

STUDENTS' PERCEPTION ON ONLINE EDUCATION IN HIGHER EDUCATION INSTITUTIONS WITH SPECIAL REFERENCE TO SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

by

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SCHOOL OF BUSINESS ADMINISTRATION

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
Jeppiaar Nagar, RAJIV GANDHI SALAI, CHENNAI - 600 119**

April - 2021



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **POOJA BHAVANA T (39410149)** who have done the project entitled **"STUDENTS' PERCEPTION ON ONLINE EDUCATION IN HIGHER EDUCATION INSTITUTION WITH SPECIAL REFERENCE TO SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY"** under my supervision from January 2021 to April 2021.

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DECLARATION

I, **POOJA BHAVANA T (Register No. 39410149)**, hereby declare that the Project Report entitled “**STUDENTS’ PERCEPTION ON ONLINE EDUCATION IN HIGHER EDUCATION INSTITUTION WITH SPECIAL REFERENCE TO SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY**” done by me under the guidance of **Dr. TR. KALAI LAKSHMI M.A., M.B.A., M.Phil., Ph.D.**, is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

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ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. BHUVANESWARI G.**, Dean, School of Management Studies and **Dr. PALANI A.**, Head of the Department, Dept. of Management Studies for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **Dr. TR. KALAI LAKSHMI M.A., M.B.A, M.Phil., Ph.D**, Faculty, School of Business Administration for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the School of Business Administration who were helpful in many ways for the completion of the project.

POOJA BHAVANA T

Abstract

During the COVID-19 pandemic, social education has shifted from face to face to online in order to avoid large gatherings and crowds for blocking the transmission of the virus. Education scenario has drastically changed. It is must to continue classes which cannot be skipped due to Covid-19. Online classes have been a boon to the students. Students are able to pursue their degree as usual as they were doing it earlier. To analyse and understand the importance of online learning among students of different branches in Sathyabama Institute of Science and Technology, this study has been conducted.

Objective of this study is to find out students' perception on online education in Sathyabama Institute of Science and Technology. Descriptive research design is used to analyze the data. Primary and secondary data is used for collecting the data. 285 students from Sathyabama Institute of Science and Technology have responded. Convenience Sampling Technique was selected for this study. The analytical tools used for this study is SPSS. It is used to study the hypothesis, Chi-square and Anova test in SPSS. Coronavirus pandemic has triggered new ways of learning and has accelerated the process of adoption of 'online' as a viable mode for learning in 2020. With respect to the study and findings, the online classes have definitely taken a place in the higher education institutions. This study will help the higher education institutions to know what are the positive and negative factors and issues faced by the students and how they can better themselves and improve.

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	i
	LIST OF TABLES	iii
	LIST OF CHARTS	v
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Need for the study	6
	1.3 Scope of the study	6
	1.4 Objectives of the study	6
	1.5 Limitations of the study	7
2	REVIEW OF LITERATURE	8
3	RESEARCH METHODOLOGY	15
	3.1 Research Design	15
	3.2 Sources of Data	16
	3.3 Structure of Questionnaire	16
	3.4 Sampling Technique	16
	3.5 Sample size	16
	3.6 Period of study	17
	3.7 Analytical tools	17
4	DATA ANALYSIS AND INTERPRETATION	18
	4.1 Percentage Analysis	18
	4.2 Chi-square	54
	4.3 ANOVA	56
5	FINDINGS, SUGGESTIONS AND CONCLUSION	57
	5.1 Findings of the study	57
	5.2 Suggestions	59
	5.3 Conclusion	59
	REFERENCES	
	APPENDIX – I (Questionnaire)	
	APPENDIX – II (Article)	

LIST OF TABLES

TABLE NO.	PARTICULARS	PAGE NO.
4.1.1	Gender of the respondents	18
4.1.2	Age of the respondents	19
4.1.3	Course	20
4.1.4	Program	21
4.1.5	Academic year	23
4.1.6	Studies affected due to COVID-19	24
4.1.7	Institution adopting online education mode to overcome pandemic	25
4.1.8	Electronic device used to study online during lockdown	26
4.1.9	Hours spent in online learning during lockdown	27
4.1.10.1	Online Classes	28
4.1.10.2	Educational Websites	29
4.1.10.3	Youtube Videos	30
4.1.10.4	Ebooks	31
4.1.10.5	Pep talks	32
4.1.10.6	PDF notes	33
4.1.11	Online learning tool used during lockdown	34
4.1.12	Hours spent online in a day apart from online classes	35
4.1.13	Complete studies on time via online mode	36
4.1.14	Internet connection to attend the online classes	37
4.1.15	Payment of bills for a regular internet connection for studying via online	38
4.1.16	Money spent for the internet connection for a month	39
4.1.17	Internet connection often used for online classes	40

4.1.18	Non-accessibility of the required electronic devices and network issues faced	41
4.1.19	Rating the usefulness of classes via online mode	42
4.1.20	Online classes have high quality learning without face to face interactions	43
4.1.21	Development of skills by attending various special online lectures	44
4.1.22	Online lectures improve knowledge on versatile topics	45
4.1.23	Online platforms are able to connect students to industry experts	46
4.1.24	Rating online education during COVID-19 pandemic	47
4.1.25	Practical difficulties faced during regular online classes	48
4.1.26	Recommendation of online education to friends to develop knowledge and skills	51
4.1.27	Rank the following according to preference for online education	52

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4.1.7	Institution adopting online education mode to overcome pandemic	25
4.1.8	Electronic device used to study online during lockdown	26
4.1.9	Hours spent in online learning during lockdown	27
4.1.10.1	Online Classes	28
4.1.10.2	Educational Websites	29
4.1.10.3	Youtube Videos	30
4.1.10.4	Ebooks	31
4.1.10.5	Pep talks	32
4.1.10.6	PDF notes	33
4.1.11	Online learning tool used during lockdown	34
4.1.12	Hours spent online in a day apart from online classes	35
4.1.13	Complete studies on time via online mode	36
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4.1.22	Online lectures improve knowledge on versatile topics	45
4.1.23	Online platforms are able to connect students to industry experts	46
4.1.24	Rating online education during COVID-19 pandemic	47
4.1.25	Practical difficulties faced during regular online classes	49
4.1.26	Recommendation of online education to friends to develop knowledge and skills	51
4.1.27	Rank the following according to preference for online education	52

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

With educational institutes closed due to the COVID-19 pandemic, the government has been encouraging online education to achieve academic continuity. Most high-end private and public institutions have made the switch smoothly using online platforms such as Zoom, Google classrooms, Microsoft teams, etc., while many still find it a herculean task. The challenges of online education are multifaceted. The world saw a paradigm shift in the education system. However, in 2020, one of the most oft-used terms after the pandemic is the term “new normal.” And the new normal in education is the increased use of online learning tools.

Coronavirus pandemic has triggered new ways of learning and has accelerated the process of adoption of ‘online’ as a viable mode for learning in 2020. Due to COVID-19, the demand for online learning has risen significantly, and it will continue to do so in the future. Along with parents and students, for many educational institutes, 'online learning' is an entirely new way of education that they have had to adopt. Many students said that the revolution of EdTech is driven out of the massive adoption of technology because of the pandemic. It has opened up access for a lot of people who did not have it till now.

According to UNESCO, since the outbreak of COVID-19 began, some 1.37 billion students in 138 countries worldwide have been affected by school and university closures. Nearly 60.2 million school teachers and university lecturers are no longer in the classroom. Since the whole country is under lockdown, e-education is the best bet left. University faculties are setting up accounts on online video conferencing platforms such as Zoom, Skype and Google Classroom, among other to engage with students.

Now new media holds out the possibility of on-demand access to content anytime, anywhere, on any digital devices but this spontaneous virtualization of education turned out to be challenging for both, the administration and students. Digital education today is a mix between existing cultural conventions like existing reading material and course books and conventions of software- new media like pdfs. Online education is often more affordable, the expense of going to college is one of the

biggest reasons aspiring students hold back from enrolling in a program. In addition to sparing students the cost of travelling to campus, the flexibility of online learning often allows them to continue earning money at their existing job.

Online education is electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials. With online education, students can turn anywhere with Internet access and electricity into a classroom.

As with most teaching methods, online learning also has its own set of positives and negatives.

1.1.1 THE ADVANTAGES OF ONLINE TEACHING FOR STUDENTS

- **Efficiency**

Online learning offers teachers an efficient way to deliver lessons to students. Online learning has a number of tools such as videos, PDFs, podcasts, and teachers can use all these tools as part of their lesson plans.

- **Accessibility of Time and Place**

Another advantage of online education is that it allows students to attend classes from any location of their choice. It also allows schools to reach out to a more extensive network of students, instead of being restricted by geographical boundaries

- **Affordability**

Another advantage of online learning is reduced financial costs. Online education is far more affordable as compared to physical learning. This is because online learning eliminates the cost points of student transportation, student meals.

- **Improved students' attendance**

Since online classes can be taken from home or location of choice, there are fewer chances of students missing out on lessons.

- **Readily Available Learning Materials**

With traditional learning, absenteeism comes with its troubles. Online learning is different. All learning resources are accessible anytime.

- **Tech Savvy**

As we are now entering a new era, the revolution of online education, online classes have changed the concept of traditional education radically. It is also helping students as well as teachers to grow their tech skills.

1.1.2 THE ADVANTAGES OF ONLINE TEACHING FOR TEACHERS:

- **Individual pace**

As classes are been taken online, teachers have enough time in their hands to prepare notes. It helps them in maximising their time and effectiveness to the best and go according to their pace.

- **Practicality**

As there's enough time in teachers' hand, they can create various number of quizzes and tests in LMS for students to understand and know which part of the topic or where they are lacking.

- **Access to training**

As there are various ways to teach online, teachers have opportunity to learn different websites and tools used for online platforms for online education. It helps them in improving and increases their tech skills.

- **Focus on students**

Since teachers have an opportunity to use LMS as online of their online platforms, it helps them to know the energy of the students, where they lack and helps them to analyse their performance.

- **Suits a variety of learning styles**

Learning styles of students depends on how they understand and take in the knowledge. Different students have different types of learning styles, some understand through audio, some through visual learners.

- **Efficiency**

Online learning offers teachers an efficient way to deliver lessons to students through various ways provided. Online teaching has a number of tools to deliver lessons such as PDFs, videos, podcasts etc., They can even screen share and show any articles to students.

1.1.3 VARIOUS INITIATIVES HAVE BEEN TAKEN TO PROMOTE DIGITAL LEARNING UNDER 'NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY' (NMEICT)

Department of Higher Education, Ministry of Human Resource Development is administering a programme 'National Mission on Education through Information and Communication Technology' (NMEICT) to leverage the potential of ICT to make the best quality content accessible to all learners in the country, free of cost. The various initiatives under this programme are as under:

- **SWAYAM:** The 'Study Webs of Active Learning for Young Aspiring Minds' (SWAYAM) is an integrated platform for offering online courses and covering school (9th to 12th) to Post Graduate Level. Till now, 2769 MOOCs (Massive Open Online Courses) have been offered on SWAYAM, wherein about 1.02 crore students have enrolled to various courses till date. The online courses are being used not only by the students but also by the teachers and non-student learners, in the form of lifelong learning. NCERT (National Council of Educational Research and Training) has been developing course modules for MOOCs for school education system in 12 subject areas (Accountancy, business studies, biology, chemistry, economic, history, geography, mathematics, physics, political science, psychology and sociology) for classes IX-XII. Twelve (12) courses were launched in the first cycle. Nearly 22,000 students were registered on various courses. Twenty (20) courses were launched in the second cycle. Nearly 33,000 students were registered.

- **SWAYAM Prabha:** SWAYAM Prabha is an initiative to provide 32 High Quality Educational Channels through DTH (Direct to Home) across the length and breadth of the country on 24X7 basis. It has curriculum-based course content covering diverse disciplines. This is primarily aimed at making quality learning resources accessible to remote areas where internet availability is still a challenge.

- **National Digital Library (NDL):** The National Digital Library of India (NDL) is a project to develop a framework of virtual repository of learning resources with a single-window search facility. There are more than 3 crore digital resources available through the NDL. The contents cover almost all major domains of education and all major levels of learners including life-long learners. More than 50 lakh students have registered themselves in the NDL, with about 20 lakhs active users.

- **Spoken Tutorial:** They are 10-minute long, audio-video tutorial, on opensource software, to improve employment potential of students. It is created for self-learning, audio dubbed into all 22 languages and with the availability of online version. The languages are C, C++, Java, PHP, Python, PERL, Scilab, Open FOAM, Open Modelica, DWSIM, LibreO and many more. The Spoken Tutorial courses are effectively designed to train a novice user, without the support of a physical teacher.
- **Free and Open-Source Software for Education (FOSSEE):** FOSSEE is a project promoting the use of open source software in educational institutions (<http://fossee.in>). It does through instructional material, such as spoken tutorials, documentation, such as textbook companions, awareness programmes, such as conferences, training workshops, and Internships. Textbook Companion (TBC) is a collection of code for solved examples of standard textbooks. About 2,000 college students and teachers have participated in this activity & close to 1,000 TBCs have been created in Scilab and made them available for free download.
- **Virtual Lab:** The Virtual Labs Project is to develop a fully interactive simulation environment to perform experiments, collect data, and answer questions to assess the understanding of the knowledge acquired. In order to achieve the objectives of such an ambitious project, it is essential to develop virtual laboratories with state-of-the-art computer simulation technology to create real world environments and problem handling capabilities. There are about 225 such labs operational, with more than 1800 experiments and benefitted more than 15 lakhs students.
- **E-Yantra:** e-Yantra is a project for enabling effective education across engineering colleges in India on embedded systems and Robotics. The training for teachers and students is imparted through workshops where participants are taught basics of embedded systems and programming. More than 275 colleges across India have benefited with this initiative. All the projects and code are available on the e-Yantra web-site www.e-yantra.org as open-source content.

1.2 NEED FOR THE STUDY

Online education has become a new hurdle for students due to current pandemic. To know how has the current trend of online classes affected the student's ability to acquire the academic education. To understand what kind of difficulties faced by students in the use of various online learning methods. To gather suggestions to make online learning more effective in future.

1.3 SCOPE OF THIS STUDY

- The study defines and analyses the perception on online education in Sathyabama institute of science and technology.
- This study shows the difficulties faced by the students during online classes.
- To study if Sathyabama institute of science and technology adopted various online teaching methods.

1.4 OBJECTIVES OF THIS STUDY

1.4.1 PRIMARY OBJECTIVE:

- To study the students' perception on online education in Sathyabama Institute of Science and Technology.

1.4.2 SECONDARY OBJECTIVES:

- To understand which type of online methods of teaching were adopted by Sathyabama Institute of Science and Technology.
- To what extent various methods of online teaching used and online infrastructure of Sathyabama Institute of Science and Technology helped in covering syllabus.
- To know the kind of difficulties faced by students in the use of various online learning methods.
- To gather suggestions to make online learning more effective in future.

1.5 LIMITATIONS OF THE STUDY:

- This study confines within the limited period.
- The study covers only Sathyabama Institute of Science and Technology, Chennai.
- The result fully depends on the information given by the respondents which may be biased.

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE

Swan. K (2003) stated that online environments support learning outcomes that are generally equivalent to those resulting from traditional, face-to-face instruction. On the other hand, the research suggests that unique characteristics of the medium may afford and constrain particular kinds of learning. Such affordances and constraints, in turn, suggest certain strategies and approaches that might enhance the learning effectiveness of online instruction.

Sakshi Agarwal & Jaya Shankar Kaushik (2020) stated that online teaching is feasible, cheap and must be made a part of the postgraduate training in India beyond the prevailing lockdown. Participants responded that these online sessions broke monotonous routine, were a good utilization of time and the material was easy to access. They felt motivated to read on those topics and it helped them not to think of COVID and sleep peacefully. Most frequent factors hindering learning were stated as limitation on the number of participants, time limitation of the sessions, and technical faults during the conduct of sessions. These shortcomings were addressed subsequently through buying advanced version of the software that allows more time, and better opportunity to interact with students.

Sandeep Shetty, C. Shilpa, Debayan Dey & S. kavya (2020) This article reflects the challenges faced during online learning and added the innovative methods that can be included to overcome the obstacles of online learning. During this period of COVID, one must embrace the alternative to classroom learning to keep up with one's academic development and can consider an integrated approach of learning after the pandemic.

Deepika Nambiar (2020) said that Improving the quality of online classes with the help of various service providers, along with support from different colleges and universities can help in making online mode of education more effective and easily acceptable all over India. Establishing a structured and user-friendly environment for online mode of education, one that is accessible for all without putting financial

burden on students and teachers should be the main criteria in the minds of college and university management while promoting online education.

Cristina Venera Tartavulea, Catalin Nicolae Albu, Nadia Albu, Ramona Iulia Diaconescu and Silvia Petre (2020) argued that the pandemic forced the stakeholders of the academic educational process to quickly accept some online tools, which will continue to be used to some extent once the educational system returns to a traditional format.

Mohammad H Rajab, Abdalla MGazal and Khaled Alkattan (2020) stated their study revealed that there has been a positive impact of the COVID-19 pandemic on online medical education at Alfaisal University. most of the respondents (70.7%) believed that the COVID-19 pandemic has boosted their confidence in the effectiveness of online medical education. Consequently, 76% of participants intended to integrate the online expertise garnered during the pandemic into their practice. In short, the modern study demonstrated a largely positive impact of the COVID-19 pandemic on online medical education.

