



**St. Ignatius College of Education** (Autonomous)  
 (Re-accredited with 'A' Grade by NAAC)  
 Palayamkottai, Tirunelveli - 627002, Tamil Nadu, India.  
 (Affiliated to Tamil Nadu Teachers Education University, Chennai)

# Impact of Covid-19 in Higher Education



## Editors

**Rev Dr L Vasanthi Medona**  
**Dr M Maria Saroja**  
**E Michael Jeya Priya**

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*The pessimist complains about the wind;  
 the optimist expects it to change; the realist  
 adjusts the sails*

– William Arthur Ward



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**E Michael Jeya Priya**

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## ***FROM THE EDITORS' DESK***

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COVID-19 pandemic rapidly reshaped the education style in higher education. It created an opportunity for change in pedagogical approaches and the introduction of virtual education at all levels of education. Besides the psychological, sociocultural, and economic problems brought about by the COVID-19 pandemic, significant opportunities to redesign higher education have ensued, along with the prospect of developing new strategies altogether. Online learning is an amalgamation of various pedagogical models instead of a single model. It is a specialized learning science that includes content delivery, behavioural analytics, learning psychology, and assessments. Teachers faced new challenges in teaching online and adapting to new technologies. Digital learning is leading the charge as a mainstay, and many recent trends are picking up momentum across the globe. Multidisciplinary and modular pedagogy that afford transferable skills and customized learning will succeed. Post-pandemic times could see a blend of e-learning and mainstream face-to-face teaching with a boost from traditional universities and the ed-tech sector. Education was also tricky due to students' lack of interaction and uncertainty in retention. Synchronous classes are feasible with interaction but cannot compensate for the lack of a physical learning environment. Mobile applications or virtual meeting platforms became virtual meeting hubs. Many universities took cognizance of the difficulties faced by teachers in adapting to teaching online and conducted orientation programs for them. But as the shift was rapid, many teachers continued to face troubles using online teaching platforms. We are indebted to **Sr.Landrada Centre for Research, St.Ignatius College of Education(Autonomous), Palayamkottai**, for rendering the support to publish this edited book “**Impact of Covid 19 in Education**”. We congratulate the authors who have contributed papers to the book. The editors of this book thank the management and Rev Sr A.Gemma ICM, Secretary of our college, for the valuable support in publishing this book. We hope this book will be helpful for the students, teachers, researchers and academicians.

*Editors*

**Rev Dr L Vasanthi Medona  
Dr M Maria Saroja  
E Michael Jeya Priya**

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## CHALLENGES AND OPPORTUNITIES IN THE POST COVID-19

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### **Introduction**

The entire education system collapsed during the 2019 new coronavirus disease (COVID-19) blockade period not only in India but around the world. Educational institutions (schools, colleges and universities) in India only teach with traditional learning methods, i.e. they follow the traditional approach of face-to-face lectures in a classroom. The sudden outbreak of a deadly disease called Covid-19 caused by a Corona virus (SARS-CoV-2) shook the world. The World Health Organization has declared it a pandemic. This situation has tested the education system (group of schools / teaching modalities) and forced educators to switch overnight to an online teaching modality. Many educational institutions that were previously slow and unwilling to change their traditional pedagogical approach have had no choice but to move entirely to online teaching learning. The chapter includes the importance of e-learning and the analysis of the strengths, weaknesses, opportunities and challenges (SWOC) of e-learning modalities at the time of the

crisis. This chapter also sheds light on the growth of EdTech startups in an era of widespread disease and natural disasters and includes tips for educational institutions on how to manage the challenges and opportunities associated with learning.

According to Nature, the spread of 2019 corona virus disease (COVID-19) is becoming inevitable and has already met the epidemiological criteria needed to be declared a pandemic, having infected more than 100,000 people in 100 countries.<sup>1</sup> The deadly and infectious disease Corona virus, also known as Covid-19, has deeply affected the global economy. This adversity has also traumatized the education sector, and this fear is likely to affect the entire education sector globally. The outbreak of the Covid-19 pandemic has forced many schools and colleges to remain temporarily closed. Several areas are affected around the world and we fear we will miss this whole semester or more in the near future. Various schools, colleges and universities have abandoned teaching in person. Since social distancing is unmatched at this point, it will have negative effects on learning opportunities. Educational units are rebellious in finding options for dealing with this difficult situation. These situations make us understand that scenario planning is an urgent need for academic institutions (Rieley, 2020). It is a circumstance that demands humanity and unity. There is an urgent need to protect and accumulate our students, our faculty, our



academic staff, our communities, our societies and the nation as a whole.

### **Opportunities**

Online learning in general offers many opportunities, but this time of serious trouble will allow online learning to thrive as most colleges or universities have transitioned to this model. E-learning, remote work and electronic group efforts have exploded with the sudden onset of a serious problem such as Corona virus disease (Favale et al., 2020). Now colleges or universities can take this opportunity by asking their teachers to teach and students to learn through one or more ways of doing things online. People have always made themselves happy (by satisfying a need or by reaching a goal) and they have never tried new ways of learning. This major problem will be a new part of e-learning and will allow people to examine the dynamic side of e-learning technologies. This is the time when there are many possibilities for amazing inventions, new things and digital developments to emerge.

Teachers can practice technology and design several flexible programs for a better understanding of students. The use of online learning will test both the teacher and the students. This will improve problem solving skills, very important thinking skills and (the ability to change) among students. In this crucial situation, users of any age can access online tools and receive a refund for the flexibility of time and place associated with online learning. Teachers can develop new

and interesting approaches (related to teacher and teaching) in this panic situation, now also known as Panicgogie. EdTech start-ups have many opportunities to make (huge changes in the way things work) in almost all aspects of education, from teaching to learning (the process of determining the value, quantity or quality of something) , tests / evaluation, results, certifications, diplomas, etc. Also, increasing what people want to buy for e-learning is an incredible opportunity for EdTech start-ups to bring a break (related to informatics and science) to the learning part / field.

## **Challenges**

Online learning faces several challenges ranging from student problems, teacher problems, and content problems. It is a challenge for educational institutions to engage students and engage them in the teaching-learning process. It is a challenge for teachers to go from offline to online, changing the way they teach to leverage things and manage their moment in time. It is difficult to expand content that not only covers the curriculum but also engages students (Kebritchi et al., 2017). The excellence of e-learning programs is a real challenge. There is no clear indication from the government in its uplifting policies on e-learning programs. There is a lack of quality standards, quality control, development of useful items for electronics / valuable supplies, and delivery of electronic content. This crisis needs to be addressed without delay so that everyone can

benefit from quality education through e-learning (Cojocariu et al., 2014). Not only should we focus on the benefits of implementing e-learning during severe problems, but we should also consider developing and improving the quality of essential courses delivered in such emergencies (Affouneh et al., 2020). Online learning takes a lot of time and money. It's not as easy as it sounds, a lot of investment is needed to get the devices and equipment, maintain the equipment, the training and shooting service, and develop the online content. Therefore, a valid and competent education system must be industrial to teach education through the online mode.

### **Unavailability of digital tools**

Ensuring digital equity is important in these difficult times. Not all teachers and students are allowed to use all digital devices, Internet and Wi-Fi. Unavailability of suitable digital tools, lack of Internet or Wi-Fi connections can cause numerous problems. many students may miss opportunities to learn things. Efforts should be made by institutions to ensure that every student and teacher / professor has access to necessary / required useful things / supplies of value. They should also make sure that all educational applications also work on cell phones, in case students don't have laptops. Therefore, you need to take steps to shrink the digital partition.

Practice Makes a Man Perfect is a famous and factual saying. Students and teachers from different universities have never practiced online learning. Most of them are satisfied with themselves and stick to traditional teaching methods. The sudden onset of the Corona virus of something as serious as an illness is an opportunity to make the most of the current situation. We can learn a lot in this difficult situation. There are many tools available, teachers are expected to choose the best tool and use it to communicate education to their students. A step-by-step guide can be prepared by colleges or universities that can guide teachers and students on how to access and use different online learning tools and how to cover major schoolrelated content through these technologies, thereby reducing digital. inability to read and write. Teachers can present the program in different formats, for example they can use video, audio and text. It is helpful for educators to be a support for their lessons with video discussions / discussions, virtual meetings, etc. to get immediate answers and maintain a personal connection with students.

### **Online Learning or E-Learning**

Rapid technological advances have made distance learning easy (McBrien et al., 2009). "Most of the terms (e-learning, open learning, e-learning, computer assisted learning, blended learning, mlearning, for example) have in common the possibility of using a computer connected to the network, which offers the prospect of

learn from anywhere, at any time, at any pace, by any means "(Cojocariu et al., 2014). E-learning can be described as a tool that can make the teaching-learning process more student-centered, more innovative and even more flexible. E-learning is defined as “learning experiences in synchronous or asynchronous environments using different devices (eg mobile phones, laptops, etc.) with Internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students” (Singh & Thurman, 2019).

