Perception of Students and Teachers Regarding Online Teaching-learning during Pandemic Time

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Abstract

Internet and new technologies gained importance in several fields including education sector, which gave the scope for online classes. In addition to this, the COVID-19 pandemic worldwide has also added to the need and relevance of online classes making it necessary to understand student–teacher perceptions regarding online classes. The study is aimed at analysing the perception of teachers and students about online classes. It tries to explain the opinions of students with regards to the impact of online courses, their comfortability in its usage, and the support received from teachers in online classes along with teachers' opinions on efficacy, teaching practice followed and training received for an online class. The analysis was carried out using the data collected through two separate structured questionnaires for students and teachers in Vadodara district of Gujarat. Data were recorded in SPSS and analysed using descriptive statistics. The study reveals that students are comfortable with online classes and are getting enough support from teachers but they do not believe that online classes will replace traditional classroom teaching. It also finds that teachers are facing difficulties in conducting online classes due to a lack of proper training and development for doing online classes. Technical issues are the major problem for the effectiveness of the online classes. This study helps schools get a general view of online classes among teachers and students.

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Introduction

In India, quality in teaching-learning of primary education is important to be ensured because it is a reality that many students attend the public and Non-Government Organisation (private schools) schools. Private schools are imparting non-formal education beside the public schools. But they are under constant pressure to fill in the gaps left by declining state provision in the formal education system. The private school sector has secured importance within the primary education system of India, and its primary education programmes are independent of government management and involvement, as the programmes do not receive government fiscal support. E-learning is primarily referred to as the use of technology and network communication for teaching and learning (Nashir and Laili, 2021). Coman et al. (2020) has referred to e-learning as a technology-enabled transfer of skills and knowledge to a large number of recipients. It is among the technological trends in education that is expanding the quickest. Because of the internet and the world wide web, educational institutions have had to adapt their teaching methods in order to provide an optimum learning environment for their students. With the aid of internet-based technologies, Van der Spoel et al. (2020) suggest that an online class is a system where students can learn subjects, communicate with other students about problems, ask questions of the teacher, and share materials and track academic progress. According to Aliyyah et al. (2020), Mishra et al. (2020) and Motte-Signoret et al. (2021), online courses are so commonplace these days that they are probably expected in any formal education curriculum.

Moreover, the widespread COVID 19 pandemic also added to the importance of online classes (Unger and Meiran, 2020). According to Khan et al. (2020) in India, there are more than 370 million users are on the internet that are helping online education to grow at a fast pace. At present, more than 3 billion users are using the e-learning platform. Gopal et al. (2021) revealed that the growing Compound Annual Growth Rate (CAGR) percentage of online education in India is approximately 19 per cent by 2020. According to Choi et al. (2021), the recent report of Coursera, one of the world's largest online education providers, out of 18 million registered learners, 1.3 million users are from India, making it the third-largest market for online learning after the US and China.

The new National Education Policy (NEP 2020) in India gives importance on the development of cognitive abilities to each of the students, like—problem solving and critical thinking. According to Banerjee et al. (2021), NEP 2020 came to improve the quality of education. As per the findings from Chopra (2020), NEP 2020 is going to move from marks-centric to skills-centric, learning-centric to research-centric, information-centric to knowledge-centric and choice-centric to competency-centric.

Despite the quick advancements we see in e-learning, it is still in its infancy. In this situation, teachers and students' role-playing is given the appropriate weight because learning and motivation are greatly influenced by their views and attitudes. In the end, acceptance of both the students and instructors is key to realise the advantages of online learning. In this sense, the study attempts to assess teachers' and students' perspectives on the superiority of online learning over traditional classroom instruction.

Objectives of this Study

The main objective of this study is to analyse the perception of teachers and students about online classes. This research explains the opinions of students on the impact, comfortability and support of teachers in an online course, along with teachers' views on the efficacy, teaching practice and training for an online class. Also, this study attempts to identify the tools used for online class, reasons for not conducting online class (teachers' perception) and reasons for not preferring online class (students' perception).