Claudiu Coman, Laurent, Iu Gabriel T, Luiza Meses, an-Schmitz ,Carmen Stanciu and Maria Cristina Bularca(2020) focus on identifying the way in which Romanian universities managed to provide knowledge during the Coronavirus pandemic, when, in a very short time, universities had to adapt the educational process for exclusively online teaching and learning.

Aras Bozkurt, Ramesh C. Sharma(2020) aims at analysing Emergency remote teaching in a time of global crisis due to Corona virus Pandemic. In terms of educational processes, the interruption of education signifies the importance of openness in education and highlights issues that should be taken into consideration such as using alternative assessment and evaluation methods

Dr. Naziya Hasan and Dr. Naved Hassan Khan (2020) conducted a qualitative survey on 408 students to uncover their perspectives on online teaching-learning. Results indicated that students were enjoying online learning. Flexibility was found to be the most liked and poor network and connectivity, the most disliked elements of online learning. Adding to it, lack of interaction, distractions and one-sided learning were mentioned as its disadvantages. Online safety and security issues

were not addressed and disabled students experienced teachers' negligence and lack of support.

Atika Qazi, Khulla Naseer, Javaria Qazi, Hussain AlSalman, Usman Naseem, Shuiqing Yang, Glenn Hardaker, Abdu Gumaei (2020) show that there is a relationship between students' satisfaction and access & use of online learning. The study suggested that it is crucial for the government and other policymakers worldwide to address access and use of online learning resources of their populace amid pandemic.

Rome Moralista, Ryan Michael Oducado (2020) determined the perception toward online education among faculty in a State College in the Philippines. Faculty of Higher Education Institutions must be provided with continued support and training as they adapt into the new normal in the higher education landscape and as they embrace the instructional challenges brought by the Coronavirus disease 19 pandemic.

Hossein Khalili (2020) discusses the application of Meaningful Discourse and the Community of Inquiry principles on developing online learning communities in interprofessional education. there are potential opportunities and positive lessons that could be seized for IPE and collaborative practice. The potential of online IPE is yet to be fully explored and evaluated.

Lokanath Mishra, Tushar Gupta, Abha Shree(2020) conduct this study as a portrayal of online teaching-learning modes adopted by the Mizoram University for the teaching-learning process and subsequent semester examinations. To develop multimodal approaches to achieve course content objectives for better learning outcome can be a better idea to deal with the complexity of online education. Undauntedly, the governments must ensure the availability of reliable communication tools, high quality digital academic experience, and promote technology-enabled learning for students to bridge the disparities originated in the education system before and after COVID-19 catastrophe which is also inevitably necessitated for uninterrupted learning.

Yamini Chandra (2020) indicates that significant differences were observed between the fear of academic failure and online and home environment among male and female students. Many of them have started diverting themselves to various

creative activities and taking up courses that are helping them to learn new technical skills. By using emotional intelligence and distancing from boredom and depressive thoughts, students were trying to cope with negative effects arising from the current pandemic situation.

Dimitrios Vlachopoulos (2020) aims to reflect on where exactly does online education figure into this crisis situation by focusing on 4 important pillars: a) policy-making, b) access to resources, c) training opportunities and d) ongoing evaluation and monitoring.

Amber Garbe, Uzeyir Ogurlu, Nikki Logan, Perry Cook (2020) The results indicate parents agreed with the school closure policy and were generally satisfied with the level of support provided by school districts whilst describing some areas of struggle. Parents described having difficulties with balancing responsibilities, learner motivation, accessibility, and learning outcomes. The results of the study suggest some important implications and recommendations for educators and policymakers.

Longjun Zhou, Shanshan Wu, Ming Zhou, Fangmei Li (2020) analyzed the background of this large-scale online education, clarify the foundation of large-scale online education, and reveal the impact of the largest online education activities on society and education.

T Muthuprasad, S Aiswarya, KS Aditya, Girish K Jha (2020) focus on understanding Agricultural Student's perception and preference towards the online learning through an online survey of 307 students. The results indicated that majority of the respondents are ready to opt for online classes to manage the curriculum during this pandemic. Majority of the students preferred to use smart phone for online learning. Using content analysis, they found that students prefer recorded classes with quiz at the end of each class to improve the effectiveness of learning. The students opined that flexibility and convenience of online classes makes it attractive option, whereas broadband connectivity issues in rural areas makes it a challenge for students to make use of online learning initiatives.

Khadijah Mukhtar, Kainat Javed, Mahwish Arooj, Ahsan Sethi (2020) support the use of online learning in medical and dental institutes, considering its various advantages. Result states that the advantages included remote learning, comfort,

accessibility, while the limitations involved inefficiency and difficulty in maintaining academic integrity. The recommendations were to train faculty on using online modalities and developing lesson plan with reduced cognitive load and increased interactivities.

John Daniel (2020) offers guidance to teachers, institutional heads, and officials on addressing the crisis. When constructing curricula, designing student assessment first helps teachers to focus. The expansion of online learning in tertiary education will further accelerate, and schools will organize themselves more systematically to pursue the aspects of technology-based learning that they have found most useful.

Dr. Amita (2020) states that HEI's along with their faculty have made appreciable efforts to compensate the loss of classroom studies of students during the lockdown period. Several tools of online education are put into practice. Efficacy of various online teaching methods of the institute in helping students in covering the syllabus.

Suzzane Young (2020) stated overall effective teaching item was regressed onto twenty-five items in order to identify a core group of items that related most strongly with effective teaching. Seven items emerged as the core group: adapting to student needs, using meaningful examples, motivating students to do their best, facilitating the course effectively, delivering a valuable course, communicating effectively, and showing concern for student learning.

Marcelo Careaga-Butter, María Graciela Badilla Quintana, Carolina Fuentes-Henríquez (2020) aim to analyze the disruption in the educational context and to detail the adaptations that may contribute to the effectiveness of educational processes. Necessary and must heed the call to collaborate in the construction of a new notion of society, sharing a new mixed educational paradigm that can face the post-pandemic context and meet the new demands and requirements of the 21st century.

Wahab Ali (2020) proposes that staff members should use technology and technological gadgets to enhance learning especially during these exceptional times. Findings reveal that universities worldwide are moving more and more towards online learning or E- Learning. Findings also reveal that apart from resources, staff readiness, confidence, student accessibility and motivation play important function in ICT integrated learning. This exploratory paper proposes that

staff members should use technology and technological gadgets to enhance learning especially during these exceptional times. Findings also propose online and remote learning as a necessity in times of lock downs and social distancing due to COVID-19 pandemic.

Shadnaz Asgari, Jelena Trajkovic, Mehran Rahmani, Wenlu Zhang, Roger C Lo, Antonella Sciortino (2020) present the results of these surveys in detail and propose solutions to address the identified issues including logistical, technical, learning/teaching challenges, assessment methods, and hands-on training. Their surveys and answered quantitative and qualitative questions to highlight the challenges they experienced during the online instruction.

Daria Bylieva, Zafer Bekirogullari, Victoria Lobatyuk, Tatiana Nam(2020) analyze the changes in students' educational activities in the transition to online learning. The results of this experience allow the management of higher education institutions to consolidate new emerging practices, use the created and developed learning materials and practices.

Petar Kolar, Filip Turčinović, Dario Bojanjac (2020) analyze the impact of the students receiving education online for the entire semester on their final grade. The analysis results presented in the paper show that the education transition from classrooms to World Wide Web was performed successfully. If the online lectures, created during the pandemic, were to be considered as the first iteration of creating a good online course, a strong foundation is laid for the set goal to be accomplished in the years to come.

Ankuran Dutta (2020) aims at exploring the kind of social media used to disseminate learning resources to the students, and the impact it crafting on their educational loss. Based on the analysis of qualitative coding, the findings were categorized under five major heads- impact of the lockdown, provision of online classes, pedagogy adopted in the teaching learning process, benefit and limitations of online classes.

Ritimoni Bordoloi, Prasenjit Das, Kandarpa Das (2021) find out the prospects and challenges of providing online/blended learning in a country like India, particularly during and in post-Covid-19 situations. before putting certain online/blended activities into practice, one must take into consideration the many

variables, including the target learners, their social, cultural and economic backgrounds, their age range, their access to technological infrastructure, the technology readiness on the part of the educational institutions

Pitambar Paudel (2021) investigated teachers' and learners' perspectives on online education in relation to its benefits, challenges and strategies during and after COVID-19 in higher education of Nepal. The results showed that the participants experienced online education beneficial primarily for promoting online research, connecting the practitioners to the global community and getting huge and authentic resource of knowledge though they have found time-management skills, more freedom to the teachers and learners, and reliable internet at workplace as the extreme challenges. The research also revealed time management skills, technological prepared and computer literate are the basic qualities for the practitioners who want to have online education.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

A research design is considered as the framework or plan for the study that guides as well as helps us in the data collection and analysis of data.

3.1.1 TYPES OF RESEARCH DESIGN

- **Experimental research design:** Experimental research design establishes a relationship between the cause and effect of a situation. It is a causal design where one observes the impact caused by the independent variable on the dependent variable.
- **Descriptive research design:** In a descriptive design, a researcher is solely interested in describing the situation or case under their research study. It is a theory-based design method which is created by gathering, analysing, and presenting collected data. This allows a researcher to provide insights into the why and how of research. Descriptive design helps others better understand the need for the research.
- **Correlational research design:** Correlational research is a non-experimental research design technique that helps researchers establish a relationship between two closely connected variables. This type of research requires two different groups. There is no assumption while evaluating a relationship between two different variables, and statistical analysis techniques calculate the relationship between them.
- **Diagnostic research design:** In diagnostic design, the researcher is looking to evaluate the underlying cause of a specific topic or phenomenon. This method helps one learn more about the factors that create troublesome situations.

3.2 SOURCES OF THIS DATA:

3.2.1 Primary Data

Primary data is collected from people by using structured questionnaire. It is a type of data that is collected by researchers directly from the main sources through interviews, surveys, experiments etc.,

3.2.1.1 Questionnaire

The questionnaire tried to capture the responses of the students from Satyabhama Institute of Science and Technology, to know their perception on online education.

3.2.1.2 Secondary Data

The secondary data refers to data collected by someone other than the user. Common sources of secondary data are journals, books and internet, Wikipedia and data that was originally collected for another research purpose.

3.3 STRUCTURE OF QUESTIONNAIRE

In this study, all the questions were open ended or close ended questions. Close ended questions provide respondents with a number of options from which they have to select. Open ended questions are questions where respondents can type their own answer instead of choosing the options given by the user.

3.4 SAMPLING TECHNIQUE

3.4.1 Convenience Sampling Technique

A convenience sampling method is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach. It is most commonly used sampling method as it is incredibly prompt, uncomplicated and economical.

3.5 SAMPLE SIZE:

Sample size is a count of the individual samples or observation in any statistical settings such as a scientific experiment or a public opinion survey. The sample size for this research study is 285, collected from Sathyabama Institute of Science and Technology, Chennai.

3.6 PERIOD OF STUDY:

This period of study is from January 2021 to March 2021 which is three months of study.

3.7 ANALYTICAL TOOLS

The analytical tools used for this study is SPSS. It is used to study the hypothesis, Chi-square and Anova test in SPSS.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

TABLE 4.1.1: Gender of the respondents

Gender	No. of Respondents	Percentage
Male	132	46.3
Female	153	53.7
Total	285	100

Source: Primary data

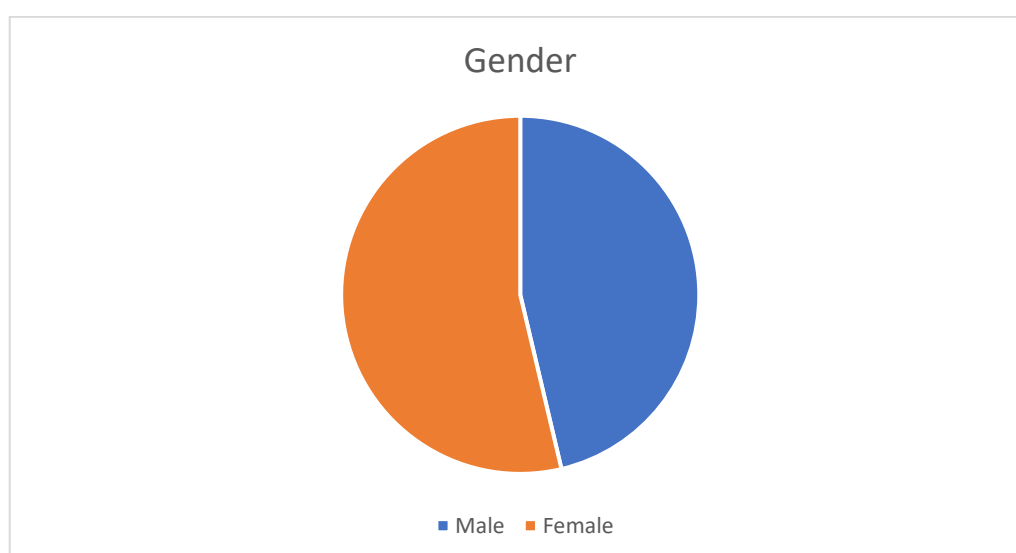


Chart 4.1.1: Gender of the respondents

INTERPRETATION

From the above table it is interpreted that the number of the male respondent is 46.3% and female respondent is 53.7%.

INFERENCE

Majority (53.7%) of the respondents are Female.

TABLE 4.1.2 Age of the respondents

Age	No of Respondents	Percentage
17 To 19	48	16.8
19-21	107	37.5
21-23	116	40.7
23 and above	14	4.9
Total	285	100

Source: Primary Data

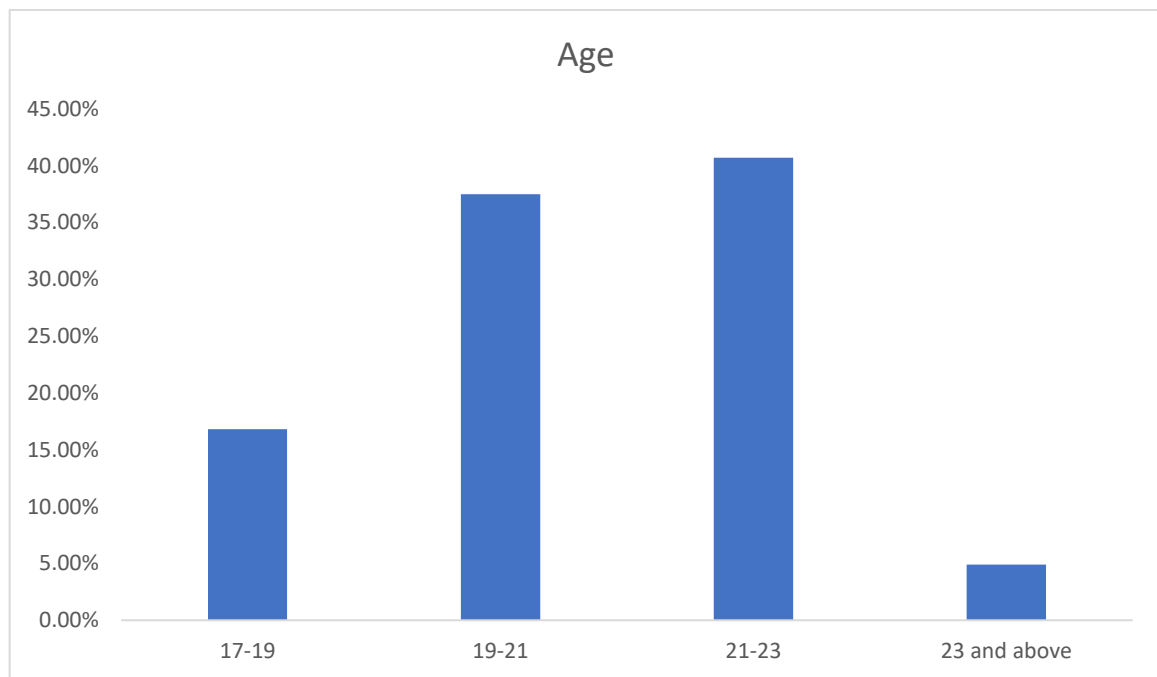


CHART 4.1.2: Age of the respondents

INTERPRETATION

From the above table it is interpreted that the age of respondents between 17-19 are 16.8%, 19-21 are 37.5%, 21-23 are 40.7%, 23 and above are 4.9%.

INFERENCE

Majority (40.7%) of the respondents fall in the age category of 21-23 years.

TABLE 4.1.3 Course

Course	No of Respondents	Percentage
UG	171	60
PG	114	40
Total	285	100

Source: Primary data

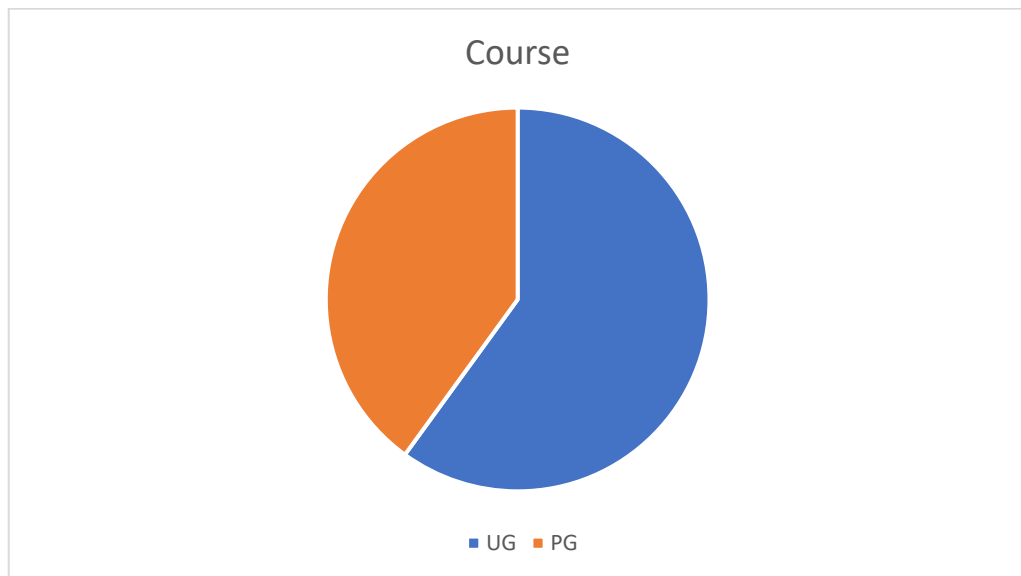


CHART 4.1.3 Course

INTERPRETATION

From the above table it is interpreted that the number of respondents from UG are 60% and from PG are 40%.

