

A study of School Teachers on Adaptation to Online Education during Pandemic Period

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Abstract

A qualitative study was conducted among Delhi private and government school teachers on how they have been adopting to online education during this covid-19 pandemic. Views of the teachers were captured on the impact on the quality of education, role of ICT/Technology and adaptation from all three – parents, children, and teachers in this new format of teaching. Another aspect that was explored has been a blended mode of learning. Even though the perception is positive towards online teaching, there is a fear of the quality of education and how students, teachers and parents have been coping with some of the challenges that online teaching brought about. Online teaching in all its glory cannot be removed altogether and a fine balance between offline and online (blended) learning would need to be established over a period as things return to normalcy.

Keywords: COVID-19 Pandemic, Online Education, Blended Learning, Impact on Teachers

Introduction

In the year 2019, we had a traditional teaching system i.e., 35 or more students in a classroom with subject teacher teaching (some ICT being leveraged by a fraction of teachers in a classroom). Teachers have fixed time schedules, and a number of classes to attend social gatherings in the school arena. Students were also somehow, on the same learning path in school, sitting with their friends, doing physical activity, and a timetable to follow. Schools have some functions like the Republic Day Celebration, Independence Day, School Foundation Day, Sports Day, and other co-curricular activities to make the students physically as well as mentally active. The examination was held in school, mock practices, and practical lab examinations. Come 2020 and a global pandemic break. With COVID-19, online learning came to the forefront.

Overnight, education moved from the traditional teaching system to online based teaching. Zoom, Google Meet and Microsoft Teams became the new buzzwords of school education. Suddenly the internet and mobile became the most important utility in a household. Mental health, steep learning curve and socio-economic status differences, were just some of the prominent issues that came to the forefront. There was a lack of unavailability to the internet in many areas. The impact can be seen after 2 years of online classes. The monotony of online classes has been affecting both students and teachers which lead to a reduction in interest levels affecting students' performance in the classroom. This has also been affecting their mental and physical health. Kamal & Illiyen (2021) in their study on "School teachers' perception and challenges towards online teaching during COVID-19 pandemic in India: an

econometric analysis" showed positive perception of virtual teaching during COVID-19 for reducing the learning gap and shaping pupils' future during the crises. Though many of the Delhi school teachers encountered obstacles in online teaching such as technical obstacles, difficulties in online exams and assessments etc. As we come out of the pandemic, it is important to understand the impact of the pandemic on schoolteachers as they adopt online education. This research paper takes a view of how teachers adapted to online education over the last 2 years.

Review of Literature

According to Jung, there are 12 teacher personas that any teacher can correlate to. These are – Ruler, Artist, Sage, Innocent, Explorer, Rebel, Hero, Wizard, Jester, Orphan, Lover, and Caregiver. Each of these could be identified in an offline teaching mode and with online teaching mode and reduction in interest levels across both teachers and students, it becomes hard for teachers to be one or a mix of these personas in the classroom. Teachers and their personas greatly influence children towards higher goals of learning. As per Piaget, there are sequences of stages of cognitive development that are influenced by the environment. Even though Vygotsky indicated that children's learning is determined by a term namely "Zone of Proximal Development", it is the environment that is introduced that eventually brings up that ideal mix of learning and development towards students' higher-order thinking skills.

Patricia, Aguilera and Hermida (2020) in their research found that motivation, self-efficacy, and cognitive engagement decreased among students post transition. It was felt that face-to-face education had an ecosystem to support learners and it would take significant time to find such an ecosystem for

online teaching. One thing that the researchers did point out was the fact that online teaching was a response to an emergency circumstance which showcases creativity and flexibility at that point in time. Driessen (2020) in his research observed socio-economic status differed across students and teachers which impacts levels of financial stability. As a result, the use of technology may be different among different students. Bali and Lui (2018) conducted research on the topic of student perception towards online vs face-to-face classroom teaching before the pandemic hit us. This study though does not truly represent the education situation as in COVID where online was the only option. Surprisingly, the study concluded that there was not a significant difference among online and face-to-face learning across different levels of education levels. Patson, et al (2021) found significant differences between students and one size fits all approach would not work. Some students were more adaptive in comparison to other students. Martin, A. J. et al (2021) found that online and parental learning support and background attributes were significantly associated with the role of adaptability in students' online learning of mathematics during periods of remote instruction. Adaptability played an important role in students' online learning during COVID-19 and beyond.

