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Teacher's and Learner's perception and pros and cons towards virtual education in India: a sustainable analysis

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Abstract

Purpose – COVID-19 has a huge impact on the education sector. It has forced the closure of schools and universities. To ensure the continuity of education, the shutdown necessitates the implementation of virtual learning in a developing country like India. As virtual education has become the future of education, it is important to analyse the teachers' and learners' perceptions and the pros and cons toward virtual education in India to ensure the sustainability of the virtual learning environment.

Design/methodology/approach – The investigation was conducted using information gathered from two different structured questionnaires sent to teachers and learners at several Delhi colleges. Data was gathered using the three-part questionnaire. Quantitative and sample survey method was used. In SPSS, data were analysed using the Reliability Test, Factor analysis, and Descriptive Statistics.

Findings- The analysis states that both teachers and learners on average have a negative perception of virtual education. The study revealed that teachers and students faced several difficulties in the acceptance of virtual education in India. Technical issues and lack of participation and engagement are the major problems in virtual education. The study also reveals that virtual education saves time, and is a flexible cost-effective, and convenient mode of education. If implemented properly in India, it can sustain even after COVID.

Practical implications- Because virtual education in India is still in its early stages, the outcomes of the study will convince educational institutions and policymakers to improve the quality of virtual classes by providing practical exposure, training, and support to both teachers and learners for the sustainability of virtual education.

Originality/value- As virtual learning is the future of the education industry, it is important to know the perceptions of teachers and learners to ensure the sustainability of e-learning in India.

Keywords Teacher, Learner, Virtual Education, Sustainability, Perception, Pros, Cons

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1. Introduction

In a relatively short time, the COVID-19 pandemic has presented extraordinary challenges to individuals and state-run administrations of each country in terms of security, well-being, training, the economy, work strength, and most importantly, the education sector. By the middle of 2020, the majority of the world's population had been subjected to a lockdown accompanied by severe regulatory measures. According to UNESCO statistics in May 2020 (Huang et al., 2020), 1.21 billion learners, or 69.3% of the total, were unable to return to school or university due to educational institution closures, which incurred significant social and economic costs. Nearly every country in the world, as well as India's education service, has given an order to higher educational universities and public schools to close down their services to prevent the infection from spreading. Because of the shutdown of higher education institutions and public schools, approximately 250 million learners in India were affected at the beginning of the COVID-19-induced lockdown. As a result, policymakers, especially in the global education sector, have adapted to the new norms as quickly as possible. In order to ensure that education is uninterrupted, this shutdown has fuelled the growth of education activities. The university's shutdown necessitates virtual learning impacting the Indian educational industry dramatically, in which the entire course content was delivered via the internet (Khan et al., 2021).

Teachers and learners have been negatively impacted by the COVID-19 situation. 63 million teachers worldwide have been impacted by the COVID-19 outbreak, and almost no country has provided virtual teaching training to teachers (UNESCO, 2020). In addition, the nationwide lockdown has harmed more than 320 million learners in India, particularly 130 million learners in high schools (Sharma, 2020). Before the pandemic, virtual education was uncommon in India, but now it is the only way to fill the knowledge gap caused by the closure of the higher education system (Henderson et al., 2020). Despite the significant progress that has been made in the field of e-learning, it is still in the preliminary stages of development in a country like India. In this situation, teachers' and learners' attitudes are crucial for sustainable virtual learning. Since virtual classes may eventually replace traditional classroom learning over a significant amount of time, teachers' and learners' attitudes toward virtual learning and their enthusiasm for acquiring knowledge should be taken into consideration.

1.1 Virtual Learning

Education theories are evolving, with the emphasis shifting from a teacher-centric to a learner-centric approach to instruction. While the teacher-centric approach emphasizes the teacher as the origin of knowledge, the learner-centric approach involves learners in the

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process of knowledge generation in the classroom (Hancock et al., 2002). In this way, teachers become assistants to learners who set and implement their norms in a learner-centric approach. Teachers provide balanced feedback on learners' work and motivate them to give alternative/additional replies (Hancock et al., 2002). Through the use of the web and other technologically advanced tools to transfer, exchange, and broaden knowledge, learner-centric teaching has benefited from many technological developments. As a result, because virtual learning makes full use of computerized instruments in education, virtual learning has become a fundamental part of learning in the twenty-first century. The term "eLearning" is used to describe instructional methods that use electronic equipment and tools as well as teacher-learner contact as part of the educational process (Dobre, 2007).

