

Changes in Content of Online Teaching in pre and during COVID-19 Era: A Comparative Analysis in Private School Setup in India

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ABSTRACT

The process of teaching and learning through online or virtual mode has been gradually becoming an important part of the Indian education sector. Teachers and students in higher education have already been effectively using online education mode to optimize the learning process. Schools, too, have been using educational technologies in many ways at all levels and across all grades. But with the unexpected worldwide spread of the COVID-19 pandemic in the year 2020, a sudden exponential boom has come in the online teaching set up. Until now, online teaching was assumed to be an aid to the teaching-learning transactions and was immediately adopted as the only way out, to continue with the pedagogical process in schools and colleges.

This research attempts to make a comparative analysis of the changes in various aspects of online teaching before and during the COVID-19 era, including content development and delivery and type of information shared with students in private schools of NCR of India. Data collected by the investigator from school teachers about their usage of online methodologies from 2017 will be compared with school teachers' data in August 2020, and its educational implications will be discussed.

Keywords: Content, COVID-19, Information, Online teaching, Private schools.

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INTRODUCTION

"Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important."

—Bill Gates

A teacher's role is indispensable in nurturing a student's learning ability. The responsibility of making the students grasp the content being taught rests on a teacher's shoulders. It is his/her call to use suitable methodologies, strategies, and techniques to make the students understand the content and stimulate their interest. No technology can replace a teacher. Understanding a child's capabilities and talents and then providing him with the requisite knowledge that will enhance them further is what an effective teacher does. The most prominent role of the teacher is his/her teaching role (Aslani, 2003). In traditional teaching concerned with the teacher being the controller of the learning environment, the traditional teacher-as information-giver uses the textbooks and his/her information, via lecturing method and instruction, based on textbooks.

As societies become more knowledge-based, schools must evolve to ensure the information and skills needs of students. The 21st-century learning's key focus is an adaptation to keep pace with demand and expectations (Punie, 2007). New learning challenges are emerging and will affect societies and countries around the globe. Experts surveyed on the future of learning have confirmed the need to innovate and modernize school education to adequately prepare students for their future (Redecker *et al.*, 2010). In contemporary teaching, teachers act as facilitators and supporters for the learners. The content is available to the students through various modes, including digital technologies and information and communication technologies. Technologies in and of themselves do not drive learning for students. They are

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of very little use unless the learning task and framework are clearly defined. Instead, the benefits are derived from the collaboration, communication, and creativity that these tools support. This is where a teacher's role comes in, wherein he/she is responsible for student engagement and interaction.

EFFECTS OF PANDEMIC ON SCHOOL EDUCATION IN 2020

COVID-19 pandemic brought the world to a standstill with all offices, businesses, shops, malls, events, and tourism shut. The world was struggling to maintain normalcy in their routines. Experts world over were looking for ways to keep the economy going and pouring in their suggestions for survival in these times of great mental depression. Amidst all this mayhem, the most vulnerable section of the population, the school students, witnessed a 360° change in their lives. All the schools' stakeholders, including the policymakers, management, administration, teachers, and parents, were putting in their best efforts to transform this situation into a productive time. In this scenario, where the physical meeting between people was to be avoided at all costs, online teaching was the only and

best possible way to continue the school year and keep students' routine as close as possible to normal.

Virtual teaching began with full effect and a variety of tools being used with trial and error methods. Some tools brought successful academic transactions, whereas some were not so apt for the particular section of learners. The initial phase was the most challenging for teachers who were not used to complete virtual teaching using digital technologies. Creating the most attractive and interest generating content was the first major task for the teachers, followed by projects, assignments, and assessments.

In this paper, a comparative analysis will be conducted on the type and mode of content used for online teaching by teachers before the pandemic when regular teaching used to happen in schools compared to the complete online teaching being done by teachers, after the pandemic hit in an Indian school scenario.

