effects reduces the dynamism and does not cultivate the same level of child interest. BYJU'S primary competition is the offline tutoring industry, which is largely focused on test preparation. Anita explains, "They capitalize on fear of exams that is widespread across India. Students feel pressure and stress and are grappling with complex theoretical material that is being learned through memorization." There are a few companies, the largest with 150,000 students, but overall the market is highly fragmented and consists of teachers offering supplemental services after school to their students. The offline model is constrained by geography and is very hard to scale.

### J. Byju's to expand tuition centers with an eye on profitability in 2023

Edtech unicorn Byju's will double down on setting up more physical tuition centers even as it is "working very hard" to achieve profitability at the group level by next year, cofounder and chief executive Byju Ravindran said in a year-end note to employees. While in the latest note, the company didn't specify a particular month on when it is targeting to turn profitable, it said in October that it is aiming to achieve the feat by March 2023. In the financial year 2021, the Tiger Global-backed company's loss widened to ₹4,589 crore from a loss of ₹232 crore incurred in the fiscal before. It is yet to file its financial results for FY22 with the Registrar of Companies.

To meet its profitability target, Byju's has now shifted its focus towards sustainable growth from exponential growth – a change it was expecting only to begin in 2024. However, the shift in momentum also forced Byju's to lay off around 2500 employees across product, content, media and technology teams. The cost cuts are likely to help achieve better unit economics and prepare the ground for its initial public offering.

Byju's recently raised \$250 million in a rights issue from its existing investors to fuel its growth. It also bagged ₹300 crore via a collateral-free loan from its wholly-owned subsidiary Aakash Educational Services. At the core of the company's growth and profitability plans for 2023 are offline education centers. It opened over 300 such centers in 2022 alone and also runs more than 300 Aakash BYJU's centers. In 2023, the company expects to have a total of 850 offline centers that will serve K-12 and test-prep segments.

## IV. ANALYSIS AND INTERPRETATION OF DATA

Analysis of data is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusion, and supporting decision-making. Data analysis is a process for obtaining raw data and converting it into information useful for decision-making by users. Data are collected and analysed to answer question, test hypotheses or disprove theories.

Statistician John Tukey defined data analysis in 1961 as: "Procedures for analysing data, techniques for interpreting the results of such procedures, ways of planning the gathering of data to make its analysis easier, more precise or more accurate, and all the machinery and results of (mathematical) statistics which apply to analysing data. "Data interpretation refers to the process of using diverse analytical methods to review data and arrive at relevant conclusions. The interpretation of data helps researchers to categorize, manipulate, and summarize the information in order to answer critical questions.

The importance of data interpretation is evident and this is why it needs to be done properly. Data is very likely to arrive from multiple sources and tends to enter the analysis process with haphazard ordering. Data analysis tends to be extremely subjective. That is to say, the nature and goal of interpretation will vary from business to business, likely correlating to the type of data being analysed. While there are several types of processes that are implemented based on individual data nature, the two broadest and most common categories are "quantitative and qualitative analysis."

The following tools were used:

- 1) Percentage Analysis
- 2) Rank Analysis
- 3) Chi-square

**A. Simple Percentage Method**

Percentage method refers to the specific kind which is used in making comparison between two or more series of data collected. Percentage is based on descriptive relationship. It compares the relative items. Through the use of percentage, the data are reduced in the form with base equal to 100%, which facilitate relative comparison. Formula:

$$\text{Percentage} = (\text{No of respondents} / \text{Total no of respondents}) * 100$$

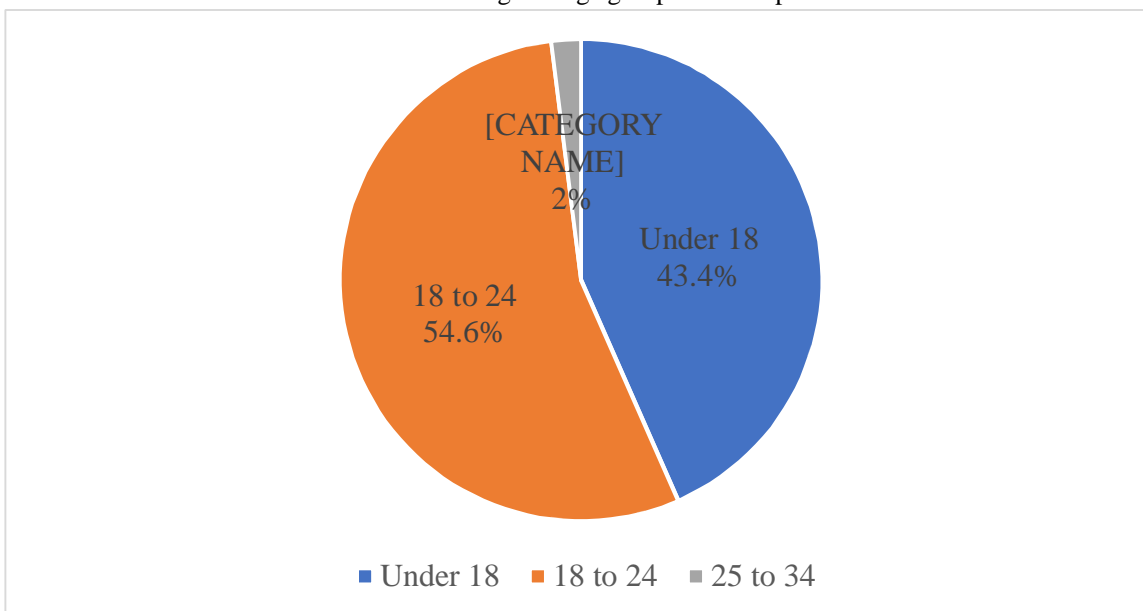
**TABLE NO.4.1.1**  
Table showing the Age group of the respondents

Category	Frequency	Percent
Under 18	66	43.4%
18 to 24	83	54.6%
25 to 34	3	2%
Total	152	100.0

Source: Primary data

- Interpretation:** The above table depicts that 54.6% of the respondents are between 18-24 years and 43.4% of the respondents are under the age group of 18years, and 2.0% of the respondents are the between 25-34 years.

4.1.1 Chart showing the Age group of the respondents



**TABLE NO.4.1.2**  
Table showing the gender of the respondents

Category	Frequency	Percent
Male	63	41.4%
Female	89	58.6%
Total	152	100.0

Source: Primary data

- Interpretation:** The above table indicates that 58.6% of the respondents are female and 41.4% of the respondents are male

4.1.2 Chart showing the gender of the respondents

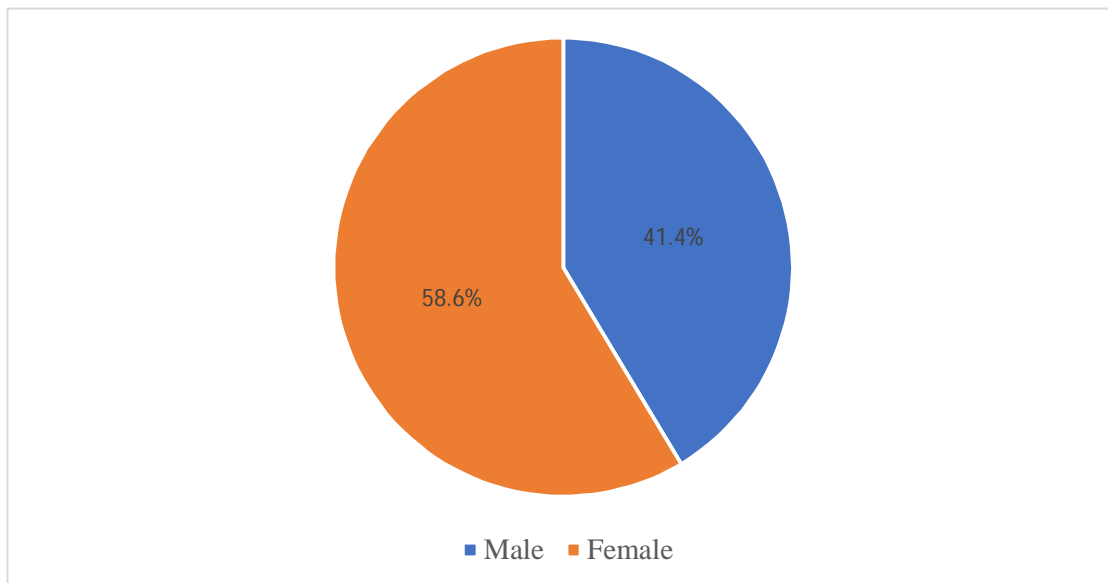


TABLE NO.4.1.3

Table showing monthly income of the respondents

Category	Frequency	Percent
Below 20000	87	57.2%
20001-40000	31	20.4%
40001-60000	24	15.8%
above 60000	10	6.6%
Total	152	100.0

Source: Primary data

- Interpretation:* The above Table depicts that 57.2% of the respondents are earning below Rs.20000, 20.4% of the respondents are Rs. 20001 – 40000, 15.8% of the respondents are earning Rs. 40001 – 60000 and 6.6% of respondents are earning above Rs. 60000.