During this pandemic, virtual learning offers both pros and cons for learners and teachers. Many professors faced virtual learning challenges because of insufficient virtual teaching experience (Kamal & Illiyan, 2021), skepticism about the success of virtual development and assessment, a lack of technical facilities at home, and the absence of engagement with an insufficient and expensive internet connection. However, virtual education has resulted in time and geographical flexibility, convenient and quick sharing of reading materials, immediate feedback (Khan et al., 2020), transport and financial cost savings, as well as an enhancement in instructors' and learners' technical skills (Kim, 2020), as well as an enhancement in the learners' comfortability and convenience (Aithal & Aithal, 2016).

1.2 Virtual Learning in India during Covid-19

COVID-19 devolves into a global disaster. Due to the global spread of COVID-19, schools and higher education institutions were forced to close temporarily. To assure learning, such closure has evolved into the establishment of virtual learning environments throughout the institutions. The state of virtual learning differs from country to country. In a country like India, virtual education is still in its early stages of development. While most private universities in India have found this transformation to be a mixed bag of benefits and drawbacks, government colleges and universities are still adjusting. Though technology makes everything more convenient and easier, sometimes it can be restrictive, particularly in India, where several learners struggle to gain internet access. As a result, challenges with involvement and punctuality in virtual sessions arise, making the adjustment of virtual education channels difficult. The bulk of the teachers lacked the knowledge and abilities required to teach and organize tests online. Due to the nationwide lockdown, teachers started teaching digitally because they had no other choice. They faced challenges such as an absence of basic facilities at home, connectivity issues, and so on. A massive digital gap has emerged as a result of this epidemic, resulting in a decline in learning in the short term and an increase in the likelihood of dropping out of universities. In the long run, to ensure virtual learning sustainability, it is important to know the perception of teachers and learners (both positive and negative) as well as the pros and cons they face in virtual classes since they're the front-line key members of every educational foundation. Therefore, the primary objective

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of this study is to examine the perception of teachers and learners as well as the pros and cons of virtual education to ensure the sustainability of the virtual learning environment.
The remaining sections of the paper are organized as follows: Section 2 covers the literature review, gaps, and objectives of the study. Section 3 covers the research methodology. Section 4 covers the results and findings. Section 5 covers the discussion and suggestions. Section 6 covers the conclusion of the paper.

2. Literature Review

COVID-19 expanded quickly and spread over the globe. It has had a huge impact on education in ways never seen before, with schools and universities being forced to close on an urgent basis and forced to transfer to a virtual style of teaching without readiness, resulting in a shift in learner-teacher relationships (Graham & Sahlberg Pasi, 2020). Learning through the internet can be a useful tool for overcoming sudden difficulties (Ayebi-Arthur, 2017). Virtual education is seen as a fun way to learn. For both teachers and learners, it is beneficial. The attitudes of the teachers and learners are both positive and negative regarding virtual education (Kulal & Nayak, 2020). According to (Kulal & Nayak, 2020), learners are confident in their ability to participate in virtual classes and feel they receive sufficient support from their instructors, but at the same time, they believe that virtual classes cannot replace traditional classroom education. It also reveals that instructors are having trouble running virtual classes due to inadequate training and development. The main difficulty preventing virtual classes from being effective is technical problems.
Teacher perspectives and attitudes about virtual education have been studied, and findings have highlighted the importance of teachers as mediators of learner-teacher interaction. During COVID-19, teachers at Uttarakhand University reported that young teachers were more actively involved in virtual learning and that teachers generally had a positive impression of the medium. Additionally, virtual learning boosted teachers' technical proficiency in addition to their knowledge (Dubey & Singh, 2020). On the other hand, a study found that technological incompetence, a lack of learner engagement, and decreased participation were all issues that teachers encountered when teaching online. There were numerous excuses offered by learners, making it challenging for teachers to determine which ones were honest (Yusnilita, 2020). Teachers also face various issues from virtual teaching such as engaging learners and motivating them to engage in the virtual teaching-learning process, as well as generating high-quality content for use in instruction and addressing technological challenges such as a poor internet connection (Tandon, 2021). According to a study (Rahayu & Wirza, 2020), during an ongoing outbreak in Indonesia, teachers have a good opinion of the ease of use and utility of virtual learning, whereas older teachers have difficulty developing high-quality content, describing, and providing feedback using digital platforms. University teachers, on the other hand, have a negative attitude toward distant learning due to unhappiness with the institution's support and training. They believed that virtual classes would not be able to replicate the emotional link that developed between