The atmosphere of synchronous learning is controlled in the sense that students attend live classes, there are real-time interactions between educators and students, and there is an opportunity for immediate feedback, as students. are properly structured. In such a learning environment, the learning content is not available in the form of lectures or live lessons; it is available in various learning systems and forums. Instant feedback and immediate response are not possible in such an environment (Littlefield, 2018). Synchronous learning can offer many opportunities for social interaction (McBrien et al., 2009). Amidst this spread of deadly viruses, such online platforms are needed when (a) it is possible to have video conferences with at least 40-50 students, (b) it is possible to conduct discussions with students to keep the lessons organic, (c) the connections The internet is good, (d) lessons are also accessible on mobile phones and not just laptops, (e) the ability to watch prerecorded lessons, and (f)

instant feedback from students can be obtained and homework done (Basilaia et al., 2020).

### **Online Teaching Is No More an Option, It Is a Necessity**

The major division of the world is in quarantine due to the severe outbreak of this global Covid-19 pandemic and as a result several cities have turned into ghost towns and its possessions can also be seen in schools, colleges and universities. Online teaching and learning can be called the universal remedy for the crisis. The Corona virus has prompted educational institutions to switch from offline to online mode. This misfortune will cause educational institutions, which were previously reluctant to change, to embrace contemporary technology. This devastation will show us the bright side of online teaching and learning. With the help of online teaching methods, we can reach a large number of students at anytime and anywhere in the world. All educational institutions must abandon various options of online educational approaches and seek to use technology in more relevant ways. Several universities around the world have fully digitized their operations to meet the dire need of this current situation. Therefore, enriching the quality of online teaching-learning is crucial in this field. There has been a night shift from regular classrooms to online classrooms, which means educators have changed their entire teaching approach to cope with new conditions and adapt to changing situations. At this difficult

time, the concern is not whether online teaching-learning methods can provide quality education; rather, it is how educational institutions will be able to embrace e-learning so broadly (Carey, 2020).

Resistance to transformation will not help any educational unit in the world. They will be judged on their speed of acclimatizing to change in such a short time and on their ability to maintain excellence. The reputation of the educational units is haphazard and under surveillance. The quality of their execution and the maintenance of the quality of their education in the midst of this crisis show their adaptability. Reassigning face-to-face courses to online courses is the only possible solution. Of course, educational institutions would not be able to renew their entire university program in one online resource at a time. Distance, scale, and personalized teaching and learning are the three biggest challenges in online education. The innovative solutions of the institutions can only help us to face this pandemic (Liguori & Winkler, 2020). It is necessary to quickly switch to e-learning mode; therefore, Google's products can be very useful in such difficult situations; these are (a) Gmail, (b) Google Forms, (c) Calendars, (d) G-Drive, (e) Google Hangouts, (f) Google Jam Board and Drawings, (g) Google Classroom, and (h) Open Board Software (not a Google product,

helps save meetings as files). These tools can in fact be used as an unconventional tool for frontal lessons (Basilaia et al., 2020).

### **Programmes and policy of the government of India on online teaching-learning in HEIs**

The Government of India has begun to think solemnly on this topic with an emphasis on ICT and the use of online education as part of the essential teaching-learning process at the tertiary level. Furthermore, this is reflected in the preparation of the 2019 new education policy project which was considered a proactive and extremely techno-effective step in the time of this pandemic. Learning Webs of Active-Learning for Young Aspiring Minds (SWAYAM) is a huge open online course or course (MOOC) launched by the Government of India and hosted online courses in different quadrants. Once a year, the Teaching Refresher Program (ARPIT) is an online professional development program launched by the MHRD on November 13, 2018 using the SWAYAM platform.

The leading authoritative higher education institution in India, UGC, has taken the current educational situation very fatally and has been actively working to resolve the stalemate of courses and exams in the current semesters, as well as the concerned circular about the academic calendar after the recommendations. one of the committees composed by UGC itself. It was also found that it is



mandatory for all Indian universities to follow the 25% course pattern via online teaching mode and 75% face-to-face interaction (UGC, 2020). The educational scenario of the post-COVID-19 epidemic would not be easy to administer teaching-learning situations without meticulously using online teaching platforms. After seeing the formidable corona virus monster, it can be expected that in the years to come the student will face several challenges of educational difficulties, including excellent education, hands-on experience, laboratory work, a visit to the library, peer tutoring, teaching of recovery, research and innovation. Therefore, the interim solution to post-COVID-19 educational grumpiness is to maintain the balance of the online and offline learning program (hybrid mode).

### **Implementation of online teaching-learning in HEIs**

There are several technical problems felt in the implementation of the revolutionary progression in the education system that arose after the COVID-19 crisis; these technical problems are related to the prospects of online training and their technological complexity. Before this pandemic, online education was laborious as education offered by universities was opened in India. But in the worsening period of COVID-19, online teachinglearning has become a daunting challenge to face and stakeholders are not potentially robust to adapt to the sudden and uplifting change as they are not

technically competent to embrace the contemporary situation. Therefore, for the successful execution of educational change (in this case, a shift from conventional teaching-learning methods to online teaching-learning methods), the implications of the change must be addressed.

Faced with COVID-19, the shared view of the education system has understood that during the epidemic phase, teachers and students are encouraged to adapt online teaching-learning platforms to meet contemporary educational needs. Everyone, teacher or student, has been kindly trained in the use of a social media app, that is. WhatsApp, Facebook, Twitter, Instagram which has turned into a soft facilitation in the use of online educational platforms such as ZOOM, Cisco WebEx, Google Meet, etc. as a sign of positive learning transfer. Additionally, there are various functional educational apps like Office 365, Google Classroom, and a much more user-friendly video conferencing app that can be downloaded for free and easy to use (FutureLearn, 2020); so, to some extent, there seems to be no reason to worry about getting a new technology all of the sudden, as some of the applications are already built into our EES. Most stakeholders are passionate about smart phones, and only a significant number of laptop users have the resources to implement e-learning.

## Conclusion

Natural disasters can stimulate our motivation to adopt cutting-edge communication technologies and e-learning tools (Tull et al., 2017). To make e-learning effective in these difficult times, we must focus on the most efficient use of technology, that is, the use of this technology which has purchase and storage costs but can actually facilitate the progression of educational processes. Before introducing and supporting any e-learning tool or technology, its pros and cons must be weighed. Institutions need to do a lot of research when they bring the right technology for various educational initiatives. There should be adequate transparency about the purpose and framework for adopting the technology. As a number of factors influence the choice of boring technology such as safety description, accessibility and stipulation of labs, internet speed, internet access, beneficiaries of digital literacy levels, etc. Online learning can facilitate the provision of a comprehensive education even in difficult circumstances. Such systems must be industrial in educational institutions which ensure that no student is dispossessed of education due to location, social class, civilization, etc. Online teaching aids facilitate the progress of learning and teaching activities, but there is an urgent need to weigh the pros and cons of technology and harness its potential. Adversity and pandemics such as Covid-19 can create many unrest and tensions;

therefore, it is important to study technology in depth and with due diligence to balance these fears and tensions in the midst of such a crisis.

We need a high level of attention so that we can quickly acclimate to changes in the environment and adapt to different modes of delivery, for example, distance learning or e-learning in pandemics such as Covid-19. Institutions and organizations must prepare plans for unforeseen events to address challenges such as pandemics and natural disasters (Seville et al., 2012). Consistency and adequate availability of information and communication technology infrastructures, learning tools, digital educational assets in the form of huge open online courses, e-books, evaluation electronics, etc. are of paramount importance in such harsh situations (Huang et al., 2020). Teaching, content, motivation, relationships, and mental health are the five important things an instructor should keep in mind when communicating about online education (Martin, 2020). Some teaching strategies (lectures, case studies, debates, discussions, experiential learning, brainstorming sessions, games, exercises, etc.) can be used online to make effective and competent learning teaching and learning practices possible. In such panic situations, where the lives of so many people are at stake, teaching and learning should become interesting. It will also reduce the level of stress, fear and anxiety in people. For this, teachers and students must be provided with adequate technique and learning support, and

government support is also influential in this area. The academic and technological skills of online educators are of utmost importance. Strict eminence management programs and continuous improvement are critical to successful online learning and to prepare people for any crisis situation.

It is obvious that everyone must learn to live with and survive with the current disaster because this is only the beginning; In the long run, no one can afford laxity towards digital transformation in higher education institutions. Developing multimodal approaches to meet course content goals for enhanced learning outcomes can be a better idea for addressing the complexity of online education. Optimistically, governments should ensure accessibility of consistent communication tools, a high-quality digital academic experience, and support technology-assisted learning for students to bridge the gaps in the education system before and after graduation necessary for uninterrupted learning. Few steps should be counted in the wake of this pandemic; develop such a program that reflects the dramatic change in students' content knowledge and learning experience, as well as to help them think critically.