CONTENT OF ONLINE TEACHING IN PRE-COVID-19 ERA

The rise of the world wide web (www) had created new spaces for virtual communication exchanges for the teaching force. In this scenario, and with support of the Web 2.0 resources, social networking had expanded its horizons among educators. Such resources enabled new modes of relationships, regardless of time and space, through social internet networks. Like the general population, teachers have been using social media for many purposes. It includes social networking sites for personal use, professional use, and teaching use. Studies about all these areas and particularly in education, are discussed below.

Various researches conducted in the last decade explored the usage of Social Networking Sites (SNS) in the educational area. Through his work, Selwyn (2007), "Screw Blackboard... do it on Facebook!" an investigation of students' educational use of Facebook, made an early attempt to study Facebook's educational use. The study revealed the rising use of Facebook, and rather than attempting to appropriate Facebook for educationally "appropriate" or valid uses, or else regulate students' use through coercion or surveillance, university authorities and educators were perhaps best advised to allow these practices to continue unabated and firmly "backstage."

Another viewpoint was presented by Anita, A. (2013) in her research study, "A study of the perceived influence of internet use on social competence, emotional maturity, and general well-being of adolescents." The research aimed to analyze the perceived influence of internet use on social competence, emotional maturity, and general well-being of adolescents belonging to different residential backgrounds, gender, academic streams, and frequency of internet access.

Prasad (2015) probed empirically in his doctoral research, "Impact of social network sites on perception of sociability and academic performance of college students in Bangalore city," into the impact of SNS on the perception and performance of youth in pre-university education in an urban setting and deduced that it has contemporary, sociological and applied relevance. The manuscript provided empirical insights into institutional bonds and synergies, circuits, and networks that bind the people, especially the youth of today, and shape their identity and ideologies.

The edWeb.net, a social networking website, prepared various research reports, such as, "A Survey of K-12 Educators on Social Networking and Content-Sharing Tools" (2009), e-books: "K-12 Educators' Usage and Attitudes" (2010), and "School Principals and Social Networking in Education: Practices, Policies, and Realities" (2010). The findings of these reports maintained that educators,

along with millions of other online adults, are joining social networks and adopting various content-sharing tools for personal, professional, and classroom use. Based on their survey response, 61% of educators have joined a social network, and these educators engage in more online activities than educators who have not joined a social network. Educators who have joined a social network are more positive about this technology's value for education than those who have not. Still, they want the ability to separate their personal and professional communications.

Kaur (2018), in her doctoral study titled "Profiling the use of Social Networking Sites by teachers and students and exploring its effectiveness in teaching and learning," investigated the use of SNS for personal, professional, and teaching purposes by teachers and students of secondary school classes in the National Capital Region of India. The study was conducted on a sample of 300 teachers, and the results were quite enlightening. The realm of activities, included formation of pages/groups for the students (22%), real-time chats with students (11%), teaching specific topics to students (26%), staying in touch with other fellow teachers and colleagues, former students, and subject experts (80%), enhancing general awareness (97%), specific school work (87%), chatting (66%), uploading photos and videos (52%), entertainment (33%), status updates (51%), geographical location updates (10%), to accumulate personal learning material (30%), shopping (11%), etc.

The students of secondary school classes were using SNS for academic and non-academic purposes. The realm of activities included participation in pages/groups formed by teachers (50%), the formation of pages/groups (10%), real-time chats with teachers (13%), staying in touch with friends, family and teachers (90%), enhancing general awareness (96%), specific school work (93%), chatting (92%), uploading photos and videos (75%), entertainment (50%), status updates (57%), geographical location updates (36%), shopping (6%), etc.

Many more studies conducted before the pandemic hit the world revealed that teachers worldwide used online tools and apps to facilitate the teaching-learning process, but they were used in a limited fashion and mostly at secondary education or higher education level. At elementary school education, animated videos or smart boards were adopted successfully, but social networking sites or apps or other online tools were rarely used.

CONTENT OF ONLINE TEACHING DURING COVID-19 ERA

With the advent of the great COVID-19 pandemic globally, many things came to a standstill but not education, thanks to online teaching with the help of apps and social networking sites at all levels of education. Students as young as toddlers studying in pre-primary were made to learn through laptops, mobile phones, tablets, etc. Everyone had to adopt this new normal. Many studies were being conducted about this teaching-learning process, its success rate, challenges, and stakeholders' response. A few prominent studies are highlighted in the paragraphs below.

