

Heightening the Virtual Teaching and Learning in Higher Education during COVID-19

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ABSTRACT

The entire educational system from elementary to higher education level has been collapsed in the duration the COVID-19 pandemic situation across the globe. Higher education in India is currently following the theoretical and practical teaching and learning methods. Higher education students acquire knowledge from face-to-face interaction through classroom and laboratory. These traditional pedagogical approaches are abruptly closed by COVID-19 pandemic situation and adopted virtual teaching and learning techniques. The virtual method initiated novel teaching and learning techniques in higher education. Firstly this paper made a few important discussions on virtual versatility and disorders of teaching and learning during the COVID-19 pandemic conditions. Secondly this paper also explores the virtual teaching and learning pedagogical approaches during the COVID-19 situation.

Key words: COVID-19, theoretical, practical, virtual versatility and disorders and pedagogical approaches.

1. Introduction

“Online learning is rapidly becoming one of the most cost-effective ways to educate the world’s rapidly expanding workforce” – Jack Messmen

The educational and societal relations have been changed while the Corona virus had been shifted from China to the rest of the world. The World Health Organization stated that the COVID-19 as severe pandemic disease which can bring the health crisis in all age groups of around the globe. In the result the millions of humans are affected and died. The advanced countries such as USA, Brazil, Russia, Peru, UK and many more severely affected by the Corona virus (Rieley, J. B, 2020). This pandemic disease not only affected the public health but it is also affected the business, research, agriculture, transport and many other sectors of the globe.

This disastrous condition has also affected entire educational system from elementary to higher education level globally. This condition not permitted the teacher and student for face-to-face interaction. From this mysterious condition teachers and students are interval form educational settings (Affouneh S et.al., 2020). During the lockdown period the AICTE (All India Council for Technical Education), UGC (The University Grants Commission), academicians, researchers of India has shootout the pandemic situation and recommended a solution to the universities and educational institutions to restart the teaching and learning in the form virtual mode. This virtual program supported the educational system and connected the teacher with students. Countless virtual teaching and learning methods have been adopted by educators and students to bridge the educational gaps. Several positive and negative comments are countered against to virtual education by psychologist, parents and educationalists. However, the virtual platform was given a scope and hope to restart the educational system (Bates, A. W, 2019). This platform merges the millions of rural, semi-urban and urban areas students with their teachers.

Until 25th March, 2020 teachers and students of higher education followed the traditional method of teaching and learning. After 25th March, 2020 the traditional method of teaching and learning has been shifted to virtual mode. The complete teaching and learning through virtual mode is a novel method for both teacher and student. The COVID-19 instructions such as social distance and self-quarantine was changed the black board teaching and introduced the screen sharing method. The virtual mode transformed the pedagogical approaches such as lesson plans, teacher and students requirements, presentations styles, monitoring modes and evaluation process. The virtual educational platform has its own conditions in teaching and learning. This paper discusses the versatility and disorders of virtual of teaching and learning modes.

2. Versatility and disorders of Virtual Education in the period of COVID-19

Due to COVID-19 crisis the educational system implemented the virtual mode of teaching and learning methods for teachers and students. In India from 1996 onwards the online education was blended with classroom teaching and become a major source for teaching and learning. This virtual environment created independence among students to learn and interact with teacher at any time and from anywhere. The classroom discussion to can be continues after class room lectures along with virtual screen (Allen, I. E. and Seaman, J., 2003).

The COVID-19 has made all institutions around the globe to move from offline to virtual mode. Few universities and colleges in India are fully digitalized to complete their daily teaching and learning accomplishments before COVID-19 outbreak. During the COVID-19 tough time this digitalization setups enhanced the quality of teaching and learning among teachers and students. In the current situation virtual education is not an option but is necessary (Carey, K, 2020). However, few students are not prepared with proper internet facility, laptop, computer and mobile phone for online learning. Even though, the virtual platform is only way in COVID-19 crisis to connect with huge number of students at a time.