But one thing that Muthuprasad (2021) confirmed was that there was a positive attitude towards online learning as it provided flexibility to learn at their own pace by recording the sessions and having the on-demand ability to view the content despite challenges in access to technology for a portion of the student community. Mercer, Hennesy and Warwick (2017) in their research on the topic of methods which can improve the quality of classroom interactions among teachers and students. Their

work included important aspects of the role of digital technology and its use in supporting classroom dialogue. The results were positive which has a direct impact on classroom pedagogy and practices.

Research Objectives

The objectives of this research were:

1. To analyse the perception and challenges of teachers for online classes and whether it has impacted the nature of education quality and standards.
2. To determine the adoption strategies that schools have adopted
3. To evaluate the role of technology in delivering quality education

Research Methodology

Nature of research

Qualitative in nature.

Sample size and sampling technique

This research is qualitative in nature (limited study) with a sample size of 40 teachers aged between 30-50 years. Of these 40 teachers, 20 were from Private schools and 20 were from Government or Government-aided schools confined to the Delhi region only. The primary sampling techniques used for this research were purposive and snowball sampling techniques. As per Vehovar et. Al. (2016), purposive is a non-probability sampling where selection is based on characteristics of the population and the objective of the study and snowball is also a non-probability sampling where participants are contacted through referral.

Research Methods and Tools

There were primary three research methods leveraged as part of this research for data collection:

1. Questionnaire,
2. Semi-structured interviews, and
3. Classroom Observations.

The major theme of the questionnaire is outlined below: -

- Experience and perceptions of online teaching
- Challenges faced by teachers and students
- Assessment techniques alongside online teaching

The major areas of investigation as part of semi-structured interviews were:

- Adapting to online teaching
- Perception on the impact on quality of education.
- Conducting online classes techniques.
- Role of technology

The major areas of investigation as part of Observations were:

- Classroom participation and engagement
- Quality content of education
- Use of technology during class

Mode of Interview conduct

The model for conducting interviews was telephonic as this research study was conducted during the summers of 2021.

Research Questions / Hypothesis

The researcher has tried to answer the below questions through these observations, questionnaires and interviews were:

1. Does the teacher have a positive

perception of leveraging online learning?

2. Does the teacher believe that the quality of education is suffering on account of online learning vis-à-vis traditional learning?
3. Does the teacher believe that the journey towards online learning was easy for all teachers, students, and their parents?
4. Does the teacher believe that technology has played a pivotal role and can be leveraged once traditional learning begins?

Data Analysis and Observations

Experience taking online classes

For the majority of teachers, taking classes online was a new experience and it took the teacher some time to get acquainted. Only a few had prior knowledge of online teaching because of which they acquired skills at a better pace. Various teachers were using different teaching platforms such as Google Meet, Zoom, Microsoft Teams and others. Most teachers voiced that school authorities were very supportive in this transition to online classes by extending technical help where required. Some of the feedback shared by teachers on their experience is captured here.

“Where to adapt right now, I think everyone is adapting. Now according to the class schedule that we do, we must watch the whole day. And whatever extra work is done, they also do it at home. As far as children are concerned, I have seen that children are active in the morning class, and in the later classes, the response is not so much. According to me, children are also adapting”.

Most teachers had similar feedback about adopting the technologies and how fatigue sets in the students as the

days pass and months have passed.

Perception of online teaching-learning process

Pre-pandemic, teachers were not comfortable with the online teaching process and seemed to believe that it was a distraction. The perception of teachers has gone through a significant shift with many teachers voicing a shift in attitude towards leveraging technological advancements and online classes even when schools open. They are thankful for the online education systems because these changes have set a new pedestal in these times. Some of the teachers did feel that online learning has been forced onto them and this is the new normal and it would be hard to move students back to offline mode fully.