4.1.3 Chart showing monthly income of the respondents

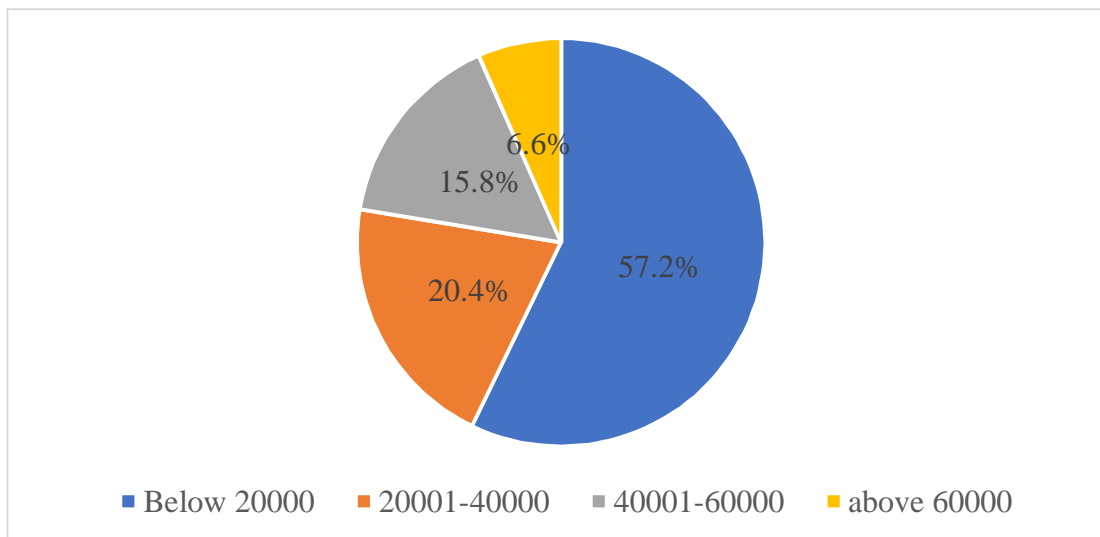


TABLE NO.4.1.4  
Table showing marital status of the respondents

Category	Frequency	Percent
Married	5	3.3%
Unmarried	145	95.4%
Separated	1	.7%
Divorced	1	.7%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that 95.4% of the respondents are unmarried and .7% of the respondents are separated and .7% of the respondents are divorced and 3.3% of the respondents are married.

4.1.4 Chart showing marital status of the respondents

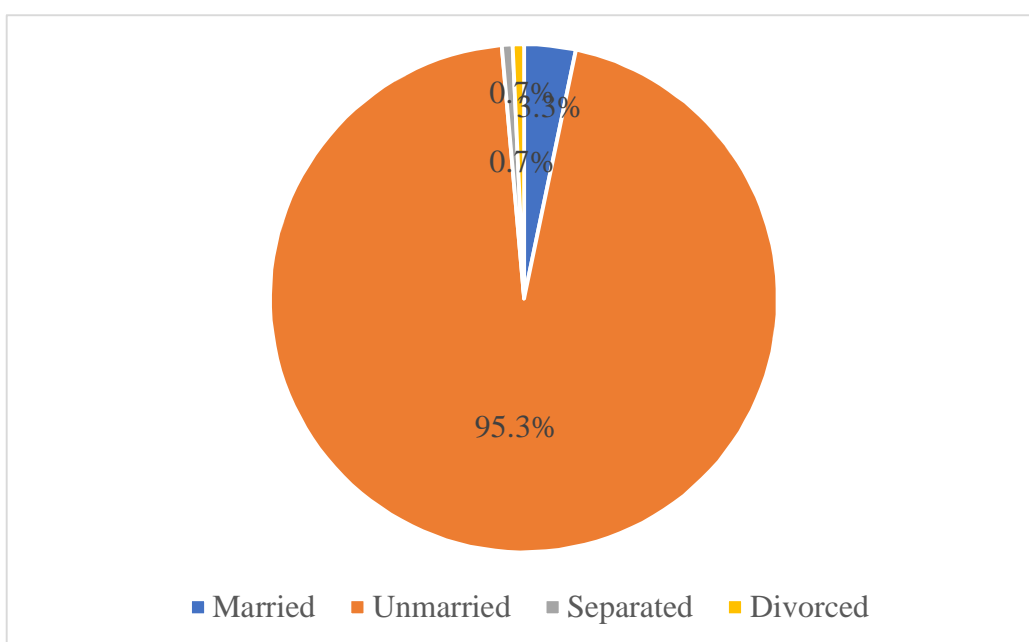


TABLE NO.4.1.5  
Table showing frequently use of the application

Category	Frequency	Percent
Daily	18	11.8%
Few times a week	56	36.8%
Once a week	47	30.9%
Once in 6 months	31	20.4%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that 36.8% of the respondents are using few times a week and 30.9% of the respondents utilizing once a week and 20.4% of the respondents operate once in 6 months 11.8% of the respondents utilize daily.

4.1.5 Chart showing frequently use of the application

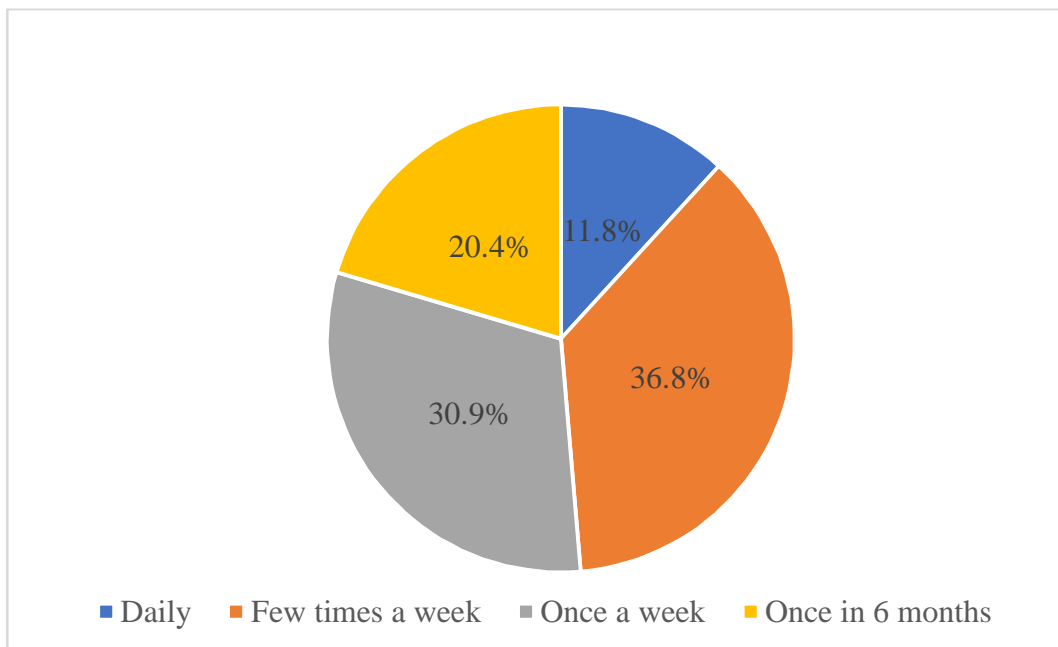


TABLE NO.4.1.6

Table showing that recommendation to choose Byjus learning application

Category	Frequency	Percent
Friends	43	28.3%
Organisation	46	30.3%
Social media	42	27.6%
Advertisement	21	13.8%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 30.3% of the respondents are being recommended by organisation and 28.3% of the respondents are being recommended by friends and 27.6% of the respondents are being recommended by social media and 13.8% of the respondents are being recommended by advertisement.

4.1.6 Chart showing the recommendation to choose Byjus learning application

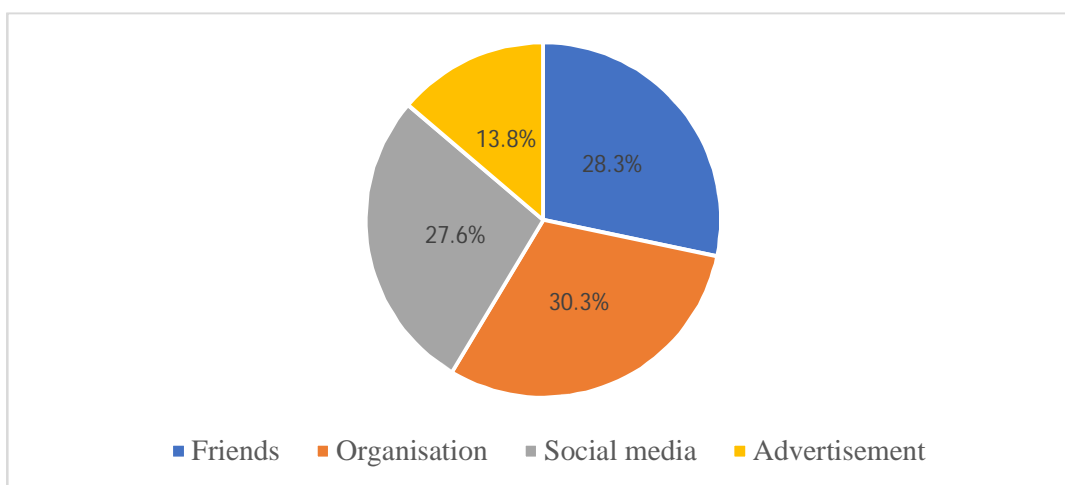


TABLE NO.4.1.7  
Table showing technology used for learning

Category	Frequency	Percent
Smartphone	82	53.9%
Laptop	43	28.3%
Tablet	19	12.5%
Desktop	8	5.3%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 53.9% are using smartphone and 28.3% are using laptop and 12.5% are using Tablet and 5.3% are using desktop.