Method

Study Design

This study utilised a descriptive quantitative design to obtain the opinions of the respondents.

Study Population

This study investigated the student teachers' perception of an online class in the school of Vadodara district of Gujarat. The respondents of this study consisted of all the students and teachers from different schools in Vadodara district, Gujarat. It identified students who are pursuing their studies in these schools via online mode. Teachers and students were selected for this study on a random basis. These students and teachers are from different academic level in the school. The population also diversified in demographic profiles like age, gender and native place. Yates formula was used to select sample size from the total population.

Study Sample

Simple random sampling techniques were used for the selection of the sample. The sample size consists of 68 teachers and 203 students from different schools in the research area. This research study conducted two surveys; one to the student population and the other to the teacher population.

Research Tool

Five-point Likert scale was used to collect the opinion of both teachers and students in the online class. Five-point Likert scale indicates 1 being 'strongly disagreed' and 5 being 'strongly agreed'. After constructing a questionnaire, to know the feasibility of the questionnaire, a pilot study was conducted and the questionnaire was reviewed. A survey instrument with demographic questions for students, demographic questions for instructors, questions for students regarding perceptions of

'Impact,' 'Comfortability' and 'Support from the teacher' and for instructors related to perceptions of 'Teaching Practice' 'Efficacy' and 'Training and Development' was available. Questionnaires were shared with the participants in the form of Google form. They were also informed that their responses and opinions would be kept confidential.

Data Analysis

The data were collected and recorded in a systematic way, which were later analysed by using Statistical Package for Social Science (SPSS) version 20. Collected data were categorised into demographic information, perception and tools used. Secondary sources were used for reviewing the concept and supporting the findings.

Results

Demographic Profile of the Respondents

The demographic details of both teachers and students were collected to know their background like gender, education, number of years of online teaching-learning experience of teachers and course pursuing, number of years in the online class of students. The following table explains the demographic background of the respondents (Table 1).

Table 1: Demographic Profile of the Respondents

Teacher's Demographic profile	Variables	N (%)	Student's Demographic profile	Variables	N (%)
Gender	Male	29 (42.6)	Gender	Male	62 (30.5)
	Female	39 (57.4)		Female	141 (69.5)
Age (Years)	Below 29	45 (66.2)	Course pursuing	Language subjects	114 (56.16)
	30–49	21 (30.9)		Mathematics and Science	43 (21.18)
	50 and above	1 (1.5)		Social Sciences	30 (14.78)
Teaching experience (Years)	0–5	44 (64.7)		Higher secondary school experience	15 (7.39)
	6–10	18 (26.5)			15 (7.39)
	11–15	2 (2.9)			15 (7.39)
	16–20	4 (5.9)			15 (7.39)
Conducting online classes	Yes	43 (63.2)	Taking online class	Yes	150 (73.9)
	No	25 (36.8)		No	53 (26.1)
Online teaching experience (Years)	1	35 (81.4)	Computer Knowledge	High	138 (67.9)
	1–2	7 (16.3)		Medium	60 (29.6)
	3–5	1 (2.3)		Low	5 (2.5)
	5 and above	0			

Table 1 indicates the demographic profile of the respondents, which show that females are major respondents in both teachers and students categorisation. Table reveals that—online classes were conducted by maximum teacher respondents while maximum student respondents attended the same. The majority of the teachers have a post graduation degree with B.Ed. qualification, and 60.9 per cent of the respondents are young faculty having teaching experience less than five years. About 80 per cent of the teachers are conducting an online class for the first time due to the COVID-19 pandemic. Responses were collected from the students of different fields of study. As to conduct online classes, computer knowledge or internet knowledge is essential, therefore, the researcher also asked the students about their level of expertise in computer and most of them had a high level of computer knowledge.