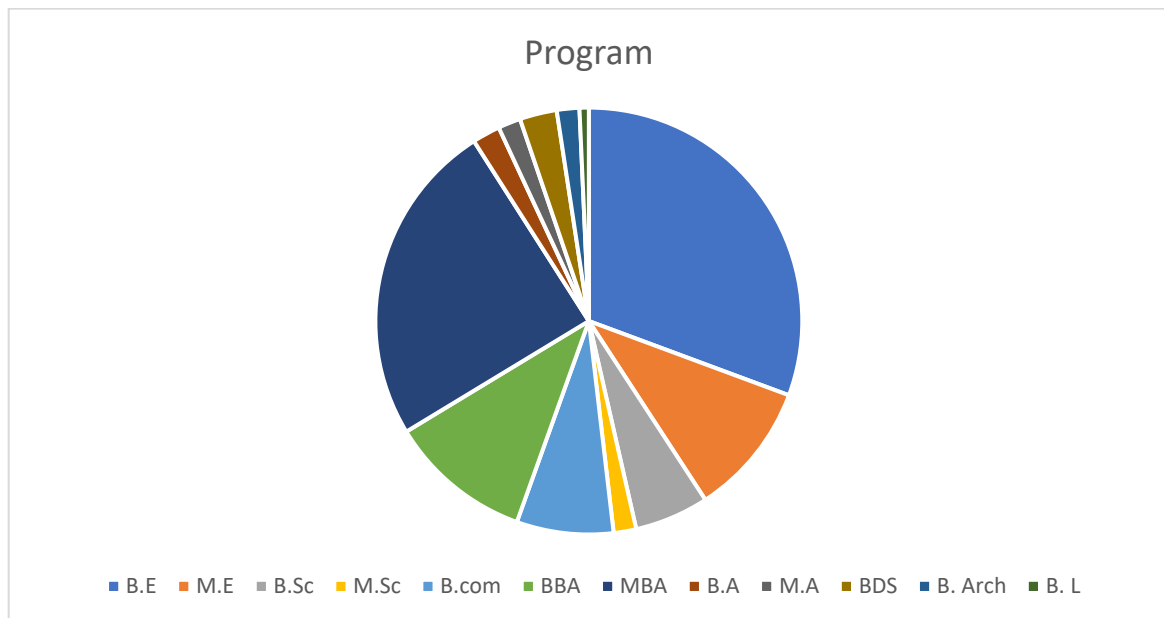
INFERENCE

Majority of the respondents 60% are in UG.

TABLE 4.1.4 Program

Program	No of Respondents	Percentage
B. E	87	30.5
M.E	29	10.1
B.Sc.	16	5.6
M.Sc.	5	1.7
B.com	21	7.3
BBA	31	10.8
MBA	70	24.5
B. A	6	2.1
M.A	5	1.7
BDS	8	2.8
B.Arch.	5	1.7
B. L	2	0.7
Total	285	100

Source: Primary Data

**CHART 4.1.4 Program**

INTERPRETATION

From the above table we can interpret that 30.5% students are pursuing B.E, 10.1% are pursuing M.E, 5.6% are pursuing B.Sc., 1.7% are pursuing M.Sc., 7.3% are pursuing B.com, 10.8% are pursuing BBA, 24.5% are pursuing MBA, 2.1% are pursuing BA, 1.7% are pursuing M.A, 2.85% are pursuing BDS, 1.75% are pursuing B.Arch. and 0.7% are pursuing B.L in Sathyabama Institute of Science and Technology.

INFERENCE

Majority of the respondents are pursuing B.E (30.5%) in Sathyabama Institute of Science and Technology.

Table:4.1.5 Academic year

Academic year	No of Respondents	Percentage
First year	53	18.6
Second year	131	46
Third year	64	22.5
Fourth year	30	10.5
Fifth year	7	2.5
Total	285	100

Source: Primary data

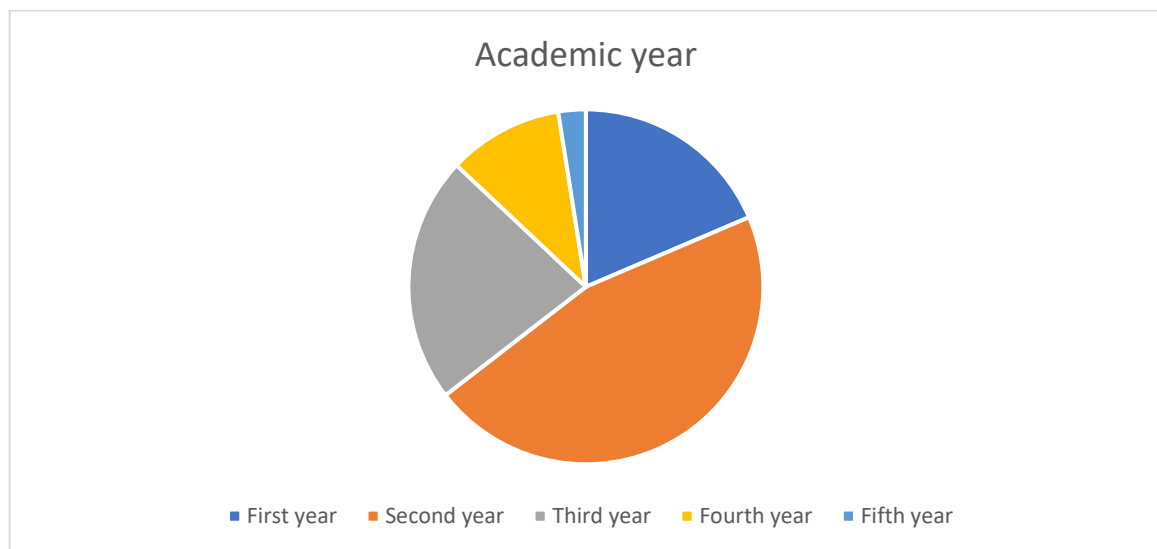


Chart 4.1.5 Academic year

INTERPRETATION

As shown in the table, 18.6% of the respondents are enrolled in first year, 46% of the respondents are in second year, 22.5% are in third year, 10.5% are in fourth year, 2.5% are in fifth year.

INFERENCE

Majority of the respondents (46%) are enrolled in second year.

TABLE 4.1.6 Studies affected due to COVID-19

Studies affected due to COVID-19	No of Respondents	Percentage
Greatly affected	71	24.9
Considerably affected	83	29.1
Moderately affected	63	22.1
Slightly affected	52	18.2
Not affected	16	5.6
Total	285	100

Source: Primary Data

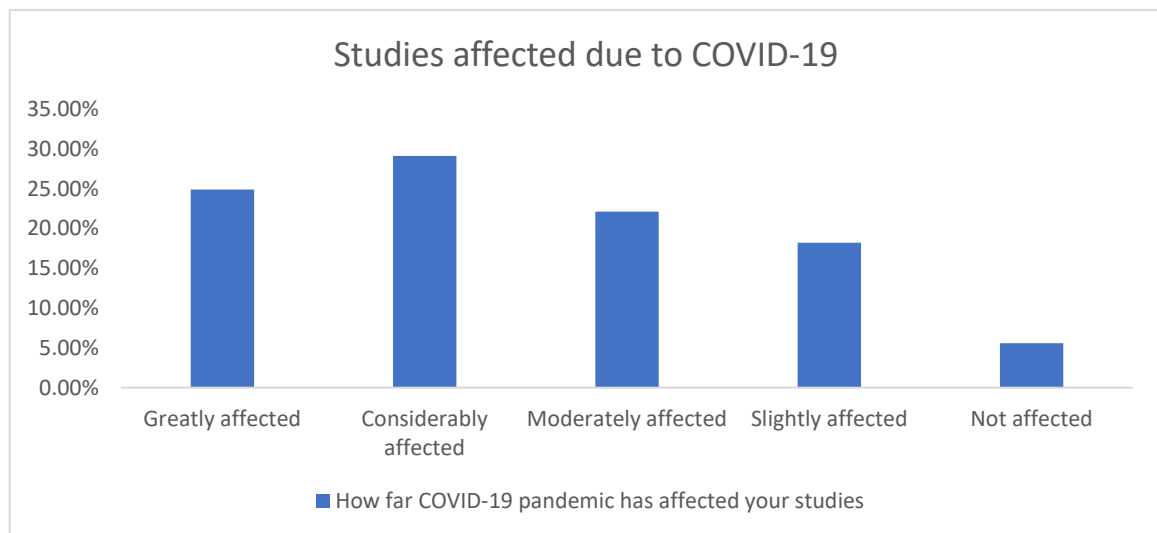


CHART 4.1.6 Studies affected due to COVID-19

INTERPRETATION

From the above table we can interpret that the 24.9% of the respondents says that their studies are greatly affected, 29.1% says they are considerably affected, 22.1% are moderately affected, 18.2% are slightly affected and 5.6% are not affected.

INFERENCE

Majority of the respondents (29.1%) says that their studies are considerably affected due to covid-19.

TABLE 4.1.7 Institution adopting online education mode to overcome pandemic

Institution adopting online education mode to overcome pandemic	No of Respondents	Percentage
Strongly agree	80	28.1
Agree	144	50.5
Neutral	54	18.9
Disagree	5	1.8
Strongly disagree	2	0.7
Total	285	100

Source: Primary Data

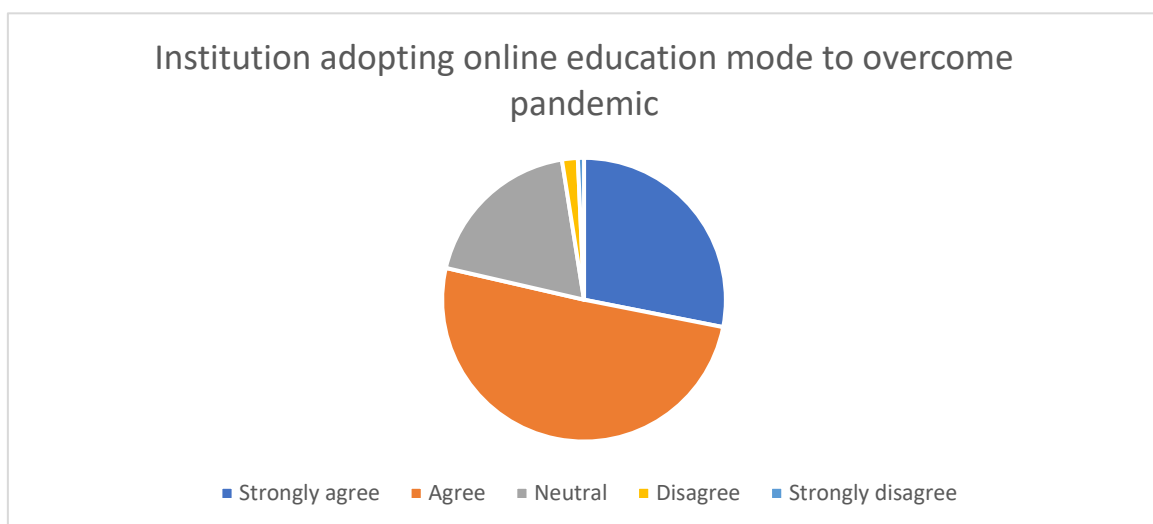


CHART 4.1.7 Institution adopting online education mode to overcome pandemic

INTERPRETATION

From the above table we can interpret that 28.1% of the respondents strongly agree, 50.5% agree, 18.9% are neutral, 1.8% disagree and 0.7% strongly disagree.

INFERENCE

Majority of the respondents (50.5%) agreed that their institution has full-fledged adopted online education mode to overcome pandemic.

TABLE 4.1.8 Electronic device used to study online during lockdown

Electronic device used to study online during lockdown	No of Respondents	Percentage
Laptop	194	68.1
PC	95	33.3
Smart Phone	219	76.8
Tablet	54	18.9
Total	285	100

Source: Primary Data

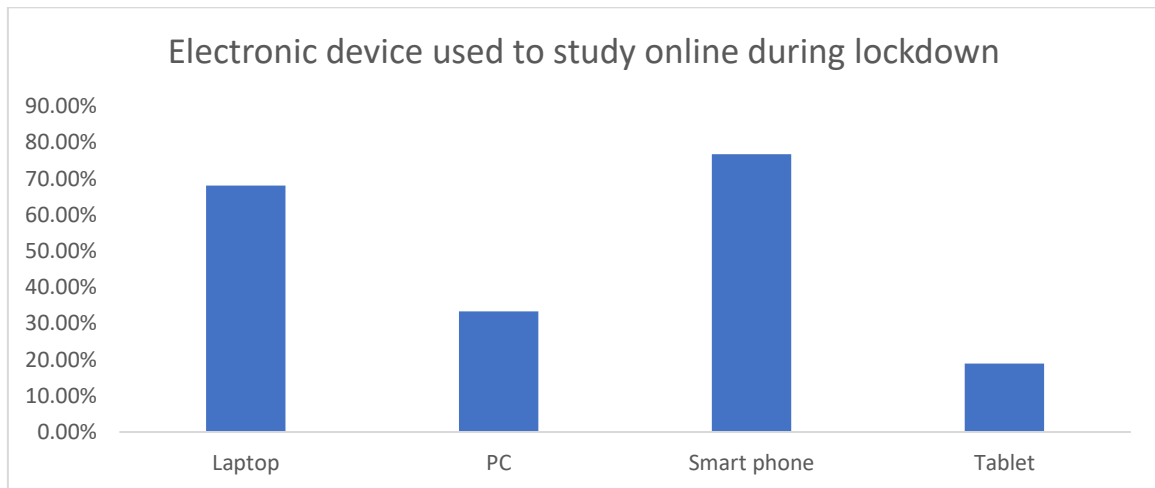


CHART 4.1.8 Electronic device used to study online during lockdown

INTERPRETATION

As shown in the above table, majority of the respondents use smart phone 76.8%, 68.1% of the respondents use laptop, 33.3% of the respondents use PC and 18.9% of the respondents use tablet.

INFERENCE

Majority of the respondents (76.8%) use/prefer smart phones to study online during lockdown.

TABLE 4.1.9 Hours spent in online learning during lockdown

Hours spent in online learning during lockdown	No of Respondents	Percentage
Less Than 2 Hours/Day	19	6.7
2-3 Hours/Day	126	44.2
4-6 Hours/Day	124	43.5
More Than 6hours/Day	16	5.6
Total	285	100

Source: Primary data

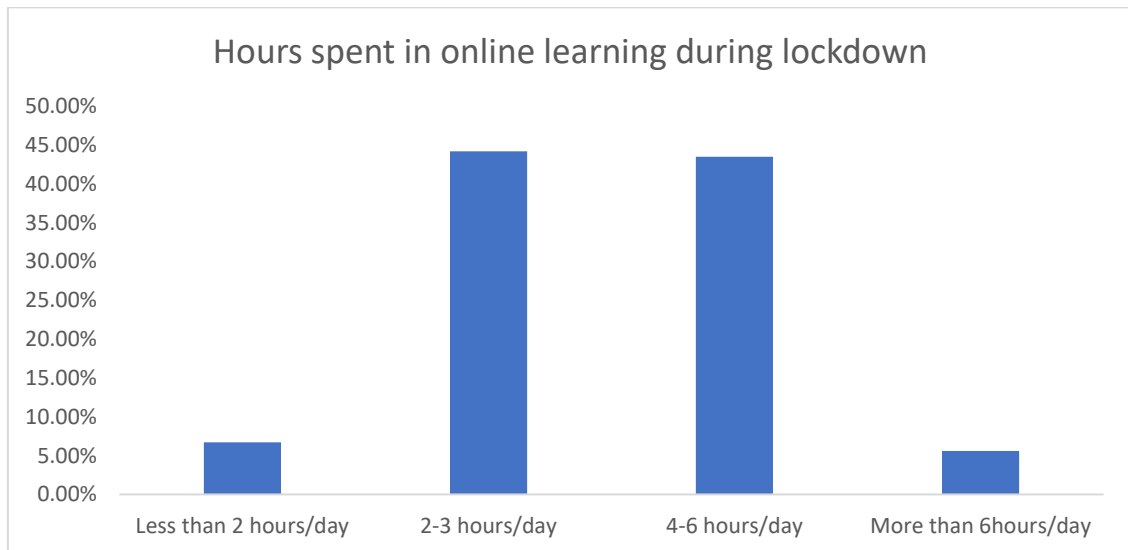


CHART 4.1.9 Hours spent in online learning during lockdown

INTERPRETATION

As we can see in the above table, 43.5% spend 4-6 hours per day in online learning during lockdown 44.2% spend 2-3 hours per day, 6.7% spend less than 2 hours per day and 5.6% spend more than 6 hours per day.