“The Pandemic has changed the education sector; it has pushed optimization in delivery methods. Schools and educational institutions have been forced to move online. A new normal has been created and it is teaching online.”

For sure, the use of ICT has added a new dimension to learning where many students find the lessons more stimulating and engaging as compared to traditional classroom environments.

“ICT tools can improvise the teaching process of a teacher, a blend of traditional and modern teaching tools would have a more practical impact on brains of students, with Powerpoint, audio-visual aids, and knowledge updates with a single click of a mouse.”

Another teacher remarked that ICT and blended modes of learning enable a better learning experience, especially catering towards the diverse needs of various learners.

“I prefer the blended mode more as compared to offline and online learning

as it caters to the diverse needs of students, as in if a student is not doing well in a particular subject matter, he can be provided with hand notes and various other videos and presentations in order to enhance his or her learning and eventually he or she will be able to perform better thereafter.”

Challenges faced by teachers and students

One of the biggest challenges that students indicated was the lack of resources on teachers’ end due to which subject matter clarity was many times a challenge. Lack of resources could be in terms of tools required to explain a concept or in some cases internet connectivity that could lead to content being taught but clarity not emerging for students.

“Teachers mostly face challenges like lack of IT support, continuous technological changes, unequal access for all students, optimized software for mobile devices and security issues because of Adaptability Struggle, Technical Issues, Computer Literacy, Time Management, and Self-Motivation.”

Many times, connectivity on the student’s end was also seen as a major challenge. A teacher responded,

“These are now, yes of course, new terms for us. They are useful for the new generation but not for us. Proper infrastructure should be there to use appropriately like we should have our own personal computer systems in the school, but the facilities are not there (talking in consideration of traditional means). Big and false promises are made haywire. We are not able to practice it. Our school is very much lacking to include such concepts. But, from the time the system has shifted to online mode of education, we now acquire our own personal laptops or systems but need to become familiar

with various online teaching-learning applications to make the classroom become more efficient and effective.”

Maintaining discipline in the classroom was also becoming a challenge and the easy online way was to mute all participants or manage host controls such as disabling chat, mic and share options for students when they joined. Another common problem observed has been the tendency of students to turn off the video which could be due to the preference of the student or a genuine connectivity issue. Attendance has also been a challenge seen more in government school students.

“कोई फायदा नहीं होता उसका भी, माँ-बाप तब भी नहीं बोलते अपने बच्चों को, कई बच्चों की फीस पूरी न होने की वजह से भी वो ऑटोमेटिकली पीछे से ब्लॉक हो जाते हैं, तो क्लास ले ही नहीं पाते, इस मामले में तो टीचर्स भी हेल्पलेस हो जाती हैं।”

“It is of no use, even when parents do not speak to their children, due to non-fulfilment of fees for many children, they are automatically blocked from behind, so they are unable to take classes, in this case then Teachers also become helpless”.

From a student’s perspective, having the class material recorded or shared post the class on the choice of tool (google classroom, WhatsApp group, Microsoft teams or others) became a norm.

“In the case of poor connectivity issues even teachers cannot help it out, the students eventually have to leave the meeting and thereafter they learn through the notes provided, YouTube videos and various other learning platforms like Vedantu, Byju’s Learning App.”

One teacher put out the advantage and challenge well with this remark,

“Online classes have a broader perspective. When you are confined in a classroom, you only learn what is limited

to the books/syllabi, but with an online class, you can Google everything more about the ongoing topic, broadening the scope. Online classes don't give you the opportunity to raise doubts. This is a big disadvantage, and I believe unless a person raises questions while learning, his learning is incomplete."