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## PSYCHOEDUCATION IN TEACHING LEARNING

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### **Introduction**

There is evidence suggesting that quarantine might have undesirable psychological impacts on the patients (Schimmenti,A, Billieux,J., Starcevic,V.2020). The most prevalent psychological problems that patients develop following quarantine are known to be fear, PTSD, stress, insomnia, irritability and low mood (Ornell F., Schuch JB., Sordi AO., Kessler FH.2020). Psycho education is defined as teaching that is method of teaching teachers and students about students behavior and emotional and intellectual development of students in a classroom setting. Since psychoeducation focuses on both the cognitive and affective domains of learning, feelings and emotions have equal weight with conceptual and factual knowledge (Saravanakumar,A.R., Balu, Subbiah,A., S.2012).

### **Psychoeducation**

Psychoeducation is a flexible intervention, able to be implemented in a variety of different formats and settings. Which format is chosen depends on the illness or disorder, the developmental age of the client whose condition is the subject of the

program, and the individual needs of the client/patient and others in his/her life(Briere. 2006). Psychoeducation can be individually implemented, (peer) group-based, parent- or family-based, or set up for roles such as caregivers, teachers, and friends. Advocates of psychoeducation are adamant that psychoeducation is for anyone experiencing psychological hardship or stress due to a condition, and that it is such individuals' right to have information about their disorder(Tursi, M.F,2013). Thus, no matter what state a person's mind or emotions may be in, that person should receive some psychoeducation, as appropriate (Saravanakumar,A.R., Balu, Subbiah,A., S.2012).

### **Purpose of Psychoeducation**

The main goal of psychoeducation is to help people better understand mental health conditions, is considered to be an essential aspect of all therapy programs. It is generally known that those who have a thorough understanding of the challenges they are facing as well as knowledge of personal coping ability, internal and external resources, and their own areas of strength are often better able to address difficulties, feel more in control of the condition(s), and have a greater internal capacity to work toward mental and emotional well-being(Pharoah, F., Mari, J., Rathbone, J., & Wong, W. 2010). One study showed psychoeducation, when administered to those with schizophrenia, helped to both reduce prehospitalization rates

and decrease the number of days a person spends in the hospital (Bauml,

J., Froböse, T., Kraemer, S., Rentrop, M., Pitschel-Walz, G. 2006).

This education is also a component of most trauma therapies. Many individuals who have a mental health condition know little or nothing about the condition they have been diagnosed with, what they might expect from therapy, or the positive and negative effects of any medications they may be prescribed. These topics given to them by medical professionals may be confusing or otherwise difficult to comprehend and thus of little help. Offered in both individual and group formats, psychoeducation can benefit the individual diagnosed, parents and other family members, and caregivers and friends. It is not an approach to treatment in itself but represents an important early step in treatment, as it offers those individuals involved in a person's care information on both how to offer support and how to maintain their own emotional health and overall well-being and provides them with the opportunity to develop a thorough understanding of the mental health concern(s) affecting their loved one. Participating in psychoeducation may have a positive impact on quality of life.

### **Process of Psychoeducation**

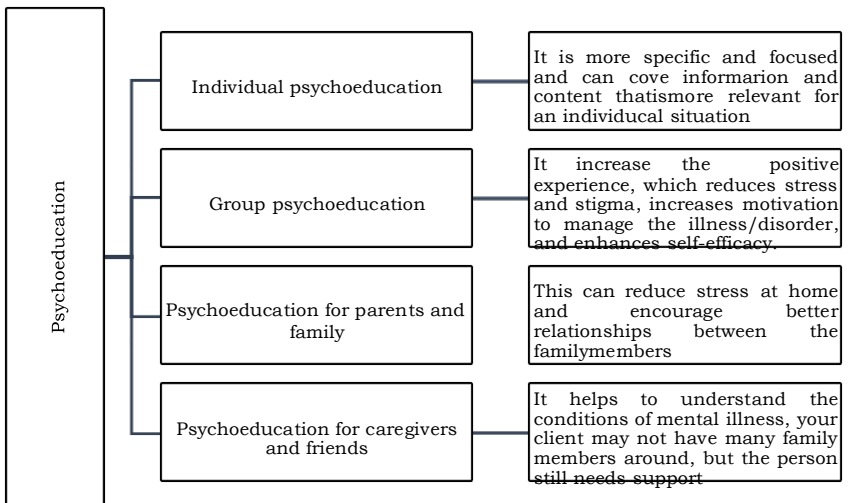
Psychoeducation refers to the process of providing education and information to those seeking or receiving mental health services,

such as people diagnosed with mental health conditions (or life-threatening/terminal illnesses) and their family members (Ornell F, Schuch JB, Sordi AO, Kessler FH, 2020). Though the term has been in use for most of the 20<sup>th</sup> century, it did not gain traction until movements

addressing the stigmatization of mental health concerns and working to increase mental health awareness began in earnest (Tursi, M.F, 2013). Psychoeducation may be general or highly specified and can be provided in a number of ways, though it is broadly steered by four main goals: transfer of information, medication and treatment support, training and support in selfhelp and self-care, and the provision of a safe place to vent emotional frustrations.

### Types of Psychoeducation

The following are the few types of psychoeducation



**All of the following may constitute psychoeducation:**

- A therapist explaining to a person in therapy the ways a mental health condition might impact function
- A psychiatrist describing how a prescribed medication can counteract symptoms of a mental health condition (Schimmenti A, Billieux J, Starcevic V, 2020)
- A psychiatric hospital providing support and education to family members of those receiving treatment
- Formal classes designed to educate the population about both specific mental health conditions and mental health in general
- Classroom behavior management assistance for students diagnosed with behavioral concerns (Ornell F, Schuch JB, Sordi AO, Kessler FH, 2020)
- Self-help and support groups designed to encourage those diagnosed with mental health concerns to share strategies and information with one another.

Some people might receive psychoeducation through online or electronic formats such as DVDs, CDs, or other audiovisual materials, though others may choose to participate in sessions with a mental health professional.

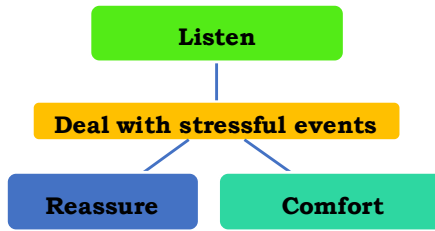
## Understanding students' needs

- Children may express psychological distress (anxiety, sadness) by acting out in a different way - each child behaves differently. Some may become silent while other may feel and express anger and hyperactivity. Caregivers need to be patient with children and understand their emotions.
- All emotions are valid emotions, and as caregivers we need to understand them with empathy (Schimmenti A, Billieux J, Starcevic V,2020)
- Sometimes engaging in a creative interactive activity, such as playing and drawing can facilitate this process. Help children find positive ways to express disturbing feelings such as anger, fear and sadness.
- Keep regular routines and schedules as much as possible.
- If children are witnessing violence at home, or if they are the target of the violence, it causes trauma and distress and may lead to disruptive behavior (Reynolds D et al, 2008).
- Explain to them that nobody should be stigmatized or signaled for having the disease.
- Avoid watching, reading, listening or discussing too much news about the COVID-19 and persuade children to divert

their attention to other topics as well (Ornell F, Schuch JB, Sordi AO, Kessler FH, 2020).

- If someone is sick in the family/ child care institution and have been taken to hospital, or if there has been a death, children may experience added anxiety and may need specialized help. Talk to professional counsellors or call CHILDLINE 1098
- Call NIMHANS toll free number 080461 10007 for specialized help

### Helping students deal with stressful events



- Listen: Give children opportunities to talk about what they are feeling. Encourage them to share concerns and ask questions
- Comfort: Use simple tools to comfort and calm children, for e.g. telling stories, singing with them and playing games. Praise them frequently for their strengths, such as showing courage, compassion and helpfulness (Lee S, Chan LY, Chau AM, Kwok KP, Kleinman A, 2005)

- Reassure children that you are prepared to keep them safe.  
Provide them with correct information through valid source

## **Principles and Beliefs of Psychoeducation**

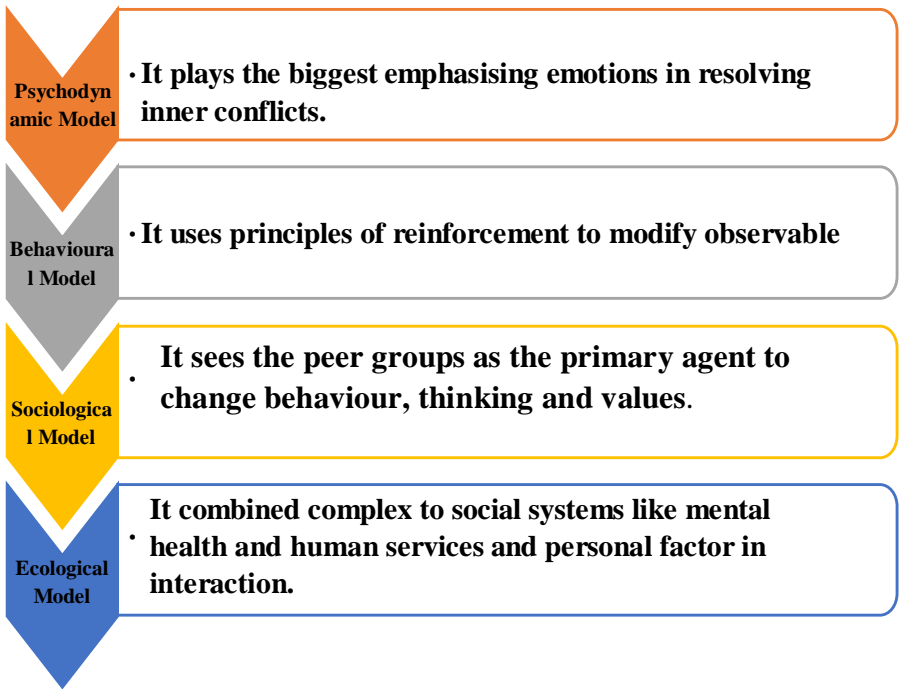
The following are the principles and beliefs of psychoeducation

