

# SELF-RELIANT EDUCATION: TRANSFORMATION HELD DURING THE COVID-19 PANDEMIC PERIOD

**Dr Saidalavi Kundupuzhakkal**

Assistant Professor, Army Institute of Education,  
Greater Noida  
saidkp.in@gmail.com

## *Abstract*

*This paper is all about how the pandemic affected the education system and what the transformative changes happened. Pandemic taught us about the importance of being self-reliant in all sectors including education. The Government of India initiated steps on how the country can be self-reliant. Covid-19 pandemic accelerated the use of technology in education. Teaching and learning became more ICT oriented, as the integration of technology in education. Traditional methods were replaced by innovative strategies, and classes became smarter. Online learning, blended and flipped classes, proctored examination, open book examinations, MCQ pattern etc were initiated to overcome the challenges due to Covid-19.*

**Keywords:** *Self-reliant Education, Pandemic, Blended and Flipped Classes.*

## *Introduction*

Covid-19 brought drastic changes in the education system across the level. School education system as well as higher education system undergone through various structural changes in this period. The functioning of the entire education industry got affected by the pandemic as like it affected other industries as well. Admissions were delayed, academic sessions got disrupted, examinations were not conducted timely and properly. To overcome these challenges, educationists suggested various alternative formulas such as online learning, blended classes, flipped class, proctored examination, open book examinations, MCQ pattern etc. In this paper the author looks into how the pandemic affected the education system and what the transformative changes happened.

As a preliminary step to stop the pandemic, authorities were suggested for maintaining social distancing and ensuring hygiene. The country has gone to complete lockdown; schools, and colleges were shut down along with other industries. When commercial industries are unlocked, educational institutions remain closed for a while until all the employees get fully vaccinated. Meanwhile, educational institutions were given timely instructions regarding academic plannings and schedules. As an alternative, educational stakeholders initiated an online mode of teaching and learning.

## Online Education

Online education is the process of teaching or training via the medium of WAN/ internet. Various methods such as video calls (skype, whatsapp call, messenger etc.), group video calls (g-meet, zoom, MS Team, etc.), live streams (youtube, facebook etc.) webinars (Stream Yard, Webex) for evaluation (Google Form, Wheelbox) are available. After the pandemic outbreak the Central Government, State governments and NGOs were supporting the school system to facilitate online education. Centre's E-vidya and Delhi state's LEAD platforms are offering e-learning. Besides, they have multiple apps and DTH channels providing online learning. Educational bodies such as NCERT and SCERT opened e-library and e-books for free access to the school children. Swayam courses were started to provide education from home at the higher education level. MOOC programmes were planned and implemented by various agencies across the country. Experts planned the courses, materials were provided digitally and as video lessons, assignments received online, and exams were conducted online.

A study conducted by García-Morales and et al (2021) in a university level revealed that the ICT used to teach during the lockdown were; instant messaging tools such as WhatsApp and Telegram, video-conferencing tools like Zoom, Google Meet, and virtual classrooms such as apps Google Classroom. Technological tools such as Cisco WebEx, GoToMeeting, Microsoft Teams, Monosnap, Loom, OBS were also used in this period. Teachers depended on technologies mainly for giving lectures through videoconference, sharing material in the modes of slides, videos, and presentations, for interacting through chats, conducting debate in online forums, evaluating students achievements, tutoring or mentoring them etc.

## Challenges of Online Classes

There are many limitations and difficulties in online education (including teacher education and training). It requires equipment such as smart phone, laptop, and television and internet connection. Financially it will be a supplementary cost to all parents, not only from the poor and lower middle class family, even it was difficult for upper middle class families especially those who have multiple children enrolled in schools and colleges. Parents might have struggled to arrange study equipment for their children. In the pandemic period most industries either cut the salaries, or reduced the number of workers. Many people who were working abroad returned back due to job loss. As a result, the rate of unemployment increased. Besides, the price of necessary goods and services were increased, transportation cost increased. In total, the nation has fallen into inflation and economic crisis. This situation has dragged the students and parents into socio-psychological stress. Gender violence and domestic violence are increasingly reported. There are worries whether online mode of education inversely

affects the students' achievement and quality of education. Teachers find difficulty in conducting examinations and practical assessments in an online mode. Parents and teachers are lacking technological skill which also makes online education miserable. The challenges of online schooling are summarised into economic means, psycho-social stress, gender issues, quality matter, value erosion and professional ethics.