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students and teachers in traditional classes and that this would result in teacher unemployment (Kulal & Nayak, 2020). Learning that includes project and practical implementations, as well as the use of various laboratory equipment, is not always suitable for digital learning (Jacques et al., 2020). According to a Learning Spiral poll, digital learning is a difficult challenge for 84 percent of teachers, and just 20 percent of teachers have gotten coaching on how to give education in distance learning programs (Roshini, 2021).

The relationship between teachers and learners has changed as a result of virtual education since teachers are unable to provide the extra care and attention that physically exhausted learners need. Additionally, the learners felt that taking lessons virtually was insufficient for them. Teachers and learners who took their classes virtually reported feeling physically exhausted and missing the atmosphere of the traditional classroom (Khan et al., 2021). The major drawback of virtual lectures is that learners are cut off from campus resources like the library. A content analysis study of the attitudes of agriculture college students about online education during the epidemic indicated that students favoured it because of its flexibility and accessibility (Muthuprasad et al., 2021). Virtual learning has come as a huge surprise to both teachers and learners, affecting both teacher productivity and learner learning. According to several studies, teacher communication with learners has a significant impact on learners' perceptions of virtual education. According to a study, learners' opinions about virtual learning were negative as a result of prior experiences, leading to increased dropout rates and low motivation among learners (Maltby & Whittle, 2000). One of the other characteristics revealed was a lack of learner satisfaction with virtual learning (Kundu and Dey, 2018). Flexibility in space and time, easy and immediate sharing of study materials, timely feedback, more liberty to connect with teachers (Khan et al., 2020), improvements in teachers' and students' technological skills, as well as reduced financial and transportation costs (Kim, 2020), and improvements in learners' convenience and comfort (Aithal & Aithal, 2016). Studies revealed that all these factors contribute to the success of online education. Studies have also shown that if virtual classes are properly designed, they can be just as successful as traditional classes and can be successful in the long run.

Evidence from the literature highlighted that many research studies have addressed the perceptions of teachers and learners in virtual education and the challenges faced by them during COVID-19 but there are lack of studies that focus on the sustainability of virtual education in developing country like India. As virtual learning is the future of the education industry, it is important to know the perceptions of teachers and learners to ensure the sustainability of e-learning in India. The current work aims to close this research gap. The findings of our research have the potential to serve as a significant input when making decisions about the learning environment within a virtual platform in order to make virtual learning more sustainable even after COVID-19.

2.1 Objectives

The objectives of this research are as follows:

1. To determine the perception of teachers towards virtual education in India.

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2. To determine the perception of learners towards virtual education in India
3. To determine the pros and cons of virtual education reported by teachers and learners.

3. Research Methodology

This study investigates the perception and pros and cons of virtual education held by two key members of the education field in India, namely teachers and learners. The views of the respondents were gathered using a quantitative and sample survey method. This study's respondents were graduates, postgraduates, and Ph.D. learners, and faculty from various universities in Delhi. A basic random sample method was used to choose the respondents. In the last week of March 2022, the study employed a questionnaire as the primary data source for the survey, and data was gathered online using Google Forms. The sample size was 330 learners and 40 teachers from Delhi were asked to fill out the form.