- ❖ Behavioral change in primarily a teaching learning process
- ❖ Attitudes, feelings and emotions play a vital role in learning.
- ❖ Teachers understand their student's behavior problem and they can devise strategies to improve those behaviors(Saravanakumar,A.R., Balu, Subbiah,A., S.2012).
- ❖ Teacher interactions with students are a potent behavior management tool.
- ❖ Teachers can teach self-control and self-management of behaviours.
- ❖ Approaching classroom situation differently can change students behavior and the classroom atmosphere (Ornell F, Schuch JB, Sordi AO, Kessler FH, 2020)
- ❖ Teachers should provide opportunity to help children develop more productive and effective ways of thinking, feelings and behaviors.



## Models of Psychoeducation

In the historical analysis of psychoeducational theories and school of thought Wood Brendtro, Fescer and Nichols (1999) listed the following models.



## Evaluation of Psychoeducation

Psychoeducational evaluation consists of a set of systematic observation, which are obtained under standardized conditions (Saravanakumar, A.R., Balu, Subbiah, A., S.2012). Educational and Psychologists are relied upon to prepare psychoeducational evaluation reports for school age children and

must occasionally (Colom, F,2009). The key ingredients of a psychoeducational evaluation include.

- ❖ Reason for referral
- ❖ Child history and background information
- ❖ Child behavior during testing
- ❖ Test results and analysis
- ❖ Summary of test results and recommendation for intervention

## **Conclusion**

Psychoeducation is an approach to changing the behavior patterns and interpretation of events of children who are not adjusting well to the school environment. In schools, psychoeducation is a skill building training that helps students understand how their school difficulties and behaviour problems. The student's own strengths and current coping resources are analysed, refined and reinforced. Teachers consistently and systematically follow psychoeducation principles; they can influence the direction of any exchange with a student to move the child away from confrontation and disruptive behaviours and towards restoring a conducive climate of learning the classroom.

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# USE OF E-LEARNING TOOLS AND APPLICATION IN HIGHER EDUCATION DURING & AFTER COVID-19 OUTBREAK

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## Introduction

Knowledge is exploding in the present time day by day even within few hours new updates are coming in knowledge society. The way of gaining knowledge is changes from offline traditional classroom to computer based technologies to online home Elearning. A few days ago self-learning, programmelearning, computer assisted learning, computer assisted teacher's concepts were being used. Today, corona like conditions have led to radical changes in all areas. The biggest changes are in education. Corona caused a huge surge in education at all levels. Due to this unexpected surge in education sector different learning apps, webapps, educational apps are very familiar to student, family member even old citizens also. In this paper mainly focus on new E-learning tools and its application in higher education. This article discusses the features of e-learning tools and its benefits in the higher educational field. MOOC courses, online videos, wearable technology, moodles, Google classroom, Prezi, zoom, gamification like kahoot, Edmodo,

storyboard etc. these different learning tools are discussed in this paper. e-learning tool and its application is very important in the present situation. Due to COVID-19 like pandemic are suddenly happen but due to this situation in future also we will be ready for new and innovative educational ideas, techniques, tools with all his applications. There are many more tools are available online. but it will be very vast points. Now day by day new tools are evolving and present tools are becoming old one. so Student, teacher, teacher educator should be aware of all new things. The main purpose of using technology is to aware with new things in new educational situation local to global.so it shouldn't be a barrier to students. Use of this innovative technologies is area of interest in upcoming days.so we have to be ready with this situation.

The covid 19 Pandemic brought tremendous changes in whole education process. It affects teaching learning procedure from K.G to P.G. and new teaching technologies, new examination process, new evaluation strategies are introduced to students, teachers and universities. Now a days E-learning is playing very crucial role in higher education due to Covid-19 outbreak. Almost all schools and colleges are closed due to this pandemic. Only online education is going on. With the exceptions of mobiles that were once banned from School and colleges, there is no alternative. Now parents are enthusiastically giving their children expensive mobiles for research, higherstudies. Children with different environments

and cultures use e-learning tool. E-Learning is a method of learning by using information technology, such as the internet or computer-based technologies, mobile learning, Tablets. It can also be used for any learning situation, including traditional classroom education, practical training, distance education, and corporate training. Elearning in higher education has been known to Knowledge Purity, reliability, focus and thereby, provide better academic results.

### **E-Learning WEB APP**

An e-learning web app is an interactive webpage that allows learners to input their data and get expected results through interactions. Your students can access the app from a web browser with an active internet connection from remote locations.

### **Google Classroom**

Google Classroom mobile apps, introduced in January 2015, are available for iOS and Android devices. It is a free blended learning platform. It is a powerful E-tool and easy to use web app for seamlessly organizing the daily activities of students. Google classroom allows you to take online classes, distribute course materials, assign assessments, track students' progress, send feedback, etc. from anywhere at any time. The app lets users share their photos and attach to their assignments. share files from other apps, and support offline access. From this app teacher can prepare different lesson plans for different subjects. Creation of discussion



on specific topics in philosophy sociology politics etc. In google classroom there is a stream that appears by default when you login to your class. This stream can be used to collect student opinions on study topics, discussion topics and new posts. For environmental studies classes, Science classes can connect with one or more classes in another city, state, province or country and gather data about the weather or environment around them. Log it in a Google Spreadsheet with a page for each location. Compare and contrast the world around you. Student can maintain daily reading record in this classroom like regular one. student collaboration on writing projects with each other

### **Kahoot**

It is a game-based learning app to improve students' engagement in the virtual classroom. Using kahoot it is possible to create quizzes, host live games, and more. All these activities will be depending on the lesson concepts, therefore, you can make students master each of the lessons via games and fun tasks. It works for hybrid learning and flipped classroom situations by making fun. This free cloud base tool is used for online learning. For college students can use their mobile device to playkahoot ,Teacher select the game options and start to begin it.

## **Edmodo**

Edmodo is an educational website that takes ideas of social network refines them and makes it appropriate for classroom. By using Edmodo student and teachers connect by sharing ideas In this Edmodo after teaching a topic for assessment of students they can use Edmodo quiz, Edmodo poll. Edmodo place the students in small groups and have them post their work to their group for peer review & feedback. Edmodo build digital citizenships skill by giving online etiquette guideline for students. It helps in foreign language practice encourage student to practice their skill, spelling grammar. By using Edmodo student can develop book club in which students read it and discuss novel with each other. Student can work on cultural exchange project with different world culture. By integrating the Edmodo mobile app into classroom curriculum to make learning anytime anywhere. By leveraging Edmodo's small group feature facilitate project based learning in classroom.

## **Zoom**

One of the best cloud video conferencing web apps that assist you in sharing schedules, tutoring lessons, communicating with multiple students, and so on. You can boost students' participation during remote learning with amazing features like one-click content sharing, digital white boarding, etc. Zoom is a video-calling app that is ideal for large groups because it supports up to 100 users for free. It is widely being used for meetings, online learning, and university

lectures, conferencing meetings, audio conferencing, webinars, meeting recordings, and live chat. Among other things. The app has become immensely popular as people have been forced to stay indoors due to the lockdown. Zoom is very useful for its characteristics i.e. Easy, affordable plans, Seamless transition to video., and Zoom Rooms' ease of use, Smooth Zoom Phone porting process., Intuitive user experience. Screen sharing and remote control. Call and video quality. Connecting employees. Zoom is a more beneficial app as it expands traditional classrooms with video communications to meet the growing needs of modern learners. Utilize resources and hardware you already have; expand your capabilities and community offerings Increase student participation and learning retention with virtual and hybrid classrooms and micro learning.

### **Google Meet**

Google Meet is a better choice for work-from-home teachers; it's secure and equipped with useful remote-teaching features that will make distance learning a breeze for you and your students. Breakout rooms, live streaming, attendance tracking, Q&A, polling and more when you sign up for the Teaching and Learning Upgrade or Education Plus. Google meet is very useful in higher education due to following reasons., Live captioning during meetings.

Compatible across devices. Video and audio preview screen. Adjustable layouts and screen settings. Controls for meeting hosts. Screen sharing with participants. Messaging with participants.

