

**A STUDY ON THE IMPACT OF COVID – 19 ON EDUCATION**

**BY**

**POORVA.V**

**(20PEC007)**

**A DISSERTATION SUBMITTED TO**

**AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER  
EDUCATION FOR WOMEN, COIMBATORE – 641 043**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF  
MASTER OF ARTS IN ECONOMICS**

**MAY - 2022**

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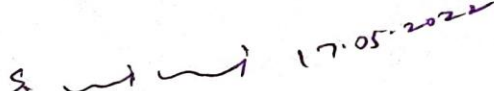
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**Signature of the Head of the Department**



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# **CHAPTER - I**

## **INTRODUCTION**

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, habits and personal development. Educational methods include teaching, training, storytelling, discussion and directed research. Education frequently takes place under the guidance of educators; however, learners can also educate themselves. Education can take place in formal or informal settings, and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy.

Formal education is commonly divided formally into stages such as preschool or kindergarten, primary school, secondary school and then college, university or apprenticeship. In most regions, education is compulsory up to a certain age.

There are movements for education reforms, such as for improving quality and efficiency of education towards relevance in student's lives and efficient problem solving in modern or future society at large, or for evidence-based education methodologies. A right to education has been recognized by some governments and the United Nations. Global initiatives aim at achieving the Sustainable Development Goal 4, which promote quality education for all.

As per the constitution of India, school education was originally a state subject – that is, the states had complete authority on deciding policies and implementing them. The role of the Government of India (GoI) was limited to coordination and deciding on the standards of higher education. This was changed with a constitutional amendment in 1976 so that education now comes in the so-called concurrent list. That is, school education policies and programs are suggested at the national level by the GoI through the state governments have a lot of freedom in implementing programs. Policies are announced at the national level periodically. The Central Advisory Board of Education (CABE), set up in 1935, continues to play a lead role in the evolution and monitoring of educational policies and programs.

There is a national organization that plays a key role in developing policies and programmes, called the National Council for Educational Research and Training (NCERT)

that prepares a National Curriculum Framework. Each state has its counterpart called the State Council for Educational Research and Training (SCERT). These are the bodies that essentially propose educational strategies, curricula, pedagogical schemes and evaluation methodologies to the states departments of education. The SCERTs generally follow guidelines established by the NCERT. But the states have considerable freedom in implementing the education system.

The National Policy on Education, 1986 and the Programme of Action (POA) 1992 envisaged free and compulsory quality for all children below 14 years before the 21<sup>st</sup> century. The government committed to earmark 6% of the Gross Domestic Product (GDP) for education, half of which would be spent on primary education. The expenditure on Education as a percentage of GDP also rose from 0.7 per cent in 1951 – 52 about 3.6 per cent in 1997 – 98.

The school system in India has four levels: lower primary (age 6 to 10), upper primary (age 11 and 12), high (age 13 to 15) and higher secondary (age 17 and 18). The lower primary school is divided into five “standards”, upper primary school into two, high school into three and higher secondary into two. Students have to learn a common curriculum largely (except for regional changes in mother tongue) till the end of high school. There is some amount of specialization possible at the higher secondary level. Students throughout the country have to learn three languages (namely, English, Hindi and their mother tongue) except in regions where Hindi is the mother tongue and, in some streams, as discussed below. There are mainly three streams in school education in India. Two of these are coordinated at the national level, of which one is under the Central Board of Secondary Education (CBSE) and was originally meant for children of central government employees who are periodically transferred and may have to move to any place in the country. A number of “ventral schools” (named Kendriya Vidyalayas) have been established for the purpose in all main urban areas in the country, and they follow a common schedule so that a student going from one school to another on a particular day will hardly see any difference in what is being taught. One subject (Social Studies, consisting of History, Geography and Civics) is always taught in Hindi, and other subjects in English, in these schools. Kendriya Vidyalayas admit other children also if seats are available. All of them follow textbooks written and published by the NCERT. In addition to these government-run schools, a number of private schools in the country follow the CBSE syllabus though they may use different text books and follow different teaching

schedules. They have a certain amount of freedom in what they teach in lower classes. The CBSE also has 141 affiliated schools in 21 other countries mainly catering to the needs of the Indian population there.

The second central scheme is the Indian Certificate of secondary Education (ICSE). It seems that this was started as a replacement for the Cambridge School Certificate. The idea was mooted in a conference held in 1952 under the Chairmanship of Maulana Abul Kalam Azad, the then Minister for Education. The main purpose of the conference was to consider the replacement of the overseas Cambridge School Certificate Examination by an All-India Examination. In October 1956 at the meeting of the Inter-State Board for Anglo- Indian Education, a proposal was adopted for the setting up of an Indian Council to administer the university of Cambridge, Local Examination in India and to advise the Syndicate's Examinations in India and to advise the Syndicate on the best way to adapt its examination to the needs of the country. The inaugural meeting of the Council was held on 3<sup>rd</sup> November, 1958. In December 1967, the Council was registered as a Society under the Societies Registration Act, 1860. The council was listed in the Delhi School of Education Act 1973, as a body conducting public examinations. Now a large number of schools across the country are affiliated to this council. All these are private schools and generally cater to children from wealthy families.

Both the CBSE and the ICSE council conduct their own examinations in schools across the country that are affiliated to them at the end of 10 years of schooling (after high school) and again at the end of 12 years (after higher secondary). Admission to the 11<sup>th</sup> class is normally based on the performance in these all-India examinations. Since this puts a lot of pressure on the child to perform well, there have been suggestions to remove the examination at the end of 10 years.

The Central Government came up with the new education policy towards the end of July 2020. The New Education Policy aims to bring in a holistic approach to education.

### **NATIONAL EDUCATION POLICY 2020:**

(NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The policy is a comprehensive framework for

elementary education to higher education as well as vocational training in both rural and urban India. The policy aims to transform India's education system by 2040.

Shortly after the release of the policy, the government clarified that no one will be forced to study any particular language and that the medium of instruction will not be shifted from English to any regional language. The language policy in NEP is a broad guideline and advisory in nature; and it is up to the states, institutions, and schools to decide on the Implementation. Education in India is a Concurrent List subject.

The policy aims to make the Board of exams easier to test the core competencies rather than memorized facts. The NEP focuses on industry-based skill empowerment that lays importance on creativity and innovation which are the key factors for someone to excel in 21<sup>st</sup> century.

The end of 2019 followed by the beginning of 2020 witnessed a turning point in the history of the world. The whole world was shaken by a small virus which led to a pandemic across the globe.

### **COVID-19: CHALLENGES AND OPPORTUNITIES CREATED FOR EDUCATION**

COVID – 19 has affected a large number of students across states, class, caste, gender and region. By the end of March 2020, the epidemic had spread to over 185 countries and resulted in the closure of over 90 percent of all schools, colleges and universities impacting close to 1.38 billion students.

The speed of the spread of the epidemic, the closure of higher education institutions and the transition to online teaching was so swift that it hardly gave any time to plan and to reflect on the potential risks or the potential opportunities that such a sudden change could bring. Given such a situation it is important to look at the impact and reflect on what has transpired and what is likely to happen as we move forward in the field of global education.

### **IMPACT OF COVID-19 PANDEMIC ON EDUCATION:**

COVID – 19 brought in lot of changes in the working of the different sectors of the economy. Educational sector experienced many changes at different levels. The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total closures of

schools, early childhood care and education (ECCE) services, universities and colleges. Most governments decided to temporarily close educational institutions in an attempt to reduce the spread of COVID-19. As of 12 January 2021, approximately 825 million learners are currently affected due to school's closures in response to the pandemic. According to UNICEF monitoring, 23 countries are currently implementing nationwide closures and 40 are implementing local closures, impacting about 47 percent of the world's student population. 112 countries schools are currently open.

In general, having fewer education options has globally impacted people with less money, while people with more money have found education. New online programs have shifted the labor of education from schools to families and individuals, and consequently, people everywhere who relied on schools rather than computers and home life have had more difficulty accessing their education. Early childhood care and education (ECCE) as well as school closures impact not only students, teachers, and families, but have far-reaching economic and societal consequences. School closures in response to the pandemic have shed light on various social and economic issues, including student debt, digital learning, food insecurity, and homelessness, as well as access to childcare, healthcare, housing, internet, and disability services. The impact was more severe for disadvantaged children and their families, causing interrupted learning, compromised nutrition, childcare problems, and consequent economic cost to families who could not work. In response to school closures, UNESCO recommended the use of distance learning programmes and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of education.

### **Negative impacts of COVID-19 on Education:**

There are a number of areas of potential risks for global education. Here are 4 negative impacts of COVID-19 on education.

#### **1. Sluggish cross-broader movement of students:**

Universities in many countries such as Australia, UK, New Zealand, and Canada are highly dependent on the movement of students from China and India. It is becoming more and clearer that this cross-broader movement of students will take a beating at least for the next two to three years and will lead to a major financial risk for universities in these

countries who are already under financial pressure. Many parents will avoid sending students abroad for higher education due to high risk from the pandemic.

## **2. Passive learning by students:**

The sudden shift to online learning without any planning – especially in countries like India where the backbone for online learning was not ready and the curriculum was not designed for such a format – has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. Added to this is that we may be leaving a large proportion of the student population untouched due to the digital divide that is part of many developing nations including India. We are now beginning to realize that online learning could be dull as it is creating a new set of passive learners which can pose new challenges.

## **3. Unprepared teachers for online education:**

Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for this sudden transition from face-to-face learning to online learning. Thus, most of the teachers are just conducting lectures on video platforms such as Zoom which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. There is a risk that in such a situation, learning outcomes may not be achieved and it may be only resulting in engaging the students.

## **4. Changing format of student recruitment:**

Universities and colleges worldwide are facing a major risk in the area of student recruitment and retention. The risk of losing students is so high that they will need to re-look at their admission practices, admission criteria and the overall recruitment process itself which will include new methods of outreach and application process itself.

## **Positive changes in Education due to COVID-19:**

Any changes that is so disruptive is also likely to bring with it some new opportunities that will transform the higher education system worldwide and especially in a country like India which is planning to bring about a planned reform in this sector. Some of the key areas of opportunities are the following:

### **1. Rise in Blended Learning:**

Universities and colleges will shift to a model of blended learning where both face-to-face deliveries along with an online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required. New ways of delivery and assessments of learning outcomes will have to be adopted which opens immense opportunities for a major transformation in the area of curriculum development and pedagogy.

### **2. Learning management systems to be the new norm:**

A great opportunity will open up for those companies that have been developing and strengthening learning management systems for use by universities and colleges. This has the potential to grow at a very fast pace but will have to be priced appropriately for use by all institutions.

### **3. Improvement in learning material:**

There is a great opportunity for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process. Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that the use of learning management systems will bring about more openness and transparency in academics.

### **4. Rise in collaborative work:**

The teaching community to a large extent has been very insulated and more so in a country like India. There is a new opportunity where collaborative teaching and learning can take on new forms and can even be monetized. Faculty members/ teachers can deliver online courses to even students from competing institutions. Collaborations can also happen among faculty/ teachers across the nation to benefit from each other. Finally, it is expected that there will be a massive rise in teleconferencing opportunities which can also have a negative impact on the travel. A large number of academic meetings, seminars and conferences will move online and there is a possibility that some new form of an online conferencing platform will emerge as a business model.

COVID – 19 accelerated the adoption of digital technologies to deliver education. Education institutions moved toward blended learning and encouraged teachers and students to acquire technology savvy. Online platform became the mode of operation right from kindergarten up to university education. With this background the present study tried to assess the “A study on the impact of COVID-19 on Education” with the following objectives.

- ❖ To study socio-economic profile of the respondents
- ❖ To assess student’s experience in online learning during lockdown and
- ❖ To examine the attitude of the students about online learning

## CHAPTER – II

### REVIEW OF LITERATURE

The review of literature relating to “A study on the Impact of COVID – 19 on Education” is discussed under the following headings:

- I. Impact of COVID-19 on Education
- II. Challenges in online teaching and learning
- III. Attitude of students and parents about online education
- IV. Other related studies

#### **I. Impact of COVID-19 on Education:**

**Jena** (2020) stated that the impact of pandemic COVID-19 was observed in every sector around the world. The education sectors of India as well as world were badly affected by this. It had enforced the world-wide lockdown creating very bad effect on the student’s life. Around 32 crore learners stopped to move schools/colleges, all educational activities halted in India. The outbreak of COVID-19 had advised us that change was inevitable. It had worked as a catalyst for the educational institutions to grow and opt for platforms and techniques, which had not been used before. The education sector had been fighting to survive the crises with a different approach and digesting the challenges to wash away the threat of the pandemic. This paper highlighted some measures taken by the government of India to provide seamless education in the country. Both the positive and negative impacts of COVID-19 were discussed and some fruitful suggestions were pointed to carry out educational activities during the pandemic situation.

**Kapasia et al.,** (2020) reported that the impact of COVID-19 lockdown on the learning of under graduate and post graduate students in West Bengal, India. The study used online survey through WhatsApp and e-mail during May 2020. The investigator used simple percentage distribution to assess the learning status of the students. The study found that during the lockdown around 70% of the students were involved in E-Learning. Most of the students used android phones for E-Learning. Some students face problems related to depression anxiety, poor internet connectivity, and unfavorable study environment at home. Students from remote areas and marginalized areas face enormous challenges during the

pandemic. This study suggested the targeted intervention to create a positive space for study among the students from vulnerable sections of the society. Strategies are urgently needed to build a resilient education system in the state that would ensure to develop the skills for employability and productivity of the young minds.

**Koul et al.**, (2020) stated that the biggest public health risk, the world today facing was leading to biggest and fastest restructuring or re orientation of the Indian education order. End of the month March 2020 recorded the spread of COVID-19 pandemic to over 185 countries and resulted in closure of over 95 percent of all schools, colleges and universities impacting close to approximately 350 million students. The spread of the epidemic was so speedy and quick that there were hardly any plans for transition to online teaching or learning from higher education systems offline classes and no one could anticipate the associated potential risks and opportunities that a sudden change could bring in the sector. entrance test of several universities and many competitive examinations were held in such a crucial period that was affecting education system badly. The instruction in the education system due to the incessant COVID-19 was a reminder that there was a prerequisite for revolution. The semester exams scheduled in May, in universities across India, was now all set to be deferred indefinitely. Academic events chain and the academic calendars would be tempted fate if those were not completed in time. There was a stern threat that this academic year will eventually be shifted by a few months all over India. Indeed, the students in the final years of a course will suffer the most. The lockdown enforced to reduce the menace of the virus has had an effect on this sector as students were being taught, via the online route by the teachers who are adjusting themselves to this new paradigm. Issues relating to the changed situation, connectivity of internet and supply of electricity are a few of the various challenges being experienced in this current lockdown period. However, every cloud had a silver lining and there were a few opportunities that can be gained from this new normal which could benefit the student and the teacher in the long run.