The study used two online surveys created by Google Docs and was sent to learners and teachers through WhatsApp messages, Emails, LinkedIn, and Facebook Messenger. Data was gathered using the three-part questionnaire. The first part focused on demographic profiles like gender, age, and educational qualifications. The second part focused on the measurement of the perception of learners and teachers toward virtual education. The statements were prepared following a careful study of the literature and conversation with specialists to eliminate researcher bias. The third part focused on the questions related to the pros and cons of virtual education. Teachers' and learners' opinions were gathered using a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). A pilot study was conducted to assess the questionnaire once it was created, in order to determine its viability. The data were analysed using SPSS software version 25. The information gathered was classified into demographic information, perception, and pros and cons of teachers and learners.

The principle component analysis (PCA) was used to reduce data and discover underlying factors measured by observable components. The goal of principal components analysis (PCA), a statistical data depletion approach that comes to the factor analysis group, is to determine how many underlying components best explain the diversity of the original data set (Todhunter, 2015). To be considered representative, an item must have an Eigenvalue (EV) greater than 1. The questionnaire's reliability and internal consistency were assessed using Cronbach's Alpha.

4. Results and Findings

This section describes the demographic information of both the teachers and learners, their perceptions, and the pros and cons of virtual education faced during the COVID-19 pandemic.

4.1 Demographic profile of the respondents (teachers and learners)

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Table 1 shows the demographic information of both teachers and learners, classified based on their gender, age group, and educational attainment of the teachers and the highest degree of the learners. It shows that there were an equal number of male (50%) and female (50%) teachers, and males were the major learner (57.4%). The majority of the teachers (47.5%) have a doctorate degree, and 42.5% of the respondents were old faculty. In the case of students, the majority of them (76.9%) were doing their postgraduate and 85.6% of the respondents were young learners.

Table 1. Demographic profile of the respondents (teachers and learners)

Teachers Demographic profile			Learners Demographic Profile		
Particulars	Category	N (%)	Particulars	Category	N (%)
Gender	Male	20 (50%)	Gender	Male	191 (57.4%)
	Female	20 (50%)		Female	142 (42.6%)
Age Group	30 years and below	7 (17.5%)	Age Group	20 years and below	18 (5.4%)
	31 – 40 years	10 (25%)		21 – 30 years	285 (85.6%)
	41 – 50 years	6 (15%)		31 – 40 years	23 (6.9%)
	50 years and above	17 (42.5%)		41 years and above	7 (2.1%)
Educational Attainment	Doctorate Degree	19 (47.5%)	Degree	Undergraduate	74 (22.2%)
	Master's Degree	18 (45%)		Postgraduate	256 (76.9%)
	Bachelor's Degree	3 (7.5%)		Ph.D.	3 (0.9%)
Total	Total	100	Total	Total	100

4.2 Teachers' perception towards virtual education

Teachers are an essential component of virtual learning. Their enthusiasm for virtual programs, as well as their ability to manage them, are critical factors. Teachers' perceptions of virtual classrooms, as well as whether or not they are efficient enough in managing virtual classes, are all problems that must be addressed prior to implementation, as some teachers may not be prepared to teach virtual courses (Sims et al., 2002). As a result, it is critical to comprehend the teachers' perspectives on the basis of their "Virtual Learnings", "Self - efficacy" and "Readiness" towards virtual education. Perceptions were studied using the Principal Component Analysis (PCA) approach and the varimax rotation methodology. The Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used to determine sample adequacy. The results showed that the sample was adequate, with a value of 0.794. According to the results, three factors have Eigenvalues greater than one, indicating three-component solutions. After that, communality values less than 0.5 were suppressed.

Initially, we asked for eight statements related to "Teachers' virtual learning," six statements related to "Self - efficacy" towards virtual education, and seven statements related to "Readiness" towards virtual education. While doing PCA, the first factor retained 8 statements that describe 71.91% of the variance, the second factor retained 4 statements that describe 41.34% of the variance, and the third factor also retained 4 statements that describe 32.68% of the variance, as depicted in Table 2. When Cronbach's alpha value exceeds 0.7,

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the data is regarded as reliable; otherwise, the data must be improved either through transformation or by gathering more data. Table 3 shows the results of the reliability test, suggesting that the components have a high degree of internal consistency.