## **Prezi**

When compared to PowerPoint presentations, Prezi presentations were found to be 25% more effective. Prezi is one of the best e-learning web apps that provides beautiful designer templates for creating visually stunning presentations. Using Prezi presentations in the online classroom, you can grab the students' attention and keep them focused on the lessons. Prezi is a presentation tool that can be used as an alternative to traditional slide making programs such as PowerPoint. Instead of slides, Prezi makes use of one large canvas that allows you to pan and zoom to various parts of the canvas and emphasize the ideas presented there. Students can use Prezi to create either individual or group presentations. Since educational licenses are free, students can easily use Prezi to develop more creative presentation

**Wearable E-Learning Tools** wearable technologies are leading new trends in the e learning industry Apple watch and google glass are trending eLearning tools. Wearable technology, also known as "wearables," is a category of electronic devices that can be worn as accessories, embedded in clothing, implanted in the user's body, or even tattooed on the skin.

What are examples of wearable technology?

### **Common examples of wearable technology**

Smart jewelry, such as rings, wristbands, watches and pin. Body-mounted sensors that monitor and transmit biological data for healthcare purposes. Fitness trackers, often in the form of wristbands or straps, that monitor things like physical activity and vital signs. Increased Productivity. Wearables have a wide range of features that deliver increased production. Enhanced Speed. Every second counts in operation workflows. Superior Task Accuracy. Outstanding Wireless Readability. Increased Worker Awareness. Here are the most common current types of wearable Smart watches: Connected watches like the Apple Watch or Samsung Galaxy Watch that let the wearer answer phone calls, track fitness, track sleep, and more. Smart rings: Tech jewelry that crams the functions of a smart watch into a ring. Rings haven't yet come into their own, but there are some decent options out there. Smart clothing: Clothing made from techinfused fabric that can track your biometric data or let you shuffle your playlist. Advanced medical tech: Wearable electrocardiograms (ECGs) that send your heart rhythm to your cardiologist and other lifesaving on-body technology. Head-mounted displays (HMDs): VR headsets and other displays that create a more immersive gaming or web-surfing experience. Let's dive into our list of the best smart wearable devices on the market.

If you like to skate along the leading edge of tech, there are exciting wearable gadgets on the horizon to consider. Take a gander at a few smart glasses, medical wearable devices, headsets, and even a connected jacket below. Smart watches and fitness trackers Apple watch series 6: It helpful to Track your blood O2, ECG, and health and fitness with its always-on display. Listen to music, share fitness data with friends, and customize the watch face how you like it. Samsung Galaxy Watch 3 At a lower price-point than the Apple Watch Series 6 Samsung Galaxy watch 3 is a solid wearable tech option for Android fans. Like the Apple

Watch, it'll take an ECG, read your blood O2, and track your fitness. The 4-day battery life is a nice perk, too. Garmin Descent Mk2 Smart Dive Watch If you're a diver who's tired of playing catch between a dive watch and a dive computer, this watch may be your new best friend. It's also an expensive friend. It also lets you store data right on your wrist and even supports contactless payment and music storage. Polar Vantage V2 Smartwatch The lightweight is a fan favourite among top wearable gadgets for its full aluminium body, heart rate tracking, GPS, cycling and running performance tests, and ultra-long battery life. Like other wearable smart devices, it'll track your sleep, but its load-recovery and training tools take it up a notch to optimize your fitness. You can also control your music and receive phone notifications. The more budget-friendly option in the

wearable tech game, the Fitbit Versa 3 will cost more. But it delivers plenty of functionality. Track your heart rate, fitness, sleep, and blood O2 with an astounding 6+ days of battery life. You'll also enjoy music, phone notifications and control, and lots of other goodies. Samsung Galaxy Watch Active 2 In the same affordable price group as the Versa 3, the Samsung galaxy watch active 2 gets rave reviews and tracks your heart rate, exercise, sleep, and other biorhythms. With a 5-day battery life and a light, crowd-pleasing design, it even monitors your stress levels. And yes, you can use it to jump to the next song in your playlist. Apple didn't leave the budget-minded out of their equation, which and it has the same heart rate tracking, music, and fitness tracking in real time as its more expensive competition. However, you'll give up fall detection, ECG capability, and an always-on display. The Fitbit Charge 4 is a rock-bottom budget entry in the list of the best wearable gadgets, at a price point comparable to a no connected watch. Yet, it boasts up to 7 days of battery life, an O2

sensor that even the Apple Watch 3 won't give you, stress management, phone controls, health and hands-free fitness tracking, and even tap-to-pay. Fitbit Luxe Some people want a smartwatch to look like a smartwatch, and others just don't. The lozenge design appeals to the style-conscious, with all the health and fitness tracking as well as phone control (and even menstrual tracking) of an ordinary wearable device. Even better, it's at the lower end of the

price range. Smart ring When it comes to the best smart ring on the market, the

NFC On is straight out of a science fiction movie. It's not as useful yet as a smart watch, but it's also not as costly, with variants for as low as \$20. Available with shipping from the U.K., this ring controls apps, locks and unlocks your door, transfers data, and never, ever needs a charge. Our Ring You may just find yourself calling the Qura Ring "my precious" because it looks so beautiful and is basically a magic ring. It won't make you invisible. but it provides valuable health insights including sleep and daily activity. The Oura also tracks several biometrics that many other wearable tech devices don't, and alerts you to deviations from the norm.

### **Advanced medical wearable devices: Core**

Body Temperature Sensor Heat training can kick your fitness up a step, or get you ready for enduro-runs, marathons, and Iron Man competitions. A core body temperature sensor can guide you down the path to heat training success. In fact, it was as recently as 2020 that extreme athletes could only monitor that metric with invasive methods like electronic pills or probes. Airofit Pro Breathing Trainer: For asthmatics, athletes serious about improving their lung capacity, and those recovering from COVID-19, breathing training is a vital technique. The airofit pro breathing trainer and accompanying app can improve your lung function, helping you



breathe faster and more efficiently. Bose Sleep buds II Earphones the Bose earphones are clinically proven to help you fall asleep faster. You can't use them for podcasts or music, though; they only play sounds from the Bose Sleep App.

### **Massive open online courses**

Massive open online courses are free online courses available for anyone to enroll. It is available for many participants at the same time ("massive"), without access restrictions("open") and in course format with video lectures and integrated tests. The learning content of mooc is created by an educational institute or universities. This education is not just available to small group of university students in developed country. Mooc courses cover many topics in higher education. Mooc certificates are useful in job application. It is flexible way to learn new skills, advance your career and deliver quality educational experience at scale.

### **Online video**

Online video is a very impressive learning tool. This helps in different learning styles. It also helps in innovative teaching method. It creates different learning experiences, it enhances comprehension and retention of information support for different learning. It also helps students to understand complex information. It also develops digital literacies. Through this video learning student are engaged deeply in classroom

## Story board

With the help of a storyboard learner can create digitally interactive and artistic books in a virtual classroom. It is a single page with boxes that flow in logical order, before starting a project learner will able to visualize the plot of a story's storyboard teaching strategy helps students keep track of narrative main ideas and explain the important scene of the story .it is a visual representation of of your teaching experience. Basically it is used when texts are read aloud and or student read independently. In higher education storyboards used as an active learning strategy in pharmacy and nursing education. Any student writer can use them to create a story or organize information.

## Augmented reality and Virtual reality

VR/AR distance learning does not only act as a replacement for real-life learning, but it can actually enhance it. VR can improve any learning that involves design such as architecture. Students can wear a VR headset and view the models and drawings they have created in a virtual world. The distinctions between VR and AR come down to the devices they require and the experience itself: AR uses a real-world setting while VR is completely virtual. VR requires a headset device, but AR can be accessed with a smartphone. AR enhances both the virtual and real world while VR only enhances a fictional reality.

## **Moodle**

Moodle is a learning management system LMS which helps teachers and educators create an online platform for more adaptive and customized learning. Developed in 2002, it is free and open source software for use and is being used by many small and large institutions to create and deliver courses online to their students. We can create & edit contents to give access to students. It has some powerful features. Moodle is easy to navigate on all devices. help to collaborator forum group assignments. Useful in hospital, privatecoach, higher studies.

## **Conclusion**

In this way we have discussed different e-learning tools and its application in higher education. Definitely it will be helpful for teachers, students, research scholars and many more.

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## ANGER MANAGEMENT FOR SCHOOL STUDENTS

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### **Introduction**

Anger management is a psycho-therapeutic program for anger prevention and control. It has been described as deploying anger successfully. Anger is frequently a result of frustration, or of feeling blocked or thwarted from something the subject feels is important. Anger can also be a defensive response to underlying fear or feelings of vulnerability or powerlessness. Anger management programs consider anger to be a motivation caused by an identifiable reason which can be logically analyzed and addressed. The negative effects of anger have been observed throughout history. Advice for countering seemingly uncontrollable rage has been offered by ancient philosophers, pious men, and modern psychologists.

