# STRATEGIES FOR VIRTUAL SCHOOLING-A SILVER LINING AROUND THE COVID-CLOUDS

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## *Abstract*

**T**hroughout history, it has been observed that the outbreak of diseases has ravaged humanity, sometimes signalling the end of an entire civilisation. Recently the COVID-19 pandemic has also raised a variety of issues in our society. Uncertainties occurred in all spheres of life including education. The overall system of education is disrupted for an indefinite period of time. This situation has raised a new set of challenges for educational institutions and its stakeholders. These challenges have brought a significant change in the teaching-learning process. This is an era of pedagogical transitions from face to face learning to blended learning and finally to virtual schooling. An online school or e-school or virtual school conducts the teaching learning process through the Internet. Till today this concept is implemented successfully at higher levels of education. But in the present scenario the concept of virtual schools gained its importance. The teachers, who were reluctant to use e teaching-learning methods in the past, now find it a boon in this present situation. Virtual schooling now holds a significant place in the teacher education curriculum as well. The following paper defines the strategies used by the instructors to implement virtual school. It also reveals the changes experienced by the instructors in this virtual mode. The paper presents the experiences of two instructors, who are teaching in reputed schools for past 10 years, as case study. Data included 1 hour interviews and an analysis of online discussion postings. This study shows that the methodology of virtual education is based on the principle of Bloom's taxonomy. It reveals that virtual schools will be effective if parents also take active participation in it. The study also reveals that not every home has computer and children need adult supervision while using internet. Thus the

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virtual schooling can be defined as a delicate balancing act which is to be implemented effectively and efficiently according to the needs as well as accessibility of the learners.

## INTRODUCTION

Information Communication technology (ICT) consists of tools and techniques that provide access to data and information through tele-communications. ICT in education is gaining importance worldwide. Online education exists all around the world. The transition from face to face teaching to online teaching is challenging. It is difficult to assess the learning level of students. The online teaching learning requires constant feedback. It is required to establish a sense of social presence in order to make the students a part of the learning community. Instructional models vary from distance learning type to live interactive classes. These instructional models can be basically of two types:

**Asynchronous learning:** In this type of learning, the students are given study materials and assignments and are expected to complete the work depending on their own pace. There is no real time interaction between them. The interaction takes place with the help of discussion forums and bulletin boards.

**Synchronous learning:** This type of learning is taking place in real time. The live-interaction between the teachers and the students is taking place over an appropriate platform.

Some of the advantages of virtual teaching include ease of access and convenience. Online teaching learning can take place from any part of the world. The students can attend these classes from anywhere.

These classes continue amidst of pandemics and natural calamities. The students can learn concepts at their own pace. Online schooling has brought the changes in the different aspects of education.

1. **Change in the Teaching Spaces:** The classrooms are replaced by the virtual applications. The virtual space is created by video conferencing applications. In this type of classrooms we can follow four different modes:

   **Same time, same place:** The teachers are organising online classes through the applications like Google meet, zoom, etc. These classes are basically kept during the regular school hours. The students are attending these classes from their place of stay.

   **Different time, same place:** The teachers are posting materials and assignments over Google Classroom Application and the children are solving these within specific time frames.

   **Same time, different place:** The classes are also going on the messaging applications where the students are called online and the teacher student interaction is taking place at the same time.

   **Different time, different place:** E-mail is an example of this type of learning. The teacher-student interaction can take place through mails according to the needs and requirements.

2. **Change in the learning process:** The process of learning has evolved during recent times. From regular classroom environment to online schooling, the learning process has seen a significant change. The first step in the online education is to propose a virtual classroom and to define the basic infrastructure to develop it. The development cost and effort should be defined. The educational goals are planned and defined. The virtual classroom is then defined and the content that needs to be delivered is prepared and distributed. Appropriate communication technologies are used and online student assessment methods are implemented. The classroom management procedures are established and the system is set up.

3. **Change in the role of instructors:** The role of teachers has evolved overtime. From the Gurukul system where the teacher is worshipped as an epitome of knowledge till today where the teacher acts as a friend, philosopher and guide who helps the students in selecting the right information from a wide variety of information. The internet has plenty of knowledge so the role of teacher is shifted from the delivery of knowledge to choice of information. The teacher provides support for student communication. The teacher is also responsible for time management relating to developing, preparing and delivering materials. The choice between synchronous and asynchronous delivery is also an important decision to be taken by teachers. The teachers are also facing technology issues. A platform skill that is the choice of appropriate platform for the delivery of information is also of key importance in the virtual school.

4. **Changes in Teacher Education:** Virtual classrooms are the future of teacher education. It is a brand new technology for training the teachers. Simulator software is created where the students are programmed to act like real kids. Some of these students may call out of turn and get distracted. Some may try to get the teacher off the task. Others may have special needs that the teacher must attend to during the lesson. The job of a teacher is not only to teach the lesson successfully without getting distracted but also make the learning happen. For teachers in training this can be a valuable experience. Another benefit to the virtual classroom is the ability to get instant feedback. This software can be included in the teacher education curriculum in order to train the teachers for virtual environment as well.