Jena (2020), Assistant Regional Director, IGNOU, in his study titled "Impact of Pandemic COVID-19 on Education in India," highlighted the measures taken by the government of India to provide seamless education in the country. He elaborated on both the positive and negative impacts of COVID-19 and pointed out suggestions to carry out educational activities during the pandemic situation.

Saxena (2020), in her study titled "Coronavirus accelerates the pace of Digital Education in India," explained that academicians



had shown agility, alertness, and adaptability to revolutionize the teaching pedagogy and shift from classroom teaching to the use of various online digital tools that can create an interactive and engaging learning environment. As universities and educational institutions were forced to close down to curb the pandemic, instructors have shifted to remote teaching. Among various online platforms, like Google Hangouts, Skype, Adobe Connect, and a few more, Zoom has emerged as a clear winner in India. Zoom has left behind WhatsApp, TikTok, and Instagram and has claimed the top spot on Google Play.

Dhawan (2020), in her research article "Online Learning: A Panacea in the Time of Covid-19 Crisis," includes the importance of online learning and strengths, weaknesses, opportunities, and challenges (SWOC) analysis of e-learning modes in the time of crisis. Her research also discusses EdTech start-ups' growth during the time of pandemic and natural disasters. It includes suggestions for academic institutions on how to deal with challenges associated with online learning.

Trust and Whalen (2020); "Should Teachers Be Trained in Emergency Remote Teaching? Lessons Learned from the COVID-19 Pandemic." To learn more about educators' experiences during this crisis, the researchers designed and distributed an online survey that received 325 responses from K-12 educators from Massachusetts, US, between 4 April and 10 May 2020. In this article, they have shared initial insights from the survey and provided recommendations for better preparing and supporting educators for teaching remotely in times of need.

Kaur *et al.* (2020), in their research titled "Online Teaching Experiences of Primary School Teachers in Private Schools of India," highlight some of the innovative techniques used by teachers that included using YouTube videos and storytelling to engage the children. They mentioned that teachers have started making interactive PowerPoint presentations with various stimulus generating activities to enhance student participation. Teachers shared that an ideal PowerPoint presentation for primary grades included a video link to generate initial interest in the lesson, proceed to the central theme of the lesson, then include online games or Q/A sessions to make the students active and responsive and finally, a recapitulation in the form of a worksheet (which is already provided to all the students). Online puzzles, quizzes, e-books, animations, simulations, and games have been a great asset to online teaching. Collaborative efforts from the teachers to build resources and share resources has become much easier and cost-effective.

Many ongoing research types are still evaluating the change in content, teaching styles, and attainment of teaching-learning

objectives as the schools have not yet opened in the physical form fully.

COMPARATIVE ANALYSIS

The online learning method utilizes various internet applications to distribute classroom materials and help learners and educators interact with one another. Using the various technologies available for online learning, educators can provide a more interactive distance learning experience by delivering real-time, synchronous video conferencing.

All the studies in the pre-COVID-19 era revealed that teachers were using online tools to enhance their teaching-learning transactions in India. Whether it was Web 2.0 tools, like social networking sites or multimedia resources, like audio and visual aids or animated smart boards, all of them worked as a catalyst to improve their pedagogy effectiveness. The teachers were not spending a great amount of time finding the right resources online because they preferred their age-old face-to-face teaching method.

Many issues, such as, technical snags or low bandwidth, hampered the students' learning flow. The pop-up advertisements also posed as a great distracter for the sensitive mind of young learners. The use of SNS was challenging for educators. They needed to learn new software and be able to teach students how to use it. SNS with forums created more work for teachers, as they needed to moderate those discussions. School authorities were reluctant to change or did not have the budget for new technologies, which impeded a teacher's ability to take advantage of SNS's benefits.