Quality of education

Quoting what one of the teachers said,

“शिक्षा में गुणवत्ता तो होनी चाहिए और मेरे हिसाब से शिक्षा का बेसिक रूल यही है कि ऐसी शिक्षा होनी चाहिए जो कि सार्वजनिक हो, सबको समझ में आए और सरल हो | संक्षेप में सरल रूप में होनी चाहिए | जहाँ तक एफेक्ट होने का सवाल है, तो हाँ ये ऑनलाइन शिक्षा से काफ़ी प्रभाव पड़ा है, बच्चे को समझ आया या नहीं ये हम पता नहीं कर सकते।”

“There should be quality in education and according to me the basic rule of education is that there should be such education which should be public, easy to understand and easy to understand. In short, it should be in a simple form. As far as the effect is concerned, yes it has been affected a lot by online education, we cannot know whether the child understood it or not.)

As per Psacharopoulos & Woodhall (1985), Quality of education is a process that imparts knowledge, skills and capabilities to the learners which aid in the social and economic development of the nation. Another teacher echoed the sentiment were in,

“Quality of education has decreased drastically; only 50 per cent of teaching-learning is being done now.”

Education is not only about subject knowledge but participation in inter-school and intra-school activities form a critical component towards students' learning. With the online way of learning/teaching, outside-the-classroom activities were a major causality.

Assessment of students

Assessment is a complex process where the CBSE (Central Board of Secondary Education) has set certain norms and principles. Based on these guidelines, teachers create different methods of assessing students and various work assignments that can be used for student evaluation. The end goal of these assessments is to assess a student's understanding of a given topic or subject. Especially for practical-based subjects like science, there has been a significant shift in how practicals are conducted and their assessments. Instead of live practicals, the teachers are recording videos of the experiments and then play them for students.

“In the previous year I found it difficult to conduct activity classes but as of now, I conduct activities by making a video of myself doing that practice, sharing it with students and asking them to write their observations and understanding from that activity.”

Another teacher put forward her viewpoint in a manner-

“होम बेस्ड सामान से ही एक्टिविटी करवाती हूँ मैं | जैसे मैं फूड्स का चैटर पढ़ा रही हूँ तो घर में से ही सामान आ जाता है | इससे एक और चीज़ आसन हो जाती है, बच्चे भी आराम से उस एक्टिविटी को परफॉर्म कर लेते हैं |

Most teachers acknowledged that assessments have moved to students uploading their work online (Word documents or paper-based writing with scanned copies) being used majorly. Practical saw a drop due to limitations among students to conduct the same. However, teachers had mixed opinions on assessment methods being used with cheating and chaotic assessment methodology leading to a lot of problems.

“The uploading of answer sheets” scenario makes everything chaotic. Some upload the sheets on the portal,

some mail them to the teacher and some even break the protocol and send them on WhatsApp. Hence, it is very difficult for the teacher to collate the response sheets.”

Classroom observations done as part of this research echoed many of the statements shared by teachers as remarks or other tooling used. Few that were observed consistently across 20 classrooms that were observed online are mentioned below:

- Few students didn't respond, and, in many cases, there was a lack of interest in students as seen from them feeling sleepy during classes.
- Many times, the classes which did not use ICT in the classroom content led to less interest from students.
- Engaging students in group activities and group submissions resulted in a high degree of interest from students.

Adoption strategy towards online learning

Regarding the adoption strategy, teachers and students in a school were primarily using one of the online learning platforms such as Zoom, Google Classroom, and Microsoft Teams to carry forward with the teaching-learning process. Over a period, technical support became a key enabler towards adoption of these new technology platforms in the online teaching world. Selvaraj, A. et al study indicates the teachers' and students' adaptation during COVID-19 to the change of emergency remote learning platforms using various online collaborative tools in hand, without any pre-planned course structure and training. A good summary of the adoption strategy is summed up in this response from the teacher,

“These are now, yes of course, new terms for us. They are useful for the

new generation but not for us. Proper infrastructure should be there to use appropriately like we should have our own personal computer systems in the school, but the facilities are not there (talking in consideration of traditional means). Big and false promises are made in haywire. We are not able to practice it. Our school is very much lacking to include such concepts. But, from the time the system has shifted to online mode of education, we now acquire our own personal laptops or systems but need to become familiar with various online teaching-learning applications to make the classroom become more efficient and effective.”