**Mahdy** (2020) examined the impact of COVID-19 pandemic on the academic performance of the veterinary medical students. The study revealed that COVID-19 lockdown had affected most of the participants (96.7%) academic performance with varying degrees. The mean evaluation score for online education in general was  $5.1 \pm 2.4$  while that for the practical parts was  $3.6 \pm 2.6$ . Although online education provided opportunity for self-study, the main problem faced by veterinary medical science was how to give practical lessons. Since most of

the lessons were practical oriented, students find difficult to fulfill the competencies of veterinary students through online education only. The study suggested that the Online education can be improved with more interactive lessons, showing medical procedures in real situations, giving concise information and showing 3D virtual tools to mimic real situations.

**Ngima et al.,** (2020) reported that the world had witnessed a standstill moment because of outbreak of coronavirus not sparing anyone across ethnicity, be it rich or poor, black or white, east or west, north or south. The pandemic had affected various sectors, education being one of it. According to UNESCO close to 900 million learners had been affected by the closure of educational institutions. Due to this pandemic, the educational institutions had to move from conventional mode of parting education to online mode. The research paper highlighted the advantages and disadvantages of imparting education through online mode during the pandemic situation.

**Rashid et al.,** (2020) stated that COVID-19 outbreak had caused a downward spiral in the world economy and caused a huge impact on the higher education system. The sudden closure of campuses as a social distancing measure to prevent community transmission had shifted face-to-face classes to online learning systems. This had thrown the focus on utilizing eLearning tools and platforms for effective student engagement which might had limitations of accessibility and affordability for many students. The pandemic had exposed the shortcomings of the current higher education system and the need for more training of educators in digital technology to adapt to the rapidly changing education climate of the world. In the post-pandemic situation, the use of eLearning and virtual education may become an integral part of the higher education system. The higher education institutions and universities need to plan the post-pandemic education and research strategies to ensure student learning outcomes and standards of educational quality.

**Tadesse et al.,** (2020) stated that corona virus affected the educational system in the world. Schools, colleges, and universities were closed to control the spread of the coronavirus. School closure brought difficulties for students, teachers, and parents. So, distance learning was a solution to continue the education system. However, the lack of network infrastructures, computers, and internet access was challenging distance learning in developing countries. This paper aims to review the impact of the COVID-19 pandemic on the education system in developing countries. Hence, countries design a strategy to use

educational technology, zero-free internet educational resources, free online learning resources, and broadcasts teaching. During closures, educational institutions design curriculum, prepare teaching-learning strategies for post-coronavirus. The educational institutions design strategies to recover lost learning, and return students to school when schools reopen. Coronavirus had been impacting the face-to-face education system of developing countries. Therefore, developing countries should enhance broadcast teaching, online teaching, and virtual class infrastructures.

**Tarkar** (2020) reported that the pandemic of COVID-19 had disrupted the whole world. It was evolved in China and now spreading globally. The COVID-19 was a pandemic health crisis which was affecting the economic growth of the country. The pandemic COVID-19 had resulted in disruptions in the normal daily life. Countries were taking various measures to control the spread of COVID-19. In order to promote the social distancing, government of India had declared lockdown in whole country. Due to the pandemic, all school, colleges and universities were declared to be closed. This was disrupting the whole education system. Teaching was taking place from offline to online. Due to this transformation in teaching methodology, students, teachers and parents were facing many problems.

**Alghamdi** (2021) reported that the COVID-19 pandemic led to surprising and unexpected experiences for Saudi university students. The study surveyed Umm Al-Qura University (UQU) students to assess the both positive and negative impacts of the COVID-19 pandemic on their lives. The results of the study showed high to moderate levels of agreement regarding student's perceptions of the positive and negative impact of the COVID-19 pandemic on their lives, with social aspects impacted more than educational ones; and no statistically significant gender differences. Weak correlations were found between the social aspects and the educational aspects of student's lives in relation to the impact of the pandemic, although all aspects were correlated positively.

**Engzell** (2021) evaluated the effect of school closures on Primary school performance. The study revealed a learning loss of about 3 percentile points or 0.08 standard deviations. The effect was equivalent to one - fifth of a school year, the same period that schools remained closed. Losses were up to 60% larger among students from less-educated homes, confirming worries about the uneven toll of the pandemic on children and families. Investigating mechanisms, the author found that most of the effect reflected the cumulative impact of

knowledge learned rather than transitory influences on the day of testing. The findings implied that students made little or no progress while learning from home and suggest losses even larger in countries with weaker infrastructure or longer school closures.

**Kumar** (2021) reported that the COVID-19 pandemic had affected the educational system worldwide, leading to the near-total closures of schools, universities and colleges. Most governments around the world decide to have temporarily closed educational institutions in an attempt to reduce the spread of COVID-19. The primary purpose of the intended paper was to highlight the impact of COVID-19 pandemic on the global education system. The paper would also provide an analytic description of the student experience and lessons learnt from the impact of the pandemic on the changing teaching and learning landscape, and the diffusion and adoption of e-learning in teacher education among few countries like India, United States of America, Dubai, Bangladesh and Indonesia. School closures impact not only students, teachers, and families, but had far-reaching economic and societal consequences. In response to school closures, UNESCO recommended the use of distance learning programs and open educational applications and platforms that schools and teachers could use to reach learners remotely and limit the disruption of education.

**Pandey** (2021) reported that the world as we know it had changed over a short period of time, with the rise and spread of the deadly novel Corona virus known as COVID-19, the world will never be the same again. This study explored the devastating effects of the novel virus pandemic, the resulting lockdown, thus the need to transform the offline classroom into an online classroom. It explored and described the numerous online teaching platforms, study materials, techniques, and technologies being used to ensure that educating the students do not stop. Furthermore, it identified the platforms, technologies which could be used to conduct online examination in a safe environment devoid of cheating. Additionally, it explored the challenges facing the deployment of online teaching methods. The study used 150 respondents who were purposefully sampled. The results of the study indicated that students preferred the multimedia means of studies. The binary logistic regression analysis reveals that poor internet connection, awareness on COVID-19, enough sources of materials, recommends massive open online course, favorite online methods, and satisfaction with online study were significant in the model or attitudes towards delivering of online classes during lockdown COVID-19 pandemic at 5% level of significance. The study recommended online teaching methods, but finally, the study concluded that satisfaction with online study

was significant in the model or attitudes towards delivering of online classes during lockdown COVID-19 pandemic at 5% level of significance.

**Perti** (2021) highlighted in his article that if offline traditional methods of teaching were applied online, they can jeopardize the success of the training. Most schools or other institutions struggle with these since neither their teaching material addresses this nor have, they had training on this. Globally more than 95% learners were affected with over 1 billion learners affected in absolute terms. 5 or 10 years ago, this shift would have been very painful, mainly because internet bandwidth was required for live, video classes were not available, or was just too expensive. Today's internet bandwidth made this a reality; however, online teaching had its own set of challenges. in online class a teacher can't pay attention to all the students. live classes have fairly good completion rates but were also teacher dependent. Social or peer learning was another aspect that becomes a challenge in online education. Live classes were the closest today in providing a classroom-type experience, at the same time adjustments need to be made on content, pedagogy, and delivery. Online learning had many benefits also. Students in online mode see faster learning, and retention rates of students were higher between 25-60% vs 8% in offline. The flexibility to go back and forth, learn at your pace, maintaining time flexibility, etc., all lead to better learning for students and hence better outcomes. Online adoption had been at a break-neck speed, and learners had moved online. One thing was for sure, online education was growing and it was here to stay.

**Pokhrel et al.,** (2021) this study determined that COVID-19 pandemic had created the largest disruption of education system in the history, affecting nearly 1.6 billion learners in more than 200 countries. Closure of schools, Colleges and other educational institutions had affected more than 94% of the world's student population. This has brought many changes in our lives. This had changed the traditional practice of education. Reopening of educational institutions after the lockdown is another challenge with new policies. Several schools, colleges and universities had discontinued the way of face-to-face teaching. There was also the fear of losing 2020 academic year and even more in future. There was the need of alternative education system. COVID-19 pandemic had provided with an opportunity to pave the way for digital learning.

**Yadav** (2021) assessed the impact of online teaching on education and students' health. The study stated that online teaching was equally important in all segments of education during

the period of a pandemic, but about 30% of the students were not satisfied with the delivery of content through online teaching. The students below 14 years were getting addicted to mobiles and laptops and consequently, they suffered from mental sickness and eye problems due to the screen effect. Online teaching had played a vital role during the pandemic, but its consequences could not be ignored. The online classes could not be accessed by each student due to the unavailability of smartphones, laptops and mobiles network to especially poor families and remote areas. This creates discrimination among the students of poor and rich or urban and rural. The students below 14 years were not aware of the screen effect and get addicted to mobile that causes mental and eye problems. The study concluded that online teaching could not take the position of traditional classroom teaching for a long time and we will need to get back to traditional teaching after a pandemic end.

## **II. Challenges in online teaching and learning:**

**Kara et al.,** (2019) explored the challenges faced by adult learners in online distance education through the analysis of the relevant literature. The findings revealed that adult learners had challenges related to internal, external, and program related factors indicating the interrelated nature of these challenges. The findings also showed that the challenges experiences by adult learners vary depending on their age, gender, knowledge and skills as well as the context in which they study. The findings of this study, which had an exploratory nature, had several implications for distance education stakeholders such as administrators, instructors, instructional designers, and policy makers.

**Adedoyin et al.,** (2020) reported that the World Health Organization had declared Covid-19 as a pandemic that had posted a contemporary threat to humanity. This pandemic had successfully forced global shutdown of several activities, including educational activities, and this had resulted in tremendous crisis-response migration of universities with online learning serving as the educational platform. The crisis-response migration methods of universities, faculty and students, challenges and opportunities were discussed and it was evident that online learning was different from emergency remote teaching, online learning would be more sustainable while instructional activities would become more hybrid provided the challenged experienced during this pandemic were well explored and transformed to opportunities.

**Dawadi** (2020) investigated the impact of COVID-19 on the Nepalese education system, with a focus on the school education. The findings indicated that the pandemic has had serious impacts on students learning and well-being and that it potentially widened the gaps between advantaged and disadvantaged children in their equitable access to quality education. Furthermore, the findings suggested that Nepal had formulated a number of ICT and education related policies since 2000; however, the challenges it was experiencing in the advent of COVID-19 were mainly due to its faulty implementation strategies and inability to implement those policies.

**Elmer** (2020) investigated student's social networks and mental health before and at the time of the COVID-19 pandemic in April 2020, using longitudinal data collected since 2018. The author analyzed the change on multiple dimensions of social networks (interaction, friendship, social support, co-studying) and mental health indicators (depression, anxiety, stress, loneliness) within two cohorts of Swiss undergraduate students experiencing the crisis (N = 212), and additional comparisons to an earlier cohort which did not experience the crisis (N = 54). In within-person comparisons the study found that interaction and co-studying networks had become sparser, and more students were studying alone. Furthermore, student's levels of stress, anxiety, loneliness, and depressive symptoms got worse, compared to measures before the crisis. Stressors shifted from fears of missing out on social life to worries about health, family, friends, and their future. Exploratory analyses suggested that COVID-19 specific worries, isolation in social networks, lack of interaction and emotional support, and physical isolation were associated with negative mental health trajectories. Female students appeared to have worse mental health trajectories when controlling for different levels of social integration and COVID-19 related stressors. The study results indicated the importance of considering social contacts in student's mental health offer and offer starting points to identify and support students at higher risk of social isolation and negative psychological effects during the COVID-19 pandemic.

**Mahyoob** (2020) in his study determined the obstacles and challenges faced by the English learning students (EFL), in Science and Arts College, Alula, Taibah University, Saudi Arabia during switching to online education in second semester of 2020 due to COVID-19 pandemic. This study evaluated the students experience in online learning and to access the feasibility of virtual methods of learning. This was achieved by analyzing 184 learner's responses to the survey-based questionnaire. The descriptive statistical method was used to test

the validation of the study. The study found that the problems influence and impact EFL during online learning are related to technical, academic and communication challenges. The study concluded that most of the online learning EFL students were not satisfied with continuing online education as they could not see expected progress in online learning performance.

**Mishra et al.,** (2020) conducted a study on the portrayal of online teaching-learning modes adopted by the Mizoram University teaching-learning Process and subsequent semester examinations. The author used both quantitative and qualitative approach to study the perception of both teachers and students on online teaching-learning modes and highlighted the implementation process of online teaching-learning modes. Liberalization, privatization and Globalization of education had been deteriorated remarkably due to limited mobility and limitedly confined exchange programmes of academic activities among the countries during the COVID-19 lockdown. The third world countries were facing policy paralysis in handling the sudden shifting scenario of educational planning, management and organization during this pandemic with their fractured technical among them, low and middle-income countries finance (Thomas, 2020). But noticeably everyone must learn to live and survive with the present crisis as it was the beginning only; in the long run, no can afford the negligence towards digital transformation in HEIs. To develop multimodal approaches to achieve course content objectives for better learning outcome could be a better idea to deal with the complexity of online education. Undauntedly, the governments must ensure the availability of reliable communication tools, high quality digital academic experience, and promote technology-enabled learning for students to bridge the disparities originated in the education system before and after COVID-19 catastrophe which was also inevitably necessitated for uninterrupted learning. Few steps should be accounted in the wake of this pandemic; to develop such a curriculum that reflects the perceptible change in the content knowledge and learning experience of students as well as enable them to think critically.

**Asgari et al.,** (2021) stated that the COVID-19 pandemic compelled the globe and abrupt conversion of conventional face-to-face instruction to the online format in many educational institutions. The study highlighted the challenges they experienced during the online instruction in Spring 2020 and identified various issues that negatively influenced the online engineering education including logistical/ technical problems, learning/ teaching challenges, privacy and security concerns and lack of sufficient hands-on training. For example, more

than half of the students indicated lack of engagement in class, difficulty in maintaining their focus and zoom fatigue after attending multiple online sessions. A correlation analysis showed that while semi-online asynchronous exams were associated with an increase in the perceived cheating by the instructors, a fully online or open-book/ open-note exams had an associated with a decrease in instructors' perception of cheating.