4.1.7 Chart showing technology used for learning

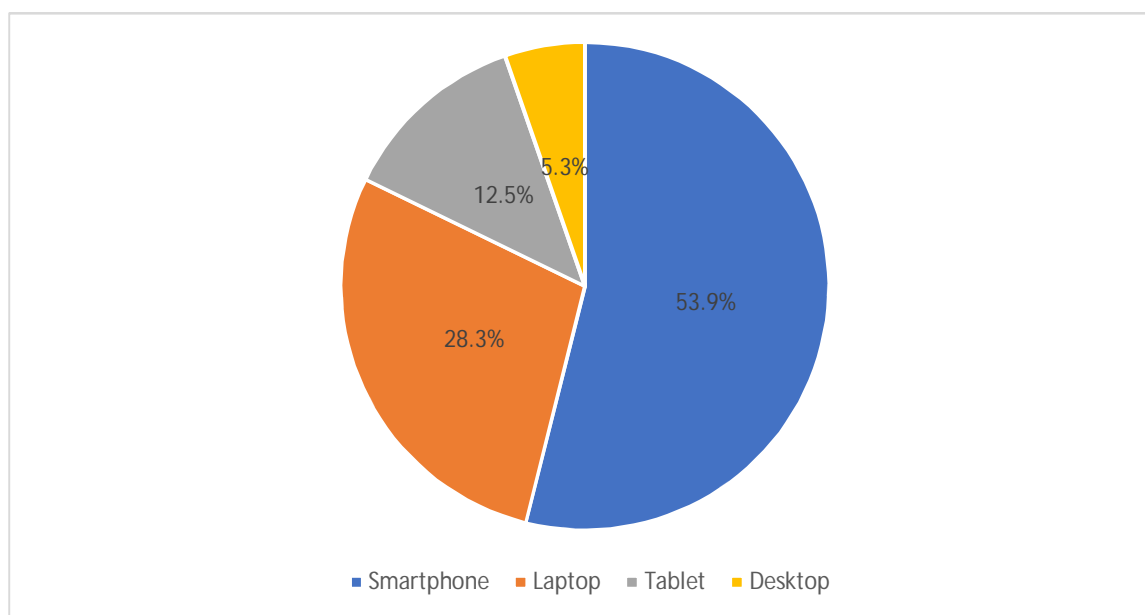


TABLE NO.4.1.8  
Table showing technical issues faced by the respondents

Category	Frequency	Percent
Slow loading time	45	29.6%
Connectivity issues	58	38.2%
App crashes	24	15.8%
others	25	16.4%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 38.2% of the respondents are facing connectivity issues and 29.6% of the respondents are facing slow loading time and 15.8% of the respondents are facing app crashes and 16.4% of the respondents are facing other issues.

4.1.8 Chart showing technical issues faced by the respondents

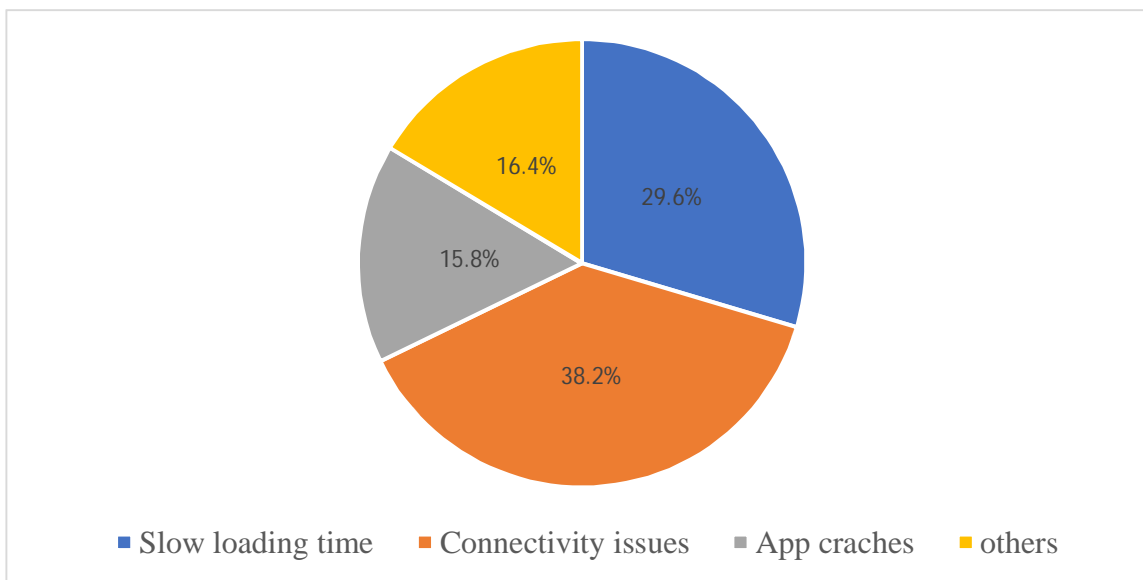


TABLE NO.4.1.9

Table showing the learning style of the respondents

Category	Frequency	Percent
Visual	78	51.3%
Auditory	26	17.1%
Verbal	23	15.1%
Logical	25	16.4%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 51.3% of the respondents are used to learn visual and 17.1% of the respondents are used to learn auditory and 16.4% of the respondents are used to learn logical and 15.1% of the respondents are used to learn verbal.

4.1.9 Chart showing the learning style of the respondents

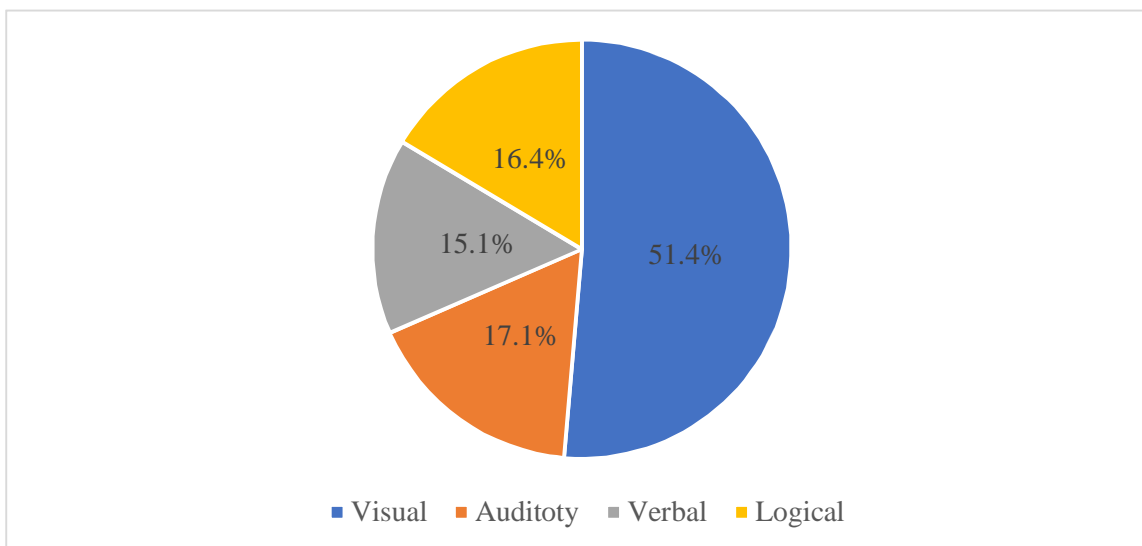


TABLE NO.4.1.10  
Table showing courses offered by byjus application

Category	Frequency	Percent
School courses	83	54.6%
Competitive courses	45	29.6%
Hobby courses	13	8.6%
Others	11	7.2%
Total	152	100.0

Source: Primary data

- Interpretation:** The above table shows that the 54.6% of the respondents are utilized for school courses and 29.6% of the respondents are avail for the competitive courses and 8.6% of the respondents are avail for hobby courses and 7.2% of the respondents are utilised for others.

4.1.10 Chart showing courses offered by byjus application

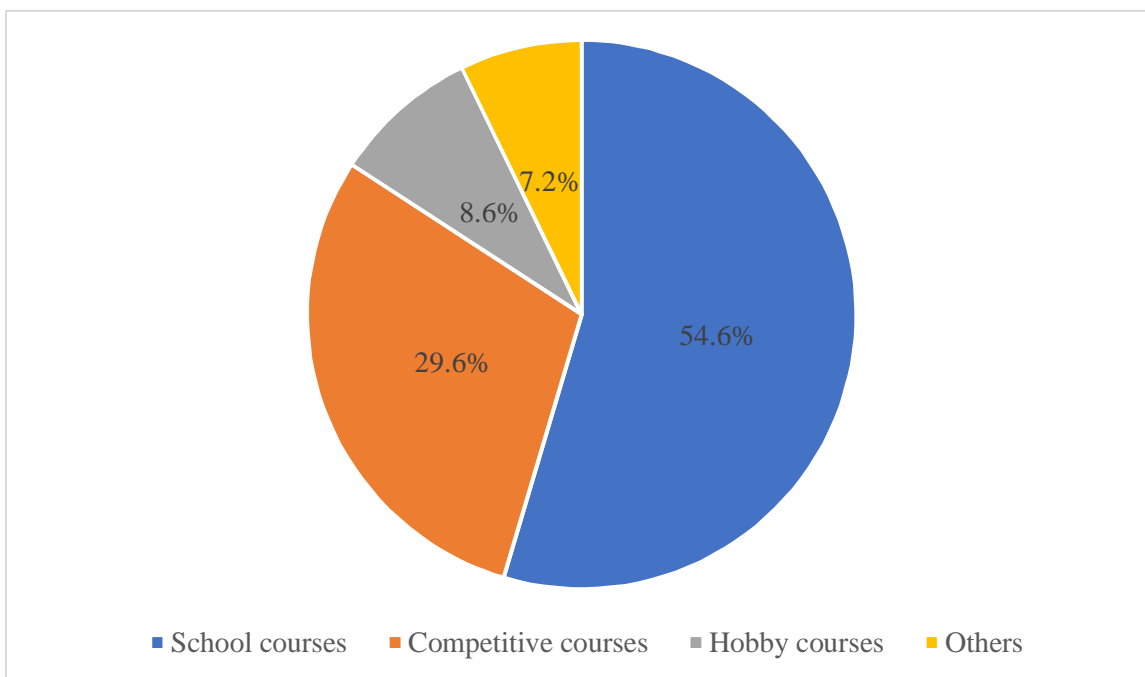


TABLE NO.4.1.11  
Table showing the purpose for using the byjus application of the respondents

Category	Frequency	Percent
Improves grade	51	33.6%
Learn new subject	28	18.4%
Prepare for exams	42	27.6%
Enhance knowledge	31	20.4%
Total	152	100.0

Source: Primary data

- Interpretation:** The above table shows that the 33.6% of the respondents are practicing to improves grade and 27.6% of the respondents are using it to prepare for exams and 18.4% of the respondents are availing to learn new subject and 20.4% of the respondents are using it to enhance knowledge.