### **Reviews of Studies on Pandemic Education**

When pandemic outbreak the country went into full lockdown and the schools and colleges closed. As an alternative, online classes started all over the country. The paradigm shift from traditional face to face teaching methods to online teaching poses technical difficulties that affect the efficacy of the Teaching-Learning Process.

According to the study conducted by Haque et al (2022) “Covid-19 forced the Indian higher education system from traditional face-to-face or offline to online mode. This paradigm shift has both negative and positive impacts on the Indian higher education system. No doubt the graph of the online education market will be upward. This paradigm shift will also affect teachers who are not tech-savvy. Of course it will create an opportunity for them to develop their technological skills as well. Blended learning will be the best option during the post Covid-19 period's education system. In this regard, the infrastructural facilities of HEIs need to be redesigned to accommodate the changing pattern of education during the post Covid-19 era and students may be benefited from that. It's the high time when teachers can mould and train themselves by allowing individuals to be more flexible as well as more technical in a Post Covid-19 environment. The possible ways one can take in order to represent himself as to be fitted with online or virtual classrooms are as follows: (i) By allowing the teachers to be trained by a short-period-course regarding the usage of digital teaching process digital teaching process can be designed smoothly. (ii) Being themselves prepared for online classes, they have to make plans so that in short span of time they can manage to determine the chapter allowing the students to perceive knowledge about the whole matter in a way where the interaction between students and teachers, between one student and the other, and the exercises on the topic, and taking class tests related to the subject can be executed. (iii) Those who are differently able students are found not to grab all the resources and opportunities related to the online teaching-learning process during pandemic situations, as well as for a long time to a great extent. If guardians can involve themselves to cooperate with their children, it can be solved easily and therefore, directly or indirectly teachers will feel free to apply their teaching methods and lesson plans. (iv) If the learning process is seen to occupy digital platforms, the problem of using computers related to the disability of novice students, seems to be a major drawback. In this issue teachers can help them by taking demo classes on how the learners are able to perceive this teaching process.”

Bao (2000) conducted a case study on online teaching in higher education after Covid 19 outbreak at Peking University. The study highlighted certain instructional methods of online teaching at higher level teachers. The study identified “five high impact principles” for online education as follows:

- (a) relevance of online instructional design and student learning,
- (b) effectiveness of online instructions,
- (c) adequate support given to the students,
- (d) quality part of student's learning, and
- (e) contingency planning to deal with.

Konig et al (2020) conducted research on adapting to online teaching during COVID-19 in Germany. The study analysed the social contact with students and challenges in teaching. The study discussed factors such as computer technology, technological competence of teachers, and pedagogical knowledge pertaining to digital teaching and learning. The study found that information and communication technologies (ICT) tools, technological competence and teacher education on technological skills are instrumental for online teaching.

Sangeeta and Tandon (2020) studied factors influencing adoption of online teaching by school teachers during Covid 19 pandemic. The study revealed that “performance expectancy, and facilitating conditions had a positive impact on behavioural intention as well as attitude. Nair (2020) collected a mixed kind opinion about online education from Mumbai city. National level surveys showed India accepted online education as an alternative platform.”

Kundu (2020) wrote about how online schooling has started taking a psychological toll on students. She states that “meaningful education has nothing to do with finishing the syllabus and burdening children with long hours in front of screens”. During the pandemic the lower attendance was a major challenge. The study found that lack of access to devices or the internet as a reason for low attendance in online classes. “The online education and new learning style are affecting the physical and mental well-being of children.” (ibid) According to epidemiologists from the New York Academy of Medicine and others published in Obesity journal, “school closures due to the Covid-19 outbreak could exacerbate childhood obesity.”