**EI Said** (2021) did an empirical investigation on the learner's academic performance at the university in developing countries. The author used T-test and Chi-square test; t-test was used to compare the grades of quizzes, course work and final exam of both groups and chi square was conducted for grade distribution for both groups. The effect of gender, age, credit hours and CGPA was assessed. The result suggested that there were no statistically significant differences in the grades of both groups. At the same time, the unexpected shift from face-to-face learning to online distance learning did not result in poor performance in learning as expected. This study also included the survey of 435 students and interviews with the sample of professors about the teaching and learning experience during the lockdown. This study provided some recommendations for universities, instructors and higher education portal designers about future application of online distance learning.

**Hafeez et al.**, (2021) reported that most of the educational institutions (universities, schools and colleges) in Pakistan were based on traditional method of learning and teaching, although various institutions were now converting the learning methods from traditional to technology based online learning. At the end of 2019, the sudden outbreak of pandemic disease COVID-19 had totally changed the learning and teaching system. Many educational institutions that were based on traditional methods of learning and teaching had to shift entirely on online learning and teachings. Survey-based research had been conducted to highlight the challenges faced by students and teachers during covid-19 in learning and teachings at undergraduate and graduate levels. The results of the research indicated that the students and teachers faced a lot of problems during the online learning and teaching.

**Kaisara et al.**, (2021) reported that over the past two decades, e-learning had become an increasingly important field of study that had attracted scholarly and policy makers attention. Many developing nations had embraced e-learning as a tool to enhance accessibility and affordability of higher education. During the COVID-19 lockdown period, many universities across the world were forced to embrace online teaching and learning to circumvent

lockdowns, social distancing and other public health interventions put in place to contain the spread of the novel coronavirus. Consequently, this study sought to establish students experiences with the e-learning mode during the COVID-19 lockdown in Namibia. The paper discussed the results of an online survey of 137 undergraduate students about their experiences using e-learning technologies during the COVID-19 induced university closures. an online survey instrument was created on Google forms and a link distributed to students through WhatsApp class groups. Quantitative data were presented through frequency tables and figures, whilst we adopted thematic content analysis to analyse quantitative data. The results of the survey indicate that mobile devices remained the primary computing device used to access academic information. An analysis of the study results led to the emergence of five themes, viz, e-learning system accessibility, e-learning platform layout, resources to access internet and network, isolation and home environment that captured student challenges with online classes. This paper argues that e-learning was still faced by a myriad of challenges that need to be addressed if it was to be a success.

**Naik et al.,** (2021) analyzed the efficacy of online teaching and learning method compared to traditional teaching method. The results and analysis of the study indicated that lack of facilities, infrastructure, technical tools and the internet access were the major drawback for conducting online sessions. The suggestions and recommendations were provided to improve the current online teaching methods to outreach many students and improve quality teaching/ learning experience.

**Dizavandi et al.,** (2022) in his study examined the challenges of online education in medical education during the COVID-19 pandemic. In this paper, a systemic search of online databases (Medline, EMBASE, Scopus, Web of Science, Cochrane Library, CIVILICA, and Google Scholar search engine) based on Mesh keywords in related articles was conducted for related studies from January 2020 to December 2021. The evaluation of eligible studies and selection was done by two reviews. The findings of this study indicated the challenges of online education in the crisis caused by the COVID-19 in three areas of student and cultural, education and research, and management, administration, and finance. During the COVID-19 pandemic, these challenges can affect the physical, psychological, social, educational and behavioural status of students and professors and educational and research processes, and cause irreparable damage to the administrative, executive, and financial infrastructure of universities. Therefore, ideas and solutions to solve these problems can facilitate high-quality

and sustainable education for students. The COVID-19 pandemic could have a positive effect on some aspects of medical education. However, numerous challenges have arisen, involving issues related to the student and cultural fields, education, and research, and financial issues. The study concluded that in the field of medical education, the development of online medical simulators, the promotion of virtual hospitals and telemedicine (telemedicine), the provision of virtual cases, and the conduct of online examinations could help to promote virtual education.

### **III. Attitude of students and parents about online education:**

**Adnan et al.,** (2020) examined the attitudes of Pakistani higher education students towards compulsory digital and distance learning university courses amid coronavirus (COVID-19). The findings of the study highlighted that online learning cannot produce desired results in underdeveloped countries like Pakistan, where a vast majority of students were unable to access the internet due to technical as well as monetary issues. The lack of face-to-face interaction with the instructor, response time and absence of traditional classroom socialization were among some other issues highlighted by higher education students.

**Chakraborty et al.,** (2020) assessed the opinion of students on online education during COVID-19 pandemic. The survey was conducted in which Undergraduate students of Indian University were asked to give their opinion on online education during the ongoing pandemic. The results indicated that the students were more comfortable with face-to-face classes than online distance learning classes. About 65.9% of students felt that they learn better with physical education and 39.9% by attending MOOCs classes than in online class. But 68.1% of the students felt that the teachers had improved their online teaching skills than at the beginning of the pandemic and 77.9% of the students felt that online education is useful now. The students had appreciated the technology and online study materials that are useful for their study but they also felt that online education was stressful and affecting their social and mental life. This pandemic had resulted in the great widespread of online education.

**Jena** (2020) in his article emphasized how online learning was beneficial during times of crises like work absences or pandemics. Therefore, some tools and techniques for online learning which could ensure the continuity of learning were highlighted. Some emerging approaches of government of India for online learning were presented. Merits and demerits of

online learning platform were also discussed. Perceptions of learners and educators on online learning system during lockdown were pointed.

**Malik et al.,** (2020) explored the challenges parents face when their children study online. The study revealed that more than 75% of the parents surveyed were satisfied with the online classes taking place and believed that it was working for them. About 41% of the parents were of the opinion that teaching methodology was the most importance factor enhancing the teaching-learning process in virtual mode for the parents. Around 29% of the parents believed that personalized attention given to the children could improve the system. these findings helped in strengthening the process of online teaching.

**Veerakumar et al.,** (2020) stated that the COVID-19 pandemic period had changed their day-to-day learning activities into a serious impact on students, instructors, and educational organizations around the globe. The study concluded to survive in the digital era and stay relevant, students should be aware of online education website which should be apt, innovative and unique to shape their future in better way.

**Gopal et al.,** (2021) this study reported the factors affecting the student's satisfaction and performance regarding online classes during COVID-19 pandemic and to established the relationship between these variables. The study was quantitative in nature and the data was collected from 544 respondents through online survey who were studying business education (B.B.A) or (M.B.A) or hotel management courses in Indian universities. Structural equation modeling was used to analyze the proposed hypothesis. The results of the study showed that four independent factors used in the study viz. the quality of instructor, course design, prompt feedback, and expectation of students positively impact student's satisfaction positively impact student's performance. The study concluded that for educational management these four factors are essential to have a high level of satisfaction and performance for online courses.

**Muthuprasad et al.,** (2021) made the research on agricultural students' perception and preference of online education through the survey of 307 students. They also explored student's preference for various attributes of online class, so that can be helpful for designing effective online education. From the study he concluded that 70% of the students were ready to opt for online education to manage the curriculum during the pandemic. Majority of the

students prefer to use smart phones for online education. From content analysis they found that students prefer recorded class and also to have quiz at the end of each session to improve effectiveness of learning. The students opined that flexibility and convenience of online class made it an attractive option but broadband connectivity issues in rural areas make it a challenge to the students to make use of online learning initiatives. However, in agricultural education system majority of concepts if practical oriented and changing it fully online mode may not be possible and need to device a hybrid mode. He concluded that the insights from this article can be helpful in designing the curriculum for new normal.

**Potra et al.,** (2021) in his study examined the experience by the first-year students with the Romanian Hybrid Higher Educational System, this paper was purposed to uncover the lessons learned and to develop a systemized model based the perception of students face-to-face, online and hybrid education. The study was conducted to 149 Romanian students enrolled in their 1<sup>st</sup> year of college in engineering specialties and with the age group of 18-26. About 50.3% of male and 49.7% of female students were surveyed through online. After a pertinent analysis of relationship between categories and relevant literature sorting, a theoretical model for the higher educational current pandemic situation had been proposed. The study stated that the main face-to-face and online education had been outdated and hybrid education system has been becoming the bridge between both the systems.

**Panakaje et al.,** (2022) stated that the impact of COVID-19 had revamped all aspects of human life including education sector, and it had completely changed the educational environment across the globe. Due to the pandemic, the methodical functions of educational institutions had stopped, and new phases had started like online class, online evaluation, and indoor activities. Students were the vital players in education sector, and their opinions played an indispensable role while formulating the policies by the government. In the pandemic, students' perspective on education environment found new dimension. In this paper the author made an attempt to know the coastal Karnataka students' stance on college educational environment. The result of the study indicates that the college students had positive perception towards online class (M=3.14), teaching and learning (M=3.704), evaluation (M=3.38), college and administration (M=3.83), extracurricular activities (M=3.87), and teachers (M=3.63). The result of the hypothesis testing revealed that there was no significant difference in the student perception towards various components of college education system. Path analysis results show that there was relation and effect between

components of college education, overall perception, and students' performance. The study concluded that students agree with policies and actions taken by colleges to carry out classes during COVID-19 pandemic irrespective of demographic and educational difference.

#### **IV. Other related studies:**

**Bouck** (2015) stated that school variables, such as school size and school location matter. School size and location impact many areas of education, including the characteristics of the school, curriculum, and post-school outcomes. The study revealed that students in rural schools face many personal and education hardships – from living in poverty to having less opportunity and sophistication in technology. Rural schools also have fewer course offerings. While rural schools are a unique, urban and rural schools might be more similar than expected, particularly as compared to more affluent suburban districts. Rural and urban schools have larger rates of poverty and more dire financial situations, which do impact the educational offerings, experiences, and outcomes of their students.

**Opoku-Asare et al.**, (2015) stated that rural-urban disparity in economic and social development in Ghana had led to disparities in educational resources and variations in student's achievement in different parts of the country. Nonetheless, senior high schools (SHSs) in rural and urban schools follow the same curriculum, and their students write the West Africa Senior Secondary Certificate Examination (WASSCE), which qualifies them to access higher education in Ghana's public universities. Urban SHSs were also recognized nationwide as good schools where students make it to university. Moreover, performance patterns with regard to admission of SHS graduates into university also vary between rural and urban schools; consequently, some parents do everything to get their children in urban SHSs, even consenting to placement in visual arts, a program deemed appropriate only for academically weak students. This study therefore adopted the qualitative-quantitative research approach with interview, observation, and questionnaire administration to investigate the critical factors that affect academic performance of SHS students, particularly those in visual arts as case study. Findings from six public SHSs in Kumasi – two each in rural, peri – urban, and urban areas – revealed that urban schools perform better than rural and peri-urban schools because they attract and admit junior high school graduates with excellent Basic Education Certificate Examination (BECE) grades, have better infrastructure,

more qualified teachers, prestigious names, and character that motivate their students to do well. This suggests that bridging the rural-urban gap in educational resources could promote quality teaching and learning, and thereby raise academic achievements for SHS students in Ghana.

**Maruthavanan** (2019) assessed the awareness level on National Education Policy (2019) among secondary school teachers in Madurai District. In his study, he found that the awareness level was below average. There was a significant difference among secondary school teachers on awareness on New Education Policy (2019) based on Gender. Male Secondary School teachers have more awareness than female teachers. Urban secondary school teachers had more awareness than rural teachers. Government school teachers had more awareness than self-finance teachers. There was a significant difference among secondary school teachers on awareness on New Education Policy (2019) based on family type. Those who are living in a joint family have more awareness than nuclear family teachers.

**Shikalepo** (2019) examined the factors that characterised rural areas and how these factors influenced teaching and learning activities. The findings of the study revealed that commuting, climatic changes, hygiene, facilities and literacy levels, were the major factors that shaped rural areas and the study concluded that these factors have negatively influenced teaching and learning activities. The study recommended that educational stakeholders should confront these factors to mitigate their detrimental effects on teaching and learning at rural schools.

**Aithal et al.,** (2020) stated that well defined and futuristic education policy was essential for a country at school and college levels due to the reason that education leads to economic and social progress. Different countries adopted different education systems by considering the tradition and culture and adopted different stages during their life cycle at school and college education levels to make it effective. Recently government of India announced its new education policy which was based on the recommendations by an expert committee headed by Dr. Kasturirangan, former chairman of the Indian Space Research Organization (ISRO). This paper highlights on various policies announced in the higher education system and compare them with the currently adopted system. Various innovations and predicted implications of NEP 2020 on the Indian higher education system along with its merits were

discussed. Finally, some suggestions were proposed for its effective implementation towards achieving its objectives.

**Devi et al.**, (2020) have reported that National Education Policy-2020 visualized to provide a quality education which was beneficial to meet the growing economy in India. The new policy was aiming to achieve majorly three aspects such as highest quality, equity, and integrity in the education system from schooling to higher education. Commerce and management education played an important role in the country's economy as it effected all the sectors like manufacturing, service industry, research and development, banking etc. in the field finance was the nerve system and knowledge to manage finance was dealt with commerce and management. The current education policy existing in India were concentrating majorly on theoretical aspects which lacks the practical training among the students i.e., the major drawback for meeting the global job opportunities. Therefore, the National Education Policy-2020 was aiming to develop creative potential, skill and analytical thinking which the needs in the global job market were. Hence all the curriculum of commerce and management should be redesigned based on the outcome-based education, where the stakeholders can know in prior what they were going to learn and how it was beneficial to develop themselves to meet the future changes in economy. The study had enhanced the knowledge on NEP 2020 impact on the stakeholders of commerce and management discipline in a broader sense. The comparative study on the current NEP and NEP 2020 had pointed out the drawbacks of the current NEP which was affecting the growth of Indian economy and affecting the youths in achieving their goals. The NEP 2020 led all the stakeholders to meet the industrial demands at national and global level so that the standard of living and the overall economic growth would be achieved significantly. Any changes in the present scenario would have both positive and negative impacts hence we might concentrate more on the positive impacts and adopt it effectively and work efficiently for the welfare of the country.