Virtual Framework of Teaching and Learning

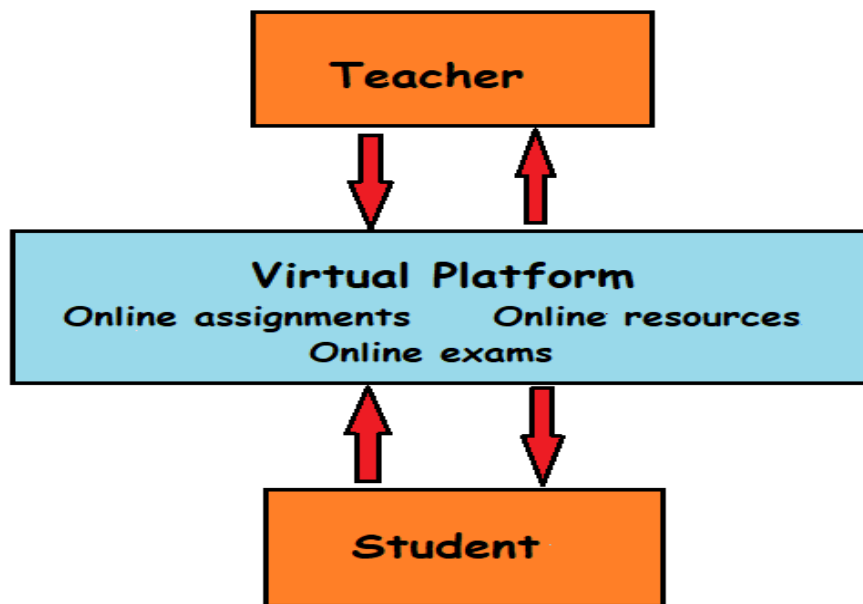


Figure 1

Fig. 1 explores the virtual sources among teacher and student, they interact with each other with virtual platform. The teacher can assess, monitor and evaluate the student work. In the reply student can receive questions, assignment and word documents through virtual platform (Kebritchi, M. et.al., 2017). However, the virtual challenges such as internet source, right technology, teacher and student support, collaboration, environment, online safety, online monitoring and online distractions are need to be address by both teacher and student.

The immediate shift from face-to-face lectures to virtual class the lectures required different virtual tools (apps) such as Google meet, Google Hangouts, WebEx, Zoom, Skepe, Blackboard etc., to interact with students. These tools supported as substitute for face-to-face to teaching and learning platform for teacher and student to interact with each other successfully (Saxena, K, 2020). It is a tough situation for teacher to select a perfect tool to virtual teaching. However, virtual tools have their own technical obstacles to accept and present all pedagogical approaches which are design by a teacher. The virtual platform created an opportunity for teacher and student to enhance their virtual knowledge. Whereas, teacher has opportunity to enhance their technology to design suitable virtual pedagogical methodologies to teach the students. In the same regard the virtual platform also develops technical strategies of the students to interact with teacher and educational platforms (Dhawan, S. 2020).

In collaborative virtual education teachers have struggled continuously to prepare virtual teaching materials such as PPTs, videos, MP3, pdf and word documents. It is difficult to manage virtual teaching to a teacher who have year of experience in traditional teaching. In making the digital class, teachers feel huge mental stress. Continuously working with digital screen can also affect the eyesight of teachers and students. The timeless additional virtual workloads make the teachers and students emotional distress. To avoid these ill health and emotional imbalances educational institutions are needed to regularize the virtual teaching timings and allot

virtual break times for teachers and students. The virtual education can develop the isolation behavior among students and teachers (Jacques, S. et.al., 2020).

However, the helpless COVID-19 pandemic situation enhanced the virtual environment and shifted the teachers and students into virtual education.