Tools used for Online Class

There are enormous numbers of online class tools available in the market where some of them are available for free, while other premium categories require payment. To know the popular tools used among participants, the researcher asked them to mention the tools they used for their online classes. For this question, participants can specify more than one option. The result of the matter is depicted in the following figure (Figure 1).

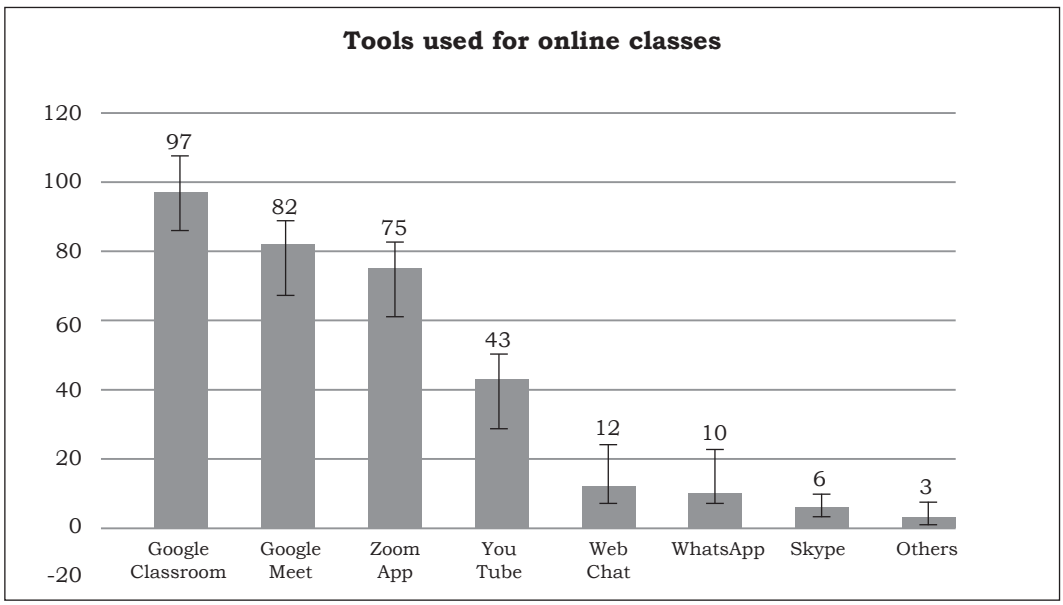

Fig. 1: Tools used for online class

From the above chart, we can quickly identify that among the many popular online tools available in India 'Google classroom' is mostly used and a preferred tool for an online class in Vadodara district while 'Google Meet' is the second most popular and preferred choice. Even though 'Skype' is the most popular online tool for communication, but here it is listed in least used tools. Here the interesting fact is that many academicians are using social network tools (WhatsApp) for online classes. This analysis explains that easy and convenient tools are used for online class irrespective of their purpose.

Students' Perception of Online Class

It is the students whose opinion matters the most in the education system. Online classes may become a chunk of the future education system, but it cannot be carried to the future unless students accept it. Therefore, the survey also asked students about their comfortability, support received from teachers and the impact of online class on their studies. To observe the selected variables, a questionnaire was constructed by asking statements on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Exploratory Factor Analysis (EFA) was performed to evaluate our survey instrument. The EFA was separately conducted for 'Impact', 'Comfortability' and 'Support' using Eigen values more significant than one as the criterion, while each of the variables suggests a one-factor solution. After that, we eliminated items with factor loadings below 0.50 (Table 2).