**Gavade** (2020) reported that a revamped education system integrating a flexible, multidisciplinary curriculum coupled with a conscious inclusion of life skills had been overdue, up until 29<sup>th</sup> of July, 2020. The purpose of the National Education Policy was to develop students in critical thinking skills, scientific temper, and imagination, along with instilling values like empathy, courage, and resilience. This paper said the difference between NEP 2020 and previous policies. This also showed the statistics and figures related to Indian

Education Sector. This paper discussed the major problems detected in the current education system. Aims, principles and salient features of the policy were discussed. Not to mention the untiring efforts of a prominent of the population at sabotaging a noble cause like this one. At the same time, it must be remembered that it was still crucial for the country to take our economy in the positive direction and not compromise our long-term success to our short-term goals. One last but not the least important thing here was to keep in mind the physical and mental well-being of the students, teachers, and everyone in the education sector. The happiness and welfare of these stakeholders were non-negotiable. The National Education Policy 2020 was pacing towards making education and learning more attractive, better optimized, equitable and affordable.

**Kaurav et al.,** (2020) identified the concerns and focus of NEP 2020. The paper identified three crucial aspects of the policy – course, language, and students, for the higher education sector. This paper also discussed the sentiment analysis, related to NEP 2020. It was found that most of people considered the policy as a positive and welcoming step.

**Kumar** (2020) stated that it was a long wait of 34 years for the country to see a New Education Policy 2020. The drafting committee gave its final draft to the union cabinet for its approval and it was accepted on the 29<sup>th</sup> of July 2020. The new policy aims to pave the way for transformational reforms in school education and higher education systems in the country. This was one of the major steps taking to bring a much-needed reform in the education system of the country. The objective of this study was to investigate the areas where the policy has proposed action, but they look very shabby. It was not possible to have a policy where we need to build a complete infrastructure. A total reform and a drastic change are to be considered during the implementation of this policy. As it was well known that education was a concurrent subject and the implementation of the proposal under the New Education Policy 2020 depends on the future regulations by the centre and state. It's a matter to the recognition of the merit that would be the key to reconstruct the Indian Education system. but going one step forward I would like to say this policy was nothing new as it was centred on the concept of Basic Education of Gandhi Ji who talked of education that helps a person to earn his livelihood. Just as Gandhi Ji said that education should be job oriented that provides money to live. Education means bread and butter. So, when this policy talks of skill development, exit at any stage during a course if a person was eligible to earn his bread and butter he should be allowed to exit with a proper certificate or a degree even if he had

achieved the minimum level of learning. The future of New Education Policy 2020 will all depend on the political will and the system that it was going to offer to the nation. Just as the Common School system which was still to see the bright daylight only because of the lack of wiliness in the political class it had yet to be a reality.

**Shikalepo** (2020) studied the challenges and difficulties in learning at rural schools, and assessed the intensity to which these challenges influenced learning at rural schools. The study found that learning at rural schools was characterised by numerous challenges. Impoverished and malnourished conditions of learners in rural environments were a result of poor families who were often unemployed and unable to provide basic necessities for their families. Malnourished learners failed to grasp the learning contents due to lack of concentration. In addition, minimum parental involvement in learning alongside low value attached to education by rural parents and guardians, resulted in low learners' enrolment and high drop-out rates among rural schools, which then compromised the quality of learning. The shortage of resources, as diverse as human resources, buildings and learning aids also compromised the quality of learning at rural schools. School authorities should implement the necessary measures to minimise the detrimental effects of these challenges on learning at rural schools, to enable learners to learn optimally with improved school performance.

**Venkateshwarlu** (2020) had defined that futuristic education policy is essential for a country at school and college levels due to the reason that education leads to economic and social progress. Different countries adopt different education systems by considering the tradition and culture and adopt different stages during their life cycle at school and college education levels to make it effective. The National Education Policy 2020 (NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The policy was a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. The policy aims to transform India's education system by 2021. Shortly after the release of the policy, the government clarified that no one will be forced to study any particular language and that the medium of instruction will not be shifted from English to any regional language. The language policy in NEP was a broad guideline and advisory in nature; and it was up to the states, institutions, and schools to decide on the implementation. Education in India was a Concurrent List subject. Himachal Pradesh had become the first state to implement New Educational Policy 2020. The national

educational policy should be implemented in all schools over India by 2022. Higher education was an important aspect in deciding the economy, social status technology adoption, and healthy human behaviour in every country. Improving GER to include every citizen of the country in higher education offerings in the responsibility of the education department of the country government. National Education Policy of India 2020 was marching towards achieving such objective by making innovative policies to improve the quality, attractiveness, affordability, and increasing the supply by opening up the higher education for the private sector and at the same time with strict controls to maintain quality in every higher education institution. By encouraging merit-based admissions with free-ships & scholarships, merit & research based continuous performers as faculty members, and merit based proven leaders in regulating bodies, and strict monitoring of quality through biennial accreditation based on self-declaration of progress through technology-based monitoring, NEP-2020 was expected to fulfil its objectives by 2030. All higher education institutions with current nomenclature of affiliated colleges would expand as multi-disciplinary autonomous colleges with degree giving power in their name or becomes constituent colleges of their affiliated universities. An impartial agency National Research Foundation would fund for innovative projects in priority research areas of basic sciences, applied sciences, and social sciences & humanities. HE system would transform itself as student centric with the freedom to choose core and allied subjects within a discipline and across disciplines. faculty members also get autonomy to choose curriculum, methodology, pedagogy and evaluation models within the given policy framework. these transformations will start from the academic year 2021-22 and would continue until the year 2030 where the first level of transformations was expected too visible.

**Nagar et al.,** (2021) reported that education was the very driving force of morals and principles in the students and a robust education system was an essential key in development of a nation. The Indian education system had come a long way from the Vedic period to the modern education system. There was a time when students had to leave their homes and live with their Guru's (teachers) for about fourteen years to receive education; today we had everything remotely accessible, just a click away, even when we are hit by a pandemic. This shift came through after the establishment of British rule in India. The most appreciated feature of any system was its dynamic nature. Pertaining to this view, the New Education Policy, 2020 was introduced in India. The author analyzed the New Education Policy, 2020

and the major lacunas that the policy possesses on the basis of the formulation and practical applicability and made a comparative study between the education systems of countries like Finland, USA and India. From this, we can know that India is on the right course of development and we are competing well on the global level. This also highlights that NEP, 2020 is big step towards success for our education sector and for the students and all the citizens and all the citizens collectively. NEP, 2020 also has some plausible loopholes and it can be tackled if the government willfully implements the new education policy with complete enthusiasm.

**Sawant et al.,** (2021) reported that it was well known fact that a well-defined, visionary and futuristic education policy was a must for every country because education was the key driver to economic and social progress. Taking into account their respective traditions and culture, different countries had adopted varied education systems. Recently government of India had announced its New Education Policy 2020 (NEP 2020), which intended to transform our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all. It was a welcome step, which will bring about a paradigm shift India's education system and will transform it into a modern, progressive, and equitable one.

**Zhang et al.,** (2021) stated that education inequality between the rural and urban areas of the People's Republic of China (PRC) – a potential bottleneck for human capital accumulation – had long been of interest to researches and policymakers. This paper used data from the China Family Panel Survey (CFPS) and the Rural-Urban Migration in China (RUMiC) survey to compare the education performance of rural children, children of rural-to-urban migrants, and urban children over the period 2009-2010. The study showed that education performance of rural children and migrant's children was significantly lower than that of their urban counterparts even after accounting for differences in personal attributes such as nutrition and parenting style. This provided useful insights for policymaking to reduce rural-urban education inequality and assist human capital accumulation in the PRC.

**Liyanage et al.,** (2021) conducted a quantitative systematic review to estimate the global prevalence of anxiety among university students during the COVID-19 pandemic. The study made a systematic search for cross sectional studies on PubMed, Scopus, and PsycINFO, using PRISMA guidelines, was conducted from September 2020 to February 2021. A total of 36 studies were included, using a random-effects model to calculate the pooled proportion of

anxiety. The study stated that a meta-analysis of the prevalence estimate of anxiety yielded a summary prevalence of 41% (95% CI = 0.34–0.49), with statistically significant evidence of between study heterogeneity ( $Q = 80801.97$ ,  $I^2 = 100\%$ ,  $p = 0.0001$ ). A subgroup analysis reported anxiety prevalence in Asia as 33% (95% CI: 0.25–0.43), the prevalence of anxiety in Europe as 51% (95% CI: 0.44–0.59), and the highest prevalence of anxiety in the USA as 56% (95% CI: 0.44–0.67). A subgroup gender-based analysis reported the prevalence of anxiety in females as 43% (95% CI: 0.29–0.58) compared to males with an anxiety prevalence of 39% (95% CI: 0.29–0.50). University students seem to have a high prevalence of anxiety, indicating an increased mental health burden during this pandemic.

**Sameh et al.**, (2022) analysed the psychological impact of COVID-19. Various psychological disorders and major mental health repercussions, such as stress, worry, sadness, frustration, and uncertainty, emerged gradually throughout the COVID-19 pandemic. Due to their long absence from school and their detention at home; they had been exposed to a wide range of psychological problems, which had led many to choose suicide. Students' mental health problems were now regarded as a public health issue. In this study the authors conducted a comprehensive review of the psychological effect on students after pandemic and COVID impact on the education system. Along with this, the online learning system and some psychological issues that may get found after COVID-19 had also been discussed.

## **CHAPTER - III**

### **METHODOLOGY**

The methodology adopted in the present study is discussed under the following heads:

- Participants
- Procedure
- Techniques of analysis

#### **I. Participants:**

College and University students were chosen as the respondents from all over India for this study. A total of 75 students were participated in the survey, which included 36 Under Graduates, 37 Post Graduates and 2 students pursuing their Ph.D. Among the total respondents 18 were male and 57 were female.

#### **II. Procedure:**

A Google form questionnaire was designed and it was sent through WhatsApp and e-mail to various students all over the India to fill the form who is currently attending online classes. After submitting their responses, they circulated it among their friends to give responses like snowball technique. In this way, the responses of 75 students were collected.

#### **III. Techniques of analysis:**

Data collected were tabulated and analysed for the purpose of giving precise and concise information. Besides, percentage, graphs the following techniques were used.

##### **A. Chi square Test:**

Chi – square test is one of the simplest and most widely used non – parametric test in statistics. The quantity  $\chi^2$  describes the magnitude of the discrepancy between theory and observation and is symbolized as:

$$\chi^2 = \frac{\sum(O-E)^2}{E}$$

Where O refers to observed frequency and E refers to expected frequency. In the present study, Chi – Square test was applied to find relationship between effectiveness of online education and satisfaction on technology used for online education.

## **B. Henry Garrett ranking technique:**

Henry Garrett ranking technique was used for evaluate the benefits and constraints of online learning, for these 5 benefits and 7 constraints were given to the respondents and they were asked to rank it based on their opinion. As the first step these ranks have to be converted into percent position based on the following formula.

$$\text{Percent position} = \frac{100[R_{ij}-0.5]}{N_j}$$

Where,

$R_{ij}$  = Rank given for the  $i$ th benefit/ constraint by  $j$ th respondents

$N_j$  = Number of benefits/ constraints ranked by  $j$ th respondents

As a second step these percent position of each rank was converted into scores using the table given by Garrett and Woodworth (1969). And then each factor, scores of individuals were added and divided by the total number of respondents to get the mean score of each factor. The benefit and constraint with the highest mean score were considered as the most important.

## CHAPTER – IV

### RESULTS AND DISCUSSIONS

The major findings of the study are presented and discussed under the following heads:

- I. Socio – Economic Profile of the respondents
- II. Students experience in online learning during lockdown
- III. Attitude of the students about online learning

#### I. Socio – Economic Profile of the respondents:

Socio – Economic status is the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation. Assessment of socio – economic status often reveals inequities in access to resources. A clear insight into the socio – economic factors is of paramount significance to establish the influence of the socio-economic factors on the life and activities of the respondents.

**TABLE – 4.1**

#### **GENDER - WISE CLASSIFICATION OF THE RESPONDENTS**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	18	24
Female	57	76
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Out of 75 respondents surveyed about 24% of the respondents were male and 76% of the respondents were female.

**TABLE – 4.2****AGE - WISE CLASSIFICATION OF THE RESPONDENTS**

<b>Age</b>	<b>Frequency</b>	<b>Percentage (%)</b>
15 – 17	1	1.3
18 – 20	19	25.3
21 – 23	50	66.7
24 – 26	5	6.7
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

Among 75 respondents, 1.3% of the students were at the age of 15 – 17, 25.3% of the students were at the age of 18 – 19, 66.7% of the students were at the age of 21 – 23 and 6.7% of the students were at the age of 24 – 26.

**TABLE – 4.3****RELIGION OF THE RESPONDENTS**

<b>Religion</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Hindu	70	93.3
Muslim	2	2.7
Christian	3	4
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

The data relating to religious status of the respondents reveals that about 93.3 % of the respondents were belonged to Hindu religion, 2.7% of the respondents were belonged to Muslim and the remaining 4% of the respondents were belonged to Christian.

**TABLE – 4.4****OCCUPATION OF HEAD OF THE HEAD OF THE FAMILY**

<b>Occupation of father</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Government employee	5	6.7
Private employee	14	18.7
Own business	33	44
Other	23	30.6
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

The data regarding the employment status of the head of the households reveals that about 6.7% were government employees, 18.7% were private employees, 44% were doing own business and 30.6% were doing other occupation.

**TABLE – 4.5****FAMILY INCOME PER MONTH**

<b>Family income per month</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1000 – 10000	20	26.6
10000 – 20000	26	34.7
20000 – 30000	18	24
30000 – 40000	11	14.7
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 26.6% of the respondent's family income per month was between Rs.1000 – 10000, 34.7% of the respondent's family income per month was between Rs.10000 – 20000, 24% of the respondent's family income per month was between Rs.20000 – 30000 and 14.7% of the respondent's family income per month was between Rs.30000 – 40000.