4.1.11 Chart showing the purpose for using the byjus application of the respondents

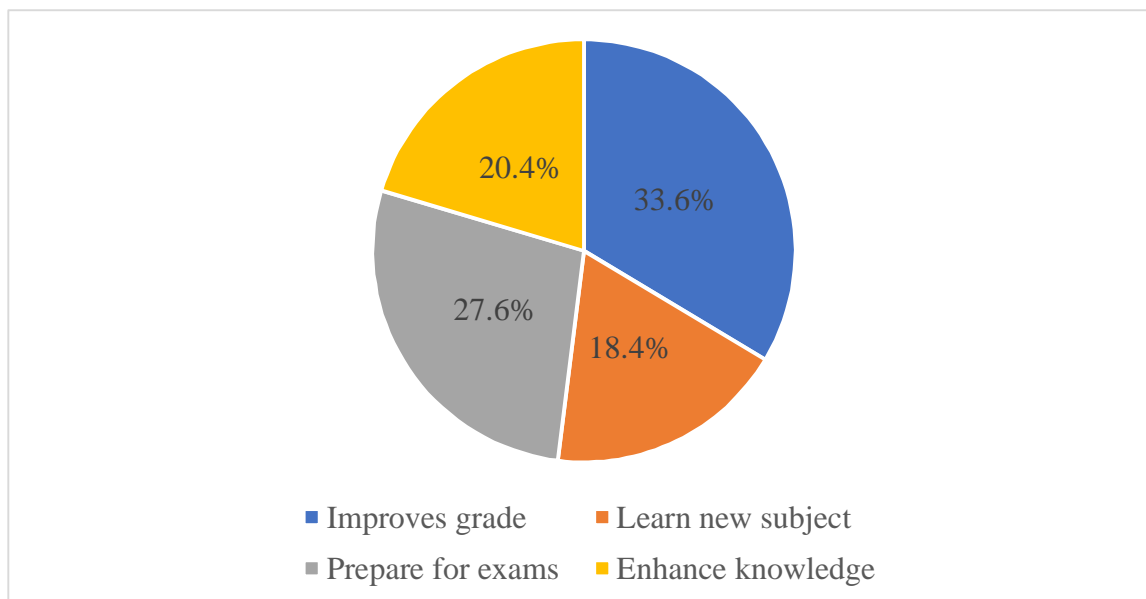


TABLE NO.4.1.12

Table showing the first word that comes in mind of the respondents

Category	Frequency	Percent
Education	49	32.2%
Innovation	39	25.7%
Expensive	33	21.7%
Learning	31	20.4%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 32.2% of the respondents think about education and 25.7% of the respondents think about innovation and 21.7% of the respondents thinks that expensive and 20.4% of the respondents think of learning.

4.1.12 Chart showing the first word that comes in mind of the respondents

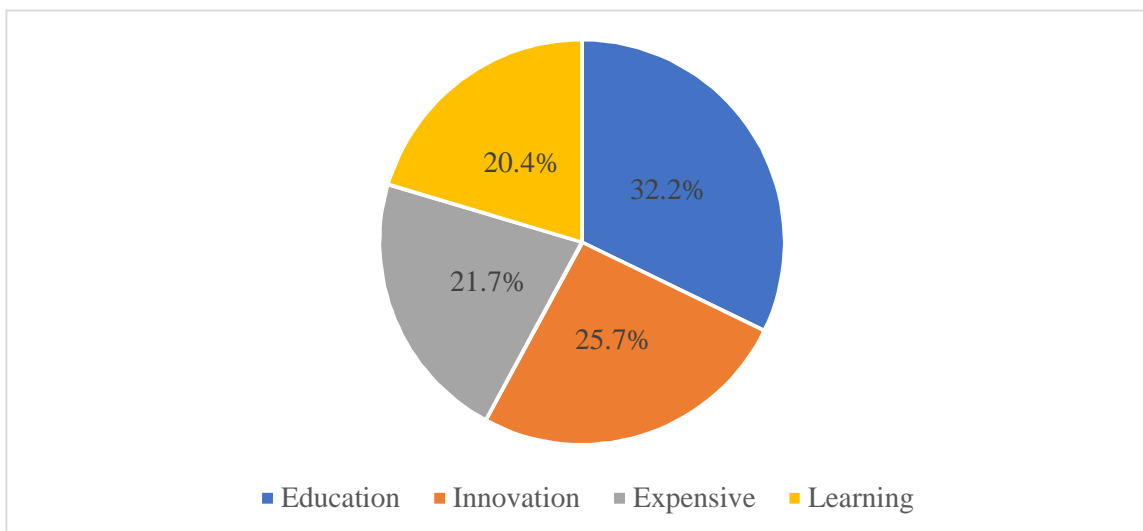


TABLE NO.4.1.13  
Table showing the opinion of the respondents

Category	Frequency	Percent
High quality	70	46.1%
Average quality	61	40.1%
Low quality	21	13.8%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 46.1% of the respondents opinion are high quality and 40.1% of the respondents opinion are average quality and 13.8% of the respondents opinion are low quality.

4.1.13 Chart showing the opinion of the respondents

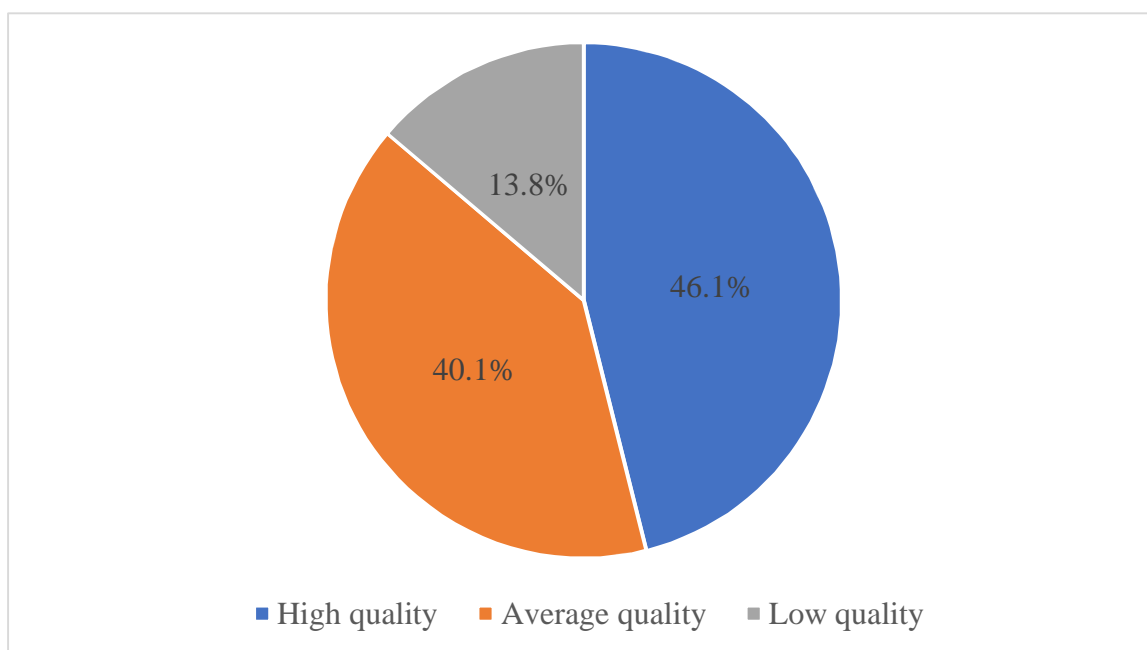


TABLE NO.4.1.14  
Table showing the purchase of the product of the respondents

Category	Frequency	Percent
Regularly	16	10.5%
Occasionally	40	26.3%
Once in a year	50	33%
Above 1 year	42	27.4%
Never	4	2.6%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 33% of the respondents purchase once in a year and 27.4% of the respondents purchase above 1 year and 26.3% of the respondents purchase occasionally and 10.5 of the respondents purchase regularly and 2.6% of the respondents purchase never.