Table 2: Exploratory Factor Analysis

Factor	Statements retained	% of variance explained	Communality
Impact	I have a positive impact on my studies due to online class	73.349	0.843
	Online classes have increased my technological literacy	9.152	0.829
	I feel online classes help me to gain more knowledge	7.561	0.877
Comfortability	I feel comfortable using online learning tools	39.520	0.662
	I feel learning is same in class and at home on the Internet	24.963	0.721
	I find it hard to stick to a study schedule of the online course	8.196	0.725

Support from Teacher	I receive enough support and resources from my teacher	71.616	0.530
	My teacher encourages discussion in an online class	9.444	0.690
	My teacher sets guidelines for effective communication and interaction in an online class	7.124	0.760

Above, Table 2 explains the percentage of variance defined by each item and communality value. Initially, in the questionnaire, we asked five statements related to 'Impact of Online Class,' seven statements related to 'Comfortability,' and six statements that represent 'Support.' EFA was conducted to reduce the number of items that least explains the respective factors. While doing the analysis, it was observed that for the 'Impact' factor, three statements describe 90.06 per cent of the factor; therefore, the researcher excluded it in the study. Here the value of communality, which explains the extent of variance, is considered for extracted factor (if the communality value is less than 0.5, it would be removed from the factor). In the case of 'Comfortability' out of seven items, three items explain 72.679 per cent of the factor with communality value more than 0.5 and in 'Support from teacher' out of seven items, three statements describe 88.184 per cent of the element. After conducting an EFA, researcher conducted a reliability test for selected items of factor. Reliability analysis was undertaken to know the consistency in opinions among scale data. If the Cronbach's alpha value is more than 0.6, then it is considered as reliable data; otherwise, there is a need for improvisation of data either by transformation or by collecting more data. Students' comprehension, mindset and attitude toward online classes are essential aspects for the success of online teaching. It is crucial to create an opportunity for outside interaction between faculty and students to increase the motivation of students to learn. On this behalf, the researcher identifies the perception of students on three critical questions like impact of online class on students, if online class is comfortable to students and whether students get enough support from teachers.

From the results of the descriptive statistics, it explains that students opined that an online class has a significant impact on their learning style, and they agreed that they get support from the teacher in online class like getting good reading material and clarifying their doubts through online tools. However, students do not believe that an online class replaces the traditional face-to-face classroom teaching, and

they feel that online courses are not comfortable when compared to the conventional method of teaching.

Teachers' Perception of Online Class

The other important pillar of online teaching is the teacher. Their interests and skills in handling online classes are essential aspects. How did teachers perceive online classes, whether teachers are capable of handling online classes, these are the questions that arise before implementing it because some of the faculty members may not always have the competency to teach courses online. A cultural background constructs a different perception among teachers. Therefore, the researcher felt that it is not unfair to collect opinions of both the participants, i.e., students and teachers. In addition to demographic information, the survey asked about the teachers' perception of their teaching practices, their general self efficacy in teaching and technology and the professional development they received and expected to win. The items like 'Teaching Practice' 'Training and Development' and 'Efficacy' are collected through five-point Likert scale, ranging from 1 as (strongly disagrees) and 5 as (strongly agree). As this questionnaire was well constructed and verified in the previous research, the researcher directly did the descriptive analysis (Table 3).

From the results of the descriptive statistics, it appears that teachers agreed with their teaching practices, and they are very much confident in the effectiveness of online classes they conducted. However, they are not satisfied with the training and support given by the institution.

Some of the respondents expressed their opinion in the open-ended question, stating that they believe that "online class will increase unemployment or reduce the demand of teachers", "online class failed to fill the emotional attachment between teacher and student", "without providing proper infrastructure facility it is challenging to conduct online class" and they also opined that "it is challenging to conduct an online class for practical subjects." Conclusively, we can say that teachers are not supporting the idea of implementing online classes without proper training and proper infrastructure facilities like network and computers.

Table 3: Descriptive Statistics for Teaching Practice, Efficacy, Training and Support

Descriptive statistics	N	Minimum	Maximum	Mean	Std. Deviation
Teaching practice	20	3.17	4.33	3.60	0.33
Efficacy	20	1.80	5.00	3.40	0.78
Training and support	20	1.00	4.17	2.86	0.72

Reasons for not Conducting or Preferring Online Class

Though, online classes are value-added techniques for the modern education system which has future prospects, many teachers and students do not believe in this aspect or are not comfortable in an online class. Therefore, the survey asked those teachers and students who were not conducting or preferring online classes to specify reasons.