Other philosophers echoed Seneca with Galen recommending seeking out a mentor for aid in anger reduction. In the middle Ages, the people would serve as both examples of self-control and mediators of anger-induced disputes. In modern times,

the concept of controlling anger has translated into anger management programs based on the research of psychologists.

Classical psychotherapy based anger management interventions originated in the 1970s. Success in treating anxiety with Cognitive Behavioral Therapy (CBT) interventions developed by Meichebaum inspired Novaco to modify the stress inoculation training to be suitable for anger management. Stress and anger are sufficiently similar that such a modification was able to create a successful branch of treatment. Both stress and anger are caused by external stimuli, mediated by internal processing, and expressed in either adaptive or maladaptive forms. This anger management is the need of the hour for school students to lead their life in a colourful way.

### **Anger management**

Anger management does not involve getting rid of all anger, but using anger to enhance our life. We can look at the purposes of anger in both a positive and negative light. The positive aspects of anger are that we have increased energy, are able to communicate our feelings, able to problem solve and can take charge of the situation.

The negative aspects of anger are that we can have disruption of our thinking, unnecessarily defend ourselves, become aggressive and become known as an angry person. Anger management would

be seen then as increasing the positive aspects or functions of anger and decreasing the negative functions of anger.

### **Anger management strategies**

Effective anger management means giving students coping strategies to manage their anger and frustration in healthy, respectful ways when those difficult feelings arise. This can include:

- **Ask ourselves why we are angry (problem solve).** If you ask ourselves why we are angry, and really think about our answer, we might figure out a problem we can solve or even uncover some of the sneaky feelings that feel like anger.
- **Use “if-then” statements to consider the consequences.** If-then statements mean that we ask ourselves what might happen if we do something. They are best used when we are deciding what to do about a situation or problem. If-then statements help us make better choices by helping us understand the consequences of our actions.
- **Count up to or down from 10.** Sometimes, quietly counting to 10 is something some people do to stop themselves from doing something too quickly. Counting to 10 as soon as we notice we are having an angry reaction can give an angry person just enough think time to make sure their first idea is a good idea. If it’s not a good idea, it can be just enough time to change it into a better one (reconsider).

- **Listen to another person.** If we are angry about something or with someone else, talking to someone and listening to their perspective—even the person we are angry with—may help us understand exactly what caused the problem so we can fix it or figure out what we can do in the future to prevent the situation.
- **Focus on our breathing.** Focusing on breathing can help during angry moments in several ways. First, it takes our attention away from the anger for a moment, just like when we count to 10. Second, breathing in a certain way, slowly and deeply (so deeply that our belly moves, too), and in through our nose and out through our mouth, can often help people who are angry to begin to calm down.
- **Take a walk or step away.** Change the environment by taking a walk or stepping away if we can. Just like counting to 10, and thinking about our breathing, walking away from a situation that is making us angry can sometimes help prevent us from reacting to a situation too quickly, or it can give us some time to breathe and think about good choices we can make.
- **Give ourselves some good advice (self-talk).** Self-talk means that we say to ourselves the things that a good friend would say to calm us down, such as, “Calm down,” “Maybe it’s not that bad,” or “Let it go.” It is best used when you first notice that we are angry (emotional reaction stage). Its purpose is to help calm us down.



Use self-talk if we notice ourselves using any thinking errors (use logic).

- **Look for the humor—without making fun of someone.**

Sometimes we get angry for silly reasons that are hard to explain. Maybe we don't even really want to be angry. Sometimes, if there is no danger, we can count to 10 and imagine what it must look like if this whole angry situation was something we were watching in a TV comedy. Sometimes, when we really think about it, some of the things that make us angry can seem really silly. Remember, though, that if you are involved in an angry situation with someone else, they may not think it's funny at the same time we do. It usually works best if we can laugh at ourselves.

**Myths about anger:**

- Anger is dangerous.
- We should not express our anger.
- Anger is bad.
- Anger is good.
- Anger is sin.
- Males have more anger. Anger is a normal and even healthy emotion.

But it's important to deal with it in a positive way. Uncontrolled anger can take a toll on both our health and our relationships.

**Anger management exercises to try:**

**Learn to breathe-** When we are angry, we might notice our breathing gets quicker and shallower. One easy way to calm our body and reduce our anger is to slow and deepen our breathing. Try breathing slowly into our nose and out our mouth. Breathe deeply from our belly rather than our chest. Repeat breaths as necessary.

**Progressive muscle relaxation-** Muscle tension is another sign of stress in the body that we may feel when we are angry. To help calm down, we may want to try a progressive muscle relaxation technique. This involves slowly tensing and then relaxing each muscle group in the body, one at a time. Consider starting at the top of our head and move our way to our toes, or vice versa.

**Visualize ourselves calm-** Imagining a relaxing place may help us reduce our anger. Sit in a quiet, comfortable space from our memory and close our eyes for a few moments. Let our imagination flow. As we think of what that relaxing place is like, think about small details. How does it smell or sound? Think about how calm and good we feel in that place.

**Get moving-** Besides being healthy for our bodily functions, regular exercise is very effective at reducing stress in the body and mind. Try to get some exercise every day to keep stress and anger

at bay. For a quick way to manage anger, go for a brisk walk, bike ride, run. Or do some other form of physical activity when we feel anger growing.

**Recognize our triggers-** Usually, people get angry about specific things over and over again. Spend some time thinking about what makes us angry. Make an effort to avoid or deal with those things, if possible. For example, this might involve shutting the door to our child's room when they don't clean it instead of getting angry about the mess. Or it could mean using public transportation instead of driving to work if we are easily angered by traffic.

**Positive effects of anger:**

- Energize us to do something.
- Enable us to assertive.
- Help us to survive.
- It is a way of communication.
- Motivate us to take action.
- Nobody makes us angry without our concern.

**Causes of anger:**

- High expectation.
- Faulty perception and thinking.
- Personality factor, Poor communication skills.
- Poor emotional control.

“Anger will never disappear so long as thoughts of resentment are cherished in the mind. Anger will disappear just as soon as thoughts of resentment are forgotten.” -Buddha. So school students can adopt the above strategies and techniques to manage their anger and as a parent and teacher we may guide them.

## **Conclusion**

Learning the skills and techniques of successfully managing anger is a lot like learning a new language. We can never learn “whole language,” because we can spend the rest of our life learning nuances, local phrases, and new vocabulary. Anger is an emotion that is exceedingly complex. We may find that we will encounter new annoyances at new phases of life—new pet peeves or new habits about people that drive you nuts. We will lose our patience in new and creative ways. All of that is normal and predictable. After going through this program, the advantage we gain is that fewer things will make us angry. We can motivate and encourage school students to practice anger management to lead their life peacefully and happily in moral and ethical way.

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## PSYCHOLOGICAL DISTRESS OF MILLENNIAL STUDENTS DURING COVID-19

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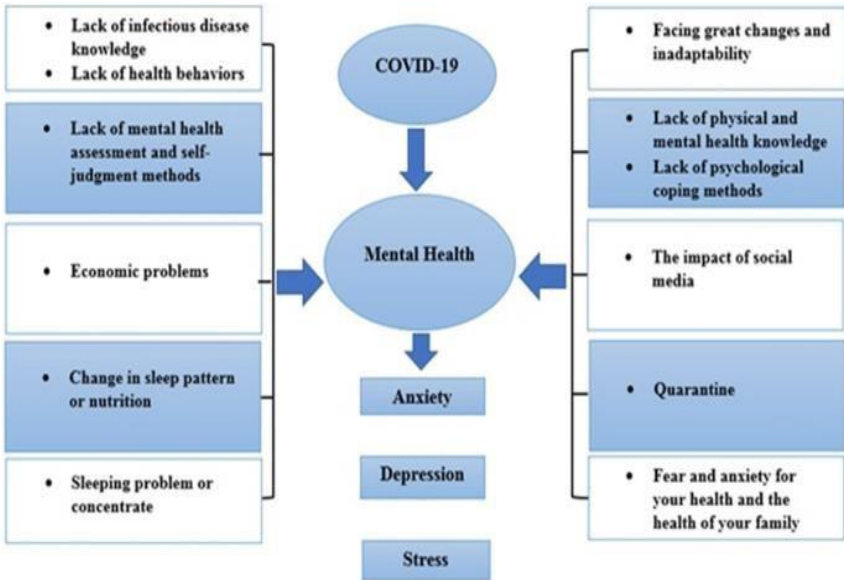
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### **Introduction**

Mental well-being refers to the abilities to adjust with the situation. It is a concept which refers to individual differences in the ability to acquire knowledge, to think and reason effectively, and to deal adaptively with the environment. Taking into account the emotional deficiencies originated during the COVID – 19 pandemic, mental well-being of students has a special mention. It is believed that a healthy mind is the key to an individual attaining satisfaction in life (Swami, et al., 2007). While so many resources and therapy related to mental well-being have been available for supporting parents, and others but, less attention has been paid on maintaining the mental well-being of the students. They find balance in a new way of living and remote learning. The mental well-being state of students, their response to the pandemic, impact on learning and few recommendations to enhance their mental well-being are the aims of this study.