INFERENCE

Majority of respondents 44.2% spend 2-3 hours per day in online learning during lockdown.

Table 4.1.10 Virtual Learning Tools use/prefer for educational purposes

4.1.10.1 Online Classes

Online Classes	No of Respondents	Percentage
Always	139	48.8
Frequently	93	32.6
Sometimes	40	14
Rarely	11	3.9
Never	2	0.7
Total	285	100

Source: Primary Data

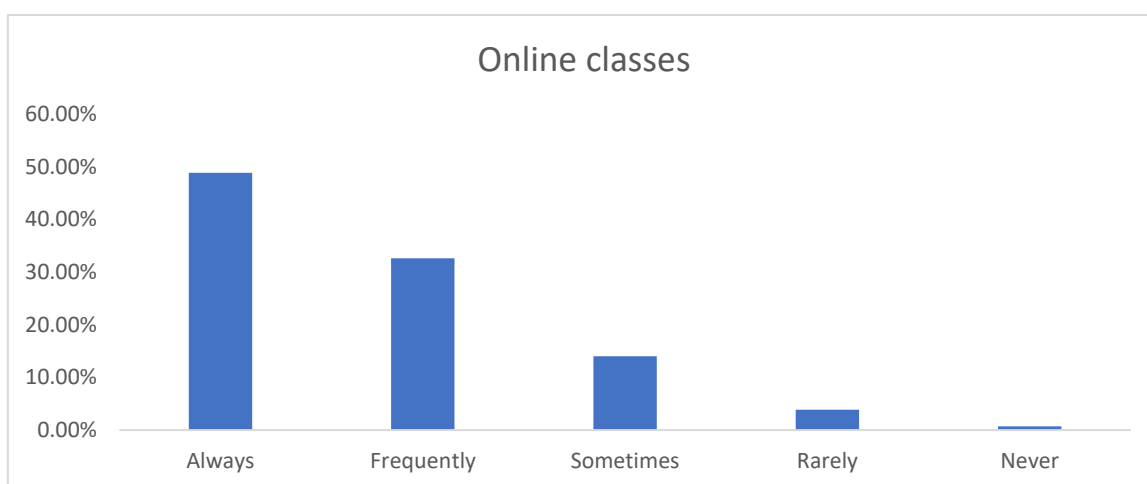


CHART: 4.1.10.1 Online Classes

INTERPRETATION

As shown in the above table, 48.8% of the respondents chose always as their option for using online classes for educational purposes, 32.6% use frequently, 14% use online classes sometimes, 3.9% use rarely and 0.7% of them never use online classes.

INFERENCE

Majority of the respondents 48.8% chose Always as their option for using online classes for educational purposes.

4.1.10.2 Educational Websites

Educational Websites	No of Respondents	Percentage
Always	22	7.7
Frequently	114	40
Sometimes	85	29.8
Rarely	36	12.6
Never	28	9.2
Total	285	100

Source: Primary data

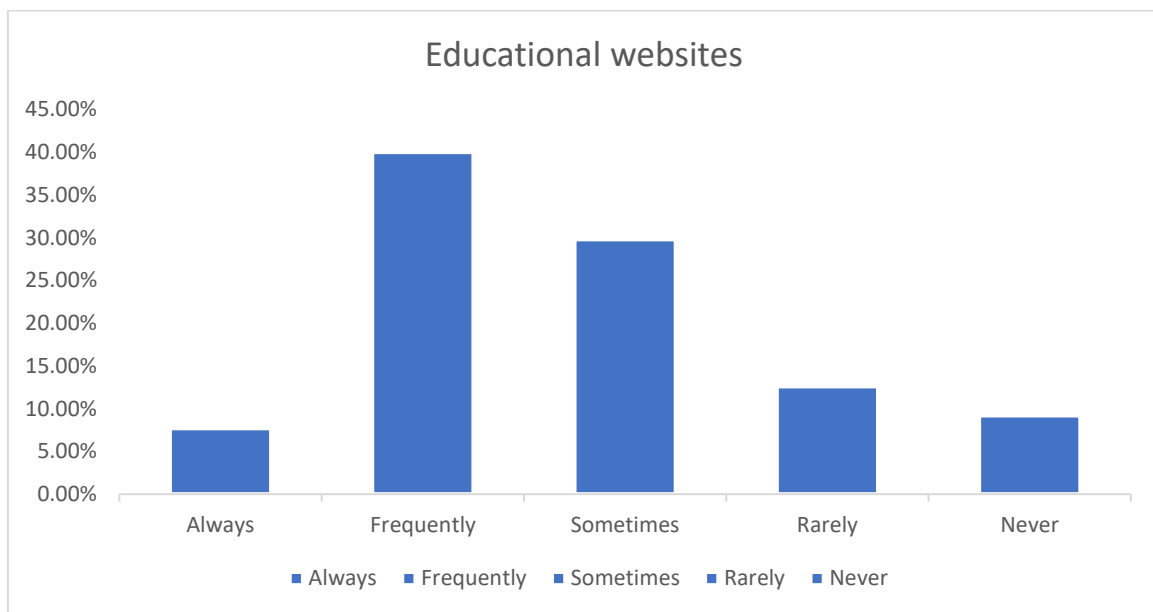


CHART: 4.1.10.2 Educational Websites

INTERPRETATION

As shown in the above table, 7.7% of the respondents chose always as their option for using educational websites for educational purposes, 40% of the respondents use frequently, 29.8% of the respondents use sometimes, 12.6% of the respondents use rarely and 9.2% of the respondents never use educational websites.

INFERENCE

Majority of the respondents 40% chose frequently as their option for using educational websites for educational purposes.

4.1.10.3 Youtube Videos

Youtube Videos	No of Respondents	Percentage
Always	37	12.9
Frequently	89	31.2
Sometimes	94	32.9
Rarely	31	10.8
Never	34	11.9
Total	285	100

Source: Primary data

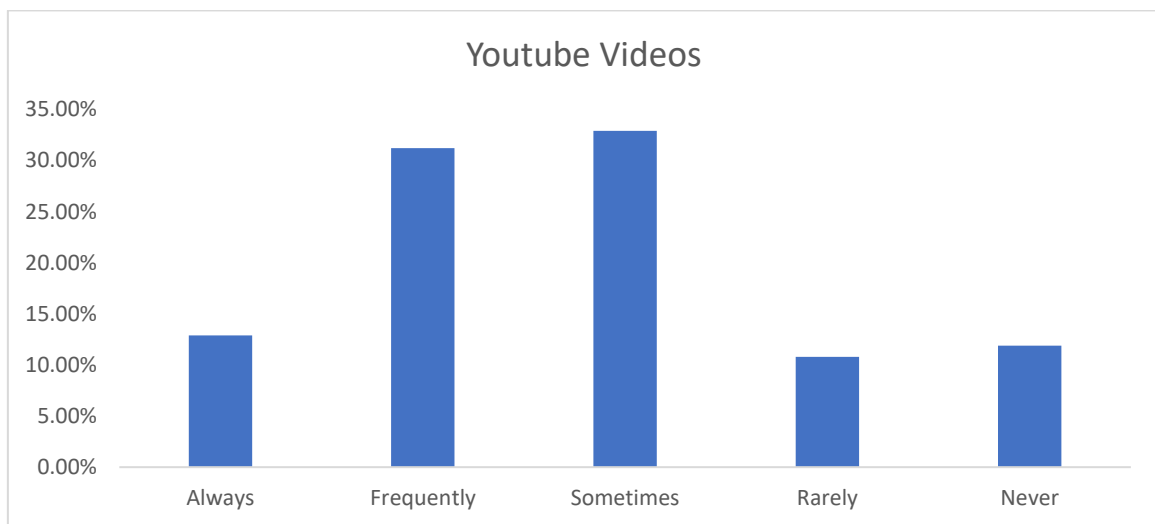


CHART: 4.1.10.3 Youtube Videos

INTERPRETATION

As shown in the above table, 12.9% of the respondents chose always as their option for using Youtube Videos for educational purposes, 31.2% use frequently, 32.9% use sometimes, 10.8% use rarely and 11.9% of them never use Youtube Videos.

INFERENCE

Majority of the respondents 32.9% chose sometimes as their option for using Youtube Videos for educational purposes.

4.1.10.4 Ebooks

Ebooks	No of Respondents	Percentage
Always	18	6.3
Frequently	65	22.8
Sometimes	107	37.5
Rarely	54	18.9
Never	41	14.3
Total	285	100

Source: Primary data

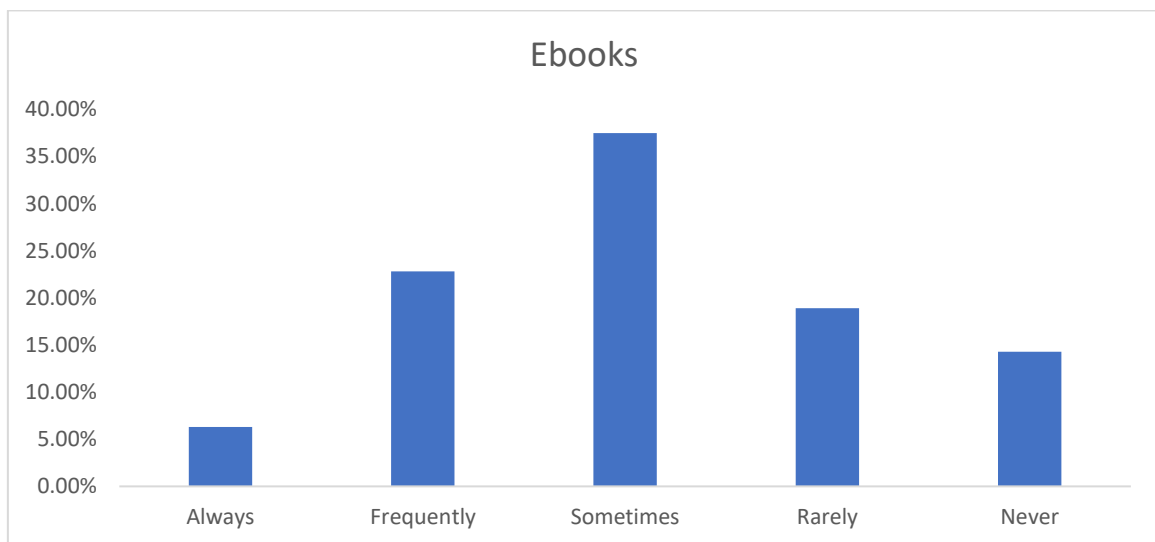


CHART: 4.1.10.4 eBooks

INTERPRETATION

As shown in the above table, 6.3% of the respondents chose always as their option for using Ebooks for educational purposes, 22.8% use frequently, 37.5% use sometimes, 18.9% use rarely and 14.3% of them never use Ebooks.

INFERENCE

Majority of the respondents 37.5% chose sometimes as their option for using Ebooks for educational purposes.

4.1.10.5 Pep talks

Pep talks	No of Respondents	Percentage
Always	12	4.2
Frequently	53	18.5
Sometimes	91	31.9
Rarely	46	16.1
Never	83	29.1
Total	285	100

Source: Primary data

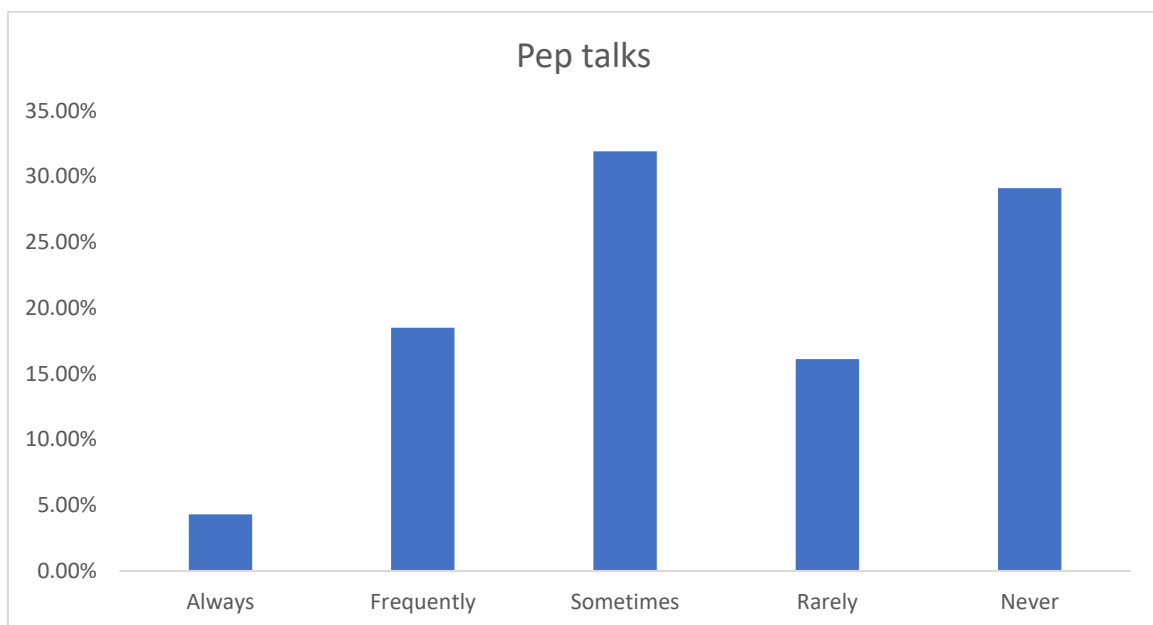


CHART: 4.1.10.5 Pep talks

INTERPRETATION

As shown in the above table, 4.2% of the respondents chose always as their option for using Peptalks for educational purposes, 18.5% use frequently, 31.9% use sometimes, 16.1% use rarely and 29.1% of them never use Peptalks.

INFERENCE

Majority of the respondents 31.9% chose sometimes as their option for using Peptalks for educational purposes.

4.1.10.6 PDF notes

PDF notes	No of Respondents	Percentage
Always	91	31.9
Frequently	127	44.5
Sometimes	49	17.1
Rarely	16	5.6
Never	2	0.7
Total	285	100

Source: Primary data

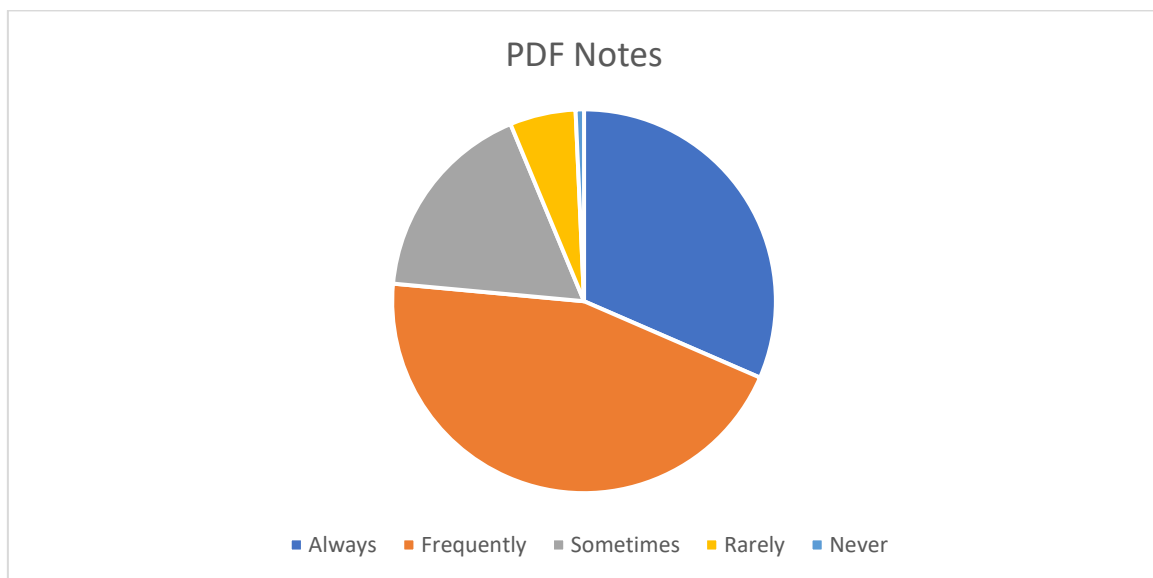


CHART: 4.1.10.6 PDF notes

INTERPRETATION

As shown in the above table, 31.2% of the respondents chose always as their option for using PDF Notes for educational purposes, 44.5% use frequently, 17.1% use sometimes, 5.6% use rarely and 0.7% of them never use PDF Notes.

INFERENCE

Majority of the respondents 44.5% chose frequently as their option for using PDF Notes for educational purposes.