Figure 2 shows that the main reasons for teachers to not conduct online classes are "due to technical issues" and also that the "teachers believed that the traditional method of teaching is a better method for effective teaching". In addition to this, some teachers also opined that they do not feel secure in private online tools like the 'Zoom' app. They also believe that in an online class it is challenging to have an emotional attachment with students and vice versa.

Students' participation is an essential aspect for the successful implementation of online classes in the current education system. Many students believe that an online class has greatly transformed the education system, and they prefer it because of its time and location flexibility and broad knowledge base availability. However, some students believe that online class cannot reach them, and they stated reasons for rejection of online class (Figure 3). The same reasons have been cited in the work done by Choi et al. (2021), Dost

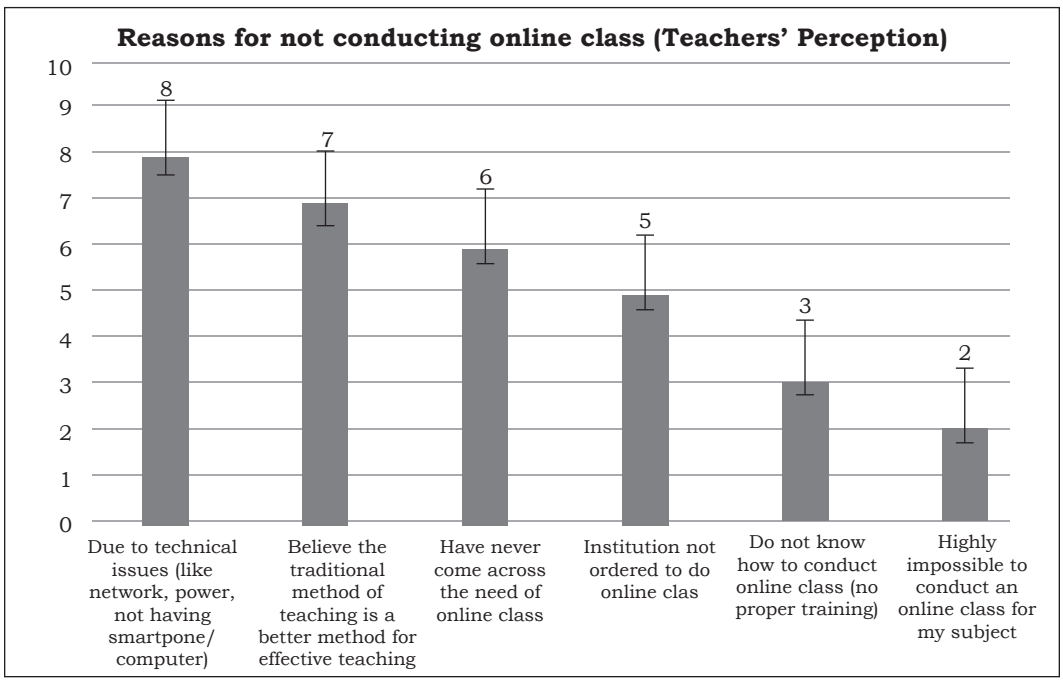

Fig. 2: Reasons for not conducting online class (teachers' perception)