**TABLE – 4.6**

**RESIDENTIAL STATUS**

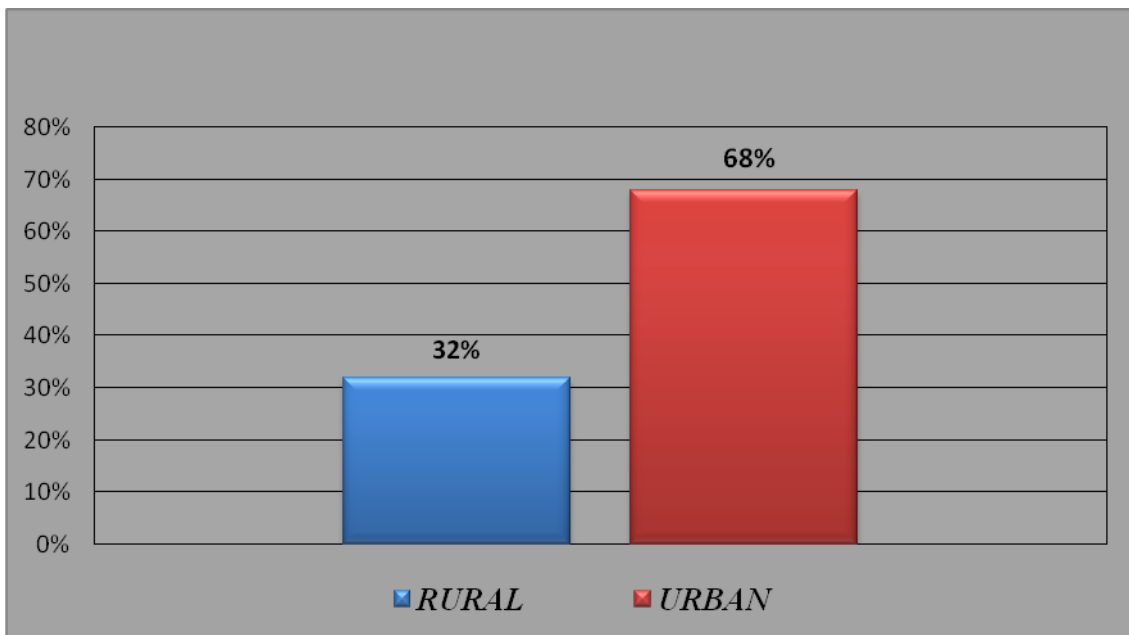
<b>Residential status</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Rural	53	70.7
Urban	22	29.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

The data regarding status of residence reveals that about 70.7% of the respondents were living in rural areas and the remaining 29.3% of the respondents were living in urban areas.

**FIGURE – 4.1**

**AREA OF COLLEGE OF THE RESPONDENTS**

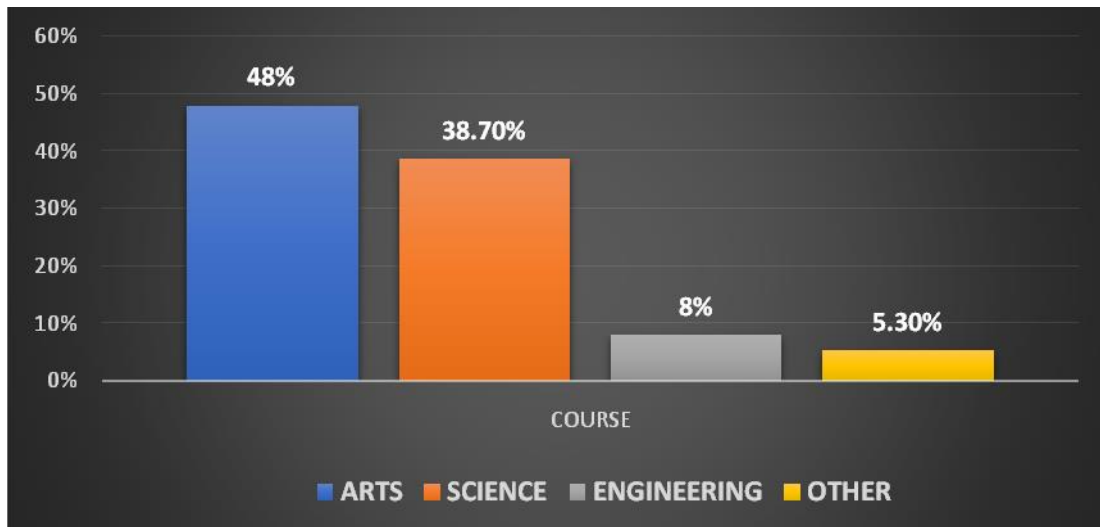


**Source:** Online survey (2021)

Figure 4.1 shows that about 32% of the respondents' study at the college which is located at rural areas and 68% of the respondents' study at the college which is located at urban areas.

**FIGURE – 4.2**

**COURSE TAKEN BY THE RESPONDENTS**

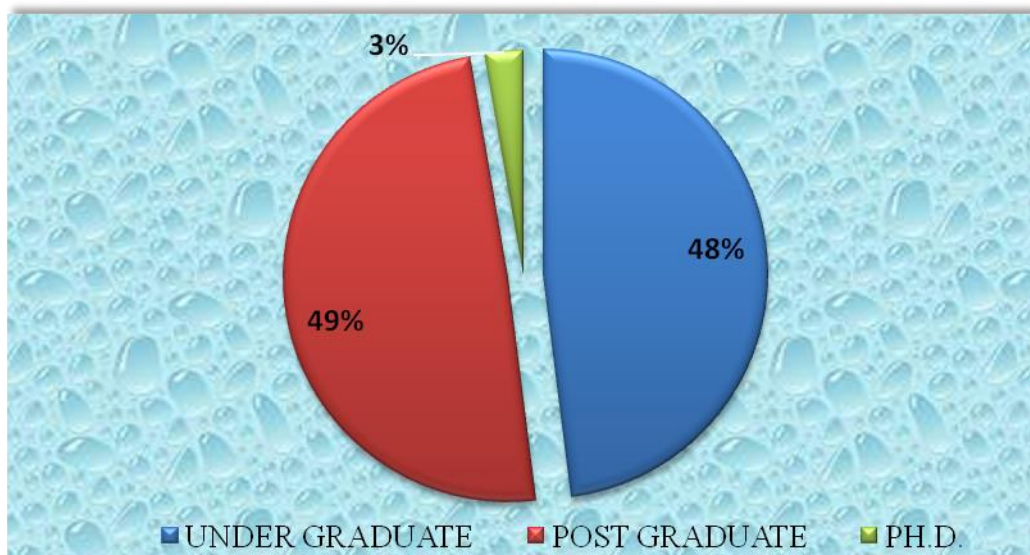


Source: Online survey (2021)

About 48% of the respondents were Arts students, 38.7% of the respondents were Science students, 8% of the respondents were engineering students and 5.3% of the respondents were other course students.

**FIGURE – 4.3**

**CLASSIFICATION OF THE RESPONDENTS BASED ON DEGREE PROGRAMME**



Source: Online survey (2021)

Among the 75 respondents, 48% of the respondents were under graduate students, 49% of the respondents were post graduate students and 3% of the respondents were Ph.D. students.

## II. Students experience in Online learning during lockdown

**TABLE – 4.7**

### DETAILS ON POSSESSION OF DEVICE FOR ONLINE LEARNING

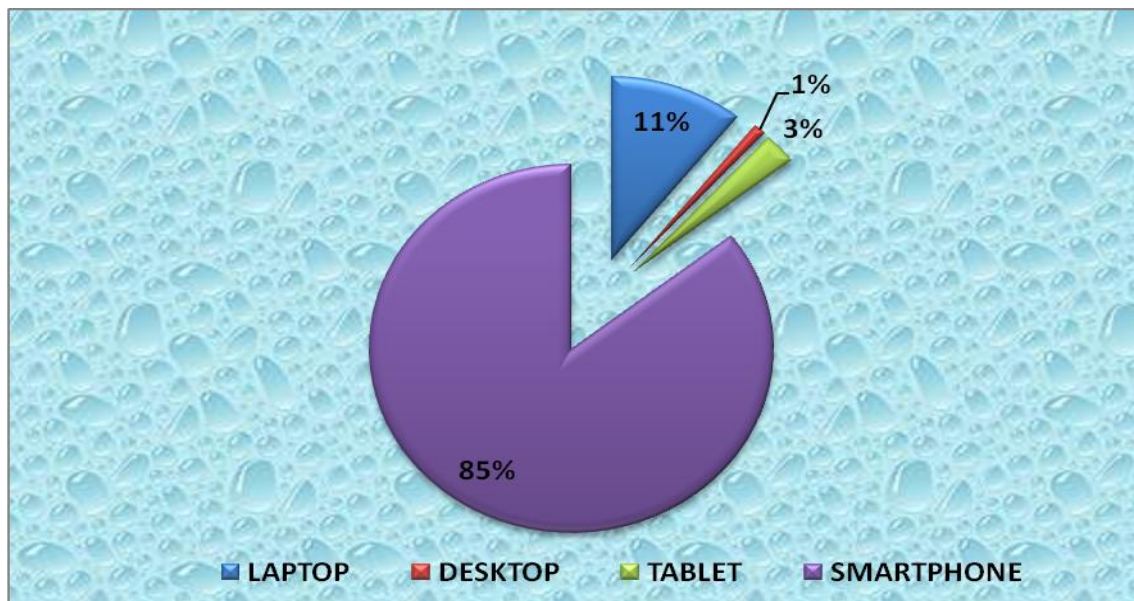
Possession of device for online learning	Frequency	Percentage (%)
Yes	55	73.3
Yes, but it doesn't work well	15	20
No, I share with others	5	6.7
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

Among 75 respondents, 73.3% of the respondents had access to the device for online learning, 20% of the respondents had the device but it doesn't work well and 6.7% of the respondents don't have the device and they share with others.

**FIGURE – 4.4**

### DEVICE USED FOR ONLINE LEARNING BY THE RESPONDENTS



Source: Online survey (2021)

Among 75 respondents, 11% of the respondents using laptop for online learning, 1% of the respondents using desktop for online learning, 3% of the respondents using tablet for online learning and 85% of the respondents using smartphone for online learning.

**TABLE – 4.8**

**TIME SPENT FOR ONLINE LEARNING EVERYDAY**

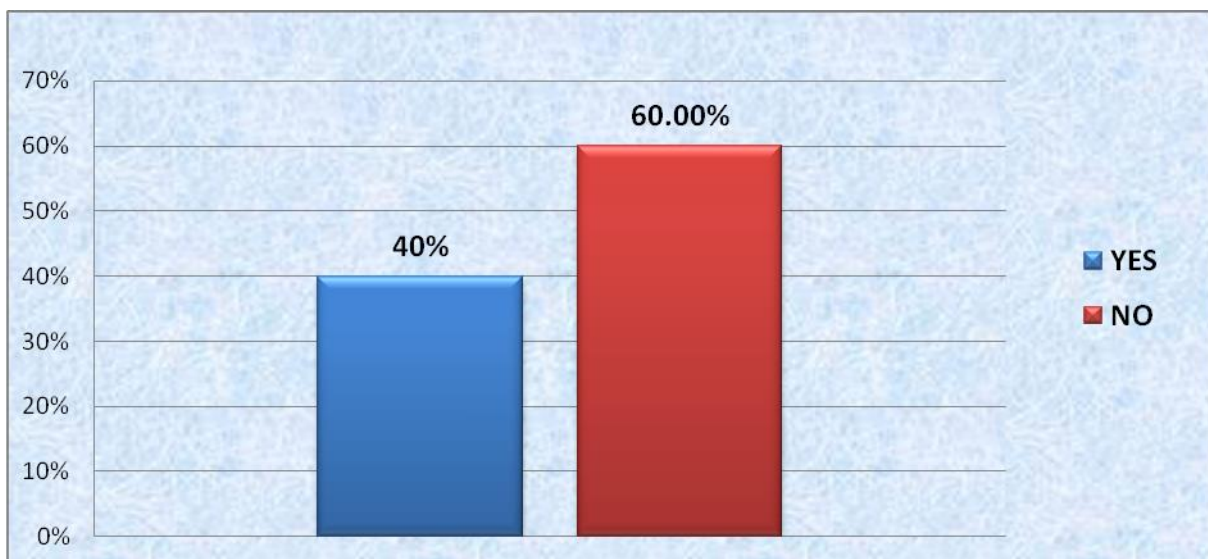
<b>Time spent for online learning</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1 – 3 hours	33	44
3 – 5 hours	27	36
More than 5 hours	15	20
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Details about the time spent for online learning every day by the respondents. Among 75 respondents, about 44% of the respondents usually spent 1 – 3 hours per day for online learning, 36% of the respondents usually spent 3 – 5 hours per day for online learning and 20% of the respondents usually spent more than 5 hours per day for online learning.

**FIGURE – 4.5**

**PARTICIPATED IN ANY TYPE OF E-LEARNING BEFORE PANDEMIC**



**Source:** Online survey (2021)

Figure 4.5 represents about 40% of the respondents had participated in e-learning before pandemic and 60% of the respondents had not participated in any type of e-learning before the pandemic.

**TABLE – 4.9**

**TEACHING METHOD DURING ONLINE CLASS**

<b>Method of Teaching</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Live online class	64	85.3
Recorded class that is uploaded at university website/ YouTube/ any other applications	6	8
Sending reading materials	5	6.7
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 85.3% of the respondents attend live online class, 8% of the respondents attend recorded class that is uploaded at university website/ you tube/ any other applications and 6.7% of the respondents receive reading materials.

**TABLE – 4.10**

**NATURE OF COURSE MATERIAL FOR THE RESPONDENTS**

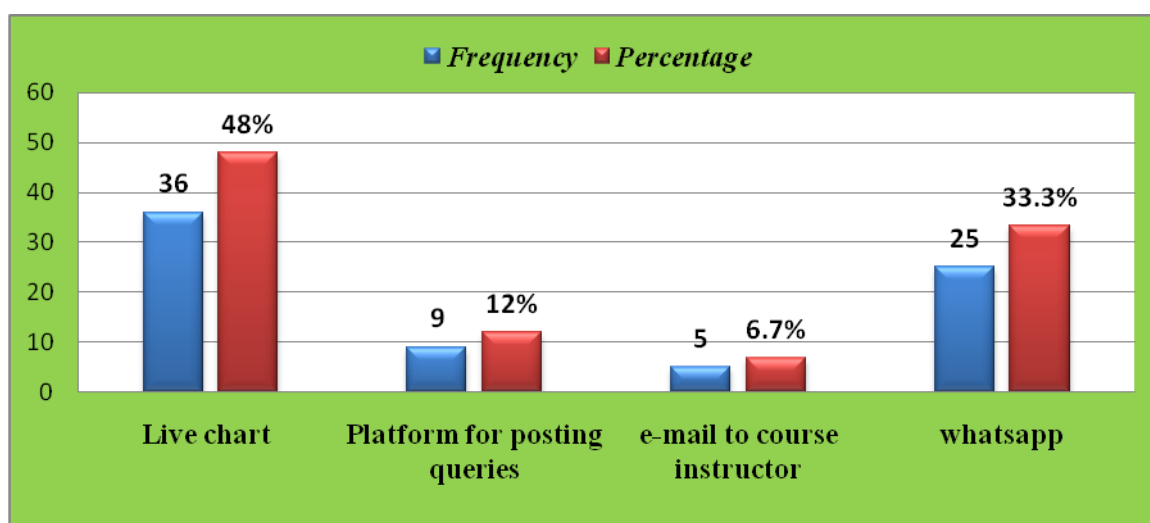
<b>Nature of course material</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Reading materials	43	57.3
Video content supplemented with reading materials	28	37.4
Video content	4	5.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 57.3% of the respondents were used to study with reading materials, 37.4% of the respondents have video content supplemented with reading materials and 5.3% had video content for studying.