4.1.14 Chart showing the purchase of the product of the respondents

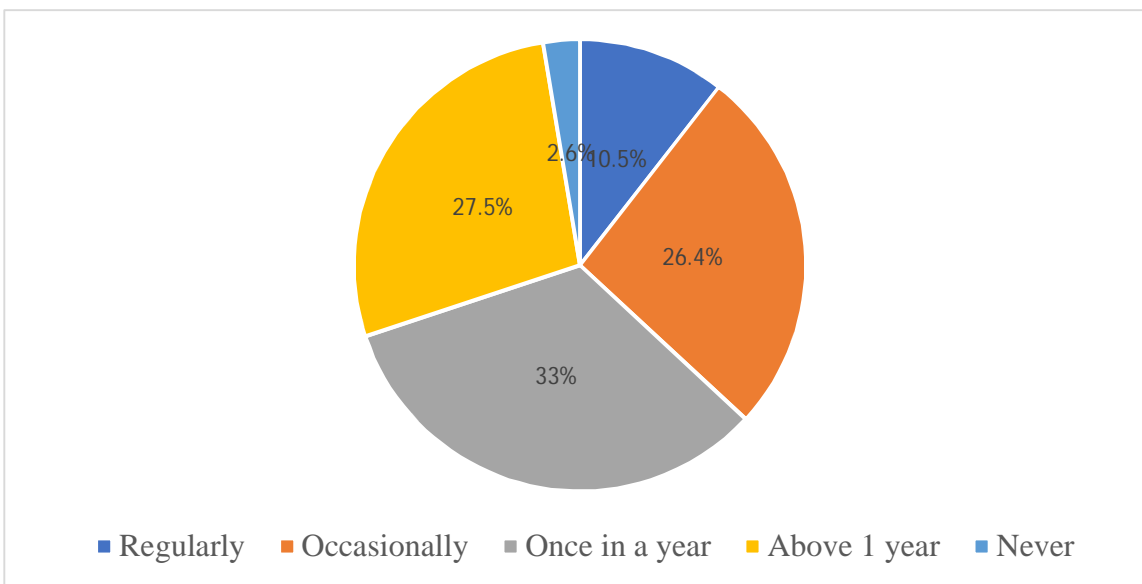


TABLE NO.4.1.15

Table showing the price of the product in the Byjus application

Category	Frequency	Percent
Affordable	26	17.1%
Fair	26	17.1%
Expensive	63	41.4%
Very expensive	37	24.3%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 41.4% of the respondents thinks that expensive and 24.3% of the respondents thinks that very expensive and 17.1% of the respondents feel affordable and 17.1% of the respondents feel fair.

4.1.15 Chart showing the price of the product in the Byjus application

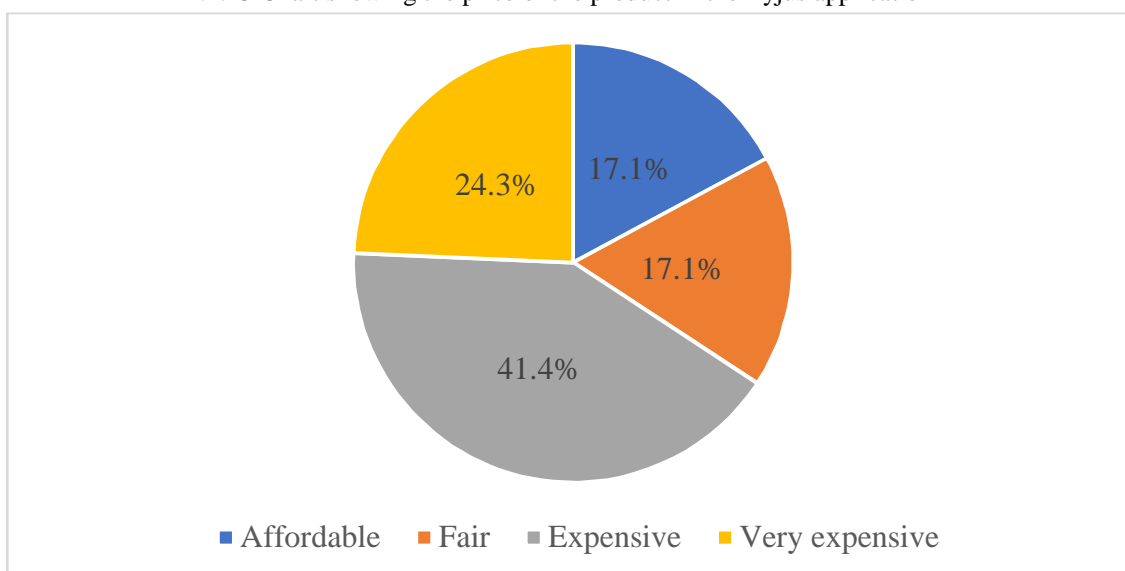


TABLE NO.4.1.16

Table showing the payment process in the Byjus application

Category	Frequency	Percent
Smooth and easy	64	42.1%
Difficult	27	17.8%
Confusing	26	17.1%
Neutral	35	23%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 42.1% of the respondents payment process are smooth and easy and 23% of the respondents are neutral and 17.8% of the respondents payment process are difficult and 17.1% of the respondents payment process are confusing.

4.1.16 Chart showing the payment process in the Byjus application

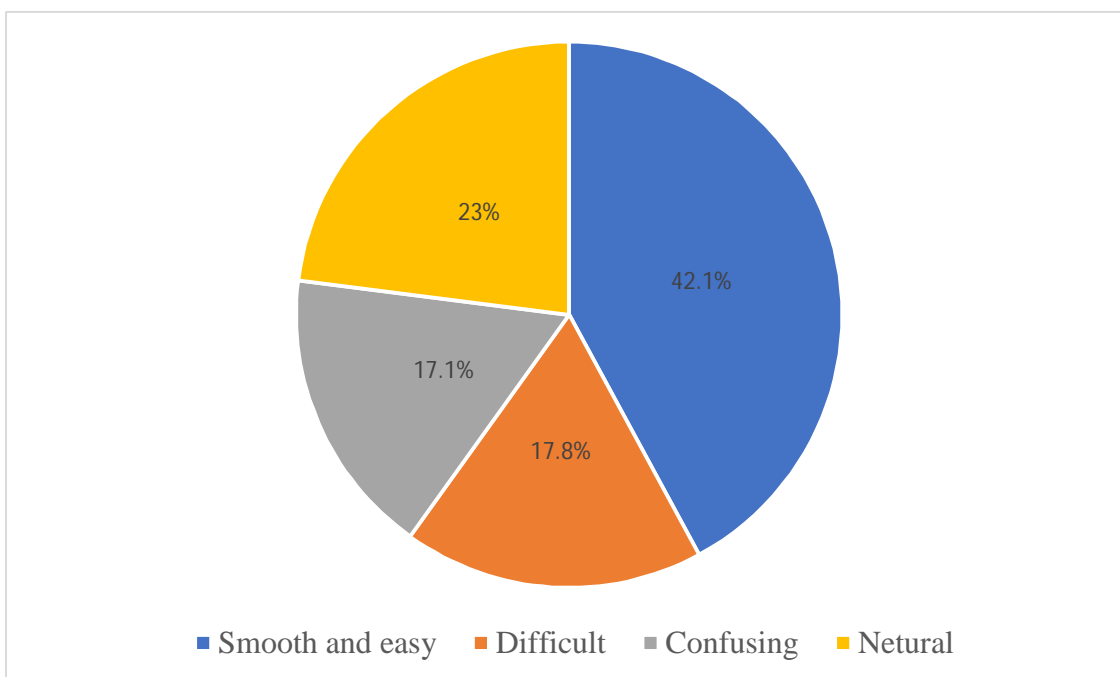


TABLE NO.4.1.17

Table showing the satisfaction level of the price paid of the respondents

Category	Frequency	Percent
Satisfied	26	17.1%
Highly satisfied	54	35.5%
Neutral	45	29.6%
Dissatisfied	23	15.1%
Very dissatisfied	4	2.6%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 35.5% of the respondents are highly satisfied and 29.6% of the respondents are neutral and 17.1% of the respondents are satisfied and 15.1% of the respondents are dissatisfied and 2.6% of the respondents are very dissatisfied.

4.1.17 Chart showing the satisfaction level of the price paid of the respondents

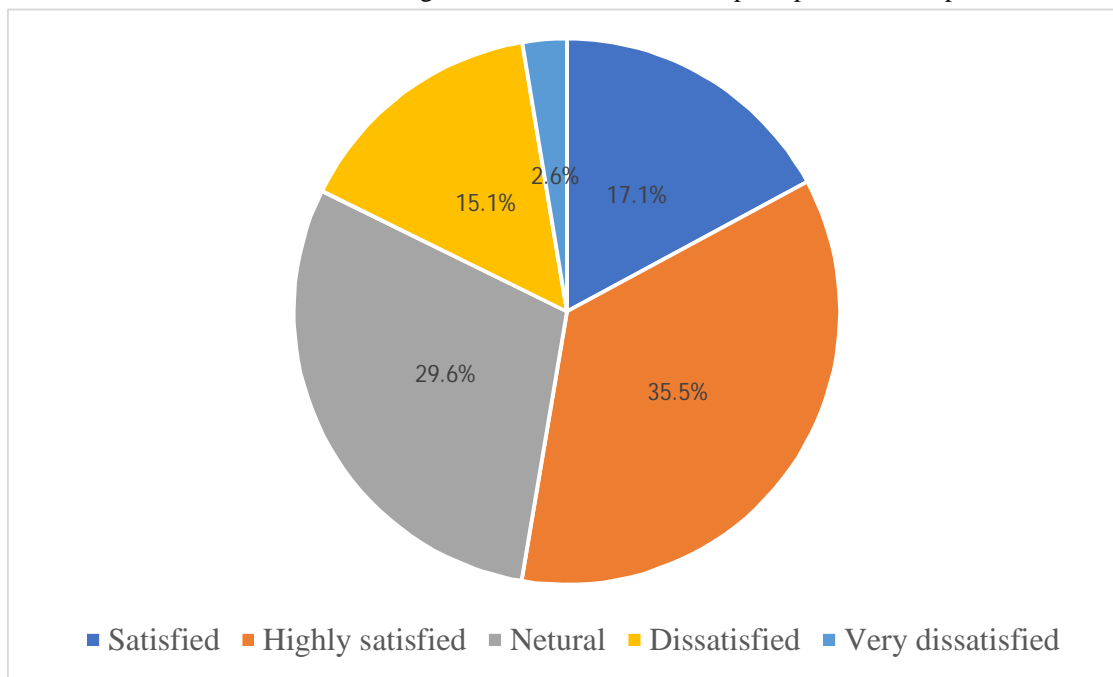


TABLE NO.4.1.18

Table showing the problems faced by the respondents

Category	Frequency	Percent
High cost	52	34.2%
Unexperienced staff	33	21.7%
Limited mock test	42	27.6%
Time management	25	16.4%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 34.2% of the respondents facing high cost and 27.6% of the respondents facing limited mock test 21.7% of the respondents facing unexperienced staff and 16.4 of the respondents facing time management.