Greek philosopher Aristotle remarks, “Anyone can become angry is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right - is not easy”. The conditions that go together with pandemic include various sources of stress for students such as fear of virus, the symptom of feelings of boredom and frustration.

### Impact of COVID – 19 on the Mental Health Issues



### Impact of Lockdown on students’ learning

The pandemic has produced a very bad effect on the students' life as all the educational activities halted in most of the

countries. The outburst of COVID-19 has advised us that change is unavoidable. It has worked as a method for the educational institutions to grow and opt for online platforms and techniques, which have not been used before. The educational institutions have been fighting to endure the crises with a different approach and digitalizing the challenges to swab away the hazard of the pandemic. Technology may play a significant role in the lockdown period like study and work from home. In developing countries like India, most of the government schools, private schools, particularly established in rural sectors could not adopt online teaching methods due to low income and as a result, there is a complete shut down as they could not find any solutions to access to e-learning. In addition to this crises, government and government aided schools miss their mid-day meals that result in social and economic stress. Higher education sectors are also disrupted as it paves way to the future economic of this country. Every year students from various part of this country seek admissions in abroad and all the countries are badly affected due to these pandemic situations. If such situation continues, there may not be a possibility that students will not take admissions in future and there will be decline in the demand for international higher education. In addition, students had bitter experience on the following grounds.



## **Challenging experiences at home**

Many children and young people already experience challenging home environments. These challenging situations will likely have been enlarged by the measures in place to control the pandemic. Others will be facing challenging home experiences for the first time. These might include:

- Domestic violence
- Abuse or neglect
- Family conflict
- Financial concerns, e.g. loss of employment for parents and guardians
- Worry about relatives who are key workers and continuing to work
- Caring responsibilities for family members
- Hunger and lack of nutrition
- Insecure housing, e.g., those living in residential care, hostels, or refuges.

## **Transitions**

As pupils' education continues to be affected by the pandemic, with various conditions and restrictions in place, the usual preparation that would be done with pupils transitioning to the next school term or year will be lacking. This will be particularly

challenging for those moving from primary to secondary school, those moving into exams years and those preparing to leave school.

### **Academic Disengagement**

Students described a sense of detachment from educational institutions that they endorsed to be short of activities with peer groups and faculty, and frustrated from staring at a screen for the whole day. Students had less opportunities become an obstacle to engage on academic platform. Pre-recorded lectures were observed as unengaging. The norms of students turning off their cameras and micro phones shows their refusal to participate in learning activities. Lab classes became abstract and much less informative in their online versions. Teachers and students face lot of technical conflicts during online learning that decreases motivation.

### **Absence of shared learning environments**

Most of the students had insufficient internet connections, families were not able to provide high level configurations of gadgets. Students living in rural setup faced innumerable issues as borrow mobile from nearby relatives' homes for classes and negotiating online time with other household members. Connectivity issues and other technical barriers, such as lack of access to the touch screen devices required for some types of remote collaboration.

## **Interruption of Autonomy**

Most of the students felt that they lost the autonomy they had obtained when they left for educational institutions. Students were restricted to go out of home due to fear of exposure to COVID-19.

## **Cycles of psychosocial and learning challenges**

Mental health concerns were top of mind for students. Disrupted sleep patterns that made it difficult to concentrate during online classes, decreased motivation and a lack of routines and structure are some of the factors that leads to psychological discomfort which intertwined with academic challenges.

## **Overcoming the Challenges**

### **1. Self-learning and activation**

Most of the students described a better freedom and increased self-efficacy in the way they learned over the course of the term. Learners expressed pride in self-learning rather than relying exclusively on lectures and assigned materials. Such passionate, selfdriven learning helped them emotionally as well as educationally. Reconnecting with his interest and inventiveness helped them from emotional issues.

### **2. Structuring routines and environment**

Realising the importance of cultivating routine works, most of the students deliberately get into a institutional mindset by reducing distractions and involved in multitasking such as morning

exercise, involved in craft making, drawing, painting etc., and many established new exercise routines. Students engaged in the practice of taking notes from the pre-recorded videos or from live lectures which allowed them to utilize their time in an useful way. To help with emotional wellbeing, students deliberately reduced their watching or listening to news on death rate due to the spread of COVID-19.

### **3. Learning with peers**

Remote study groups afforded essential support for many students. These study groups, watched through various video and voice communication platforms. Peer support groups, set up by students to ask or answer questions by messaging or voice, were also helpful, especially for those participants who were not part of other study groups helped morally. Attending in working hours and meetings with teachers was easier in online. Students not only attended the online classes, but also took on leadership roles by initiating group discussions.

### **4. Emotional wellbeing through communication platforms**

Students from rich background helped themselves in Tele therapy and meditation apps, and most of the students emphasized the emotional benefit of communicating with their friends. Communication with friends often involved emotional support. Students learned by taking more social initiative by helping their

friends as well as themselves. Human beings live in and develop through their environment. For the satisfaction of our needs we have to be in constant interaction with environment. Such interactions result in modification of human behavior. Hence socialization is a key factor in the better development of mental wellbeing.

Socialization begins in the family and society which is the cradle of social behavior. Increased social interaction helps sufferers to rebuild their self-esteem which in turn enables them to maintain and develop positive relationships with friends.

### **5. Using familiar technologies in new ways to communicate with friends**

Learners shared images with different degrees of personalization depending on closeness in a friendship. In addition, most of the students become familiar with using new apps and become expertise in handling the technology. Students who had not experienced in engaging with larger groups over social media, started to learn during online classes. Socially, this meant checking in with friends to give and receive social support, lightweight bonding, and arranging hanging out and coworking sessions with peers. Students used technologies with which they were already familiar, but applied them in different ways and for different purposes than they had before, whether that was using video calling for multi-hour coworking sessions rather than quick greetings, or an

app like Tinder to find new conversation partners rather than dating prospects.

## **6. Be innovative**

True innovation is about doing something new. Innovation can be the modern and new technology. Technology has made it possible for everyone to work anywhere. With video conferencing, email and online chat, teachers can continue to work even if we are forced to do that from home, bridging the space between institution and home. All the solutions are at our fingertips. We have to embrace the change. Albert Lord Tennyson says, “Old order changeth, yielding place to new, And God fulfils Himself in many ways, lest one good custom should corrupt the world”.

### **1. Impart resiliency**

Personal characteristics, competences and positive influences of the social environment in which the individual works and lives, independently and together interact to contribute to the process of resilience building. Resilience in students and the education system is going to be an significant role in dealing with the effects of the pandemic. Hence, it is necessary to reassess the relationship between students and teachers, on the one hand, and students and learning, on the other, with due contemplation for the social and family situations under which students faced the confinement

## **2. Model Self-compassion**

The potential benefits of self-compassion are huge. People who practice self-compassion experience fewer negative emotions and stay emotionally balanced. Such people balance themselves in difficult situations. Self-kindness is the first component of self-compassion, or treating ourselves with the same care and concern we would give a loved one. As teachers, we care for our students every day but often to forget about caring for ourselves. We all need kindness, understanding, and grace.

### **Conclusion**

This chapter describes the challenges the millennial faced during the COVID-19 pandemic. It is observed that a continuum of distress that varies across students and over time. We see that students benefit by creating their own active coping strategies, tailored to their particular social, academic and technical contexts. These active coping strategies, for taking initiative in learning and peer communication, can inform interventions to help students at greatest psychosocial and academic risk. Additional channels for participation, whether for asking questions in class or engaging in group study, will benefit students who continue attending school remotely as well as those who return to in-person education after the pandemic. Parents have to support them in terms of space, giving an area where they can concentrate and also look at the brighter picture

of the possibility of going back to normal living after vaccination. Improving coping mechanisms by looking at the brighter picture will help them as they have a long way ahead. Its right to point the words of Robert Frost words, “Miles to go before I sleep, And Miles to go before I sleep”.

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## **SAMPLE OF E-LEARNING TOOLS AND APPLICATIONS TO CURE STUDENTS WITH SPECIAL NEEDS**

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### **Introduction**

The educational standards claim that students with disabilities should be provided with opportunities to realize their potential. They should participate in education and training on the same basis as students without disabilities and that they are not subject to discrimination. Due to the progress in the IT industry, digital technologies are easily accessible and widespread which allows using them for providing students with new opportunities.

Most people working within the education sector understand the importance of making e-learning tools and applications accessible to students with disabilities, yet it is not always clear exactly how this should be accomplished. E-Learning tools and applications for Disability students in Education evaluates current accessibility practice and critiques the extent to which 'best' practices can be confidently identified and disseminated. This is updated and includes a focus on research that seeks to give 'voice' to disabled students in a way that provides an indispensable insight into their

relationship with e-learning tools and applications and the institutions in which they study. Examining the social, educational, and political background behind making online learning accessible in higher and further education, E-Learning tools and applications for Disability in Education considers the roles and perspectives of the key stakeholders involved in e-learning.