**FIGURE – 4.6**

**DETAILS ABOUT THE METHODS USED FOR CLARIFYING QUERIES**



**Source:** Online survey (2021)

Among 75 respondents, 48% of the respondents clarify their queries in live chat, 33.3% of the respondents clarify their queries through What's App, about 12% of the respondents clarify their queries in platform for posting queries and 6.7% of the respondents clarify their queries through e-mail to the course instructor.

**TABLE – 4.11**

**BREAK ACCESSIBLE BETWEEN CLASSES**

<b>Break between classes</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 10 mins	17	22.6
10 mins	14	18.7
15 mins	20	26.7
More than 15 mins	24	32
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 22.6% of the respondents had less than 10 minutes break between two classes, 18.7% of the respondents had 10 minutes break between two classes, 26.7% of the respondents had 15 minutes break between two classes and 32% of the respondents had more than 15 minutes of break between two classes.

### III. Attitude of the students about online learning

TABLE – 4.12

#### EFFECTIVENESS OF ONLINE LEARNING

Effectiveness Online learning	Frequency	Percentage (%)
Not at all effective	9	12
Slightly effective	30	40
Moderately effective	31	41.3
Extremely effective	5	6.7
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

Among 75 respondents, 12% of the respondents felt online learning not at all effective, 40% of the respondents felt online learning slightly effective, 41.3% of the respondents felt online learning moderately effective and 6.7% of the respondents felt online learning was extremely effective.

TABLE – 4.13

#### PERCEPTION ABOUT STUDY RESOURCES OFFERED

College or university helpful in offering resources	Frequency	Percentage (%)
Not at all helpful	6	8
Slightly helpful	20	26.7
Moderately helpful	35	46.6
Extremely helpful	14	18.7
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

Among 75 respondents, 8% of the respondents felt that college or university is not at all helpful in offering resources to learn from home, 26.7% of the respondents felt that college or university is slightly helpful in offering resources to learn from home, 46.6% of the respondents felt that college or university is moderately helpful in offering resources to learn from home and 18.7% of the respondents felt that college or university is extremely helpful in offering resources to learn from home.

**TABLE – 4.14**

**RESPONDENT’S PERCEPTIONS ABOUT ONLINE LEARNING**

<b>Perceptions about online learning</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes, absolutely	15	20
Yes, but I would like to change few things	31	41.4
No, there are quite a few challenges	16	21.3
No, not at all	13	17.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 20% of the respondents absolutely enjoy online learning, 41.4% of the respondents enjoy online learning but they would like to change few things, 21.3% of the respondents don’t enjoy online learning as there were quite a few challenges and 17.3% of the respondents not at all enjoy online learning.

**TABLE – 4.15**

**SUPPORT OF THE TEACHERS FOR ONLINE LEARNING**

<b>Teachers helpful while studying</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Not at all helpful	3	4
Slightly helpful	21	28
Moderately helpful	26	24.7
Extremely helpful	25	33.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 4% of the respondents felt that their teachers are not at all helpful while studying online, 28% of the respondents felt that their teachers were slightly helpful while studying online, 24.7% of the respondents felt that their teachers were moderately helpful while studying online and 33.3% of the respondents felt that their teachers were extremely helpful while studying online.

**TABLE – 4.16**

**RESPONDENT’S SATISFACTION LEVEL WITH THE TECHNOLOGY AND SOFTWARE USING FOR ONLINE LEARNING**

<b>Satisfied with the technology and software using for online learning</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	51	68
No	24	32
<b>Total</b>	<b>75</b>	<b>100</b>

Source: Online survey (2021)

Among 75 respondents, 68% of the respondents were satisfied with the technology and software they are using for online learning and 32% of the respondents were not satisfied with the technology and software they are using for online learning.

**CHI SQUARE ANALYSIS:**

In this section, an attempt was made to examine relationship between effectiveness of online learning and satisfaction on technology used for online learning by using chi square test. The hypothesis framed was

H<sub>0</sub>: There is no relationship between effectiveness of online learning and satisfaction on technology used for online learning

H<sub>a</sub>: There is relationship between effectiveness of online learning and satisfaction on technology used for online learning

**TABLE – 4.17**

**RELATIONSHIP BETWEEN EFFECTIVENESS OF ONLINE LEARNING AND SATISFACTION ON TECHNOLOGY USED FOR ONLINE LEARNING**

<b>S. No.</b>	<b>Variables</b>	<b>X<sup>2</sup> value</b>	<b>Degrees of freedom</b>	<b>Level of significance</b>	<b>Inference</b>
1	Effectiveness of online learning	29.907	3	0.000	Reject H <sub>0</sub>
2	Satisfaction on the technology used for online learning	9.720	1	0.002	Reject H <sub>0</sub>

Source: Estimation based on field survey, 2021

The estimated chi – square values reveal that effectiveness of online learning significantly related with satisfaction on technology used for online learning.

**TABLE – 4.18**

**ADVANTAGES OF ONLINE LEARNING**

<b>Advantages of online learning</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Access to online materials	16	21.3
Learning on your own pace	26	34.7
Ability to stay at home	18	24
Ability to record a meeting	5	6.7
Comfortable surrounding	10	13.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 21.3% of the respondents felt access to online materials was the advantage of e-learning, 34.7% of the respondents felt that learning on your own pace was the advantage of e-learning, 24% of the respondents felt that ability to stay at home was advantage of e-learning, 6.7% of the respondents felt that ability to record a meeting was the advantage of e-learning and 13.3% of the respondents felt that the comfortable surrounding was the advantage of e-learning.

**TABLE – 4.19**

**DISADVANTAGES OF ONLINE LEARNING**

<b>Disadvantages of online learning</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Reduced interaction with the teachers	25	33.3
Technical problem	32	42.7
Poor learning conditions at home	18	24
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

About 42.7% of the respondents felt that the technical problems were the major disadvantage of online learning, followed by 33.3% of the respondents felt that online

learning reduced interaction with the teachers and the remaining 24% of the respondents felt that the poor learning conditions at home was the disadvantage of online learning.

**TABLE – 4.20**

**PERCEPTION ABOUT THE SIGNIFICANCE OF FACE-TO-FACE COMMUNICATION DURING ONLINE CLASS**

<b>Face-to-face importance</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Not important	6	8
Slightly important	16	21.3
Moderately important	18	24
Very important	35	46.7
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 8% of the respondents felt that face-to-face communication is not important while learning remotely, 21.3% of the respondents felt that face-to-face communication is slightly important while learning remotely, 24% of the respondents felt that face-to-face communication is moderately important while learning remotely and 46.7% of the respondents felt that face-to-face communication is very important while learning remotely.

**TABLE – 4.21**

**OPINION ABOUT DISTANCE LEARNING DURING COVID-19 PANDEMIC**

<b>Distance learning stressful</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Not stressful	10	13.4
Slightly stressful	21	28
Moderately stressful	28	37.3
Very stressful	16	21.3
<b>Total</b>	<b>75</b>	<b>100</b>

**Source:** Online survey (2021)

Among 75 respondents, 13.4% of the respondents felt that distance learning is not stressful during COVID-19 pandemic, 28% of the respondents felt that distance learning is slightly stressful during COVID-19 pandemic, 37.3% of the respondents felt that distance

learning is moderately stressful during COVID-19 pandemic and 21.3% of the respondents felt that distance learning is very stressful during COVID-19 pandemic.

**BENEFITS AND CONSTRAINTS IN ONLINE LEARNING:**

In this study Garrett’s ranking technique was used to find out the most significant factor which influences the respondent perception on benefits and constraints in online learning.

**A. Benefits of online class:**

**TABLE – 4.22**

**ESTIMATED GARRETT’S RANKING FOR BENEFITS OF ONLINE CLASS**

<b>S. No</b>	<b>Factors</b>	<b>Total score</b>	<b>Garrett Mean score</b>	<b>Mean Rank</b>
<b>1</b>	Flexible schedule and convenience	4700	62.67	<b>I</b>
<b>2</b>	More comfortable environment	4440	59.2	<b>II</b>
<b>3</b>	Improves your technical skills	3815	50.87	<b>III</b>
<b>4</b>	More interaction and greater ability to concentrate	3115	41.53	<b>IV</b>
<b>5</b>	Self-discipline and responsibility	2680	35.73	<b>V</b>

**Source:** Estimation based on field survey, 2021

On the basis of the ranks assigned by the sample respondents, the benefits of online classes are analysed through Garrett Ranking Techniques. It is evident from above table that flexible schedule and convenience (62.67 score) was the main benefits of online class, followed by more comfortable environment (59.2), improves your technical skills (50.87), more interaction and greater ability to concentrate (41.53) and self-discipline and responsibility (35.73).

## B. Constraints of online learning:

TABLE – 4.23

### ESTIMATED GARRETT'S RANKING FOR CONSTRAINTS OF ONLINE CLASS

S. No	Factors	Total	Average	Rank
1	Lack of connectivity	4689	62.52	I
2	Data limit	4496	59.95	II
3	Data speed	4107	54.76	III
4	Little/ no face-to-face interaction	3832	51.09	IV
5	Intense requirement for self-discipline	3551	47.35	V
6	Lack of device	2998	39.97	VI
7	Poor learning environment	2727	36.36	VII

Source: Estimation based on field survey, 2021

On the basis of the ranks assigned by the sample respondents, the constraints of online learning are analysed through Garrett Ranking Techniques. It is evident from above table that lack of connectivity (62.52 score) was the main constraint of online learning, followed by data limit (59.95), data speed (54.76), Little/ no face-to-face interaction (51.09), Intense requirement for self-discipline (47.35), lack of device (39.97) and poor learning environment (36.36).

## CHAPTER – V

### SUMMARY AND CONCLUSION

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, habits and personal development. Educational methods include teaching, training, storytelling, discussion and directed research. Education frequently takes place under the guidance of educators; however, learners can also educate themselves. Education can take place in formal or informal settings, and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy.

Formal education is commonly divided formally into stages such as preschool or kindergarten, primary school, secondary school and then college, university or apprenticeship. In most regions, education is compulsory up to a certain age.

The school system in India has four levels: lower primary (age 6 to 10), upper primary (age 11 and 12), high (age 13 to 15) and higher secondary (age 17 and 18). The lower primary school is divided into five “standards”, upper primary school into two, high school into three and higher secondary into two. Students have to learn a common curriculum largely (except for regional changes in mother tongue) till the end of high school. There is some amount of specialization possible at the higher secondary level. Students throughout the country have to learn three languages (namely, English, Hindi and their mother tongue) except in regions where Hindi is the mother tongue and, in some streams, as discussed below. There are mainly three streams in school education in India. Two of these are coordinated at the national level, of which one is under the Central Board of Secondary Education (CBSE) and was originally meant for children of central government employees who are periodically transferred and may have to move to any place in the country. A number of “central schools” (named Kendriya Vidyalayas) have been established for the purpose in all main urban areas in the country, and they follow a common schedule so that a student going from one school to another on a particular day will hardly see any difference in what is being taught. One subject (Social Studies, consisting of History, Geography and Civics) is always taught in Hindi, and other subjects in English, in these schools. Kendriya Vidyalayas admit other children also if seats are available. All of them follow textbooks written and published by the NCERT. In addition to these government-run schools, a number of private schools in the country follow

the CBSE syllabus thought they may use different text books and follow different teaching schedules. They have a certain amount of freedom in what they teach in lower classes. The CBSE also has 141 affiliated schools in 21 other countries mainly catering to the needs of the Indian population there.

The Central Government came up with the new education policy towards the end of July 2020. The New Education Policy aims to bring in a holistic approach to education.

### **NATIONAL EDUCATION POLICY 2020:**

(NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. The policy aims to transform India's education system by 2040.

Shortly after the release of the policy, the government clarified that no one will be forced to study any particular language and that the medium of instruction will not be shifted from English to any regional language. The language policy in NEP is a broad guideline and advisory in nature; and it is up to the states, institutions, and schools to decide on the implementation. Education in India is a Concurrent List subject.

The policy aims to make the Board of exams easier to test the core competencies rather than memorized facts. The NEP focuses on industry-based skill empowerment that lays importance on creativity and innovation which are the key factors for someone to excel in 21<sup>st</sup> century.

The end of 2019 followed by the beginning of 2020 witnessed a turning point in the history of the world. The whole world was shaken by a small virus which led to a pandemic across the globe.

### **COVID-19: CHALLENGES AND OPPORTUNITIES CREATED FOR EDUCATION**

COVID – 19 has affected a large number of students across states, class, caste, gender and region. By the end of March 2020, the epidemic had spread to over 185 countries and

resulted in the closure of over 90 percent of all schools, colleges and universities impacting close to 1.38 billion students.

The speed of the spread of the epidemic, the closure of higher education institutions and the transition to online teaching was so swift that it hardly gave any time to plan and to reflect on the potential risks or the potential opportunities that such a sudden change could bring.

Given such a situation it is important to look at the impact and reflect on what has transpired and what is likely to happen as we move forward in the field of global education.

### **IMPACT OF THE COVID-19 PANDEMIC ON EDUCATION:**

COVID – 19 brought in lot of changes in the working of the different sectors of the economy. Educational sector experienced many changes at different levels. The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total closures of schools, early childhood care and education (ECCE) services, universities and colleges. Most governments decided to temporarily close educational institutions in an attempt to reduce the spread of COVID-19. As of 12 January 2021, approximately 825 million learners are currently affected due to school's closures in response to the pandemic. According to UNICEF monitoring, 23 countries are currently implementing nationwide closures and 40 are implementing local closures, impacting about 47 percent of the world's student population. 112 countries schools are currently open.