Table 2. Principal Component Analysis

Factors	Statements Retained	% of variance explained	Communality
Virtual Learning	Conversations will appear impersonal and emotionless	71.91%	0.838
	Virtual classes are less effective		0.836
	Lack personal of emphasis on weaker learners		0.79
	Technology tools cannot replace my lectures		0.784
	It's difficult to keep learners interested		0.735
	The pace and flow are affected by technical issues		0.7
	Learners in virtual classes learn less		0.635
	Virtual learning is not a realistic option for learning		0.642
Self - Efficacy	Trouble in adjusting to the virtual teaching method	41.34%	0.911
	Get anxious when I take virtual classes		0.828
	Get easily distracted		0.757
	Tough to manage the technology of virtual courses		0.784
Readiness	Taking online classes increases work satisfaction	32.68%	0.877
	Taking online classes increases motivation		0.841
	Online classes are a secure and safe method of teaching		0.823
	In general, I support online education		0.851

Table 3. Reliability Analysis

Factor	Initial number of items	Number of Items retained	Cronbach's alpha
Teachers Virtual learning	8	8	0.913
Self – Efficacy	6	4	0.889
Readiness towards online education	7	4	0.879

Table 4 reveals the descriptive statistics of teachers' perceptions of their virtual learning, self-efficacy, and readiness towards virtual education. Self-efficacy beliefs influence how

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individuals feel and think, and thus how they behave and act (Alqurashi, 2016). In this difficult learning environment, teachers' self-efficacy is critical to investigate. So, to understand a teacher's perception, it is important to understand their learning towards virtual teaching, their self-efficacy towards virtual teaching, and whether they are ready to teach online. From the results of descriptive statistics, it is evident that teachers opined that they have a negative virtual learning experience (M = 3.85) as virtual classes are less effective and conversations are impersonal and unrealistic. Also, teachers were asked how they while teaching virtually. They have a negative feeling while teaching online (M = 2.80) as they have trouble adjusting to the online teaching methods. Also, teachers are not in support of online teaching and they are not ready to teach online (M = 2.68). As a result, teachers' overall impressions of online teaching were shown to be unfavorable.

Table 4. Descriptive statistics of teachers' perception

	N	Minimum	Maximum	Mean	Std. Deviation
Teachers Online Learning	40	1	5	3.85	1.122
Self - Efficacy	40	1	5	2.80	1.224
Readiness	40	1	5	2.68	1.023
Valid N (listwise)	40				

4.3 Pros and cons of virtual education reported by teachers

4.3.1 Pros of virtual education

Table 5 shows the pros of virtual education as reported by university professors. 87.5% of the teachers believed that virtual learning saved time because it could be done from the comfort of their own homes, reducing travel time. Virtual teaching has benefited 50% of teachers in enhancing their teaching skills, becoming more technically adept, learning novel teaching approaches, and increasing their confidence, and 37.5% thought that online classes were accessible and convenient, meaning that they could be scheduled at their leisure.

Table 5. Pros of virtual teaching reported by teachers

S.NO.	Statements	N (%)
1	Improvement in technical skills	20 (50)
2	Online classes are accessible and convenient	15 (37.5)
3	Online Teaching saves time	35 (87.5)

4.3.2 Cons of virtual education

Table 6 shows the cons of virtual education as reported by university professors. A majority of the teachers (87.5%) were of the opinion that virtual teaching leads to technical issues such as poor internet access, power outages, broadband problems, and poor video and audio quality. They need technical assistance for virtual teaching, something they don't have at

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home (Joshi et al., 2020). The next large problem faced by teachers (75%) was that "basic amenities such as a printer, whiteboard, and marker are unavailable." It shows that in order to conduct virtual classes, teachers must have the necessary infrastructure, such as a marker, a whiteboard, and other items. Also, basic amenities, external distractions, and family interference while conducting virtual classes were key disadvantages experienced by teachers (Joshi et al., 2020). A total of 50% of teachers felt that there was a lack of learners' participation and engagement in class. According to them, learners make several excuses and show a lack of sincerity during virtual classes. 37.5% of the teachers said that the virtual method seemed too formal, had a little personal touch, and was not lively. 62.5% raised an issue which was the difficulty in taking practical areas of study virtually. According to the teacher, theoretical subjects were simpler to grasp, but practical subjects such as communication, accounting, math, and others were difficult to grasp as they required one-on-one interaction.