3. Impact of COVID-19 on Higher Education:

After the outbreak of COVID-19, universities and colleges have been closed for uncertain date. In India the higher educational sector is also affected by COVID-19 pandemic. Due to spreading nature and severe health disorders the COVID-19 is referred as pandemic disease. In the entire human evolution COVID-19 is the first pandemic disease which was completely affected the globe. This pandemic crisis muted the entire world for several months. Still in the year 2021 many countries are in the clutches of COVID-19. Many countries are developing the medicine and vaccine to eradicate this disease. However, this pandemic disease shown new life styles to humans. This situation not only taught health care issues but also taught the importance of social distance (Klahr, D., 2008). The social distance not only disturbed human relations but also stopped all kinds of business, education, transport and agriculture sectors. The face-to-face interactions were held before COVID-19. During the COVID-19 this interactive sections were clogged.

During the Covid-19 outbreak the entire nation was faced crisis in all sectors. The educational sector was also badly affected in India and in the globe. All the educational settings such as classwork, projects, exams and assignments have been cancelled and postponed for dateless period. To restart the educational settings and stop the pandemic situation the higher education has chosen the virtual educational platform. The virtual education is the only one option to restart the educational institutions. In the month of August, 2021 the Indian government slowly unlocked the country and allowed the public on the roads. In this particular period the higher educational institutions are reopened with utmost care and instructed their teachers and students to continue their education with virtual method. The age group of higher education students are actually suitable to access with virtual education. These matured minds have capability to understand the pandemic situation and adopted virtual platform.

4. Virtual Pedagogical Approaches in Higher Education

Even though, the higher education teacher and students are also new for the virtual platform. In the pandemic scenario this virtual education becomes an important and alternative interactive platform for higher education students (Coman, C. et.al., 2020). The pedagogy which is relevant for virtual platform is variant from regular face-to-face classroom pedagogy. The virtual teaching is required new pedagogy such as Hybrid Learning, Teaching and Learning Competencies, Effective Virtual Syllabus, Accessible Materials, Asynchronous and Synchronous communication and Virtual Labs. The figure 2 explores the importance and sequence of the virtual pedagogical approaches.