Rajhansa and et al (2020) found that “the Covid-19 pandemic provided a constructive disruptor, giving opportunity for restructuring the present conventional, classroom based educational system”. The study also looked into how the sudden transitions to online mode helped in keeping continuity of optometry education

programs, and effectively fitting in with the purpose of completion of the academic year. “The rapid transition to online education has not only benefited optometry students but also has created a momentum of continued education for practising optometrists.” (ibid)

Jena (2020) in his study identified various impacts of Covid-19 on higher education in India. “The pandemic created an opportunity for change in pedagogical approaches and introduction of virtual education in all levels of education. Due to uncertainty about the pandemic, a gradual move towards online/ virtual education was the demand of the time. The Ministry of Education (previously MHRD) and UGC have launched many virtual platforms with online depositories, e-books and other online teaching/learning materials. Combination of the traditional technologies (radio, TV, landline phones) with mobile/ web technologies to a single platform with all depositories would enhance better accessibility and flexibility to education. This would involve upgrading the service platform to enable it to meet the required volume of educational demands of students. All service providers need to be mobilised to provide proper access to the educational service platforms to the disadvantaged groups of population also. Virtual education is the most preferred mode of education at this time of crisis due to the outbreak of Covid-19. The post Covid-19 education seems to be an education with widely accepted online/ virtual education which may perhaps be a parallel system of education.”

Naik and et al (2021) conducted a survey on how the Covid-19 pandemic affected the economy and education in India. The survey has been conducted with stakeholders of higher education institutions to know the effectiveness of online teaching-learning during the pandemic. It found that the online sessions of practical courses are difficult, but theoretical courses are easy to conduct.”

### **The Transformation in Higher Education**

As a direct consequence of the Covid pandemic, higher education institutions went through a transformation from offline mode to online learning. In this period of time teachers and academics all over the world were forced to prepare for changes according to the new situation. The major challenge was converting course materials into digital format and delivering lessons online mode. Ultimately the pandemic compelled for a global experimentation with remote teaching and virtual classes.

Marinoni et al., (2020) called this new system as “emergency online education”. The new system posed many challenges for students, especially those who needed technical assistance. It also was a challenge for teachers, staff and leaders. Even though the process of digitization in the field of education began years ago, the Covid-19 pandemic has accelerated the process. Jensen (2019) states that “this technological transformation of education involves sudden changes in methods of teaching, technical skills, and methods

of evaluation”. Marinoni et al (2020) suggested higher education institutions must evolve from lecture method to problem-based learning method to ensure the students engagements.

### **Self-reliance and Education**

Covid-19 taught us about the importance of being self reliant. The Government of India initiated steps on how the country can be self reliant. Prime minister Narendra Modi in his Independence day speech of 2020 said that “National Education Policy (NEP) seeks to strengthen research and innovation in the country to help it progress in a competitive world and to play a crucial role in making India self-reliant.

The self-reliant India campaign “Atmanirbhar Bharat Abhiyan” launched on 12 May 2020 and the NEP approved on 29 July 2020. The vision of 'Atmanirbhar Bharat' a Self-reliant India reflects as a major concern of National Education Policy (NEP) 2020. The government urged all the central and state bodies to conduct conferences and webinars to aware people about the NEP and self-reliant India. In this regard the government agencies have opened debates and discourses with stakeholders, academics, and public intellectuals.

NEP is not just for changing the way of education, it gives a new direction to the social and economic aspect and aspirants of 21st century India. Though the target achievement is a tiring job as if breaking the current world order from its infrastructure to superstructure, it is a substantial effort. In a world where trades are moreover a gambplings and people are highly liberal, escalating an economy and breaking socio-cultural stereotypes are big challenges. International stock exchange, multinational corporations, purchasing power parity, balance of trade, currency exchange, tariffs etc are made by the law of survival of the fittest. Redeem offers, bulk price, usury, black market, black money, counterfeit, bribery etc make common men's life in misery.

Besides, balancing the labour-saving technologies with growing demography is another challenge. 'Fewer babies and more robots' is a new world order. A survey shows that “new technological changes such as robots, artificial intelligence, automation may increase productivity growth but at the risk of having disruptive effects on employment and wages”.