In general, having fewer education options has globally impacted people with less money, while people with more money have found education. New online programs have shifted the labor of education from schools to families and individuals, and consequently, people everywhere who relied on schools rather than computers and home life have had more difficulty accessing their education. Early childhood care and education (ECCE) as well as school closures impact not only students, teachers, and families, but have far-reaching economic and societal consequences. School closures in response to the pandemic have shed light on various social and economic issues, including student debt, digital learning, food insecurity, and homelessness, as well as access to childcare, healthcare, housing, internet, and disability services. The impact was more severe for disadvantaged children and their families, causing interrupted learning, compromised nutrition, childcare problems, and consequent

economic cost to families who could not work. In response to school closures, UNESCO recommended the use of distance learning programmes and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of education.

### **Negative impacts of COVID-19 on Education:**

There are a number of areas of potential risks for global education. Here are 4 negative impacts of COVID-19 on education.

#### **1. Sluggish cross-broader movement of students:**

Universities in many countries such as Australia, UK, New Zealand, and Canada are highly dependent on the movement of students from China and India. It is becoming more and clearer that this cross-broader movement of students will take a beating at least for the next two to three years and will lead to a major financial risk for universities in these countries who are already under financial pressure. Many parents will avoid sending students abroad for higher education due to high risk from the pandemic.

#### **2. Passive learning by students:**

The sudden shift to online learning without any planning – especially in countries like India where the backbone for online learning was not ready and the curriculum was not designed for such a format – has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. Added to this is that we may be leaving a large proportion of the student population untouched due to the digital divide that is part of many developing nations including India. We are now beginning to realize that online learning could be dull as it is creating a new set of passive learners which can pose new challenges.

#### **3. Unprepared teachers for online education:**

Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for this sudden transition from face-to-face learning to online learning. Thus, most of the teachers are just conducting lectures on video platforms such as Zoom which may not be real online learning in the absence of a dedicated online platform

specifically designed for the purpose. There is a risk that in such a situation, learning outcomes may not be achieved and it may be only resulting in engaging the students.

#### **4. Changing format of student recruitment:**

Universities and colleges worldwide are facing a major risk in the area of student recruitment and retention. The risk of losing students is so high that they will need to re-look at their admission practices, admission criteria and the overall recruitment process itself which will include new methods of outreach and application process itself.

#### **Positive changes in Education due to COVID-19:**

Any changes that is so disruptive is also likely to bring with it some new opportunities that will transform the higher education system worldwide and especially in a country like India which is planning to bring about a planned reform in this sector. Some of the key areas of opportunities are the following:

##### **1. Rise in Blended Learning:**

Universities and colleges will shift to a model of blended learning where both face-to-face deliveries along with an online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required. New ways of delivery and assessments of learning outcomes will have to be adopted which opens immense opportunities for a major transformation in the area of curriculum development and pedagogy.

##### **2. Learning management systems to be the new norm:**

A great opportunity will open up for those companies that have been developing and strengthening learning management systems for use by universities and colleges. This has the potential to grow at a very fast pace but will have to be priced appropriately for use by all institutions.

### **3. Improvement in learning material:**

There is a great opportunity for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process. Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that the use of learning management systems will bring about more openness and transparency in academics.

### **4. Rise in collaborative work:**

The teaching community to a large extent has been very insulated and more so in a country like India. There is a new opportunity where collaborative teaching and learning can take on new forms and can even be monetized. Faculty members/ teachers can deliver online courses to even students from competing institutions. Collaborations can also happen among faculty/ teachers across the nation to benefit from each other. Finally, it is expected that there will be a massive rise in teleconferencing opportunities which can also have a negative impact on the travel. A large number of academic meetings, seminars and conferences will move online and there is a possibility that some new form of an online conferencing platform will emerge as a business model.

COVID – 19 accelerated the adoption of digital technologies to deliver education. Education institutions moved toward blended learning and encouraged teachers and students to acquire technology savvy. Online platform became the mode of operation right from kindergarten up to university education. With this background the present study tries to assess the “Impact of COVID-19 on Education in India” with following objectives.

- ❖ To study socio-economic profile of the respondents
- ❖ To assess student’s experience in online learning during lockdown and
- ❖ To examine the attitude of the students about online learning

In the present study snowball technique was used to collect the necessary data. A Google form questionnaire was designed and it was sent through WhatsApp and e-mail. The respondents after submitting their responses, they circulated it among their friends to fill the form who is currently attending online classes. In this way, the responses of 75 students were collected from various students all over the India. Data were collected on socio –

economic status, followed by students experience in online learning, advantages, disadvantages, perceptions on benefits and constraints in online learning during COVID – 19 pandemic periods. Besides frequency and percentage Henry Garrett ranking technique was used for evaluate the benefits and constraints of online learning.

## **MAJOR FINDINGS:**

### **I. Socio – Economic Profile of the respondents:**

- Out of 75 respondents surveyed about 24% of the respondents were male and 76% of the respondents were female.
- Among 75 respondents, 1.3% of the students were at the age of 15 – 17, 25.3% of the students were at the age of 18 – 19, 66.7% of the students were at the age of 21 – 23 and 6.7% of the students were at the age of 24 – 26.
- The data relating to religious status of the respondents reveals that about 93.3 % of the respondents were belonged to Hindu religion, 2.7% of the respondents were belonged to Muslim and the remaining 4% of the respondents were belonged to Christian.
- The data regarding the employment status of the head of the households reveals that about 6.7% were government employees, 18.7% were private employees, 44% were doing own business and 30.6% were doing other occupation.
- Among 75 respondents, 26.6% of the respondent's family income per month was between Rs.1000 – 10000, 34.7% of the respondent's family income per month was between Rs.10000 – 20000, 24% of the respondent's family income per month was between Rs.20000 – 30000 and 14.7% of the respondent's family income per month was between Rs.30000 – 40000.
- The data regarding place of Residence reveals that about 70.7% of the respondents were living in rural areas and the remaining 29.3% of the respondents were living in urban areas.
- About 32% of the respondents' study at the college which is located at rural areas and 68% of the respondents' study at the college which is located at urban areas.

- About 48% of the respondents were arts students, 38.7% of the respondents were science students, 8% of the respondents were engineering students and 5.3% of the respondents were other course students.
- Among 75 respondents, 48% of the respondents were under graduate students, 49.3% of the respondents were post graduate students and 2.7% of the respondents were Ph.D. students.

## **II. Students experience in Online Learning during lockdown**

- ❖ Among 75 respondents, 73.3% of the respondents had access to the device for online learning, 20% of the respondents had the device but it doesn't work well and 6.7% of the respondents don't have the device and they share with others.
- ❖ Among 75 respondents, 10.7% of the respondents using laptop for online learning, 1.3% of the respondents using desktop for online learning, 2.7% of the respondents using tablet for online learning and 85.3% of the respondents using smartphone for online learning.
- ❖ Details about the time spent for online learning every day by the respondents. Among 75 respondents, about 44% of the respondents usually spent 1 – 3 hours per day for online learning, 36% of the respondents usually spent 3 – 5 hours per day for online learning and 20% of the respondents usually spent more than 5 hours per day for online learning.
- ❖ About 40% of the respondents had participated in e-learning before pandemic and 60% of the respondents had not participated in any type of e-learning before the pandemic.
- ❖ Among 75 respondents, 85.3% of the respondents attend live online class, 8% of the respondents attend recorded class that is uploaded at university website/ you tube/ any other applications and 6.7% of the respondents receive reading materials.
- ❖ Among 75 respondents, 57.3% of the respondents were used to study with reading materials, 37.4% of the respondents have video content supplemented with reading materials and 5.3% had video content for studying.
- ❖ Among 75 respondents, 48% of the respondents clarify their queries in live chat, 33.3% of the respondents clarify their queries through What's App, about 12% of the respondents clarify their queries in platform for posting queries and 6.7% of the respondents clarify their queries through e-mail to the course instructor.

- ❖ Among 75 respondents, 22.6% of the respondents had less than 10 minutes break between two classes, 18.7% of the respondents had 10 minutes break between two classes, 26.7% of the respondents had 15 minutes break between two classes and 32% of the respondents had more than 15 minutes of break between two classes.

### **III. Attitude of the students about online learning**

- ❖ Among 75 respondents, 12% of the respondents felt online learning not at all effective, 40% of the respondents felt online learning slightly effective, 41.3% of the respondents felt online learning moderately effective and 6.7% of the respondents felt online learning was extremely effective.
- ❖ Among 75 respondents, 8% of the respondents felt that college or university is not at all helpful in offering resources to learn from home, 26.7% of the respondents felt that college or university is slightly helpful in offering resources to learn from home, 46.6% of the respondents felt that college or university is moderately helpful in offering resources to learn from home and 18.7% of the respondents felt that college or university is extremely helpful in offering resources to learn from home.
- ❖ Among 75 respondents, 20% of the respondents absolutely enjoy online learning, 41.4% of the respondents enjoy online learning but they would like to change few things, 21.3% of the respondents don't enjoy online learning as there were quite a few challenges and 17.3% of the respondents not at all enjoy online learning.
- ❖ Among 75 respondents, 4% of the respondents felt that their teachers are not at all helpful while studying online, 28% of the respondents felt that their teachers were slightly helpful while studying online, 24.7% of the respondents felt that their teachers were moderately helpful while studying online and 33.3% of the respondents felt that their teachers were extremely helpful while studying online.
- ❖ Among 75 respondents, 68% of the respondents were satisfied with the technology and software they are using for online learning and 32% of the respondents were not satisfied with the technology and software they are using for online learning.
- ❖ The estimated chi – square values reveal that effectiveness of online learning significantly related with satisfaction on technology used for online learning.
- ❖ Among 75 respondents, 21.3% of the respondents felt access to online materials was the advantage of e-learning, 34.7% of the respondents felt that learning on your own pace was the advantage of e-learning, 24% of the respondents felt that ability to stay

at home was advantage of e-learning, 6.7% of the respondents felt that ability to record a meeting was the advantage of e-learning and 13.3% of the respondents felt that the comfortable surrounding was the advantage of e-learning.

- ❖ About 42.7% of the respondents felt that the technical problems were the major disadvantage of online learning, followed by 33.3% of the respondents felt that online learning reduced interaction with the teachers and the remaining 24% of the respondents felt that the poor learning conditions at home was the disadvantage of online learning.
- ❖ Among 75 respondents, 8% of the respondents felt that face-to-face communication is not important while learning remotely, 21.3% of the respondents felt that face-to-face communication is slightly important while learning remotely, 24% of the respondents felt that face-to-face communication is moderately important while learning remotely and 46.7% of the respondents felt that face-to-face communication is very important while learning remotely.
- ❖ Among 75 respondents, 13.4% of the respondents felt that distance learning is not stressful during COVID-19 pandemic, 28% of the respondents felt that distance learning is slightly stressful during COVID-19 pandemic, 37.3% of the respondents felt that distance learning is moderately stressful during COVID-19 pandemic and 21.3% of the respondents felt that distance learning is very stressful during COVID-19 pandemic.
- ❖ On the basis of the ranks assigned by the sample respondents, the benefits of online classes are analysed through Garrett Ranking Techniques. It is evident from above table that flexible schedule and convenience (62.67 score) was the main benefits of online class, followed by more comfortable environment (59.2), improves your technical skills (50.87), more interaction and greater ability to concentrate (41.53) and self-discipline and responsibility (35.73).
- ❖ On the basis of the ranks assigned by the sample respondents, the constraints of online learning are analysed through Garrett Ranking Techniques. It is evident from above table that lack of connectivity (62.52 score) was the main constraint of online learning, followed by data limit (59.95), data speed (54.76), Little/ no face-to-face interaction (51.09), Intense requirement for self-discipline (47.35), lack of device (39.97) and poor learning environment (36.36).

## **CONCLUSION**

To conclude that COVID-19 pandemic on Education has created many changes to Education sector throughout the world. Learning takes the new form as digital learning. Although most of the teachers, students and even parents were faced problems when digital learning takes place. As this digital learning is new for everyone both teachers and students face some issues in this type of learning. Students have both benefits and constraints in online learning. Most of the students are satisfied and benefitted by learning many new digital works with online education. Even though there are many advantages of online learning such as students can consume time by studying at home and not travelling, students can record the meeting and replay if they have any doubts, etc, there are also some disadvantages students face such as network problem during class time, students can't interact with teachers frequently and many poor can't afford smart phone, tablet, laptop or desktop. So, they faced problems for learning.

## BIBLIOGRAPHY

### Journals

1. Abdulelah A. Alghamdi (2021), **“Impact of the COVID-19 pandemic on the social and educational aspects of Saudi university students’ lives”**, “Plos one”, Vol:16; No:4.
2. Adnan M, Anwar K (2020), **“Online Learning amid the COVID-19 Pandemic: Students' Perspectives”**, “Online Submission”, Vol:2; No:1; Pp:45-51.
3. Aithal, Sreeramana and Aithal, Shubhrajyotsna (2020), **“Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives”**, “International Journal of Management, Technology, and Social Sciences”, Vol:5; No:2; Pp:19-14.
4. Akanksha Gavade (2020), **“Statistical analysis of the national educational policy (2020)”**, “International Journal of Research in Engineering and Science”, Vol:9; NO:7; Pp:27-31.
5. Amit Nagar and Ritim Mangla (2021), **“Critical Comparison of India’s new Education Policy with Global Education Policies”**, “International Journal of Law Management and Humanities”, Vol:4; No:4; Pp:1872-1880.
6. Ashish Kumar (2021), **“Impact of covid – 19 on education system”**, “International Journal of Engineering Research and Technology (IJERT)”, Vol:10; No:06.
7. Avadhesh Kumar Yadav (2021), **“Impact of online teaching on students’ education and health in India during the pandemic of COVID – 19”**, “Coronavirus”, Vol:2; No:4; Pp:516-520.
8. B. Venkateshwarlu (2021), **“A critical study of NEP 2020: issues, approaches, challenges, opportunities and criticisms”**, “International Journal of Multidisciplinary Educational Research”, Vol:10; No:2(5); Pp:191-196.
9. Dandan Zhang, Xin Li and Jinjun Xue (2015), **“Education inequality between rural and urban areas of the People's Republic of China, migrants’ children education, and some implications”**, “Asian Development Review”, Vol:32; No:1; Pp:196-224.
10. Deep Kumar (2020), **“A critical analysis and a glimpse of new education policy – 2020”**, “International Journal of Scientific and Engineering Research”, Vol:11; No:10; Pp:248-253.