Virtual Pedagogical Pyramid

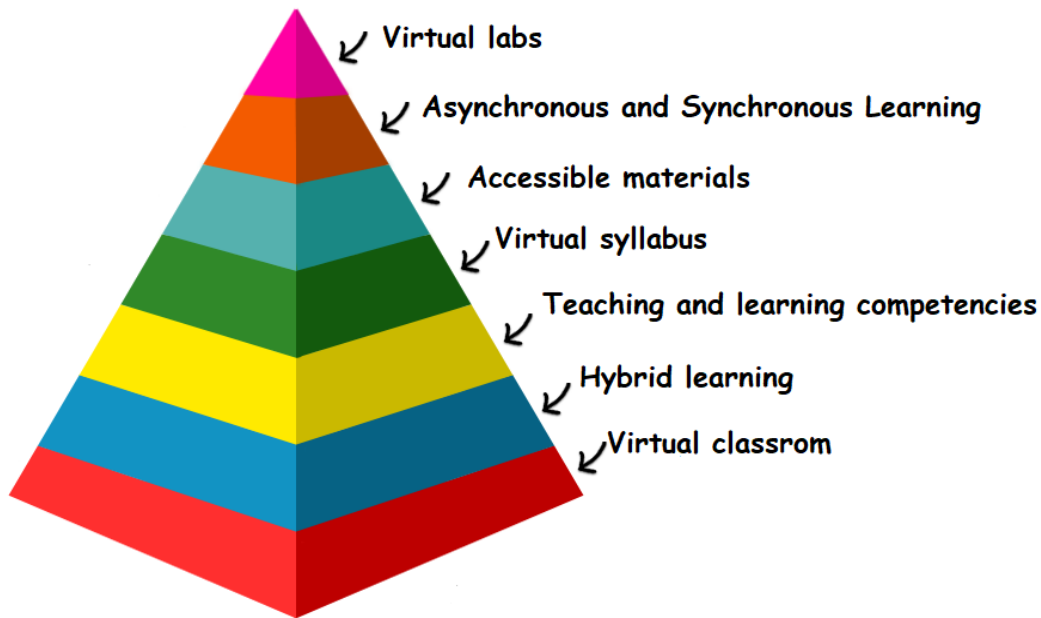


Figure 2

4.1 Hybrid Learning

The theory of Hybrid Learning refers to the mixture of a virtual learning environment by gaining the flexibility in teaching through distance or outside of classroom. Virtual learning also consider as learning similarly and a face-to-face classroom instruction. It is also stated that hybrid learning is a way of combination of traditional classroom experiences, experiential learning objectives and digital emphasis by using the best option for each teaching and learning objectives. Virtual learning is blended learning models, which seek to balance the face-to-face and online aspects within a course. The hybrid classrooms vary widely according to the subject matter taught and the needs of specific groups of learners (Hentea, M. et.al., 2003).

4.2 Teaching and Learning Competencies

It is difficult to identify the major and minor competencies of virtual teaching and learning. However, it is important for virtual teacher to play the roles such as managers, technicians and facilitators. According to the literature, virtual educational competencies has not discussed deeply. However, virtual competencies are unique from face-to-face teaching and learning. The virtual educators and stakeholders need to utilize moderate technology and follow online rules, guide and styles. Both teacher and student need adopt netiquettes, online culture and internet ethics (Bigatel, P. M. 2012).

4.3 Effective Virtual Syllabus

Virtual syllabus is usually similar to traditional (face-to-face) syllabus. In present scenario the traditional and virtual syllabuses are related to student learning centric model. The virtual syllabus consists of various significant elements such as course objectives, outcomes, course information, course requirements, grading,

schedule, material, app information, time and duration and references. The virtual syllabus should not be lengthy and ambiguous (Creating an Effective Online Syllabus. 2010).

4.4 Accessible Materials

The critics argue that virtual materials are ineffective for students because the virtual material leads to manipulation of physical materials (Berk, E. G. 1999). However, the virtual materials are differs from physical materials. The virtual materials can present in the model such as alternative text format (word and PDF), portability, safety, cost-efficiency, minimization of error, amplification or reduction of temporal and spatial dimensions, and flexible, rapid, and dynamic data displays. The virtual materials can fulfill objectives and outcomes, and achieve goals of instructors and students (Klahr, D. et.al., 2008).

4.5 Asynchronous and Synchronous Learning

In the time being the traditional classroom learning called as synchronous shifted to recorded classroom communication called as asynchronous. In the synchronous classroom learning feedback and messaging are the instant mode. Whereas, asynchronous learning feedback and messaging are send through mail or phone. However, these two learning models are more effective and collaborative to interact with students (Yamagata-Lynch, L. C. 2014).

4.6 Virtual Labs

Virtual labs are replicated the learning environments of students and them to complete laboratory experiments through online. Virtual labs are explore the concepts and theories without stepping into a physical lab. The physical labs provide real and actual experience for students. Whereas, virtual labs provide distance learning setups for students. The virtual labs are not only reduces cost and maintenance but they consist accessibility, availability, observability and safety (Heradio, R., et.al., 2016).

The research community recommended that there is an emergency to provide relevant virtual training to teachers and students to enhance their virtual abilities to resolve virtual problems in future.

5. Conclusions

India has not only consist of common educational polices but it has all structured and policy oriented higher educational system. Virtual education is not a new platform for Indian teachers and students. However, the virtual education has completely accessed in the period of COVID-19 to stop spreading virus. Virtual technology helped both teachers and students to overcome teaching difficulties during the COVID-19. The pandemic situation taught new ways for all sectors in the globe. As per the world COVID-19 pandemic reports the virtual teaching supported and helped the higher education teacher and students to continue their educational settings with digital mode. This virtual mode suggested new pedagogic methods for teachers and students to achieve better objectives and outcomes. The higher education students and teachers are more accessed than other educational fields. This pandemic situation taught new digital abilities and approaches among teacher and students to get success in their courses. The virtual education also strength the teachers and students educational

polices and strategies. However, it is vital for higher educational section to regulate and reconstruct the current virtual polices to match the teachers and students strategies.

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