4.1.18 Chart showing the problems faced by the respondents

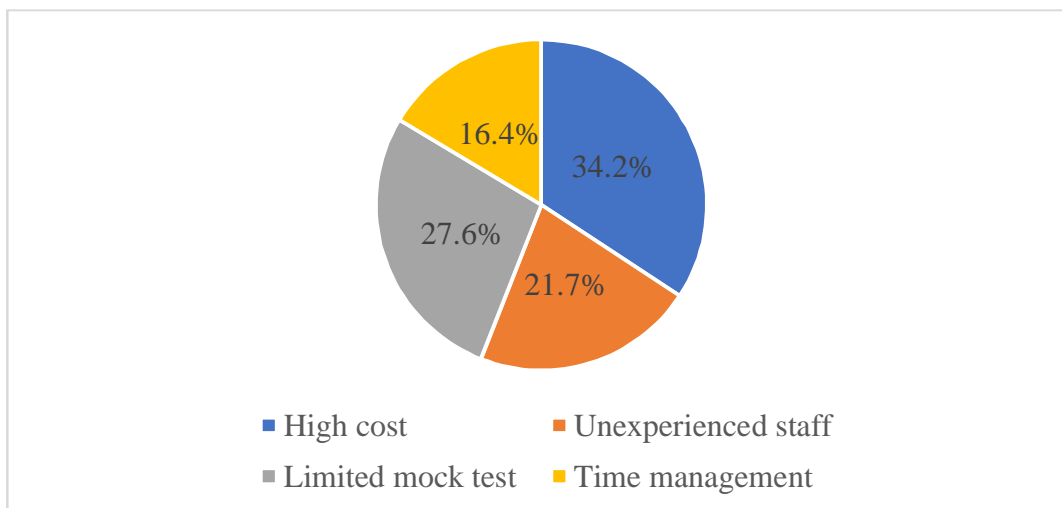


TABLE NO.4.1.19

Table showing the difficulty faced by the respondents in understanding the concept

Category	Frequency	Percent
Lack of personal interaction with the teacher	38	25%
Challenging teaching style	42	27.6%
Complex concepts are not explained well	48	31.6%
Mainly focused on theoretical learning	24	15.8%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 31.6% of the students facing complex concepts are not explained well and 27.6% of the respondents have problem with challenging teaching style 25% of the respondents facing lack of personal interaction with the teacher and 15.8% of the respondents facing mainly focused on theoretical concept.

4.1.20 Chart showing the difficulty faced by the respondents in understanding the concept

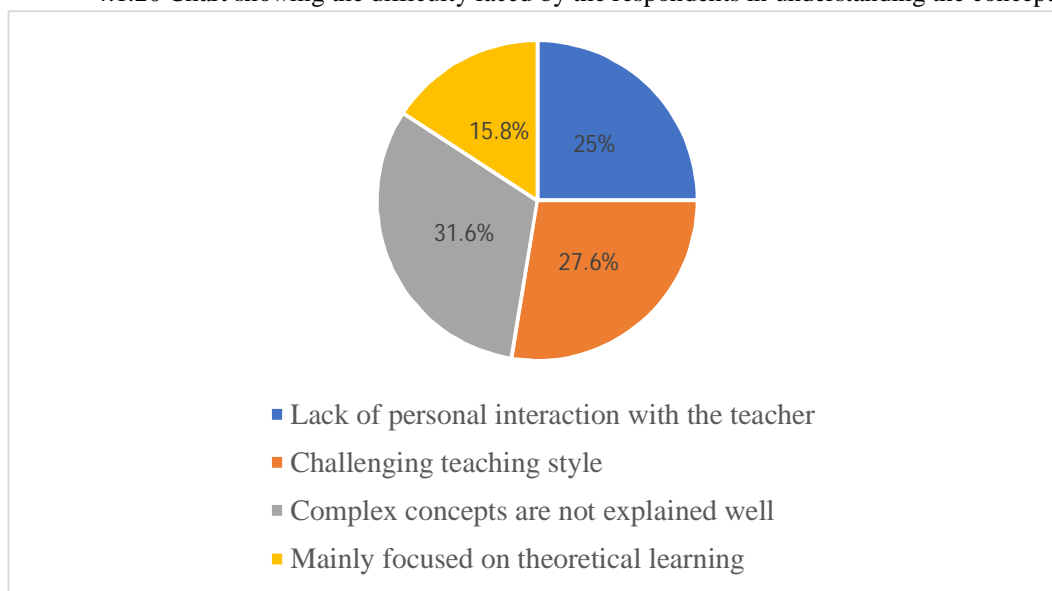


TABLE NO.4.1.20

Table showing the limited interaction affected the learning of the respondents

Category	Frequency	Percent
Inability to ask question in real time	40	26.3%
No chance to collaborate with peers	47	30.9%
No option for real time interaction with the teacher	43	28.3%
Difficulty in getting doubts resolved	22	14.5%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 30.9% of the respondents opinion are no chance to collaborate with peers and 28.3% of the respondents opinion are no option for real time interaction with the teacher and 26.3% of the respondents opinion are inability to ask question in real time and 14.5% of the respondents opinion are difficulty in getting doubts resolved.

4.2.21 Chart showing the limited interaction affected the learning of the respondents

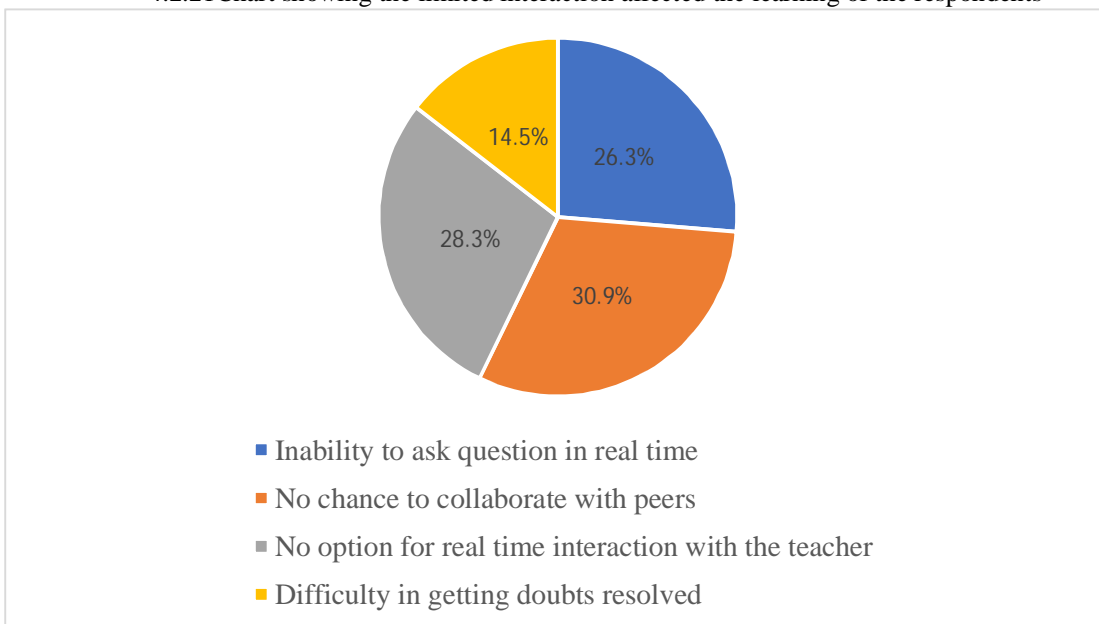


TABLE NO.4.1.21

Table showing the application is compared with other application that the respondents used

Category	Frequency	Percent
It is the best	49	32.2%
It is better than most	65	42.8%
It is the same	31	20.4%
It is the worst	7	4.6%
Total	152	100.0

Source: Primary data

- Interpretation:* The above table shows that the 42.8% of the respondents says that it is better than most and 32.2% of the respondents says that it is the best and 20.4% of the respondents says that it is the same and 4.6% of the respondents says that it is the worst.