### **Goal of education**

A goal shift in education is a need of the time. It is to address the requirements of various industries, the opportunities in job markets and the interests of our nation. It is for promoting collective efforts and ensuring transparency in workspaces. In this sense education should be to teach one how to become altruistic. All children should learn multiple skills -soft skill to life skills- according to their future needs. It is the way to

make one economically stable, technologically competent, and socially worthy. NEP emphasis on “explosive growth of vocational education in the country since it requires all educational institutions to integrate vocational education into their offerings”.<sup>(3)</sup> Job orientation, guidance, placement should get higher priority.

### **Pedagogical shift**

A paradigm shift in pedagogy is taking place all over the world in the post pandemic era, which may result in erosion of values. It is observed that the online mode of education brought radical changes in the relationship between teachers and students. In contrast to offline mode, virtual classrooms are highly liberal and teacher's control becomes minimal.

### **Blended Approach**

A blended approach to learning is about “the design of a course that enhances the teaching and learning experiences for students and teachers by combining face-to-face learning activities with online learning components”. In these above-mentioned scenarios a blended approach is advisable for leaping towards the goal of 'self-reliance'.

### **Quality Education**

Quality education is a major threat post pandemic period. While the value part is missing, the quality of education also matters. In online classroom learners attention always diverts from one to another. During online class even though the teacher can see full students' attendance some students used to engage in some other activities. Technical glitch was a common problem during online education. During Covid-19 period many universities initiated proctored examination for the end semester examinations and online practical examination. It did not help to ensure the quality evaluations as proctored invigilation had many limitations. Lack of social interaction is a big miss of online education. In a traditional classroom, students find comfort in group studies, group discussion, and thus easy access to their teachers and fellow students, however, these are missing in online learning.

### **OERs**

Open educational resources (OERs) are study materials prepared for the purposes of teaching, learning, and research, that can be reused without any copyright obligations. OERs may be found in the forms of texts, audio, video or their combination. Information technology and digitalization made it easy to access the OER in the most effective manner. During the pandemic teachers and experts developed various OERs and used them for online classes. Various Government agencies took a joint effort to develop quality materials. Some of the popular OERs platforms include; National Digital Library, Swayam, and Inflibnet.

National Digital Library (NDL) of India is a space where many books can be found freely. School text books, college reference books in different curriculum or syllabus are available there. National Digital Library (NDLI) is a project of the Ministry of Education to make available to the learners community learning resources through a single-window. It is in collaboration with the National Mission on Education through Information and Communication Technology (NMEICT).

SWAYAM programme is an initiative of the Government of India to achieve the educational goals of access, equity and quality. The objective of this programme is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital gap among students from different social and economic backgrounds. SWAYAM is done through a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time without any cost.

Information and Library Network (INFLIBNET) is an autonomous inter university centre (IUC) of University Grants Commission (UGC) under Ministry of Education, Govt. of India. It was started as a major national project of the UGC under the IUCAA in March 1991. Later it became an IUC in June 1996. INFLIBNET is involved in modernising university libraries across the country using the state-of-art technologies for the optimum utilisation of information. INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India. It hosts e-Pathshala, e-Shodhganga, e-Shodhgangotrietc that help students and scholars for their educational use.

### **Conclusion**

Covid-19 pandemic accelerated the use of technology in education. Teaching and learning became more ICT oriented, as the integration of technology in education. Traditional methods were replaced by innovative strategies, and classes became smarter. The role of teacher shifted from the mentor to the facilitator. Research shows that online classes aren't as effective as in-person classes for most students, but they are certainly the better choice than no classes. While online education is becoming the new normal, students and teachers are living in the virtual world rather than the real world. In this scenario discussion on providing technical assistance and training of online teaching is a need of the time. Blended mode of teaching is a better alternative for future education. Theory courses can be taught online mode and practical courses can be given in offline mode during emergency situations. OERs are the best platform for providing course material. Integration of technology in education will be effective when there is proper monitoring. The academicians and educationists should be alert for timely monitoring the relevancy of content provided and quality of materials.

India is moving toward the policy of self-reliance. Self-reliance is not only in the economy or any particular sector. We need self-reliance in the fields of health, education, and technology. The pandemic taught us the importance of being self-reliant across the field. For that a joint, integrated effort from all sectors, and moral support from all individuals is required. Proper awareness should be given to all stakeholders to achieve this goal of self-reliance and participating in the process of making the country stronger.

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