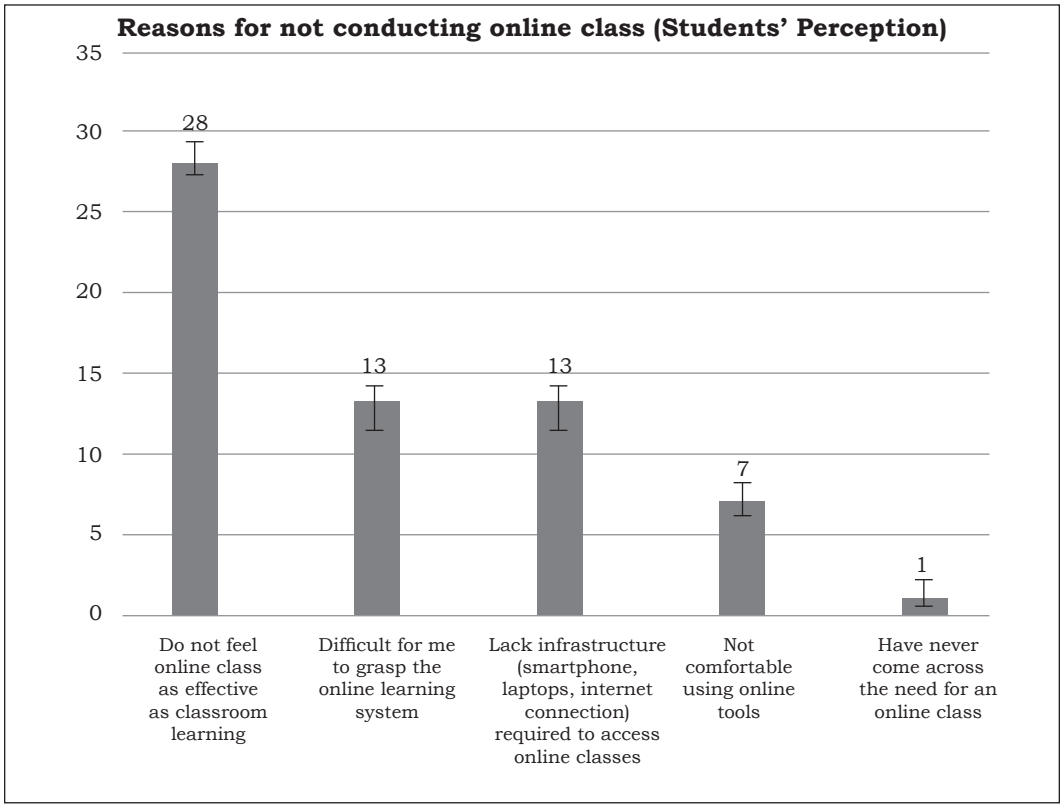

Fig. 3: Reasons for not preferring online class (students' perception)

et al. (2020), Szopiński and Bachnik (2022), Chen et al. (2020) and Bordoloi et al. (2021).

Figure 3 explains the reasons for not taking online classes from the students' perspective. Students opined that online class is not an effective method as classroom learning (82.4 per cent), and they also have the opinion that it is complicated for them to grasp the online learning system. It is observed from both teachers' and students' views that lack of infrastructure for an online class like availability of smartphone or laptop and network issues are the major problem or reasons for the insignificance of online class among respondents. The same reasons for the insignificance of online class among the students and teachers were recorded by Song et al. (2021), Cahyadi (2020), Gu et al. (2021), Biswas et al. (2022) and Huang et al. (2021).

Discussion

The findings allow us to address the two aspects in the study. The first aspect was "opinions of students

on the impact, comfortability and support of teachers in an online course". The results indicated that the student's opinion matters the most in the education system. Our study tested the variables like 'Impact', 'Comfortability' and 'Support' to assess the first aspect in this study. In this study, students opined that an online class had a significant impact on their learning style and they agreed that they get support from the teacher in online class like getting good reading material and clarifying their doubt through online tools. This finding concurs with many previous studies that reported on receiving support from the teacher in online class. For example, Song et al. (2021) reported 79.8 per cent of 203 students displayed that students agreed that they get support from the teacher in online class like getting good reading material and clarifying their doubt through online tools. On the contrary, Cahyadi (2020) concluded that few students opined that an online class did not have significant impact on their learning style, and further they agreed that they did not get support from the teacher in online class like getting good reading material and clarifying their doubt through online tools. In few studies, an online class style is recognised as an effective way of teaching. This discrepancy between online class and classroom teaching suggests that on one hand, more training and support programs are necessary in online class education to facilitate the instructional change while on the other hand, more detailed discussions are necessary to further specify what are actions and what are true student-centred ones.