TABLE 4.1.11 Online learning tool used during lockdown

Online learning tool used during lockdown	No of Respondents	Percentage
Zoom	227	79.6
Skype	4	1.4
Google Meet	49	17.2
Team Viewer	1	0.4
Go to Meeting	3	1.1
Zoho	-	-
Microsoft Teams	1	0.4
Total	285	100

Source: Primary data

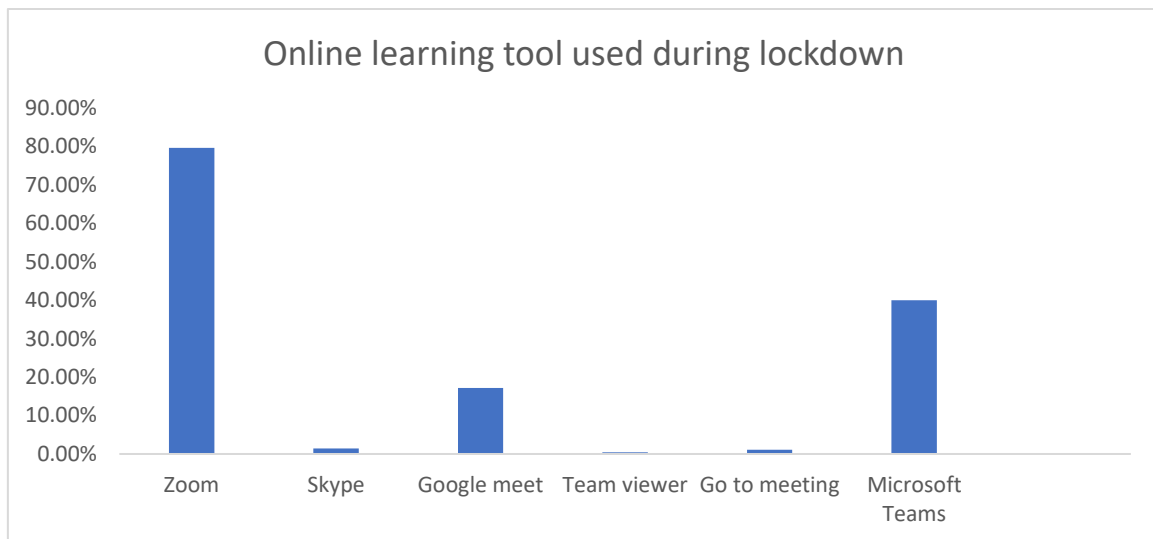


CHART: 4.1.11 Online learning tool used during lockdown

INTERPRETATION

As shown in the above table, 79.6% of the respondents chose zoom as their option for online learning tool during lockdown, 1.4% use skype, 17.2% use google meet, 0.4% use team viewer, 1.1% use go to meeting and 0.4% use Microsoft teams.

INFERENCE

Majority of the respondents 79.6% chose zoom as their option for online learning tool during lockdown.

Table 4.1.12 Hours spent online in a day apart from online classes

Hours spent online in a day apart from online classes	No of Respondents	Percentage
Less than an hour	18	6.3
2-3 hours	81	28.4
4-5 hours	94	33
Above 5 hours	92	32.3
Total	285	100

Source: Primary data

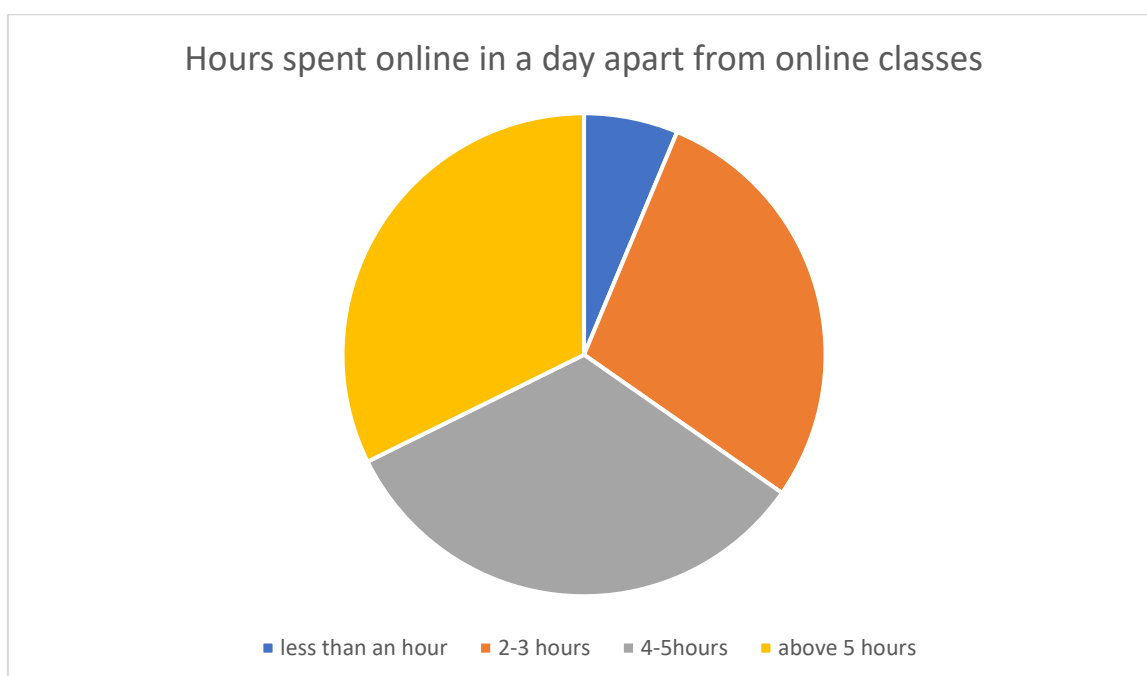


CHART 4.1.12 Hours spent online in a day apart from online classes

INTERPRETATION

As we can see in the above table, 6.3% of the respondents spend less than an hour , 28.4% of the respondents spend 2-3 hours , 33% of the respondents spend 4-5 hours and 32.3% of the respondents spend more than 5 hours.

INFERENCE

Majority of 33% spend 4-5 hours in a day apart from online classes.

Table 4.1.13 Complete studies on time via online mode

Complete studies on time via online mode	No of Respondents	Percentage
Strongly agree	30	10.5
Agree	112	39.3
Neutral	73	25.6
Disagree	37	13
Strongly disagree	33	11.6
Total	285	100

Source: Primary data

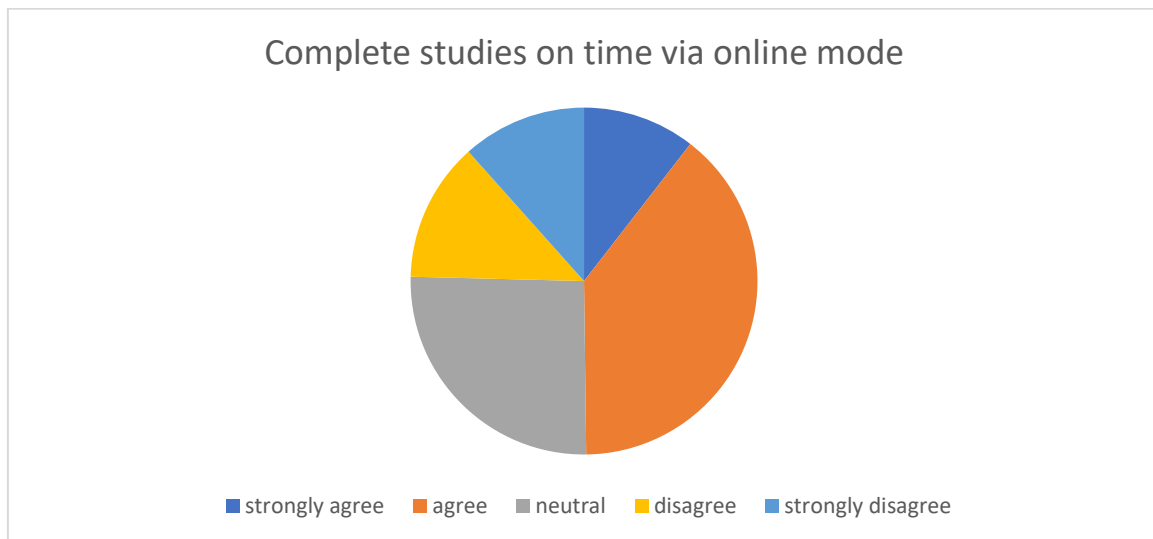


Chart 4.1.13 Complete studies on time via online mode

Interpretation

From the above table we can interpret that 10.5% of the respondents strongly agree, 39.3% of the respondents agree, 25.6% of the respondents are neutral, 13% of the respondents disagree and 11.6% of the respondents strongly disagree.

Inference

Majority of the respondents (39.3%) agree that they are able to complete studies on time via online mode.

Table 4.1.14 Internet connection to attend the online classes (1 being the bad connection and 5 being good connection)

Internet connection to attend the online classes	No of respondents	Percentage
1	3	1.1
2	19	6.7
3	67	23.5
4	97	34
5	99	34.7
Total	285	100

Source: Primary data

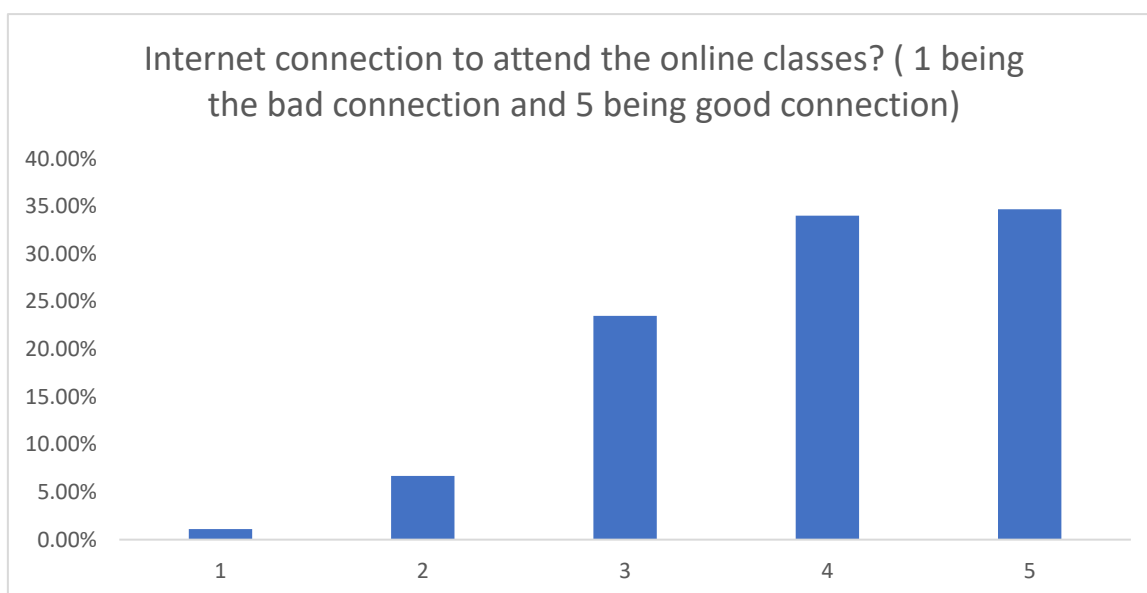


Chart 4.1.14 Internet connection to attend the online classes

INTERPRETATION

It is interpreted that of the respondents 1.1% have very poor connection, 6.7% of the respondents have poor connection, 23.5% of the respondents have average connection, 34% of the respondents have good connection and 34.7% of the respondents have excellent connection.

INFERENCE

Majority of the respondents 34.7% have excellent connection.

Table 4.1.15 Payment of bills for a regular internet connection for studying via online

Payment of bills for a regular internet connection for studying via online	No of respondents	Percentage
Strongly agree	92	32.3
Agree	110	38.6
Neutral	61	21.4
Disagree	18	6.3
Strongly disagree	4	1.4
Total	285	100

Source: Primary data

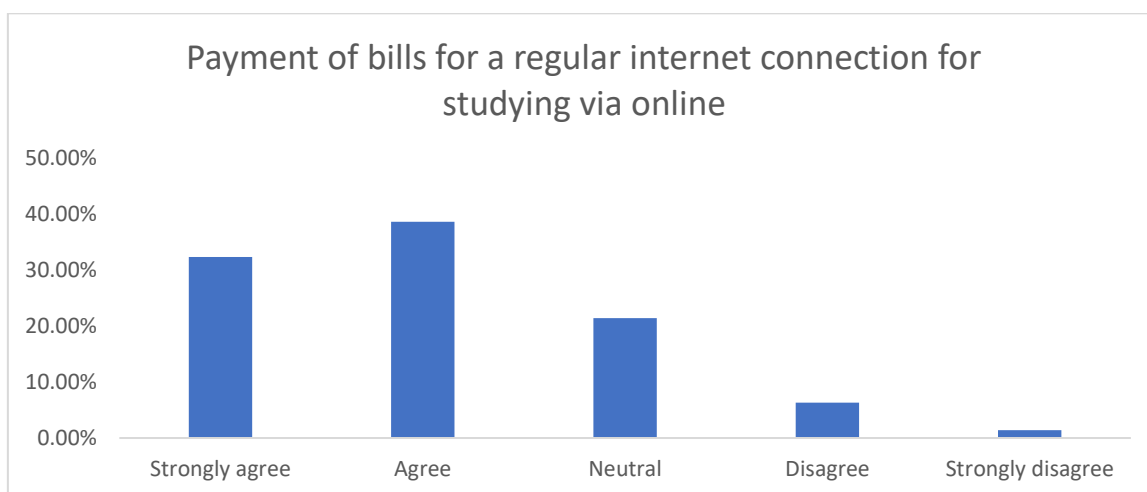


Chart 4.1.15 Payment of bills for a regular internet connection for studying via online

Interpretation

From the above table we can interpret that 32.3% of the respondents strongly agree, 38.6% of the respondents agree, 21.4% of the respondents are neutral, 6.3% of the respondents disagree and 1.4% of the respondents strongly disagree.

Inference

Majority of the respondents (38.6%) agree that they are able to pay your bills for a regular internet connection for studying via online.

Table 4.1.16 Money spent for the internet connection for a month

Money spent for the internet connection for month	No of respondents	Percentage
Less than Rs.200	7	2.5
Rs.200 – Rs.400	39	13.7
Rs400 – Rs.600	95	33.3
Rs.600 and above	144	50.5
Total	285	100

Source: Primary data

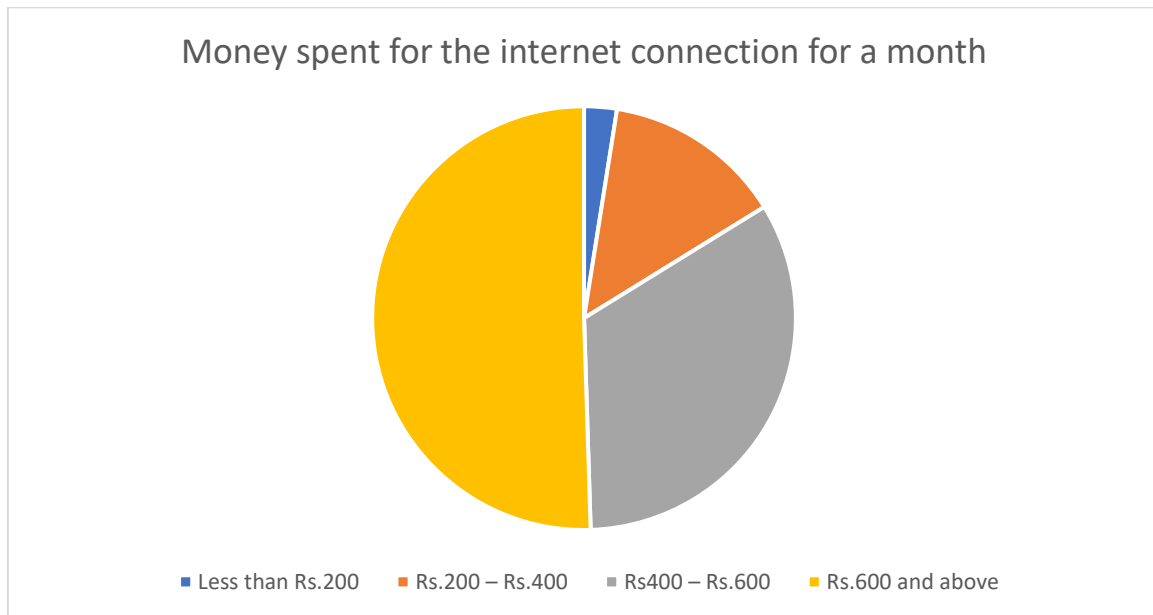


Chart: 4.1.16 Money spent for the internet connection for a month

Interpretation

From the above table we can interpret that 2.5% of the respondents pay less than rs.200, 13.7% of the respondents pay between rs.200 – rs.400, 33.3% of the respondents pay rs.400 – rs.rs.600 and 50.5% of the respondents pay above rs.600 for their internet connection monthly.