4.1.21 Chart showing the application is compared with other application that the respondents used

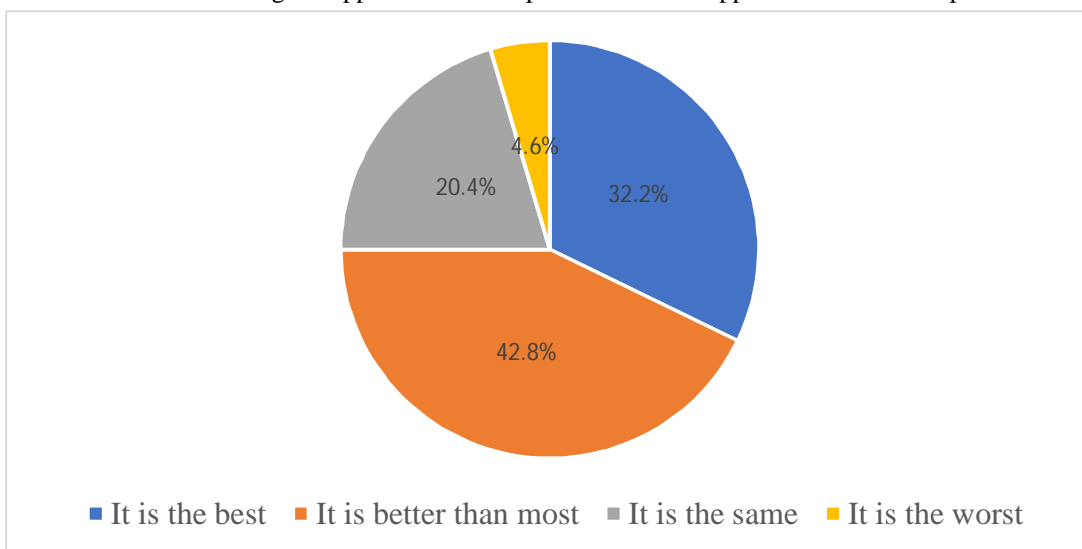


TABLE NO.4.1.22

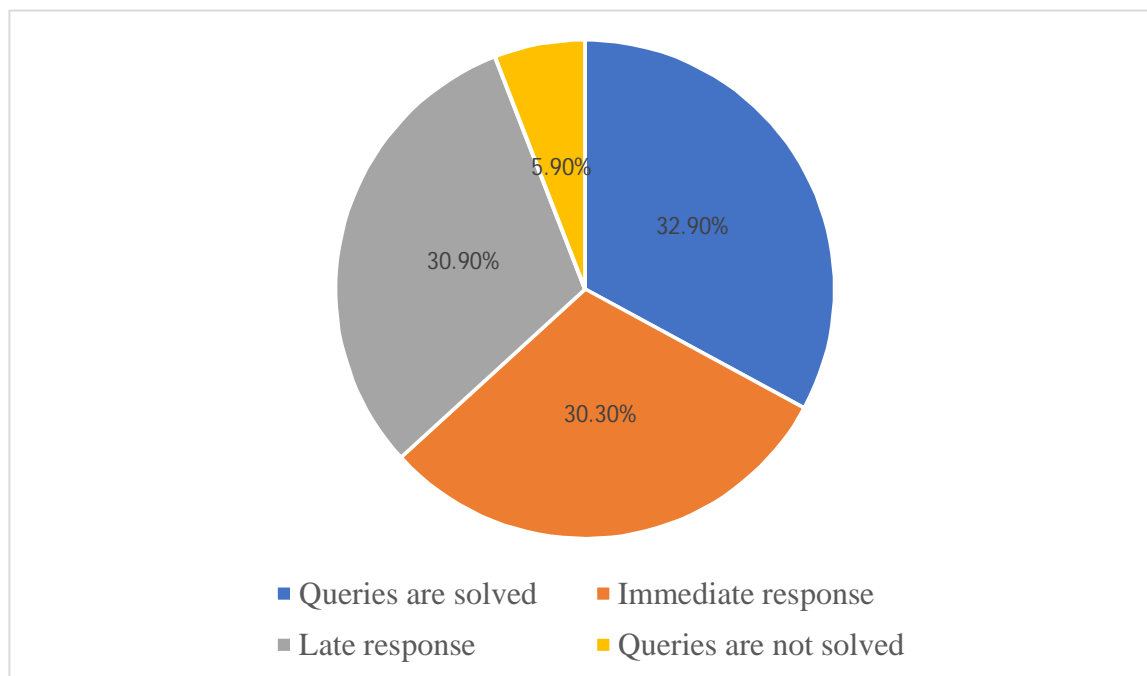
Table showing the experience on the discussion forum of the respondents

Category	Frequency	Percent
Queries are solved	50	32.9%
Immediate response	46	30.3%
Late response	47	30.9%
Queries are not solved	9	5.9%
Total	152	100.0

Source: Primary data

- *Interpretation:* The above table shows that the 32.9% of the respondents queries are solved and 30.3% of the respondents are obtain immediate response and 30.9% of the respondents are obtain late response and 5.9% of the respondents queries are not solved.

4.1.22 Chart showing the experience on the discussion forum of the respondents



### B. Rank Analysis

Rank analysis is a statistical method used to evaluate and compare the relative positions or ranks of individuals, groups, or objects based on a particular criterion or set of criteria. It involves assigning a rank or numerical value to each item being evaluated and then using statistical techniques to identify patterns and trends in the data. Analysis of ranks involves two steps. First, observations are assigned rank scores, usually from smallest to largest (the largest values given the largest ranks). Then, test statistics are calculated using rank scores.

TABLE NO.4.2.1

4.2.1 Table showing the features that find most helpful

Product	R5	R4	R3	R2	R1	Total	Rank
Interactive videos	98	31	19	3	1	678	1
Interactive quizzes	69	57	22	3	1	646	2
Practice questions	69	47	34	1	1	637	3
Personalised learning path	75	46	18	10	3	636	4

- *Interpretation:* The above table shows that R1 is given to the features that are helpful according to the respondents, based on their attractive features, followed by interactive videos, interactive quizzes, practice questions and personalised learning path.

TABLE NO.4.2.2

4.2.2. Table showing the factors that motivated to start using byjus application

Product	R5	R4	R3	R2	R1	Total	Rank
Availability of high quality study material	102	36	11	2	1	692	1
Doubt solving session with mentors	53	66	28	2	3	620	3
Competitive exam preparation	55	46	38	11	2	597	4
Convenience of learning from home	91	40	16	2	3	670	2

- *Interpretation:* The above table shows that R1 is given to factors that motivated the respondents based on their attractive factors followed by Availability of highquality study material, Convenience of learning from home, Doubt solving session with mentors and Competitive exam preparation.

C. Chi - Square Analysis

A CHI-SQUARE is a statistical tool commonly used for testing the independence and goodness of fit. Testing independence determines whether two or more observations across two populations are dependent on each other. Testing for goodness of fit determines if an observed frequency distribution matches a theoretical distribution.

FORMULA

$$\text{CHI - SQUARE VALUE } (\Sigma) = \frac{(\text{OBSERVED VALUE} - \text{EXPECTED VALUE})^2}{\text{EXPECTED VALUE}}$$

EXPECTED VALUE

$$\text{EXPECTED VALUE} = \frac{\text{ROW TOTAL} * \text{GRAND TOTAL}}{\text{GRAND TOTAL}}$$

GRAND TOTAL

$$\text{DEGREE OF FREEDOM} = (\text{ROW} - 1) * (\text{COLUMN} - 1)$$

TABLE NO: 4.3.1

TABLE SHOWING THE RELATINSHIP BETWEEN THE AGE WITH FREQUENTLY USING THE BYJUS LEARNING APPLICATION

The respondent’s age group and their preference level towards the frequently using of byjus cross tabulated from 153 respondents. A cross tabulation of chi square is requested from SPSS a computer software. The result is shown below as a Table.

		How frequently do you use the Byjus learning application?				Total
		Daily	Few times a week	Once a week	Once in 6 months	
Age	Under 18	9	23	28	6	66
	18 to 24	9	32	17	25	83
	25 to 34	0	1	2	0	3
Total		18	56	47	31	152

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.337 <sup>a</sup>	6	.012
Likelihood Ratio	17.682	6	.007
Linear-by-Linear Association	1.989	1	.158
N of Valid Cases	152		

H0: There is no significant relationship between Age and frequently usage of the byjus learning application of the respondents

H1: There is a significant relationship between Age and frequently usage of the byjus learning application of the respondents

Level of significance = 5% or 0.05

Degree of freedom = 6

Chi- square value = 16.337

Table value = 12.592

- *Interpretation:* In the above analysis, the calculated Chi-square value {16.337} is more than the table value {12.59} at the level of 5% significance, the null hypothesis H<sub>0</sub> is rejected. Thus at 95% of confidence level we accept the alternative hypothesis H<sub>1</sub> that the age group of respondents and frequently usage of the byjus learning application of the respondents are associated significantly with each other.

TABLE NO: 4.3.2

TABLE SHOWING THE RELATIONSHIP BETWEEN MONTHLY INCOME AND THE PRICE OF THE PRODUCT IN THE BYJUS LEARNING APPLICATION

The respondent’s preference for monthly income and price of the product in the byjus learning application are cross tabulated from 153 respondents. A cross tabulation of chi square is requested from SPSS a computer software. The result is shown below as a Table.

		How do you describe the price of the product in the Byjus application?				Total
		Affordable	Fair	Expensive	Very expensive	
Monthly income	Below 20000	18	15	37	17	87
	20001-40000	6	7	11	7	31
	40001-60000	1	3	13	7	24
	above 60000	1	1	2	6	10
Total		26	26	63	37	152

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.180 <sup>a</sup>	9	.155
Likelihood Ratio	12.970	9	.164
Linear-by-Linear Association	6.446	1	.011
N of Valid Cases	152		

H0: There is no significant relationship between monthly income and the price of the product in the Byjus application

H1: There is a significant relationship between monthly income and the price of the product in the Byjus application

Level of significance = 5% or 0.05

Degree of freedom = 9

Chi- square value = 13.180

Table value = 16.919

- *Interpretation:* In the above analysis, the calculated Chi-square value {13.180} is less than the Table value {16.919} at the level of 5% significance. Hence, null hypothesis H<sub>0</sub> is accepted, thus, there is no significant relationship between monthly income and the price of the product in the Byjus application.

## V. FINDINGS, SUGGESTION, CONCLUSION

### A. Findings

The objective of the study is to know about the satisfaction level, performance and quality and factors motivating students to prefer, company's image and brand recognition to use the app.

This study measures the overall satisfaction towards byju's learning application with reference to Coimbatore city. This study has been analysed using techniques of percentage analysis, ranking analysis and chi square. The final chapter is an attempt to summarize the findings of the study based on which few suggestions have been made.