With regard to the second aspect in this study—"teachers' views on the efficacy, teaching practice and training for an online class", indicated that they do not believe in this aspect of being or not being comfortable in an online class and always have the competency to teach courses online. These findings provide useful information for training programs for teachers. By taking concrete actions, the instructors can improve their performance on "flexibility of online teaching development" and "assessing student needs" for online programmes. Gu et al. (2021) reported 64 percent of 184 teachers reported that they do not believe in this aspect of being or not being comfortable in an online class and always have the competency to teach courses online. On the contrary, Biswas et al. (2022) concluded that they believed in this aspect of being or not being comfortable in an online class and always have the competency to teach courses online.

India has adopted NEP 2020 and is taking concrete steps towards online learning for the betterment of students. The same are highlighted in the studies undertaken by Gupta

(2022). As suggested by Agnihotri (2022), not only students, but even the teachers are required to follow the guidelines laid out in the report of *PRAGYATA: Guidelines for Digital Education*.

Conclusion

Online learning is an exciting new way to learn about almost anything. It has bought a positive impact on the lives of students as well as teachers. The increasing use of technology in the field of learning has improved the quality of education. Both students and teachers have optimistic views about online classes. However, there is always much room for improvement as far as online learning goes. It is evident that online learning has benefits that are more significant as it fills the gap of literacy rate by reaching the rural areas. Still, to effectively implement in a country like India, certain things shall be considered. This includes strengthening infrastructure facilities, improvement in Internet connectivity, development of rural areas, bringing changes in the attitude of students and teachers, etc. One of the most important initiative to strengthen the above aspects is the implementation of NEP (2020) in India.

Recommendation

Schools and other educational institutions are required to provide excellent training and support to both students and teachers regarding the usage of online classes that helps in increasing their comfortability. 'No smartphones or laptop' is one of the major problems of rural students, and network issues also added to the problem for rural teachers and students. One of the major problems faced by students from a rural area is that the teachers need to observe the transition in their roles, i.e., from merely being a transmitter of knowledge to the designer of the educational process. In traditional classroom learning, students are always said to be spoon-fed, but online classes necessitate a learner-centred environment that requires students to be self-motivated and self-directed. Schools and teachers need to put efforts into changing the mindset of the students. To achieve this goal, school or government has to take training and development programs to teachers as well as students regularly. The study also proved that e-learning has a more significant role to play in the future, but it cannot be a replacement to traditional face-to-face classroom learning. A complete transition to online learning is quite tricky. However, we cannot ignore the benefits derived from e-learning. As such, there is a need to understand the obstacles that come in the way of accepting online learning and take corrective measures to overcome it.

References

Agnihotri. 2022. A National Education Policy 2020: Prospects for Teacher Education Institutions. In *Edutech Enabled Teaching.* pp. 153–170. Chapman and Hall/CRC.

Aliyyah RR, R. Rachmadtullah, A. Samsudin, E .Syaodih, M. Nurtanto and AR. Tambunan. 2020. The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies*. Vol. 17, No. 2. pp. 90–109.

Banerjee, N., A. Das and M. S. Ghosh. 2021. National Education Policy 2020: A Critical Analysis. *Towards Excellence.* Vol. 13, No. 3.

Biswas B, SK. Roy and F. Roy. 2022. Student's perception of mobile learning during COVID-19 in Bangladesh: University student perspective. *Aquademia*. Vol. 4, No. 2. (Online)

Bordoloi R., P. Das and K. Das. 2021. Perception towards online/blended learning at the time of Covid-19 pandemic: An academic analytics in the Indian context. *Asian Association of Open Universities Journal*.