## BACKGROUND OF THE STUDY

The kids of this era have something in common with the kids growing up 100 years ago. In the year 1918, the schools were closed temporarily in response to a new flu virus. Like covid-19, the illness it caused spread rapidly in communities. There was no medicine and no one was immune to it yet. According to the sources during 1918 pandemic, it is assumed that the teachers probably sent reading assignments home but schoolwork were minimal. Outside of school, the kids were kept busy with chores.

In recent times, the scenario of education has changed a lot because of the advancement in technology. Electronic gadgets have revolutionized the entire process of education in times of

crisis. The entire process of teaching-learning is dependent on technology. Virtual schooling has helped the educational institutions to cross the four walls of the classroom and reach to the students. The teachers and students are connected online through different platforms and the process of teaching and learning is going on during difficult times.

## OBJECTIVES OF THE STUDY

The study is conducted keeping the following objectives in mind:

- To study the teacher student interaction in online classroom.

- To discuss the importance of social presence in online education.

- To discuss the non-stop nature of online teaching and learning which adds to the stress and anxiety levels of the teachers.

- To study the learning management system for an online classroom.

## REVIEW OF THE REALATED LITREATURE

ICT in education is not a novel concept. A lot of studies have been conducted in this field. These studies show that a change in the beliefs of the instructors has taken place. The teachers who were unwilling to rely on online teaching are now finding it a ray of hope in times of crisis. The teachers are now using the basic computer tools and integrating them with the web resources to conduct online classes. For the benefit of the students, the teachers are also developing online resources and conducting online assessments.

Education can be defined as a social activity. Quality education has been associated with teachers having high degrees of personal con-

tact with learners. In case of online teaching personal touch is minimal. So the real challenge of the teachers in the present scenario is to make the virtual space efficient and interactive for the students. The studies also show that the use of ICT in education leads to more student-centred learning settings. Continuous and Comprehensive Evaluation (CCE) helps students as well as teachers to use more technology for making teaching learning more attractive for the betterment of our future generation. Teachers must also know the use of ICT in their subject areas. So, the knowledge of ICT is very much essential. These studies help teachers to know integrated technology with classroom teaching.

## METHODOLOGY

This paper presents a case study of two teachers. They moved from face-to-face to virtual teaching during Covid times. Data were collected using online discussions and two 1-hour semi structured interviews. The participants were interviewed when they designed and taught their first virtual class. The interview data and the data from the online discussions were presented to the teachers in a second interview for them to comment on. The constant comparison method (Lincoln & Guba, 1985) was used to analyse the data.

The purpose of this study is to build an understanding of the changes that academics experience when moving from face-to-face to virtual mode. This research was set in a school where teachers moved from face-to-face teaching towards blended and fully online teaching to accommodate the increased economically, geographic, socially and culturally diverse student population during covid. The first instructor is an early childhood educator .She has also

worked as a fitness instructor and has managed her own personal training business prior to becoming an academic. The second instructor is an enthusiastic ICT user who had been teaching science subjects in the middle school

**DATA ANALYSIS AND INTERPRETATION**

This section will describe the change in pedagogical practices as the two instructors moved from teaching traditional to online teaching. In Virtual environment a learning management system is designed by the teachers. Typically, a learning management system provides teachers with a way to create and deliver content, monitor student participation and assess student performance. The teachers have followed the digital learning management system to design virtual classes.

- In order to give the personal touch to online classes a responsive design is used. The virtual learning management also includes a user-friendly interface

  **Responsive design** – The students are able to access the virtual class from whatever type of device they choose, whether it's a desktop, laptop, tablet or smartphone.

  **User-friendly interface** - The user interface (UI) enables the learners to easily navigate the learning management platform.

  **Reports and analytics** - This includes eLearning assessment tools. The teachers are evaluating the students based on their weekly or monthly performances

  **Curriculum management** – The teachers are able to create and manage the content in order to deliver a more targeted learning experience.

**Certification support** – The teachers are also able to assess the learner's skill, identify gaps in their performance and provide certifications at regular intervals of time.

- Online classes are conducted keeping in mind that the students get maximum involvement in these classes to channelize their emotions.

  **Social learning capabilities** - This allows learners to interact with their peers, collaborate and share their learning experiences.

- The teachers are burdened with the task of creating online resources and conducting online assessments. To ease this stress and anxiety the learning system has been made automated.

  **Automation** – The Learning management systems enables teachers to automate repeated and tedious tasks in less time.

The different types of learning management system deployment options areas are as follows:

  **Cloud-based:** These are hosted on the cloud. Online students can access the system from anywhere, at any time, using a username and password.

  **Self-hosted:** These require software to be downloaded by the students. The educational institution can buy this type of software for its stakeholders.

  **Desktop application**: These are installed on the desktop of the students. However, the application may still be accessible on multiple devices.