Table 6. Disadvantages of online classes reported by teachers

S.NO.	Statements	N (%)
1	Virtual teaching leads to technical issues	35 (87.5)
2	Learners' lack of participation and engagement	20 (50)
3	Unavailability of basic amenities	30 (75)
4	Virtual method seemed too formal	15 (37.5)
5	Difficulty in taking practical areas of study	25 62.5)

4.4 Learners' perception towards virtual education

In the educational system, the learner's viewpoint is very important. Virtual classrooms could be incorporated into the educational system, but they cannot be sustained in the long run without the viewpoint and acceptance of learners. In this study, the researchers inquired about the responding learners' perceptions of virtual classes (both positive and negative). Negative and positive perceptions were studied using principal component analysis. The Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used to determine sample adequacy. The results showed that the sample was adequate, with a value of 0.914. Initially, we asked nine statements relevant to learners' negative perceptions towards virtual classrooms and eight statements relevant to learners' positive perceptions towards virtual classrooms. While doing PCA, the negative perception retained eight statements that described 56.415% of the variance and the positive perception retained six statements that described 54.92% of the variance, as depicted in table 7. Reliability tests for both factors were undertaken based on the final items acquired after PCA analysis. Table 8 shows the results of the reliability test, suggesting that the components have a high degree of internal consistency.

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Table 7. Principal Component Analysis

Factors	Statements Retained	% of variance explained	Communality
Negative	Lead to disinterest and laziness	56.415	0.78
	Lead to lack of learning environment at home		0.768
	Don't focus on personality development		0.766
	Lead to easy distraction and lack of concentration		0.748
	Lack of interaction with the instructor		0.744
	Online classes are less effective		0.74
	Lack of interaction with other learners		0.732
	Lack of practical learning (e.g. field visits), group discussion, and extracurricular activities		0.729
Positive	Quality of discussion is more	54.92	0.861
	Feel motivated to engage in virtual class discussions		0.819
	More convenient in terms of class discussions		0.791
	Make easier to understand course material		0.736
	Online classes are easy to understand and attend		0.716
	Overall, I am in favour of virtual education		0.709

Table 8. Reliability Analysis

Factor	Initial number of items	Number of Items retained	Cronbach's alpha
Negative	9	8	0.889
Positive	8	6	0.865

Table 9 reveals the descriptive statistics of learners' negative and positive perceptions towards virtual education. The mean value for learners' negative perception of virtual classes is 4.39, which is greater than the mean value of 3.34 for learners' positive perception of virtual classes. As a result, learners' overall impressions towards virtual education were shown to be unfavourable because virtual programs are less successful than regular classrooms and there is a lack of a learning environment at home during the ongoing COVID-19 pandemic.

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Table 9. Descriptive statistics of students' perception

	N	Minimum	Maximum	Mean	Std. Deviation
Negative	330	1	5	4.39	0.900
Positive	330	1	5	3.34	1.178
Valid N (list wise)	330				

4.5 Pros and cons of virtual education reported by learners

4.5.1 Pros of virtual education

Table 10 shows the pros of virtual education as reported by university learners. 90.9% of learners believed that virtual classes save time and reduce cost because they can be completed from the convenience of one's own home, saving time on travel and commuting and eliminating the need to rush to get to college. 84.8% of the learners were of the opinion that virtual classes are flexible as they can be taken anywhere, at any time. 60.6% of the learners stated that virtual classes are easily accessible as they have fast access to the internet, laptops, or smartphones, which makes their learning easy.

Table 10. Pros of virtual classes reported by learners

S.NO.	Statements	N (%)
1	Virtual classes save time and Reduce cost	300 (90.9)
2	Virtual classes are easily accessible	200 (60.6)
3	Virtual classes are flexible	280 4.8)

4.5.2 Cons of virtual education

Table 11 shows the cons of virtual education as reported by university learners. A majority of learners (90.9%) were of the opinion that virtual classes lead to poor learning environments. They struggled to focus during virtual lectures, and there were additional distractions at home. The next large problem (84.8%) faced by learners was that virtual classes lead to technical issues such as poor internet connectivity, power outages, broadband challenges, poor video and audio quality, app issues, getting detached in between classes, and making it tough to come back again. A total of 75.7% of the learners felt unmotivated and disinterested in attending virtual classes. 60% of the respondents felt that virtual classes lead to health issues because of the harmful radiation of the devices used at the time of virtual classes.