Cahyadi A. 2020. COVID-19 Outbreak and New Normal Teaching in Higher Education: Empirical Resolve from Islamic Universities in Indonesia. *Dinamika Ilmu*. Vol. 20, No 2. pp. 255–66.

Chen T., L. Peng, X. Yin, J. Rong, J. Yang and G. Cong. 2020. Analysis of user satisfaction with online education platforms in China during the COVID-19 pandemic. *In Healthcare.* Vol. 8, No. 3. p. 200. Multidisciplinary Digital Publishing Institute.

Choi JJ, CA Robb, M. Mifli and Z. Zainuddin. 2021. University students' perception to online class delivery methods during the COVID-19 pandemic: A focus on hospitality education in Korea and Malaysia. *Journal of Hospitality, Leisure, Sport and Tourism Education*; 29:100336.

Chopra, R. 2020. Explained: Reading the new National Education Policy 2020. *The Indian Express*, *2*.

Coman C, LG Tîru, L. Mesesan-Schmitz, C. Stanciu and MC. Bularca. 2020. Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. Sustainability. Vol. 12 No. 24:10367.

Dost S, A. Hossain, M. Shehab, A. Abdelwahed and L. Al-Nusair. 2020. Perceptions of medical students towards online teaching during the COVID-19 pandemic: a national cross-sectional survey of 2721 UK medical students. *BMJ open.* Vol. 10, No. 11: e042378.

Gopal R, V. Singh and A. Aggarwal. 2021. Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*. Vol. 26, No. 6. pp. 6923–47.

Gu S, X. Yang and W. Li. 2021. Relationships among Online Teaching Design, Experience, and Perception of College Teachers during the Pandemic. *In International Conference on Blended Learning.* pp. 351–366. Springer, Cham.

Gupta, A. 2022. Global and local discourses in India's policies for early childhood education: policy borrowing and local realities. *Comparative Education.* pp. 1–19.

Huang R, A. Tlili, H. Wang, Y. Shi, CJ. Bonk, J. Yang and D. Burgos. 2021. Emergence of the online-merge-offline (OMO) learning wave in the post-COVID-19 era: A pilot study. *Sustainability*. Vol. 13, No. 6. pp. 3512.

Khan MA, MK. Nabi, M. Khojah and M. Tahir. 2020. Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. *Sustainabili*ty. Vol. 13, No. 1. pp. 57.

Mishra L, T. Gupta and A. Shree. 2020. Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*. Vol. 1; No. 1:100012.

Motte-Signoret E, A. Labbé, G. Benoist, A. Linglart, V. Gajdos and A. Lapillonne. 2021. Perception of medical education by learners and teachers during the COVID-19 pandemic: a cross-sectional survey of online teaching. *Medical education online.*1. Vol. 26, No. 1, 1919042.

Nashir M and RN. Laili. 2021. English teachers' perception toward the switch from offline to online teaching during lockdown in the midst of COVID-19 outbreak. *Edukatif: Journal Ilmu Pendidikan*. 18; Vol. 3, No. 2. pp. 250–60.

Song Y, S. Wang, Y. Liu, X. Liu and A. Peng. 2021. Online education at the medical School of Tongji University during the COVID-19 pandemic: A cross-sectional study. *BMC medical education*. Vol. 21, No. 1. pp. 1–6.

Szopiński T and K. Bachnik. 2022. Student evaluation of online learning during the COVID-19 pandemic. *Technological Forecasting and Social Change*. Vol. 174:121203.

Unger S and WR. Meiran. 2020. Student attitudes towards online education during the COVID-19 viral outbreak of 2020: Distance learning in a time of social distance. *International Journal of Technology in Education and Science*. Vol. 4, No. 4. pp. 256–66.

Van der Spoel I, O. Noroozi, E. Schuurink and S. Van Ginkel. 2020. Teachers' online teaching expectations and experiences during the Covid19-pandemic in the Netherlands. *European Journal of Teacher Education*. 7. Vol. 43, No. 4. pp. 623–38.