#### 1) Percentage Analysis

- 54.6% of the respondents age between 18 to 24.
- 58.6% of the respondents are Female.
- 57.2% of the respondents monthly income is below 20000.
- 95.4% of the respondents are unmarried.
- 36.8% of the respondents operate once in a week.
- 30.3% of the respondents are utilized by organisation.
- 53.9% of the respondents are using smartphone.
- 38.2% of the respondents are facing connectivity issues.
- 51.3% of the respondents are avail to learn visual.
- 54.6% of the respondents are utilised to learn school courses.
- 33.6% of the respondents are used to improves grade.
- 32.2% of the respondents think about education.
- 46.1% of the respondents opinion are high quality.
- 32.9% of the respondents purchase once in a year.
- 41.4% of the respondents says that expensive.
- 42.1% of the respondents payment process were smooth and easy.
- 35.5% of the respondents are highly satisfied with the price paid.
- 34.2% of the respondents facing high cost.
- 27.6% of the respondents have problem with challenging teaching style.

- t) 30.9% of the respondents opinion are no chance to collaborate with peers
- u) 42.8% of the respondents says that it is better than most.
- v) 32.9% of the respondents queries are solved.

## 2) Ranking Analysis

- a) The above analysis indicates R1 is given to features that helpful according to the respondents based on their attractive features followed interactive videos, interactive quizzes, practice questions, personalised learning path.
- b) The above analysis indicates R1 is given to factors that motivated according to the respondents based on their attractive factors followed by Availability of high quality study material, Convenience of learning from home, Doubt solving session with mentors, Competitive exam preparation.

## 3) Chi Square Analysis

- a) In the above analysis, the calculated Chi-square value {16.337} is more than the table value {12.59} at the level of 5% significance. Hence, null hypothesis is accepted, thus, there is no significant relationship between age and frequently using the byjus learning application.
- b) In the above analysis, the calculated Chi-square value {13.180} is less than the Table value {16.919} at the level of 5% significance. Hence, null hypothesis is accepted, thus, there is no significant relationship between monthly income and price of the product in the byjus learning application.

## B. Suggestions

- 1) The application should provide engaging and interactive content such as videos, animations, and quizzes.
- 2) Byju's should provide regular feedback and assessment to students to help them identify their strengths and weaknesses.
- 3) The application should include more mock test.
- 4) The app should fix the price affordably, and there should be different pricing plans available to suit the needs and budget of different students.
- 5) Byju's could also introduce parental controls in its app, allowing parents to monitor their child's progress and set usage limits.

## C. Conclusion

Based on the data collected from the study on student's satisfaction towards Byju's learning app, it can be concluded that the majority of the students using the app are satisfied with its features, functionalities, and overall learning experience. The study revealed that students find the app user-friendly and engaging, with interactive videos and quizzes that help them learn in an enjoyable way. Moreover, the app's personalized learning approach, which adapts to the individual needs of each student, was found to be particularly helpful.

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**ANNEUXRE**

1. Age:

- a) Under 18
- b) 18-24
- c) 25-34
- d) 35-44

2. Gender:

- a) Male
- b) Female
- c) Others

3. Income:

- a) Below 20,000
- b) 20,000-40,000
- c) 40,000-60,000
- d) Above 60,000

4. Marital status:

- a) Married
- b) Unmarried
- c) Divorced
- d) Separated

5. How frequently you use the byjus learning application?

- a) Daily
- b) Few times a week
- c) Once a week
- d) Once in 6 months

6. Who recommended you to choose byjus learning application?

- a) Friends
- b) Organisation
- c) Social media
- d) Advertisement

7. What type of technology do you use to access byjus learning application?

- a) Smartphone
- b) Laptop
- c) Tablet
- d) Desktop

8. What are the technical issues you faced while using the application?

- a) slow loading time
- b) connectivity issues
- c) app crashes
- d) others

9. What is your learning style?



- a) Visual
- b) Auditory
- c) Verbal
- d) Logical

10. Which subject do you use the byjus learning application?

- a) School courses
- b) Competitive courses
- c) Hobby courses
- d) Others

11. What is your purpose of using the application?

- a) Improves grade
- b) Learn new subject
- c) Prepare for exams
- d) Enhance knowledge

13. Rank the following features of the Byjus learning application do you find most helpful

Rank each option from 5 to 1 where 5 being the positive and 1 being the negative

Product	R5	R4	R3	R2	R1
Interactive videos					
Interactive quizzes					
Practice questions					
Personalised learning path					

14. What is the first word that comes to your mind when you think of byjus learning application?

- a) Education
- b) Innovation
- c) Expensive
- d) Learning

15. What is your opinion of the quality of education offered by byjus?

- a) High quality
- b) Average quality
- c) low quality

16. How frequently do you purchase the product in the byjus learning application?

- a) Regularly
- b) Occasionally
- c) Once in a year
- d) Above 1 year
- e) Never

17. Rank the following factors that motivated you the most to start using the byjus learning application  
Rank each option from 5 to 1 where 5 being the positive and 1 being the negative

Product	R5	R4	R3	R2	R1
Availability of high quality study material					
Doubt solving session with mentors					
Competitive exam preparation					
Convenience of learning from home					

18. How do you describe the price of the product in the byjus learning application?

- a) Affordable
- b) Fair
- c) Expensive
- d) Very expensive

19. How was the payment process in the byjus learning application?

- a) Smooth and easy
- b) Difficult
- c) Confusing
- d) Neutral

20. The product in the byjus learning application worth the price you paid

- a) satisfied
- b) Highly satisfied
- c) neutral
- d) dissatisfied
- e) very dissatisfied

21. What are the problems you faced while using the Byjus learning application?

- a) High cost
- b) Unexperienced staff
- c) Limited mock test
- d) Time management

22. How difficult is it for you to understand the concept?

- a) lack of personal interaction with teacher
- b) Challenging teaching style
- c) Complex concepts are not explained well
- d) Mainly focused on theoretical concept



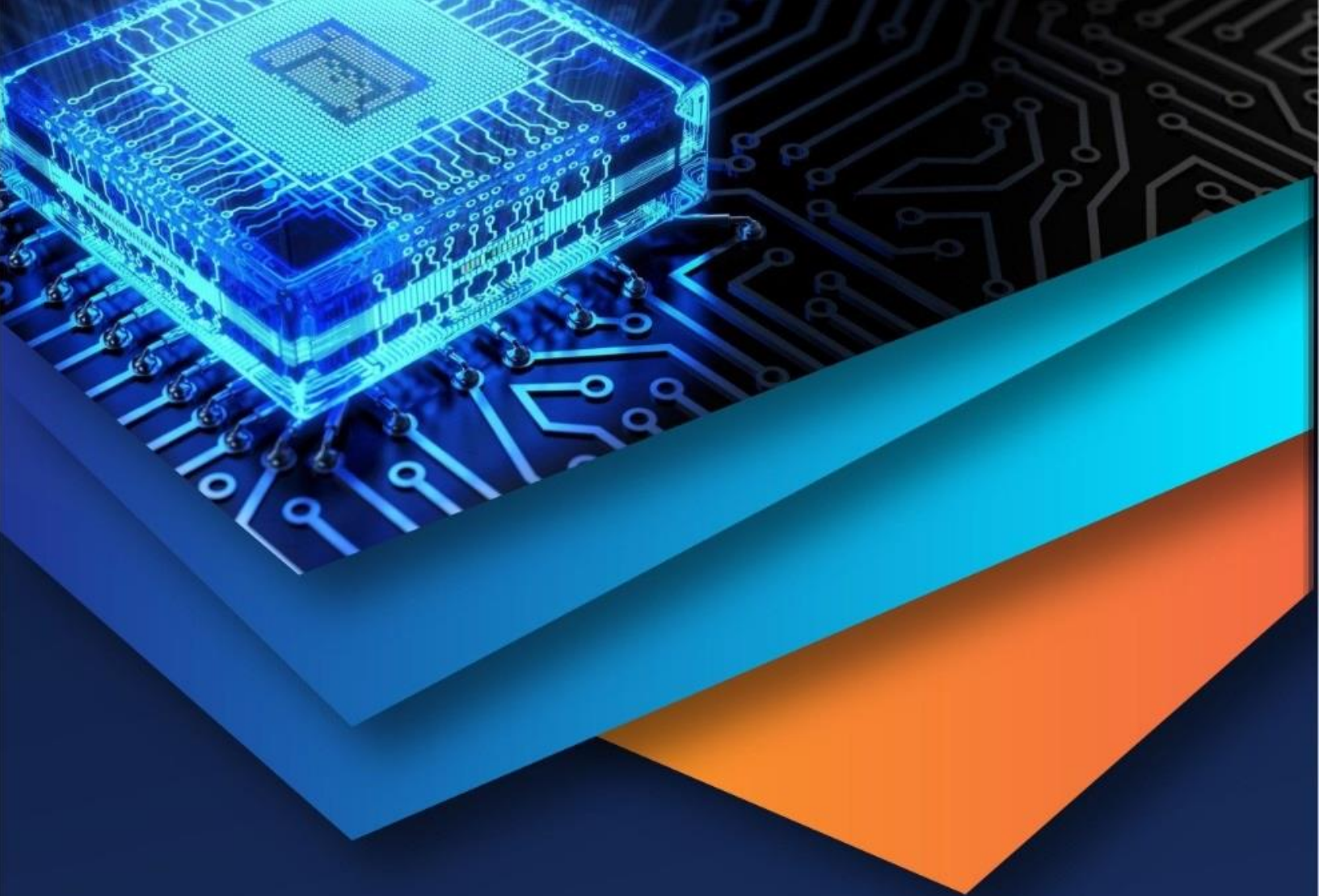
23. How is the byjus learning application compared to the other learning application you have used?

- a) It is the best
- b) It is better than most
- c) It is the same
- d) It is the worst

24. What is your experience in discussion forum?

- a) Queries are solved
- b) Immediate response
- c) Late response
- d) Queries are not solved

25. Any suggestion



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