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Table 11. Cons of virtual classes reported by learners

S.NO.	Statements	N (%)
1	Virtual classes lead to technical issues	280 (84.8)
2	Poor learning environment	300 (90.9)
3	Health issues	200 (60.6)
4	Unmotivated and uninterested	250 (75.7)

5. Discussion

The focus of the study is to determine the perception and pros and cons of both the teachers and learners towards virtual education in India. Mixed opinions of virtual education are shared by both learners and teachers. But there is always a potential for growth, especially with regard to virtual learning. A similar result was observed where university instructors in Karnataka have conflicting opinions about virtual courses (Kulal & Nayak, 2020). Some teachers and learners at universities in Jordan have expressed optimism that virtual courses will help teachers and learners cope with the current flu epidemic (Almahasees et al., 2021). The findings of the study suggest that teachers have a negative impact on virtual education due to a lack of training and knowledge about the usage of technology, technical problems, lack of interest, engagement, and motivation of learners. So, in order to enhance the productivity of teachers and change the perception towards virtual learning, government and institutions should provide proper training and support to both teachers and learners. To avoid technical issues, the government should provide internet packages to both teachers and learners to ensure sustainable virtual education.

The capacity of teachers and learners to use computers and the internet proficiently is a crucial component in determining the sustainability of virtual education. Time-saving, flexibility, and convenience were recognized as the strength of virtual education. Lack of basic amenities, lack of practical experience to enhance practical skills, and easy distraction all lead to the failure of virtual education. However, the study revealed that faculty members favoured face-to-face instruction over virtual learning. Face-to-face training enables learners to engage in discussion and receive lively instruction (Cooke, 2020). Therefore, teachers need to ensure that virtual classes are more interactive and engaging.

The result of the study indicates that virtual classes result in a lack of interaction between learners and a lack of learner-teacher interaction which is the key determinant for the success of virtual education. Also, there is a lack of personal development of learners while attending virtual classes. These results should be considered by institutes and educators and should provide solutions to these problems. Because learners may study from the comfort of their own homes and avoid the costs of transportation and other incidentals, virtual education makes it possible to lower the overall cost of a learner's education. This finding correlates with (Almahasees et al., 2021) that online learning is cost-saving. Even though virtual

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education in India is still in its infant stages of development, having a thorough comprehension of the pros and cons of virtual education experience, as well as the perspectives of both teachers and learners, can help in the development of methods that are effective and well-organized for teaching via the internet which will result in the sustainability of virtual education.

6. Conclusions

The study examines the perception and pros and cons of teachers and learning toward virtual education to ensure the sustainability of virtual education. In order to ensure the sustainability of virtual education in a country like India, certain things have to be taken care of. This encompasses bringing about changes in the mentality of learners and teachers, as well as improvements in Internet connectivity and the learning environment, as well as increases in learner engagement and motivation, availability of basic amenities, etc. To ensure sustainability in virtual education, educational universities should provide proper training and support to teachers and learners. Along with this, universities should focus on the personality development and practical learning of learners for the successful implementation of virtual education.

References

Almahasees, Z., Mohsen, K., & Amin, M. O. (2021, May). Faculty's and students' perceptions of online learning during COVID-19. In *Frontiers in Education* (Vol. 6). Frontiers Media SA.

Ayebi-Arthur, K. (2017). E-learning, resilience and change in higher education: Helping a university cope after a natural disaster. *E-learning and Digital Media*, *14*(5), 259-274.

Alqurashi, E. (2016). Self-efficacy in online learning environments: A literature review. *Contemporary Issues in Education Research (CIER)*, *9*(1), 45-52.

Aithal, P. S., & Aithal, S. (2016). Impact of on-line education on higher education system. *International Journal of Engineering Research and Modern Education (IJERME)*, *1*(1), 225-235.