Since online teaching was being adopted as support only, teachers could not gain its full potential. Teachers and the school authorities were also reluctant to utilize online learning tools because of the additional expenses that might come along. Parents also perceived online education as a distracter rather than a motivator.

As compared to the previous times, the COVID-19 era brought about a gigantic change in the pedagogical structures at the school level. All the stakeholders, including the policymakers, school administration, parents, teachers, students, and others, had to adopt online teaching as a last resort to save the upcoming years full of uncertainty. The initial teething difficulties, like preparation of content, delivery of content, student engagement, prompting by parents, assessment, and other issues, were faced by one and all.

But as time progressed, both teachers and students got used to the idea of virtual classrooms and the adoption of the new set up that was here to stay for a while. Teachers gradually started searching, creating, and developing innovative online content

Table 1: Content of online teaching in pre-COVID-19 and during COVID-19 era

S. No.	Content/ Purpose	Pre-COVID-19 era (%)	During COVID-19 era (%)
1	Formation of groups or pages	22	72
2	Real-time interaction with students	11	90
3	Uploading photos	52	90
4	Uploading videos	58	100
5	Discussion with colleagues	26	85
6	Consultation from subject experts	15	72
7	Enhancing general awareness	45	70
8	Accumulate personal learning material	35	64
9	Assessment	43	100
10	Project work	56	90

that attracted students' attention and interest. They learned the art of incorporating videos, audios, and animation to prepare a wholesome, balanced lesson. They discussed with their colleagues and subject matter experts regarding novel ways to keep students' interest alive and keep them completely engaged during virtual classes. Assessment forms were developed as objective and subjective in Google Forms, Microsoft Word, Edpuzzle, Flipgrid, etc. For project work, innovative padlets were being uploaded for student learning.

To understand the drastic changes that took place in the year 2020 because of the pandemic, a comparative analysis was done by the investigator. Table 1 shows the percentage comparison in changes of content and purposes of online teaching in pre-COVID-19 and during the COVID-19 era by teachers in private schools in India. It depicts the percentage of teachers using online or virtual teaching tools (websites or apps) for various purposes and the kind of content shared with students and colleagues. The data for the same was collected from the teachers teaching in various private schools from all over India by the investigator in 2017 and 2020, respectively, for separate research purposes.

As clearly seen in Table 1, while in the pre-COVID-19 era, barely 22% of teachers used online tools for forming groups or pages for their students, but during the COVID-19 era, almost three-quarters of teachers used it for the same. A vast difference is observed in the real-time interaction of teachers with students in both eras. Because of schools' physical closure in the session of 2020, teachers had to interact with their students in real-time virtually. The content was delivered majorly in the form of photos and videos of the lesson plans, and thereby, almost 90 to 100% of teachers were using it during COVID-19 era teaching. An increase in the percentage of teachers interacting with their colleagues and subject matter experts online was also visible. To enhance students' general awareness, almost 70% of teachers used online tools during the COVID-19 era compared to 45% in the pre-COVID era.

Another significant point to be analyzed was the number of teachers using online material for accumulating personal learning material. Almost double the number of teachers were using online tools for personal learning. Finally, teachers using online tools used for assessment and project work increased double in number clearly showing that online tools became an indispensable part of teaching and learning for teachers and students in the COVID-19 era.

CONCLUSION

The purpose of this investigation was to get a true comparative picture of the academic scenario of online teaching in India before and during the COVID-19 era. Profiling the changes in the content of online teaching by school teachers and exploring the challenges that are posed in teaching and learning transactions. This investigation was important because online teaching has conquered the present generation in the COVID-19 era the most, and educators and learners are impacted to such a great extent.

Students are the most impressionable and vulnerable too. Thus, it becomes imperative to profile the changes in the content of online teaching and record its practicalities to improvise the same for a scholastic outlook of our country's future citizens.

Although most educators seem to identify and acknowledge the benefits of online teaching, they miss the human touch and the personal connection with their students. Although teachers engage in a synchronous teaching model where they meet all of their students daily in a virtual classroom, they feel that the human connection cannot be replaced in primary education. It is difficult for them to engage their students and connect emotionally.

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