  **Mobile application:** These support mo-

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bile learning and are accessible wherever and whenever through mobile devices.

- The various pricing models used for learning management systems include:

  **Fermium** - This pricing model allows teachers and students to access the basic features of some the learning management system platforms for free. For additional benefits the educational institution can buy the version.

  **Subscription** – The teachers' pay a fixed fee at regular intervals in order to access the digital  learning management system.

  Whatever learning system is being used, the teachers should have the ability to monitor the progress and performance of the learners with it effectively and efficiently. The virtual classrooms should increase the e-Learning accessibility without geographic limitations. The e-Teaching Learning modules and activities should be designed in such a way that it is easy to update. The online training and learning materials are being distributed equally. Finally, centralized learning is another major benefit of virtual schooling. It allows an educational institution to organize and store all data in one location safely. This allows the teachers to easily update and maintain learning resources. Furthermore, advanced encryption features are also allowed in many learning systems to help guarantee the data and content remain secure.

**FINDINGS**

This study shows that the online teaching learning process follows the traditional concept of Bloom's taxonomy. The teaching-learning environment, the virtual classroom and its activities are designed keeping in mind the basic architecture of education.

**Dissemination of Knowledge**

In an online learning context, the teachers can use different assets to deliver the knowledge. Information can be given by any means using text, audio, video,        films, TV programmes and so on. The teachers are only checking that the students are paying attention or not and have absorbed the knowledge.

**Understanding and comprehending:** The second step in virtual class is to check to what extent the students have understood the concepts. It is the responsibility of the teacher to ask the right questions to take the learner beyond the stage of knowledge recall.

**Applying concepts:** The application of the learning is a powerful indicator of meaningful learning. This can be done by assigning different tasks to the students. The target      is improvement in the skills of the learners.

**Analysis of online classes:** Things like discussion forums encourage learners to        a s k each other for advice and they can offer their own insight. In this way, the learners take ownership of their own development.

**Evaluation of learners:** In the field of training and development, reaching the stage of evaluation       does more than simply train the students. It can become a base for cultural change.

## LIMITATIONS OF THE STUDY

This study shows that the virtual classrooms provide no control over the students. The teaching-learning environment in virtual classrooms depends upon the internet connection. Virtual Classroom requires computers and internet access, which might not be available to everyone. The enrolment of the students into online live classes can be costly for a majority of students. This study also reveals that the students lack real-time interaction and lack personal touch.

## CONCLUSION

This paper revealed the journey of two teachers as they moved from traditional teaching to online teaching. The teachers experienced a change in their respective roles. They also observed a significant change in their comfort level with online teaching-learning strategies and acceptance of the effectiveness of online teaching and learning. The strategies followed in regular classrooms are not effective in virtual space. The teachers should be given chances to critically question their own practices and to discuss with their peers about the adoption of new pedagogical practices. To cope up with the current situation the teachers should engage meaningfully in reflective practice. Moving the learning online requires changes in pedagogy. The learning outcomes also need to be changed. The digital learning management system is to be designed. The real challenge is to explore the integration of pedagogical ideas and technology. This has added to the teacher's stress to prepare online resources. For many teachers their attention has not yet shifted to the new pedagogical practices and use of the tools. This has an impact not only on instructor identity but also on the effectiveness of the teaching and the perceptions and satisfaction of the learners.

## REFERENCES

Chauhan, S. S. (1992). *Innovations in Teaching and Learning process*. New Delhi: Vikas Publication House Pvt. Ltd.

Pajo, K., & Wallace, C. (2001). Barriers to the uptake of web-based technology by university teachers. *The Journal of Distance Education*, 16(1), 70-84.

UNESCO (2002). Information and Communication Technologies in Teacher Education, a Planning Guide. Paris: UNESCO.

Goel, D. R. (2003), ICT in Education, Changes and Challenges in ICT in Education. M. S. University, Baroda

Bharadwaj, A. P. (2005). Assuring Quality in Teacher Education. *University News,* Vol. 43. No. 18.

Dash, K. M. (2009). *ICT in Teacher Development*,. Neelkamal Publication Pvt. Ltd. Educational Publishers, New Delhi.

Vanaja, M. & Rajasekhar, S. (2009). *Educational Technology and Computer Education*. Neelkamal Publications Pvt. Ltd., Hyderabad.

Kirwadkar, A & karanam, P. (2010): *E-learning Methodology*. Sarup Book Publishers Pvt Ltd. New Delhi.

Redmond.Dr Petrea,(2011). *From face-to-face teaching to online teaching: Pedagogical transitions.* Digital Learning Research Network Faculty of Education University of Southern Queensland

Weltzer-Ward, M. L. M. (2011). Content analysis coding schemes for online asynchronous discussion. *Campus Wide Information Systems*, 28(1), 56-74.

Bhattacharjee.B, Deb.K, (2016). Role of ICT in 21st Century's Teacher Education Department of Education. Tripura University, *International Journal of Education and Information Studies*. 6(1), 1-6.