11. Digvijay Pandey, Gabriel A. Ogunmola, Wegayehu Enbeyle, Marzuk Abdullahi, Binay, Kumar Pandey and Sabyasachi Pramanik (2021), **“COVID-19: A framework for effective delivering of online classes during lockdown”**, “Human Arenas”
12. Dr. K.V. Veerakumar, Dr. G. Gnanaselvi, Dr. Kolachina Srinivas (2020), **“A study on student’s preference towards online education during covid-19 pandemic period”**, “International Journal of Disaster and Business Continuity”, Vol:11; No:3; Pp:968-976.
13. Dr. Rahul Pratap Singh Kaurav, Prof. K.G. Suresh, Dr. Sumit Narula, Raturaj Baber (2020), **“New education policy: qualitative (contents) analysis and Twitter mining (sentiment analysis)”**, “Journal of Content, Community and Communication”, Vol:12; No:1; Pp:4-13.
14. Dr. Rupesh G. Sawant, Dr. Umesh B. Sankpal (2021), **“National Education Policy 2020 and Higher Education: A Brief Review”**, “International Journal of Creative Research Thoughts (IJCRT)”, Vol:9; No:1; Pp:3456-3460.
15. Elock Emvula Shikalepo (2019), **“Characteristics of rural areas and their effects on teaching and learning dynamics”**, “International Journal of Science and Management Review”, Vol:02; No:04; Pp:20-36.
16. Elock Emvula Shikalepo (2020), **“Challenges Facing Learning at Rural Schools: A Review of Related Literature”**, “International Journal of Research and Innovation in Social Science (IJRISS)”, Vol.4; No:3; Pp:128-132.
17. Emily C. Bouck (2004), **“How size and setting impact education in rural schools”**, “The Rural Educator”, Vol:25; No:3; Pp:38-42.
18. Fatemah Rajab Dizavandi, Abbas Heydari (2022), **“Challenges to Online Education in Medical Education during the COVID-19 Pandemic”**, “Medical Education Bulletin”, Vol:3; No:1; Pp:393-401.
19. Ghada Refaat El Said (2021), **“How Did the COVID-19 Pandemic Affect Higher Education Learning Experience? An Empirical Investigation of Learners’ Academic Performance at a University in a Developing Country”**, “Advances in Human-Computer Interaction”.
20. Girisha Lakshman Naik, Malteshkumar Deshpande, D.C. Shivananda, C.P. Ajey, G.C. Manjunath Patel (2021), **“Online Teaching and Learning of Higher Education in India during COVID-19 Emergency Lockdown”**, “Pedagogical Research”, Vol:6; No:1; Pages:14.

21. Hafeez M, Ajmal K and Kazmi Q.A. (2021), “**Challenges faced by the teachers and students in online learning**”, “International Journal of Innovation, Creativity and Change”, Vol:15; No:2; Pp:325-346.
22. Kaisara G, Bwalya K.J. (2021) “**Investigating the E-Learning Challenges Faced by Students during COVID-19 in Namibia**”, “International Journal of Higher Education”, Vol:10; No:1; Pp:308-318.
23. Kara M, Erdogdu F, Kokoc M and Kursat Cagiltay (2019), “**Challenges faced by adult learners in online distance education: A literature review**”, “Open Praxis”, Vol:11; No:1; Pp:5-22.
24. L. Devi and Cheluvaraju, (2020) “**A Study on Awareness about the Impact of National Education Policy-2020 Among the Stakeholder of Commerce and Management Disciplinary**”, “European Journal of Business and Management Research”, Vol:5; No:6; Pages:5.
25. Leonardo Villani, Roberta Pastorino, Enrico Molinari, Franco Anelli, Walter Ricciardi, Guendalina Graffigna and Stefania Boccia (2021), “**Impact of the COVID-19 pandemic on psychological well-being of students in an Italian university: a web-based cross-sectional survey**”, “Globalization and health”, Vol:17; No:1; Pages:14.
26. Lokanath Mishra, Tushar Gupta, Abha Shree (2020), “**Online teaching-learning in higher education during lockdown period of COVID-19 pandemic**”, “International Journal of Educational Research Open”.
27. M. Maruthavanan (2020), “**A Study on the Awareness on New Education Policy (2019) among the Secondary School Teachers in Madurai District**”, “Shanlax International Journal of Education”, Vol:8; No:3; Pp67-71.
28. Malik S, Tyagi HK (2020), “**A study of parent’s opinion on online teaching in Delhi-NCR schools**”, “Indian Journal of Science and Technology”, Vol:13; No:42; Pp:4351-4363.
29. Md Swadi Sameh, Farhana Binta Fozal, Tanvir Hasan Shuvo, Mir Jerina Farhath and Tanzin Hossain Oyshi (2022), “**Psychological Impact of COVID-19 Described with SWOT Analysis**”, “International Journal of Science and Business”, Vol:7; No:1; Pp:53-66.

30. Mohamed A. A. Mahdy (2020), **“The impact of COVID-19 pandemic on the academic performance of veterinary medical students”**, “Frontiers in veterinary science”, Vol:7; Pages:8.
31. Mohammad Mahyoob (2020), **“Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners”**, “Arab World English Journal”, Vol:11; No:4; Pp:351-362.
32. Nana Afia Amponsaa Opoku-Asare and Abena Okyerewa Siaw (2015), **“Rural–urban disparity in students’ academic performance in visual arts education: evidence from six senior high schools in Kumasi, Ghana”**, “Sage Open”, Vol:5; No:4; Pages:14.
33. Nanigopal Kapasia, Pintu Paul, Avijit Roy, Jay Saha, Ankita Zaveri, Rahul Mallick, Bikash Barman, Prabir Das, Pradip Chouhan (2020), **“Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India”**, “Children and Youth Services Review”, Vol:116; Pages:5.
34. Niyaz Panakaje, Habeeb Ur Rahiman, Mustafa Raza Rabbani, Abhinandan Kulal, Mahammad Thauseef Pandavarakallu, Shakira Irfana (2021), **“COVID-19 and its impact on educational environment in India”**, “Environmental Science and Pollution Research”, Pp:1-7.
35. Olasile Babatunde Adedoyin and Emrah Soykan (2020), **“COVID-19 pandemic and online learning: the challenges and opportunities”**, “Interactive Learning Environments”.
36. Per Engzell, Arun Frey, Mark D. Verhagen (2021), **“Learning loss due to school closures during the COVID-19 pandemic”**, “Proceedings of the National Academy of Sciences”, Vol:118; No:17; Pages:7.
37. Pinaki Chakraborty, Prabhat Mittal, Manu Sheel Gupta, Savita Yadav, Anshika Arora (2020), **“Opinion of students on online education during the COVID-19 pandemic”**, “Human Behavior and Emerging Technologies”, Pp:357-365.
38. Pravat Kumar Jena (2020), **“Impact of pandemic COVID-19 on education in India”**, “International journal of current research”, Vol:12; No:07; Pp:12582-12586.
39. Pravat Kumar Jena (2020), **“Online learning during lockdown period for covid-19 in India”**, “International Journal of Multidisciplinary Educational Research”, Vol:9; No:5(8); Pp:82-86.

40. Prof. Priyanka Pandita Koul, Prof. Omkar Jagdish Bapat (2020), **“Impact of COVID – 19 on education sector in India”**, “Journal of Critical Reviews”, Vol:7; No:11; Pp:3919-3930.
41. Ram Gopal, Varsha Singh, Arun Aggarwal (2021), **“Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19”**, “Education and Information Technologies”.
42. Rashid S, Yadav SS (2020), **“Impact of Covid-19 pandemic on higher education and research”**, “Indian Journal of Human Development”, Vol:14; No:2; Pp:340-343.
43. Sabina Potra, Adrian Pugna, Madalin-Dorin Pop, Romeo Negrea and Luisa Dungan (2021), **“Facing COVID-19 Challenges: 1st-Year Students’ Experience with the Romanian Hybrid Higher Educational System”**, “International Journal of Environmental Research and Public Health”, Vol:18; No:6; Pages:15.
44. Saraswati Dawadi, Ram Ashish Giri and Padam Simkhada (2020), **“Impact of COVID-19 on the Education Sector in Nepal: Challenges and Coping Strategies”**.
45. Seble Tadesse Mekonnen (2020), **“The impact of COVID-19 pandemic on education system in developing countries: a review”**, “Open Journal of Social Sciences”, Vol:8; No:10; Pp:159-170.
46. Shadnaz Asgari, Jelena Trajkovic, Mehran Rahmani, Wenlu Zhang, Roger C. Lo, Antonella Sciortino (2021), **“An observational study of engineering online education during the COVID-19 pandemic”**, “Plos one”, Vol:16; No:4; Pages:17.
47. Shefali Liyanage, Kiran Saqib, Amber Fozia Khan, Tijhiana Rose Thobani, Wang-Choi Tang, Cameron B. Chiarot, Bara Abdallah ALShurman and Zahid Ahmad Butt (2021), **“Prevalence of anxiety in university students during the COVID-19 pandemic: a systematic review”**, International Journal of Environmental Research and Public Health”, Vol:19; No:1; Page. No:62.
48. Sumitra Pokhrel and Roshan Chhetri (2021), **“A literature review on impact of COVID-19 pandemic on teaching and learning”**, “Higher Education for the Future”, Vol:8; No:1; Pp:133-41.
49. T. Muthuprasad, S. Aiswarya, K.S. Aditya, Girish K. Jha (2021), **“Students’ perception and preference for online education in India during COVID-19 pandemic”**, “Social Sciences & Humanities Open”, Vol:3; No:1; Pages:11

50. Tarkar (2020), **“Impact of COVID-19 pandemic on education system”**, “International Journal of Advanced Science and Technology”, Vol:29; No:9; Pp:3812-3814.
51. Timon Elmer, Kieran Mepham, Christoph Stadtfeld (2020), **“Students under lockdown: Comparisons of students’ social networks and mental health before and during the COVID-19 crisis in Switzerland”**, “Plos one”, Vol:15; No:7; Pages:22.
52. Yeshi Ngima, Dorjee Tsering (2020), **“Impact of COVID-19 on Education”**, “International Research Journal on Advanced Science Hub”, Vol:02; No:10; Pp:34-39.

### **Websites**

- <https://en.m.wikipedia.org>
- <https://www.gnu.org>
- <https://en.m.wikipedia.org>
- <https://en.m.wikipedia.org>
- <https://en.m.wikipedia.org>
- <https://www.indiatoday.in>
- <https://en.m.wikipedia.org>

## ANNEXURE

### QUESTIONNAIRE ON A STUDY ON THE IMPACT OF COVID – 19 ON EDUCATION

#### I. SOCIO ECONOMIC PROFILE OF THE SELECTED RESPONDENTS:

1. Name:
2. Gender:
  - Male
  - Female
  - Other
3. Age:
  - 15-17
  - 18-20
  - 21-23
  - 24-26
4. Religion:
  - Hindu
  - Muslim
  - Christian
  - Others, please specify \_\_\_\_\_
5. Occupation of Father:
  - Government Employee
  - Private Employee
  - Own Business
  - Others, please specify \_\_\_\_\_
6. Family income per month:
  - 1,000-10,000
  - 10,000-20,000
  - 20,000-30,000
  - 30,000-40,000
7. Residential status
  - Rural
  - Urban

8. Area of school/ college?

- Rural
- Urban

9. Course:

- Arts
- Science
- Engineering
- Others, please specify \_\_\_\_\_

10. Degree:

- Under Graduate
- Post Graduate
- Ph.D.

## **II. STUDENTS EXPERIENCE IN ONLINE LEARNING DURING LOCKDOWN:**

11. Do you have access to the device used for online learning?

- Yes
- Yes, but it doesn't work well
- No, I share with others

12. What device you use for online learning?

- Laptop
- Desktop
- Tablet
- Smartphone

13. How much time do you usually spend each day on an average for online learning?

- 1-3 hours
- 3-5 hours
- More than 5 hours

14. Have you participated in any type of E-Learning before the pandemic?

- Yes
- No

15. Online class format?

- Live online class
- Recorded class that is uploaded at university website/ you tube/ any other application
- Sending reading material

16. Nature of course material?

- Reading material
- Video content supplemented with reading material
- Video content

17. Way for clarifying queries?

- Live chat
- Platform for posting queries
- E-mail to course instructor
- WhatsApp

18. How much time a break between two classes?

- Less than 10 min
- 10 min
- 15 min
- More than 15 min

### **III. ATTITUDE OF THE STUDENTS ABOUT ONLINE LEARNING:**

19. How effective has online learning been for you?

- Not at all effective
- Slightly effective
- Moderately effective
- Extremely effective

20. How helpful your college or university has been in offering you the resources to learn from home?

- Not at all helpful
- Slightly helpful
- Moderately helpful
- Extremely helpful

21. Do you enjoy learning online?

- Yes, absolutely
- Yes, but I would like to change a few things
- No, there are quite a few challenges
- No, not at all

22. How helpful are your teachers while studying online?

- Not at all helpful
- Slightly helpful
- Moderately helpful
- Extremely helpful

23. Are you satisfied with the technology and software you are using for online learning?

- Yes
- No

24. What are the advantages of e-learning?

- Access to online materials
- Learning on your own pace
- Ability to stay at home
- Ability to record a meeting
- Comfortable surrounding

25. What are the disadvantages of e-learning?

- Reduced interaction with the teacher
- Technical problems
- Poor learning conditions at home

26. Give ranks to the following according to your preference: Benefits of online class

- Flexible schedule and convenience
- More comfortable environment
- Improves your technical skills
- More interaction and greater ability to concentrate
- Self-discipline and responsibility

27. Give ranks to the following according to your preference: constraint of online learning

- Lack of connectivity

- Data limit
- Data speed
- Little/ no face-to-face interaction
- Intense requirement for self-discipline
- Lack of device
- Poor learning environment

28. How important is face-to-face communication for you while learning remotely?

- Not important
- Slightly important
- Moderately important
- Very important

29. How stressful is distance learning for you during COVID-19 pandemic?

- Not stressful
- Slightly stressful
- Moderately stressful
- Very stressful