Cooke, G. (2020). Online Learning vs Face to Face Learning | Elucidat. Available online at: https://www.elucidat.com/blog/online-learning-vs-face-to-face-learning/

Dubey, D. B., & Singh, D. S. (2020). Perception of teachers on online teaching in higher education during covid-19 lockdown. *Int. J. Creat. Res. Thoughts*, *8*(5), 1017-1022.

Dobre, I. (2007). Evaluation of students knowledge-an experiment in e-learning. Seria Matematica-Informatica-Fizica, (2), 43-48.

Graham, A. and Sahlberg Pasi (2020), "Schools are moving online, but not all children start out digitally equal", The Conversation, available at: https://theconversation.com/schools-aremoving-online-but-not-all-children-start-out-digitally-equal-134650.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2022.28.04.097

Henderson, D., Woodcock, H., Mehta, J., Khan, N., Shivji, V., Richardson, C., ... & Burns, A. (2020). Keep calm and carry on learning: using Microsoft teams to deliver a medical education programme during the COVID-19 pandemic. *Future healthcare journal*, *7*(3), e67.

Hancock, R., Swann, W., Marr, A., Turner, J., & Cable, C. (2002). Classroom assistants in primary schools: Employment and deployment.

Joshi, A., Vinay, M., & Bhaskar, P. (2020). Impact of coronavirus pandemic on the Indian education sector: perspectives of teachers on online teaching and assessments. *Interactive Technology and Smart Education*.

Khan, M. A., Kamal, T., Illiyan, A., & Asif, M. (2021). School students' perception and challenges towards online classes during COVID-19 pandemic in India: An econometric analysis. *Sustainability*, *13*(9), 4786.

Kamal, T., & Illiyan, A. (2021). School teachers' perception and challenges towards online teaching during COVID-19 pandemic in India: an econometric analysis. *Asian Association of Open Universities Journal*.

Kulal, A., & Nayak, A. (2020). A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District. *Asian Association of Open Universities Journal*.

Khan, M. A., Nabi, M. K., Khojah, M., & Tahir, M. (2020). Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. Sustainability, 13(1), 57.

Kim, J. (2020). Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. International Journal of Early Childhood, 52(2), 145-158.

Kundu, A., & Dey, K. N. (2018). Barriers to utilizing ICT in education in India with a special focus on rural areas. *International Journal of Scientific Research and Reviews*, *7*(2), 341-359.

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID-19 pandemic. *Social Sciences & Humanities Open*, *3*(1), 100101.

Maltby, J. R., & Whittle, J. (2000). Learning programming online: Student perceptions and performance. In *Proceedings of the ASCILITE 2000 Conference*.

Roshini (2021), "84% of teachers facing challenges during online classes: survey", India Today, 18 March, available at: https://www.indiatoday.in/education-today/latest-studies/story/84-of-teachers-facing-challenges-during-online-classes-survey-1780816-2021-03-18

Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic covid-19. *Jurnal Penelitian Pendidikan*, *20*(3), 392-406.

Sharma, K. (2020). In India, over 32 crore students hit by Covid-19 as schools and colleges are shut: UNESCO. *The Print*.

Sims, R., Dobbs, G., & Hand, T. (2002). Enhancing quality in online learning: Scaffolding planning and design through proactive evaluation. *Distance education*, *23*(2), 135-148.

Tandon, U. (2021). Factors influencing adoption of online teaching by school teachers: A study during COVID-19 pandemic. *Journal of Public Affairs*, *21*(4), e2503.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2022.28.04.097

Todhunter, F. (2015). Using principal components analysis to explore competence and confidence in student nurses as users of information and communication technologies. *Nursing Open*, *2*(2), 72-84.

UNESCO (2020), *With Over 63 Million Teachers Impacted by the COVID-19 Crisis, on World Teachers' Day, UNESCO Urges Increased Investment in Teachers for Learning Recovery, UNESCO*, available at: https://en.unesco.org/news/over-63-million-teachers-impacted-covid-19-crisis-worldteachers-day-unesco-urges-increased

Yusnilita, N. (2020). The impact of online learning: Student's views. *ETERNAL (English Teaching Journal), 11*(1).