Teachers also emphasized the role that school has been playing towards helping teachers adapt to the new ways of learning with in-service teacher training programs.

“School authorities have arranged training programs for teachers through Diksha App and Chocolate App. Also, they've arranged educational programs on teaching strategies. Yes, these played a significant role in my learning as I came to know about making Google forms and Excel spreadsheets and made us capable of making audio video files of educational topics and concepts.”

Role of Digital Technology in this new learning process

Technology and its related aspects have been a major contributor towards the progress and development of the education sector. Continuing with the old traditional methods of teaching are nowadays not much prevalent in today's scenario. Teachers as well as students have become tech-savvy and demand change in the modes of delivering subject matter content.

As one teacher summed up,

“Online classes have a broader

perspective. When you are confined in a classroom, you only learn what is limited to the books/syllabi, but with an online class, you can Google everything more about the ongoing topic broadening the scope.”

However, from the responses of various teachers, the opinion is divided among teachers on whether digital technology has been helpful or not. An example shared by a teacher is quoted below,

“Only and only one difficulty comes, that is not all students are habitual of giving online exams that are going to affect their performance and also the speed issue is going to be the main for the subjective exams as most of the students face this problem.”

Conclusion

Teachers, Students, and parents all three have played a pivotal role towards education during this pandemic. Teachers form the centre of the education process and are the indispensable vehicle towards the good quality of education. “Educate” in the real sense of that word is not to transmit from teachers to students some information about mathematics or history or geography, but in the very instruction to bring about a change in the mind of human beings.

The study explored teachers’ perception of education shifting from a traditional classroom environment to an online way of teaching imposed by the COVID-19 pandemic. Teachers who were part of the sample set for this study brought in both their past and present experiences of teaching, challenges they have faced, an impact on the quality of education and how they foresee education once offline classrooms start operating again.

The respondents were happy about the fact that despite a pandemic which completely shut down traditional

classroom education overnight as we knew it, online teaching brought a new life into education and teaching. Teachers did share their worries and anxiety towards fulfilling parents’ expectations about the quality of education being imparted alongside learning and coping with the new teacher-learning processes. Most teachers acknowledged that online education and the new way of teaching brought all of them out of their comfort zone and they had to unlearn and learn new ways of teaching and engaging with students. There were many challenges that were faced by teachers, students, and parents but despite some of these challenges, students’ learning continued through the 2 years of the pandemic. Quality of education brought in different perspectives from different teachers and respondents. For sure the teacher’s exceptional and creative personality and ability to handle classroom situations had a big impact on the quality but for sure across all types of learners in a classroom, ensuring the same quality being delivered became very hard.

National Council of Educational Research and Training (NCERT) on its part mapped all online materials available through the Ministry of Education’s (MoE) online platforms with curricular standards. Diksha, an online National Teacher Platform, was leveraged to provide teacher training and resources, including lesson plans and worksheets linked to the curriculum (NCERT, 2020a). In August 2020, the MoE and NCERT released a new set of learning guidelines for students and teachers. These guidelines were a significant departure from the initial AAC (Alternate Academic Calendar) as they recognized the diversity of the country and varying degrees of ownership of technical devices and opportunities available to students, stating that “following only one model of teaching and learning will not work” (NCERT, 2020c, p.3).

These steps by the government helped the teacher adapt to the online mode of teaching. The use of ePathshala (e-school) and guidelines for studying at home for teachers, parents and school principals were some of the initiatives which were helpful for teachers to cope as they transitioned to online teaching as part of adaptation.

Most teachers did share that the future of education, once things got back to normalcy, is neither offline nor online teaching but a fine balance of blended learning for students. Bashir, A. et al,

highlighted the adaptability during the pandemic as it had prepared students to work remotely and reflected global adaptations made by many organizations to evolve. Therefore, lessons learned are to create opportunities for hybrid teaching, learning and assessment approaches. Hybrid teaching, learning and assessment bring in good aspects which have come out with online teaching (bringing about interest and spark among students, collaborative in nature to name a few) would need to be continued alongside offline or classroom environments of teaching.

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