Inference

Majority of the respondents (50.5%) pay above rs.600 for their internet connection monthly

Table 4.1.17 Internet connection often used for online classes

Internet connection often used for online classes	No. Of respondents	Percentage
Broadband connection	70	24.6
WIFI	214	75.1
Mobile data	163	57.2
Total	285	100

Source: Primary Data

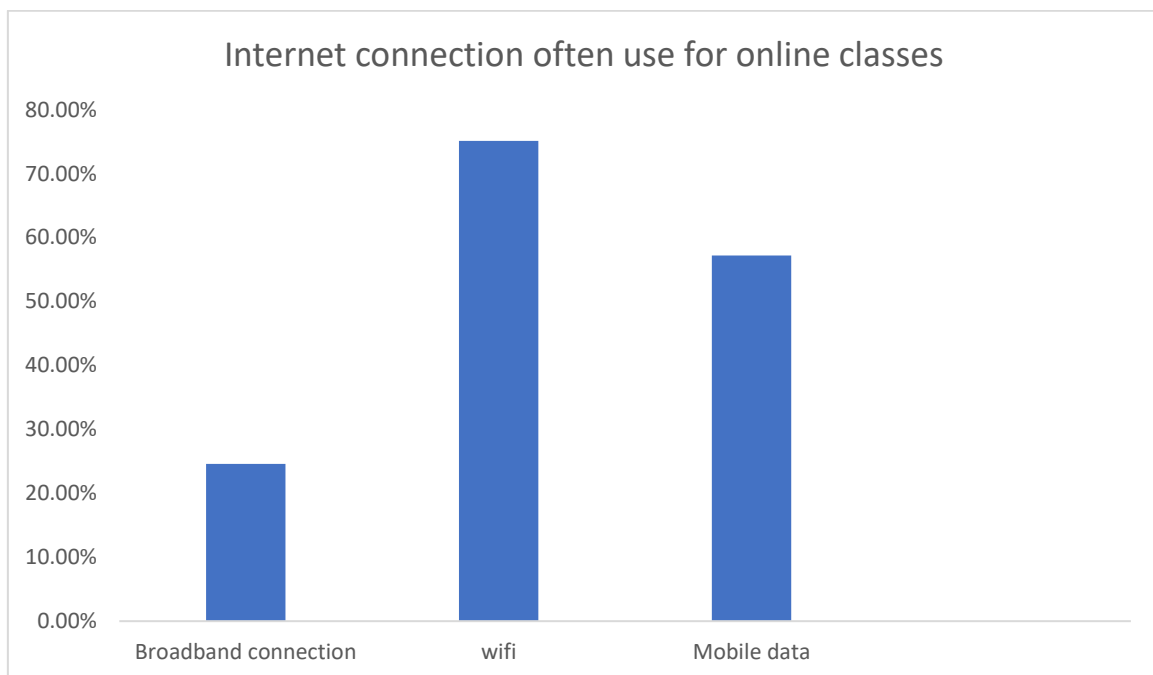


Chart: 4.1.17 Internet connection often used for online classes

INTERPRETATION

As shown, 24.6% of the respondents use broadband connection, 75.1% of the respondents use WIFI and 57.2% of the respondents use mobile data.

INFERENCE

Majority of the respondents 75.1% use wifi for online classes.

Table 4.1.18 Non-accessibility of the required electronic devices and network issues faced

Non-accessibility of the required electronic devices and network issues faced	No. of respondents	Percentage
Always	11	3.9
Frequently	57	20
Sometimes	73	25.6
Rarely	96	33.7
Never	48	16.8
Total	285	100

Source: Primary Data

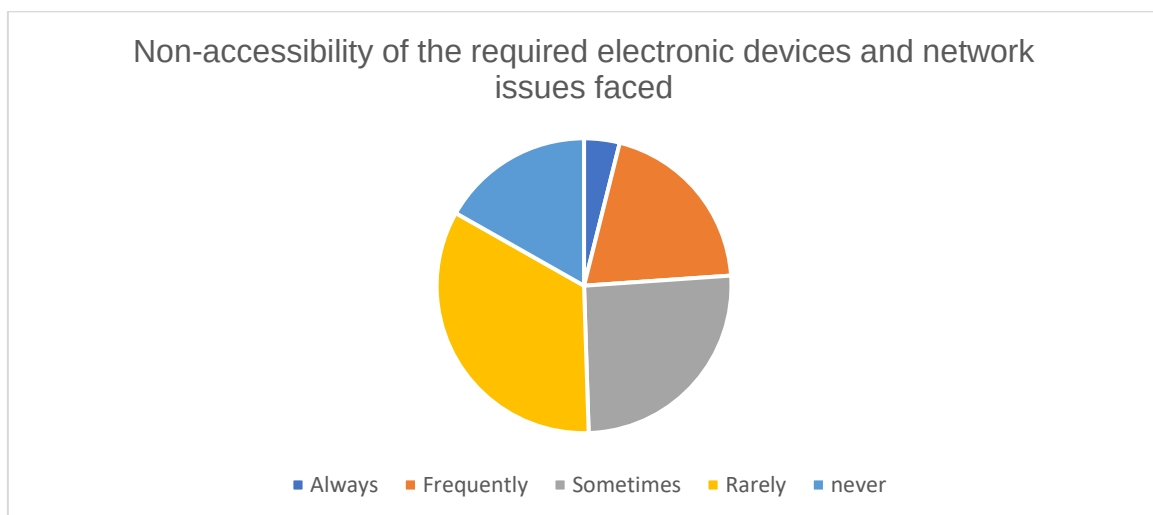


CHART:4.1.18 Non-accessibility of the required electronic devices and network issues faced

INTERPRETATION

As shown in the above table, 3.9% of the respondents chose always, 20% of the respondents chose frequently, 25.6% of the respondents chose sometimes, 33.7% of the respondents chose rarely and 16.8% of the respondents chose never.

INFERENCE

Majority of the respondents (33.7%) chose rarely.

Table 4.1.19 Rating the usefulness of classes via online mode

Rating the usefulness of classes via online mode	No. of respondents	Percentage
Excellent	36	12.6
Good	135	47.4
Average	92	32.3
Bad	17	6
Very bad	4	1.4
Very good	1	0.4
Total	285	100

Source: Primary Data

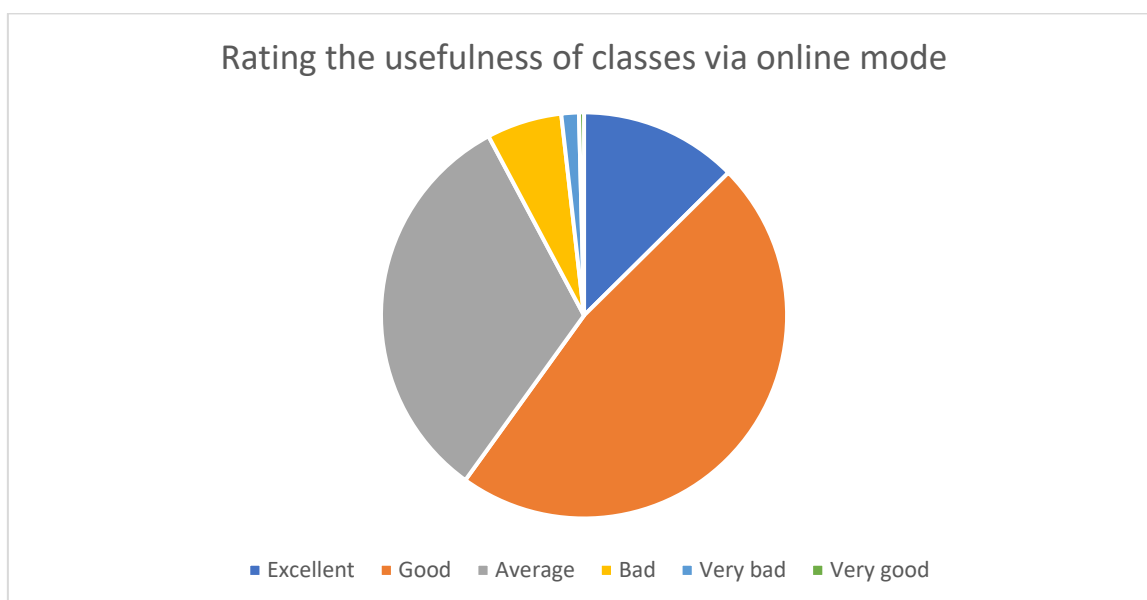


CHART:4.1.19 Rating the usefulness of classes via online mode

INTERPRETATION

It is interpreted that 12.6% of the respondents have found online classes useful, 47.4% of the respondents found it good, 32.3% of the respondents found it average, 6% of the respondents found it bad, 1.4% of the respondents found it very bad and 0.4% of the respondents found it very good.

INFERENCE

Majority of the respondents 47.4% found online classes good and useful.

Table:4.1.20 Online classes have high quality learning without face to face interactions

Online classes have high quality learning without face to face interactions	No. Of respondents	Percentage
Strongly agree	20	7
Agree	47	16.5
Neutral	92	32.3
Disagree	103	36.1
Strongly disagree	23	8.1
Total	285	100

Source: Primary Data

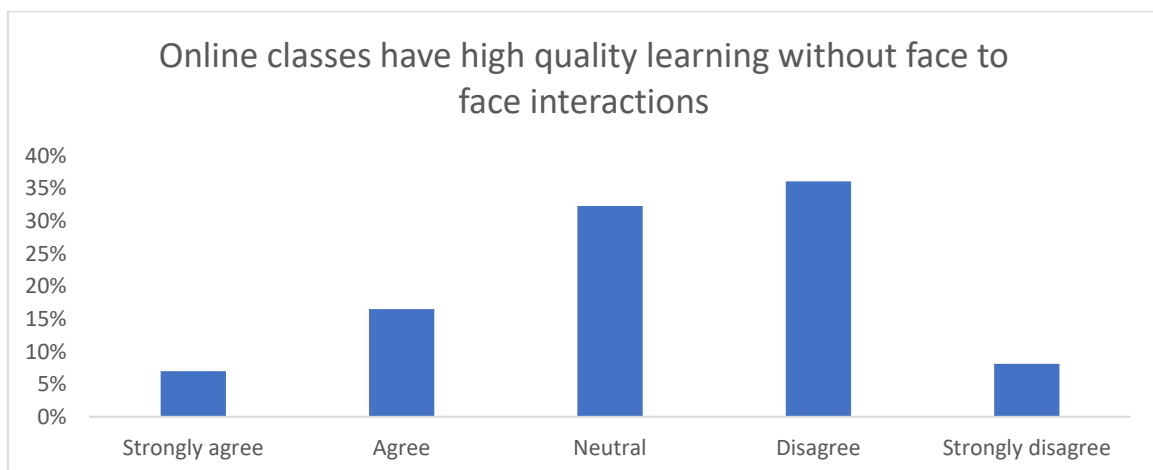


CHART: 4.1.20 Online classes have high quality learning without face to face interactions

INTERPRETATION

It is interpreted that 7% of the respondents strongly agree in online classes have high quality learning without face to face interaction, 16.5% of the respondents agree, 32.3% of the respondents neutral, 36.1% of the respondents disagree and 8.1% of the respondents strongly disagree.

INFERENCE

Majority of the respondents 36.1% disagree.

Table:4.1.21 Development of skills by attending various special online lectures

Development of skills by attending various special online lectures	No. Of respondents	Percentage
Very good	42	14.7
Good	129	45.3
Neutral	91	31.9
Bad	19	6.7
Very bad	4	1.4
Total	285	100

Source: Primary Data

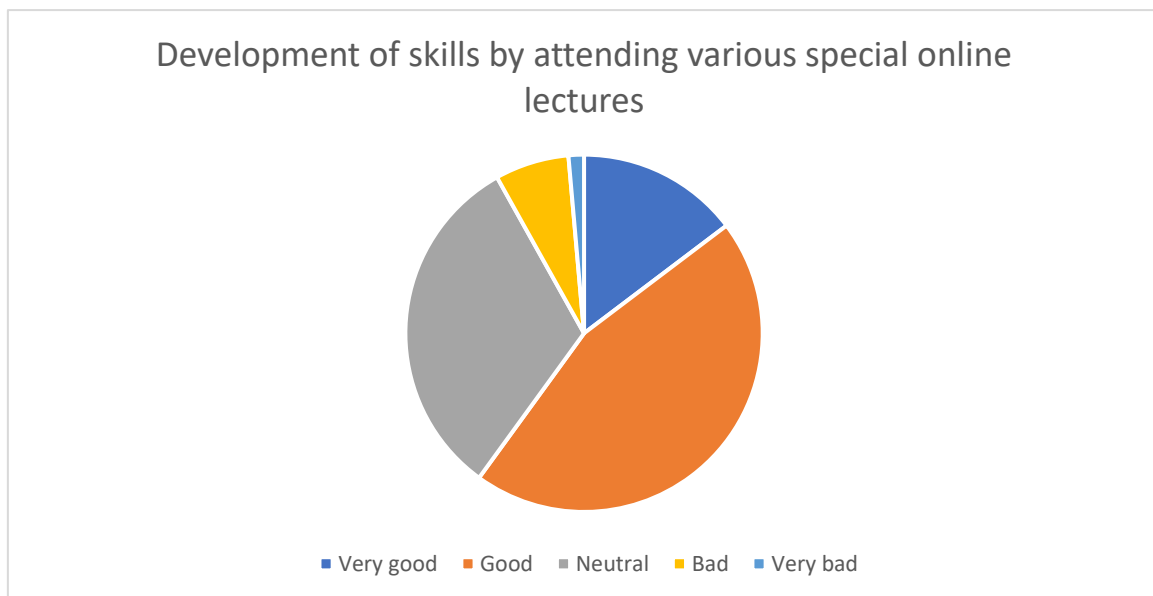


CHART: 4.1.21 Development of skills by attending various special online lectures

INTERPRETATION

It is interpreted that 14.7% of the respondents have found it very good ,45.3% of the respondents found it good, 31.9% of the respondents found it neutral ,6.7% of the respondents found it bad,1.4% of the respondents found it very bad.

INFERENCE

Majority of the respondents 45.3% found it very good.

Table:4.1.22 Online lectures improve knowledge on versatile topics

Online lectures improve knowledge on versatile topics	No. Of respondents	Percentage
Strongly agree	31	10.9
Agree	134	47
Neutral	84	29.5
Disagree	34	11.9
Strongly disagree	2	0.7
Total	285	100

Source: Primary Data

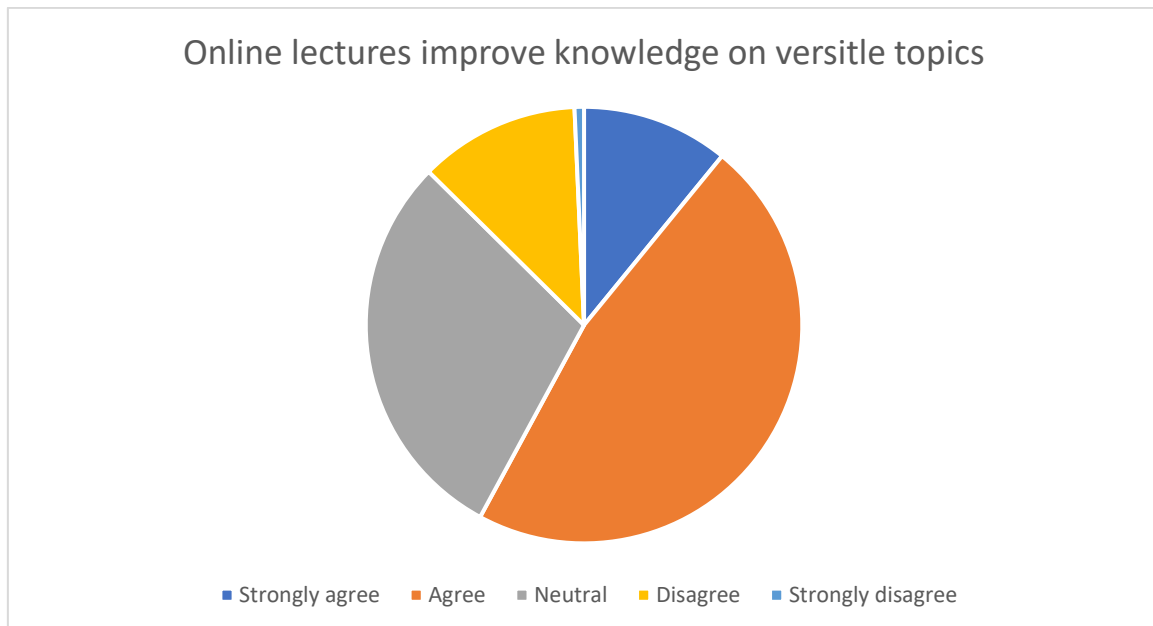


Chart 4.1.22 Online lectures improve knowledge on versatile topics

INTERPRETATION

From the above table we can interpret that 10.9% of the respondents strongly agree, 47% of the respondents agree, 29.5% of the respondents are neutral, 11.9% of the respondents disagree and 0.7% of the respondents strongly disagree.

INFERENCE

Majority of the respondents (47%) agree that they are able to online lectures improve your knowledge on versatile topics.

Table:4.1.23 Online platforms are able to connect students to industry experts

Online platforms are able to connect students to industry experts	No of respondents	Percentage
Strongly agree	40	14
Agree	124	43.5
Neutral	81	28.4
Disagree	37	13
Strongly disagree	3	1.1
Total	285	100

Source: Primary data

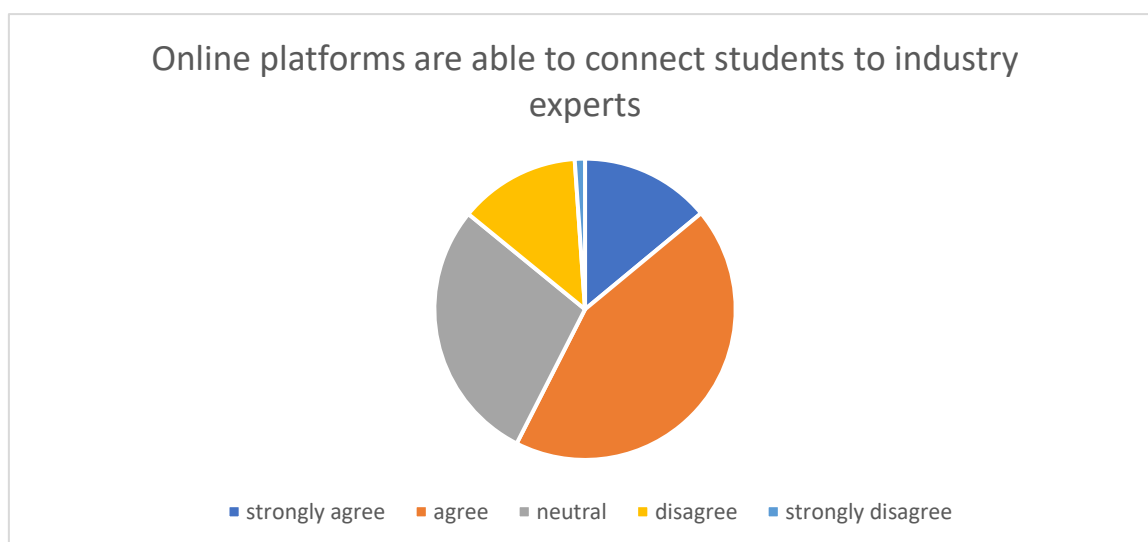


Chart 4.1.23 Online platforms are able to connect students to industry experts

INTERPRETATION

From the above table we can interpret that 14% of the respondents strongly agree, 44% of the respondents agree, 28% of the respondents are neutral, 13% of the respondents disagree and 1% of the respondents strongly disagree.

INFERENCE

Majority of the respondents (44%) agree that they are online platforms are able to connect them to industry experts.

Table:4.1.24 Rating online education during COVID-19 pandemic

Rating online education during COVID-19 pandemic	No. Of respondents	Percentage
Excellent	32	11.2
Good	139	48.8
Average	85	29.8
Bad	21	7.4
Very bad	8	2.8
Total	285	100

Source: Primary Data

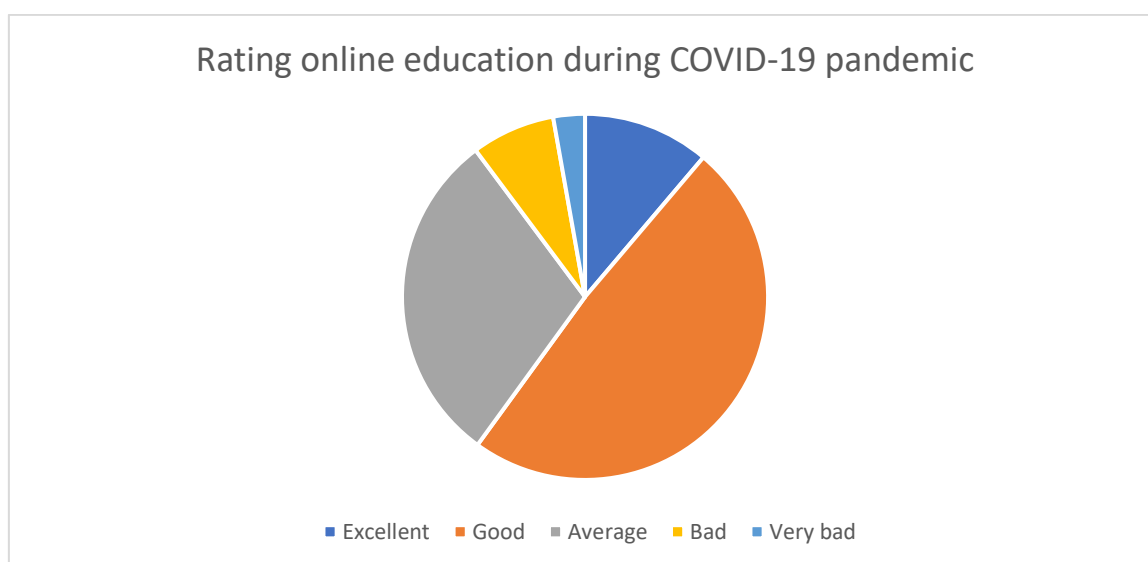


CHART: 4.1.24 Rating online education during COVID-19 pandemic

INTERPRETATION

As shown in the table 11.2% of the respondents gave excellent as rating for online education during covid-19, 48.8% of the respondents rated good, 29.8% of the respondents rated average, 7.4% of the respondents rated bad and 2.8% of the respondents rated it as very bad.

INFERENCE

Majority of the respondents 48.8% gave good as their rating for online education during covid-19.

Table:4.1.25 Practical difficulties faced during regular online classes

Practical difficulties faced during regular online classes	Always	Frequently	Sometimes	Rarely	Never	No of respondents
Internet connectivity	31	38	78	82	56	285
Payment issues	17	37	83	88	58	285
Privacy at home is not available	35	47	75	89	37	285
Not able to concentrate	35	65	89	74	20	285
Time management	32	60	91	83	17	285
Lack of in person interaction	63	74	79	56	11	285
Total						285

Source: Primary Data

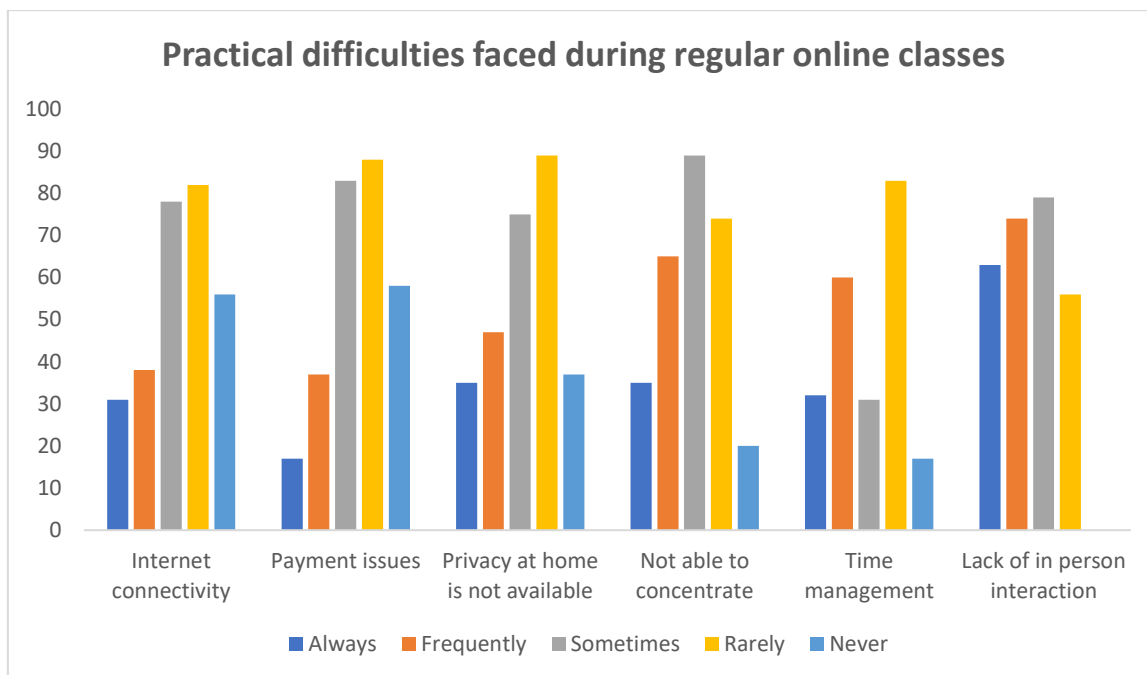


CHART:4.1.25 Practical difficulties faced during regular online classes

INTERPRETATION

Internet connectivity

As shown in the table, 31 (10.8%) respondents faced internet connectivity difficulties every time they attend online classes, 38 (13.3%) respondents said frequently, 78 (27.3%) said sometimes, 82 (28.7%) respondents selected rarely and 56 (19.6%) of them said never.

Payment issues

17 (5.9%) respondents had payment issues every time they attended online classes, 37 (12.9%) respondents said frequently, 83 (29.1%) said sometimes, 88 (30.8%) respondents selected rarely and 58 (20.3%) of them said never.

Privacy at home

35 (12.2%) respondents were having privacy at home every time they attended online classes, 47 (16.4%) respondents said frequently, 75 (26.3%) said sometimes, 89 (31.2%) respondents selected rarely and 37 (12.9%) of them said never.

Not able to concentrate

35 (12.2%) respondents were not able to concentrate every time they attended online classes, 65 (22.8%) respondents said frequently, 89 (31.2%) said sometimes, 74 (24.9) respondents selected rarely and 20 (7.01%) of them said never.

Time management

32 (11.2%) respondents faced time management difficulties every time they attended online classes, 60 (21%) respondents said frequently, 91 (31.5%) said sometimes, 83 (29.1%) respondents selected rarely and 17 (5.9%) of them said never.

Lack of in person interaction

63 (22.1%) respondents felt lack of in person interaction difficulties every time they attended online classes, 74 (25.9%) respondents said frequently, 79 (27.7%) said sometimes, 56 (19.6%) respondents selected rarely and 11 (3.8%) of them said never.

INFERENCE

Majority of the respondents (28.7%) rarely faced any internet connectivity problem while attending online classes.

Majority of the respondents (30.8%) rarely faced any payment issues while attending online classes.

Majority of the respondents (31.2%) rarely faced any problem in privacy at home while attending online classes.

Majority of the respondents (31.2%) were not able to concentrate while attending online classes sometimes.

Majority of the respondents (31.5%) were not able to manage time while attending online classes sometimes.

Majority of the respondents (27.7%) faced lack of in person interaction sometimes while attending online classes.

Table : 4.1.26 Recommendation of online education to friends to develop knowledge and skills

Recommending online education to friends to develop knowledge and skills	No. Of respondents	Percentage
Highly recommend	33	11.6
Recommend	202	70.9
Will not recommend	50	17.5
Total	285	100

Source : Primary Data



CHART:4.1.26 Recommendation of online education to friends to develop knowledge and skills

INTERPRETATION

As shown in the table, 11.6% of the respondents highly recommend online education to their friends to develop their knowledge, 70.9% of the respondents recommend and 17.5% of the respondents do not recommend online classes.

INFERENCE

Majority of the respondents 70.9% recommend online education to their friends to develop their knowledge.

Table: 4.1.27 Rank the following according to preference for online education

Rank the following according to preference for online education	First choice	Second choice	Third choice	Fourth choice	Fifth choice	Sixth choice	No of respondents
Zoom	210	35	21	23	22	16	285
Skype	14	167	39	28	16	16	285
Google meet	47	48	166	12	8	10	285
Team viewer	6	25	32	180	22	18	285
Go to meetings	2	9	19	24	185	27	285
Zoho	5	1	21	18	32	198	285
Total							285

Source: Primary Data

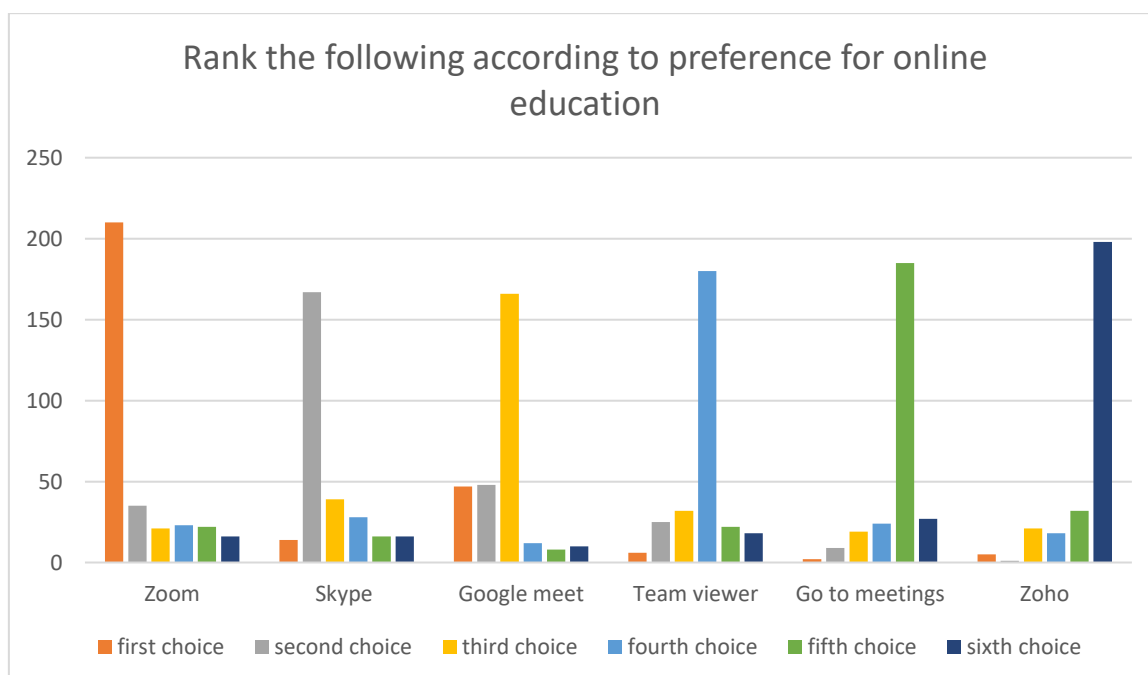


CHART:4.1.27 Rank the following according to preference for online education

INTERPRETATION

As shown in the table, 210 (73.6%) respondents have selected zoom as their first choice, 35 (12.2%) as second choice, 21 (7.3%) as third choice, 23 (8.0%) as fourth choice, 22 (7.7%) as fifth choice and 16 (5.6%) as sixth choice.

As shown in the table, 14 (4.9%) respondents selected skype as their first choice, 167 (58.5%) as second choice, 39 (13.6%) as third choice, 28 (9.8%) as fourth choice, 16 (5.6%) as fifth choice and 16 (5.6%) as sixth choice.

As shown in the table, 47 (16.4%) respondents selected google meet as their first choice, 48 (16.8%) as second choice, 166 (58.2%) as third choice, 12 (4.2%) as fourth choice, 8 (2.8%) as fifth choice and 10 (3.5%) as sixth choice.

As shown in the table, 6 (2.1%) respondents selected team viewer as their first choice, 25 (8.7%) as second choice, 32 (11.2%) as third choice, 180 (63.1%) as fourth choice, 22 (7.7%) as fifth choice and 18 (6.3%) as sixth choice.

As shown in the table, 2 (0.7%) respondents selected go to meetings as their first choice, 9 (3.1%) as second choice, 19 (6.6%) as third choice, 24 (8.4%) as fourth choice, 185 (64.9%) as fifth choice and 27 (9.4%) as sixth choice.

As shown in the table, 5 (1.7%) respondents selected zoho as their first choice, 1 (0.3%) as second choice, 21 (7.3%) as third choice, 18 (6.3%) as fourth choice, 32 (11.2%) as fifth choice and 198 (69.4%) as sixth choice.

INFERENCE

Majority of the respondents 210 (73.6%) selected Zoom as their first choice as preference for online education, 167 (58.5%) respondents selected Skype as their second choice, 166 (58.2%) respondents selected Google Meet as their third choice, 180 (63.1%) respondents selected Team Viewer as their fourth choice, 185 (64.9%) respondents selected Go to meetings as their fifth option and 198 (69.4%) respondents selected Zoho as their sixth option.

4.2 Chi-square

Null hypothesis (H_0) there is no significance difference between the type of program studied by the students and his/her perception towards the completion of studies on time via online mode.

Alternative hypothesis (H_1) there is significance difference between the type of program studied by the students and his/her perception towards the completion of studies on time via online mode.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Program * Do you agree that you are able to complete your studies on time via online mode?	285	100.0%	0	0.0%	285	100.0%

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	94.091 ^a	52	.001
Likelihood Ratio	87.208	52	.002
N of Valid Cases	285		
a. 53 cells (75.7%) have expected count less than 5. The minimum expected count is .11.			

Source: Primary Data

INTERPRETATION

Since the significance value .001 is less than 0.005, we accept the alternate hypothesis and reject the null hypothesis. Hence, there is significance difference between the program studied by the students and his/her perception towards the completion of studies on time via online mode.

Table 4.2.2

Null hypothesis (H_0) there is no significance difference between the type of program studied by the students and his/her rating on online education during covid 19.

Alternative hypothesis (H_1) there is significance difference the type of program studied by the students and his/her rating on online education during covid 19.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Program * How do you rate online education during COVID-19 pandemic?	285	100.0%	0	0.0%	285	100.0%

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	84.258 ^a	52	.003
Likelihood Ratio	79.210	52	.009
N of Valid Cases	285		
a. 55 cells (78.6%) have expected count less than 5. The minimum expected count is .03.			

Source: Primary Data

INTERPRETATION

Since the significance value .003 is less than 0.005, we accept the alternate hypothesis and reject null hypothesis. Hence there is significance difference between the program and his/her rating on online education during covid 19.

4.3 ANOVA

Null hypothesis (H_0) there is no significance difference between age of the students and his/her perception towards the development of skills by attending various special online lectures.

Alternative hypothesis (H_1) there is significance difference between the age of the students and his/her perception towards the development of skills by attending various special online lectures.

ANOVA					
Age					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.617	4	1.404	2.160	.074
Within Groups	182.046	280	.650		
Total	187.663	284			

INTERPRETATION

Significance level is .074 which is above 0.05 we accept the null hypothesis and reject alternative hypothesis. Hence there is no significance difference between the age of the students and his/her perception towards the development of skills by attending various special online lectures.

CHAPTER 5

5.1 FINDINGS

- Majority (53.7%) of the respondents are Female.
- Majority (40.7%) of the respondents fall in the age category of 21-23 years.
- Majority of the respondents are pursuing B.E i.e., (30.5%).
- Majority of the respondents (46%) are enrolled in second year.
- Majority of the respondents (29.1%) says that their studies are considerably affected due to covid-19.
- Majority of the respondents (50.5%) agreed that their institution has full-fledged adopted online education mode to overcome pandemic.
- Majority of the respondents (76.8%) use smart phones to study online during lockdown.
- Majority of respondents (44.2%) spend 2-3 hours per day in online learning during lockdown.
- Majority of the respondents (48.8%) chose Always as their option for using online classes for educational purposes
- Majority of the respondents (40%) chose frequently as their option for using educational websites for educational purposes.
- Majority of the respondents (32.9%) chose sometimes as their option for using Youtube Videos for educational purposes.
- Majority of the respondents (37.5%) chose sometimes as their option for using Ebooks for educational purposes
- Majority of the respondents (31.9%) chose sometimes as their option for using Peptalks for educational purposes.
- Majority of the respondents (44.5%) chose frequently as their option for using PDF Notes for educational purposes.
- Majority of the respondents (79.6%) chose zoom as their option for online learning tool during lockdown.
- Majority of (41.7%) spend more than 5 hours in a day apart from online classes
- Majority of the respondents (39.3%) agree that they are able to complete studies on time via online mode.

- Majority of the respondents (34.7%) have excellent connection.
- Majority of the respondents (38.6%) agree that they are able to pay your bills for a regular internet connection for studying via online.
- Majority of the respondents (50.5%) pay above rs.600 for their internet connection monthly
- Majority of the respondents (75.1%) use wifi for online classes.
- Majority of the respondents (33.7%) chose rarely for non accessibility of the required electronics devices & network issues
- Majority of the respondents (47.4%) found online classes good and useful.
- Majority of the respondents (36.1%) disagree for high quality online classes.
- Majority of the respondents (45.3%) found development of skills via online mood very good.
- Majority of the respondents (47%) agree that they are able to online lectures improve your knowledge on versatile topics.
- Majority of the respondents (44%) agree that they are online platforms are able to connect them to industry experts.
- Majority of the respondents (48.8%) gave good as their rating for online education during covid-19.
- Majority of the respondents (28.7%) rarely faced any internet connectivity problem while attending online classes.
- Majority of the respondents (30.8%) rarely faced any payment issues while attending online classes.
- Majority of the respondents (31.2%) rarely faced any problem in privacy at home while attending online classes.
- Majority of the respondents (31.2%) were not able to concentrate while attending online classes sometimes.
- Majority of the respondents (31.5%) were not able to manage time while attending online classes sometimes.
- Majority of the respondents (27.7%) faced lack of in person interaction sometimes while attending online classes.
- Majority of the respondents (70.9%) recommend online education to their friends to develop their knowledge.

- Majority of the respondents 210 (73.6%) selected Zoom as their first choice as preference for online education, 167 (58.5%) respondents selected Skype as their second choice, 166(58.2%) respondents selected Google Meet as their third choice, 180(63.1%) respondents selected Team Viewer as their fourth choice, 185 (64.9%) respondents selected Go to meetings as their fifth option and 198 (69.4%) respondents selected Zoho as their sixth option.

5.2 SUGGESTIONS

- Students should interact more so that they don't zone out, stay concentrated.
- Since there's no in person interaction due to COVID-19, teachers should make the class more interactive, innovative and interesting. The teaching method can have some practical example and knowledge to connect and describe so that the understanding becomes much better.
- As online classes are necessary, it's hard to concentrate on each and every student. For that, teachers must spend some time by allotting separate classes to students who needs extra attention or to clear doubts. This helps the students to understand the topic easily.
- Staff can think of various ways of making the class more interesting such as gaming quiz, allotting them in breakout rooms in zoom, group activities, etc
- Classes can focus on what's essential and which topics need teacher's guidance. The rest of the topics which are easy to understand, can be recorded and sent as a video so that learning can be made more effective.
- Since technology has many advantages, teachers can share many videos during classes to make students understand even more better. Create courses in different formats like text, video, audio.

5.3 CONCLUSION

Coronavirus pandemic has triggered new ways of learning and has accelerated the process of adoption of 'online' as a viable mode for learning in 2020. Due to COVID-19, the demand for online learning has risen significantly. With respect to the above study and findings, the online classes have definitely taken a place in the higher education institutions. The higher solve basic issues faced by the students. This study will help the higher education institutions to know what are the positive and negative factors and

issues faced by the students and how they can better themselves and improve.

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APPENDIX - I

QUESTIONNAIRE

1. Gender

- Male
- Female

2. Age:

- 17-19
- 19-21
- 21-23
- 23 and above

3. Course:

- UG
- PG

4. Program:

- B.E
- M.E
- B.Sc.
- M.Sc.
- B.com
- BBA
- MBA
- B.A
- M.A
- BDS
- B.Arch.
- B. L

5. In which academic year are you enrolled in?

- First year
- Second year
- Third year

- Fourth year
- Fifth year
- Sixth year

6. How far COVID-19 pandemic has affected your studies?

- Greatly affected
- Considerably affected
- Moderately affected
- Slightly affected
- Not affected

7. Has your institution fully adopted online education mode to overcome pandemic?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

8. Which electronics device do you use to study online during lockdown (Tick all applicable)

- Laptop
- Pc
- Smart phone
- Tablet

9. How many hours do you spend in online learning during lockdown?

- Less than 2 hours/day
- 2-3 hours/day
- 4-6 hours/day
- More than 6 hours/day

10. Which of the following virtual learning tools do you use/prefer for educational purposes?

	Always	Frequently	sometimes	Rarely	Never
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Online classes					
Educational websites					
YouTube videos					
eBooks					
Pep talks					
PDF notes					

11. Which online learning tool do you use during lockdown?

- Zoom
- Skype
- Google meet
- Team viewer
- Go to meeting
- Zoho
- Others:

12. How many hours do you spend online in a day apart from online classes?

- Less than an hour
- 2-3 hours
- 4-5 hours
- Above 5 hours

13. Do you agree that you are able to complete your studies on time via online mode?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

14. How good is your internet connection to attend the online classes? (1 being bad connection and 5 being good connection)

- 1

- 2
- 3
- 4
- 5

15. Are you able to pay your bills for a regular internet connection for studying via online?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

16. How much do you spend for the internet connection for month?

- Less than Rs.200
- Rs.200 - 400
- Rs.400 - Rs.600
- Rs.600 and above

17. What internet connection do you often use for online classes?

- Broadband connection
- WIFI
- Mobile data

18. How often do you face non-accessibility of the required electronic devices and network issues?

- Always
- Frequently
- Sometimes
- Rarely
- Never

19. How will you rate the usefulness of classes via online mode?

- Excellent
- Good
- Average

- Bad
- Very bad

20. Do you agree that online classes have high quality learning without face-to-face interactions?

- Always
- Frequently
- Sometimes
- Rarely
- Never

21. Are you able to develop your skills by attending various special online lectures?

- Very good
- Good
- Neutral
- Bad
- Very bad

22. Do you agree that online lectures improve your knowledge on versatile topics?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

23. Do you agree that online platforms are able to connect you to industry experts?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

24. How do you rate online education during COVID-19 pandemic?

- Excellent
- Good
- Average

- Bad
- Very bad

25. What are practical difficulties you faced attending regular classes online?

	Always	Frequently	Sometimes	Rarely	Never
Internet connectivity					
Payment issues					
Privacy at home is not concentrate					
Time management					
Lack of in person interaction					

26. Would you recommend online education to your friends to develop their knowledge and skills?

- Highly recommend
- Recommend
- Will not recommend

27. Rank the following according to your preference for online education

	First choice	Second choice	Third choice	Fourth choice	Fifth choice	Sixth choice
Zoom						
Skype						
Google meetings						
Team viewer						
Go to						

meetings						
Zoho						

28. Give your suggestions to improve online education in future.

APPENDIX – II

PERCEPTION ON ONLINE EDUCATION IN HIGHER EDUCATION INSTITUTION

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ABSTRACT

During the COVID-19 pandemic, social education has shifted from face to face to online in order to avoid large gatherings and crowds for blocking the transmission of the virus. Education scenario has drastically changed. It is must to continue classes which cannot be skipped due to Covid-19. Online classes have been a boon to the students. Students are able to pursue their degree as usual as they were doing it earlier. To study the students' perception on online education in Higher Education Institution based on their program and rating, this study has been conducted. As stated in the findings and study, majority of the students (48.8%) gave their ratings as good on online education. Online education has created a positive impact in students' life.

KEYWORDS: COVID-19, Online education, Pandemic, Students, Teachers, Technology.

INTRODUCTION

Due to the global COVID-19 pandemic, the world has experienced a drastic change in the lives of all, be it adults or children, old or young. Everyday activities have changed, and the only alternative left was the mode of online. This hence pushed and forced the whole world to go online. Though the pandemic has affected all, special focus has been placed on the lives and education of the future generation and leaders, the schoolers. Having unable to attend their schools and colleges physically, students now attend their classes through online modes using platforms/apps such as Zoom, Skype, Google meet etc., Lakhs of teachers and

students now use these applications and help the students to be in touch with their teachers and professors virtually.

Since learning is more effective with in-person teaching, online teaching has distanced the learners, thus reducing the efficiency and the quality of the learning. For some, online education has been proven beneficial instead. So due to these varied opinions, this survey shows the perspective of students on online education. Everybody has struggled to adopt and adapt to the 'new normal'.

Everything has its own pros and cons. With an access to electricity, internet connection and a device, students can now interact with their teachers and peers virtually, anytime and anywhere. This is very affordable, since other costs and expenses such as transportation cost has reduced significantly.

REVIEW OF LITERATURE

- **Amber Garbe, Uzeyir Ogurlu, Nikki Logan, Perry Cook (2020)** in their study, they found that parents are satisfied with the closing of schools and agreed for online education. Parents were satisfied with school being supportive. They have even discussed the problems faced in online education. The results suggest that policymakers and education management must think through properly and receive recommendations to make use of online education in a better way.
- **Sakshi Agarwal & Jaya Shankar Kaushik (2020)** stated in their study that online education is affordable, easy to use and must be used for Higher Education Institutions in India even after lockdown. Online education made students to be active, break their regular routine and good utilization of time and easy access to study materials. Students were motivated to read various topics which distracted them from thinking about COVID-19. Since there are large number of students, they faced problems while conducting online classes like technical issues, time factor, predetermined time schedule etc., Such problems were solved by purchasing advanced version of the particular software to avoid such problems stated above.
- **Mohammad H Rajab, Abdalla MGazal and Khaled Alkattan (2020)** stated in their study that there has been a positive response on online medical education at Alfaisal University during COVID-19. Majority of the respondents (70%7) said that pandemic has increased their confidence in the usage of

online medical education. Also, 76% of the respondents believed to blend online education into their practice. Respondents were satisfied with online medical education.

- **Lokanath Mishra, Tushar Gupta, Abha Shree (2020)** in their study, online education modes adopted by Mizoram University. To introduced various to use online platforms conveniently, easy to use and avoid difficulties. Governments should show their support and availability of resources for online education such as high-quality apps to support online learning hassle free for students as well as faculties to overcome the gap between students and teachers.
- **T Muthuprasad, S Aiswarya, KS Aditya, Girish K Jha (2020)** their study focuses on understanding Agricultural Student's perception and preference towards online education. Result states that majority of the respondents agreed and accepted online classes during COVID-19. Majority of the respondents selected their response as smart phone for online classes. Study found out that students are more into recorded classes with other activities like quiz at the end of each class to increase their knowledge on topics. Students stated that adaptation and easy to use technology makes their classes even more interesting. Though connectivity issues are faced by few students in rural areas. It became a challenge for such students to learn online properly.

OBJECTIVE OF THE STUDY

- To study the students' perception on online education in Higher Education Institution based on their program and rating.

RESEARCH METHODOLOGY

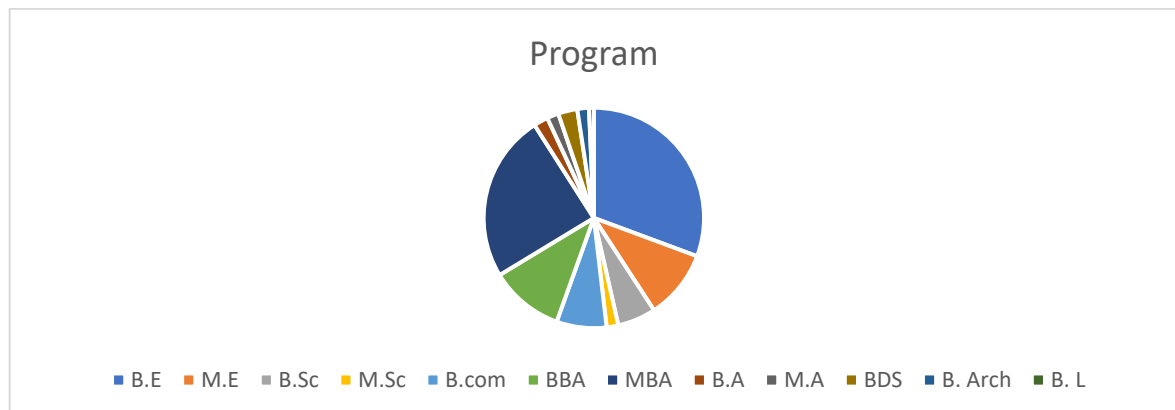
The sample size of the study is 285 and both primary and secondary data is used in this study. This study adopted convenience sampling method to collect data. Questionnaire method was used for data collection. Both open ended and close ended questions were asked to the respondents.

DATA ANALYSIS AND INTERPRETATION

I. Program

Program	No of Respondents	Percentage
B. E	87	30.5
M.E	29	10.1
B.Sc.	16	5.6
M.Sc.	5	1.7
B.com	21	7.3
BBA	31	10.8
MBA	70	24.5
B. A	6	2.1
M.A	5	1.7
BDS	8	2.8
B.Arch.	5	1.7
B. L	2	0.7
Total	285	100

Source: Primary Data



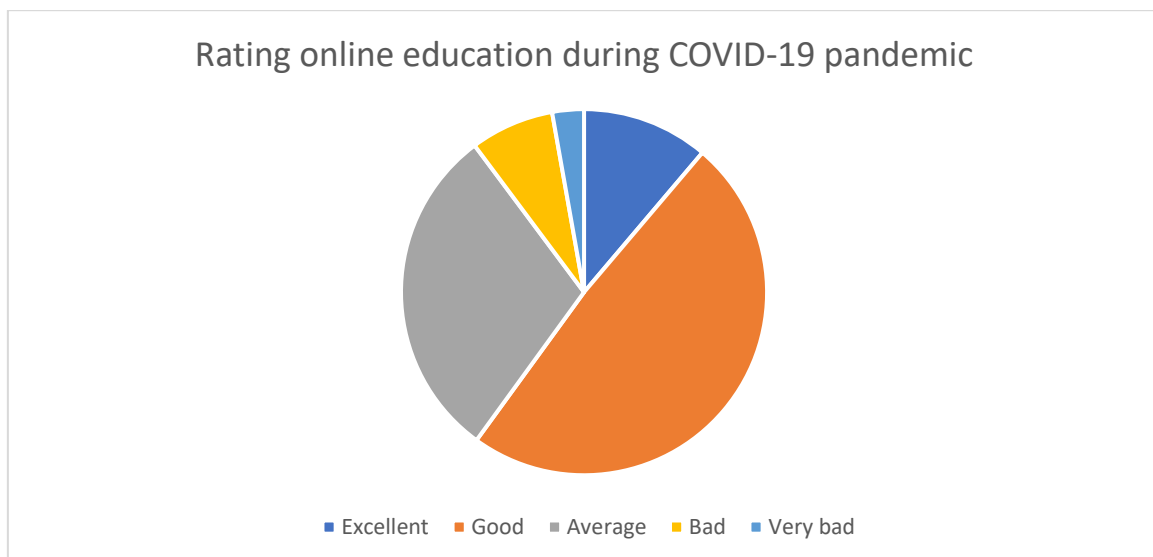
INFERENCE

Majority of the respondents are pursuing B.E (30.5%)

II. Rating online education during COVID-19 pandemic

Rating online education during COVID-19 pandemic	No. Of respondents	Percentage
Excellent	32	11.2
Good	139	48.8
Average	85	29.8
Bad	21	7.4
Very bad	8	2.8
Total	285	100

Source: Primary Data



INFERENCE

Majority of the respondents (48.8%) gave good as their rating for online education during covid-19.

III. Chi-square

Null hypothesis (H_0) there is no significance difference between the type of program studied by the students and his/her rating on online education during covid 19.

Alternative hypothesis (H_1) there is significance difference the type of program studied by the students and his/her rating on online education during covid 19.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	84.258 ^a	52	.003
Likelihood Ratio	79.210	52	.009
N of Valid Cases	285		
a. 55 cells (78.6%) have expected count less than 5. The minimum expected count is .03.			

Source: Primary Data

INTERPRETATION

Since the p value is less than .003, we accept the alternate hypothesis and reject null hypothesis. Hence there is significance difference between the program and his/her rating on online education during covid 19.

SUGGESTIONS

- Since there's no in person interaction due to COVID-19, teachers should make the class more interactive, innovative and interesting. The teaching method can have some practical example and knowledge to connect and describe so that the understanding becomes much better.
- As online classes are necessary, it's hard to concentrate on each and every student. For that, teachers must spend some time by allotting separate classes to students who needs extra attention or to clear doubts. This helps the students to understand the topic easily.

- Classes can focus on what's essential and which topics need teacher's guidance. The rest of the topics which are easy to understand, can be recorded and sent as a video so that learning can be made more effective.

CONCLUSION

Coronavirus pandemic has made every student to continue their classes through online mode by using various online platforms which are available. New normal has given us a new way of continuing education. Importance of online education has increased due to covid-19. As stated in the findings and study, majority of the students (48.8%) gave their ratings as good on online education. Online education has created a positive impact in students' life. With easy accessibility and flexibility of time and other advantages, online education has been a boon to students. though there are basic problems faced by the students, the Higher Education Institutions should take measures to minimize the problems faced by the students.

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