## **E-Learning**

E-learning, an abbreviation of electronic learning, indicates the provision of education and training on the Internet or the World Wide Web. E-learning is among the most important explosion propelled by the internet transformation. This allows users to fruitfully gather knowledge and education. E-learning refers to the use of information and communication technology (ICT) to enhance and/or support learning in tertiary education. However this encompasses an ample array of systems, from students using email and accessing course materials online while following a course on campus to programmes delivered entirely online. . The COVID19 pandemic has triggered new ways of e-learning. All around the world, educational institutions are looking toward online learning platforms to continue with the process of educating students with special needs.

Many schools, colleges, and other educational institutions have embraced online education platforms. With e-learning tools

and web apps, you can provide an effective virtual learning experience to your learners. E-learning tools and web apps improve students' academic progress. It has surpassed the barriers of space and time and made the students, teachers, and parents stay connected from anywhere in and around the world. Online education has experienced an excellent transformation with the advent of e-learning tools and web apps. Keep reading and by the end, you will understand the importance of e-learning web apps for your online classroom.

As a matter of fact, many colleges and universities have started conducting online learning platforms. Today, the concept of virtual campuses is evolving rapidly and more disabled students are getting enrolled. Technology is also playing a vital role in providing the perfect learning solutions to the disabled students E-Learning tools and Applications can fill in this gap and help students with learning disabilities. And thanks to massive advance in technology, there are a number of apps that have been created to help students with learning disabilities.

### **Use of E-Learning in Special Education: Tools and Applications**

According to the National Center for Education Statistics, in 2015–2016, the number of students served under the Individuals with Disabilities Education Act (IDEA) in the US was 6.7 million (AlaksandraDikusar, 2018). E-learning tools and applications allows

increasing the independence of a particular student freeing him from the constant need for direct teacher involvement. As a result, a student can choose the speed of learning that is convenient for him which leads to more personalized learning. When a student doesn't inhibit the learning process for the whole group, it allows reducing the anxiety level which plays a significant role in education as well. Implementation of E-Learning tools and applications in special education allows simplifying the communication and improve the academic skills of students with disabilities. Here is how e-learning tools and applications can simplify the educational process for students with disabilities.

### **Innovative E-Learning Apps and Tools that Make Learning Easier for Students with Learning Disabilities**

In the US, the NCES (National Center for Education Statistics) states that in 2017–18, some 34 percent of all students who received special education services had specific learning disabilities (5 Apps that make learning easier for students with learning disabilities, 2019). Unfortunately, not all education systems are well set up to help students who learn differently and might need special assistance in the classroom. There are times where technology is really useful, and this is one of those times. Elearning tools and applications can fill in the gap and help students with learning disabilities, such as text-to-speech software and

telepresence robots. The saying “there’s an app and tools for that” holds true for students with learning disabilities, too. There are a number of apps and tools that can help these students so they can keep up to their peers and learn according to their needs. Here are some e-learning tools and apps that are useful for students with learning disabilities:

- **Mod Math-** Mod Math is the first free iPad app that helps kids with dyslexia and dysgraphia (writing learning disability) do maths. Dysgraphia can affect children with a range of learning problems – not only dyslexia, but also those with autism and ADHD. As students with these challenges find it difficult to read their own writing, this app (developed by parents of a child with both dyslexia and dysgraphia) provides students with virtual graph paper in a pencil-free platform so they can work on problems in a legible format.
- **Learn with Rufus-** Rufus the Robot teaches kids about colours, shapes, fruit and other common objects from a range of examples so they can form broad categories and learn through generalization. The app can be customised for kids with varying skills, learning styles and abilities. It was developed by Dr Holly Gastgeb, a clinical and developmental psychologist who works with children with autism spectrum disorder (ASD). Finding that children with ASD have difficulty forming categories and identifying objects, she designed this interactive game to help

them. It's also suitable for children with no learning difficulties.

- **Articulation Station-** Developed under the Little Bee Speech host of apps, Articulation Station helps children learn how to pronounce sounds in English through engaging and fun activities such as flashcards, matching activities and storytelling. The app was founded by a certified SpeechLanguage Pathologist to help children and adults with speech and articulation problems learn to speak and pronounce their sounds more clearly.
- **Choice works-**This tool helps kids who struggle with executive functioning, teaching them how to cope with day-to-day activities like schedules, waiting and feelings. Using pictures, checklists, storyboards and other interactive activities, Choice works is an essential learning tool for helping children and their care givers complete daily routines. It can also be customized for teachers to use in school settings.
- **Phonics Genius-**This app provides a simple way for children to learn how to recognize, read, and speak words through letter sounds. The app contains more than 6,000 words, compiled by phonetic groups, in addition to the fun games for practicing skills.
- **Sounding Board-**This is a free mobile augmentative and alternative communication (AAC) app designed for children who are unable to speak (or who have limited speech) to help them communicate. In order to meet the needs of this particular

population, the app comes with preloaded boards using symbols with recorded messages.

Students select and press images on the board to prompt a verbal message.

- **Letter School-** This tool promotes early literacy and numeracy skills by guiding children to tap, touch, and trace colourful animations. Children learn letter formation, letter sounds and names, spelling, counting, and other preschool and primary skills. This app, which offers a free trial, also does an excellent job of developing fine motor skills and eye-hand coordination.
- **Tales2Go-** An audiobook service that offers a free onemonth trial, helps students who struggle to read while boosting their listening skills. This app has an extensive collection of stories and books for all ages, with scores of splendid narrators who bring stories from every genre to life.
- **Epic-** This tool is an e-library that is great for supporting reluctant or struggling readers. It provides access to more than 20,000 high-quality children's books and educational videos and includes an assortment of both fiction and nonfiction books from prominent publishers. Epic is offering free access to schools during this time.
- **Edoki Academy -** It also offers a series of math apps using a step-by-step approach whereby students learn Montessori math by



manipulating various objects that appear on the screen. It also helps boost motor skill development.

## **Conclusion**

The use of E-Learning tools and applications in special education helps break the barriers for people with learning disabilities and provide them with access to the most relevant educational programs. Properly designed software and hardware allow students with special needs to get modern education and achieve any required information online. So, mentioned above elearning tools and apps which allows special students to make education or life in a hard level to easy manner.

E-Learning tools and application helps provide students with individual learning events, enables reaching higher flexibility and differentiation in educational methodologies. With modern technology, teachers can adapt to the possibilities of a particular student with minimum effort and choose one of the dozens of available learning tactics designed to meet the needs of individual learners.

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**DIGITAL LIBRARIES: FEATURES AND CHALLENGES****C Sofia Selvarani**

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**Introduction**

Information and Communication technology has changed the concept of Libraries. Almost every library in the 21<sup>st</sup> century is slowly getting digitized. A digital library is nothing but the conversion of physical media of the library. To some extent, it means computerization of traditional libraries. A digital library is an online database of digital objects that include text, still images, audio, video and digital documents that are accessible through the internet. It also comprises digital collections, services to enhance learning, research, scholarly communication and also to preserve our recorded knowledge. Digital libraries vary in size and scope and it can be either maintained by individuals or organizations. Important considerations for the digital library includes quality preservation, multiple referencing, wide area usage, archival storage and security measures. Digital libraries are at the focal point of many different areas of research and hence the knowledge of the features of a digital

library and the challenges in creating it are highly the essential need of the hour.

A digital library, also referred as virtual library, electronic library, online library, digital repository and library without walls is an electronic collection of real or virtual resources. The digital library which may also be called as “Networked Electronic Library” has various resources which can be accessed by the user anytime in anywhere. The resources are whole works, in which an individual can have a complete cognitive or affective engagement. The important benefit of digital library is that it preserves rare and fragile objects and helps multiple users to access simultaneously. It gives the users a convenient access to high quality of information. The primary objective of digital library is to improve the access and focus on cost saving. The characteristics of a digital library lies in the collection of information objects, services, supporting users with information objects, organization and preservation of those objects and electronic/digital availability.

### **Features of Digital Library**

Digital libraries have the potential to store much more information than the traditional libraries. This is because digital information requires very little physical space to store it. Also the cost of maintaining a digital library can be much lower than that of a traditional library. Another important use of digital conversion is

the increased accessibility to users. Other features of the digital library includes the following.

- **No time and physical boundary:** As long as an internet connection is available, the people from all over the world can access the same information 24/7 without moving to the library physically.
- **Multiple accesses:** The same resources and the information can be used simultaneously by a number of institutions and patrons.
- **Information retrieval :** The information needed can be obtained by the user by any search term (word, phrase, title, name, and subject) to search the entire collection.
- **Preservation and conservation:** Digitization is not a long term preservation solution for physical collections. However, exact copy of the materials can be made any number of times without any quality change.
- **Space :** Digital libraries have the potential to store much more information than the traditional library as digital information requires very little physical space to contain them

### **Drawbacks of Digital Library**

There are some disadvantages of digital libraries also, which are as follows:

- **Copyright** : The thought content of one author can be freely taken by the other without his acknowledgment as digitalization violates the copy right law.
- **Digital preservation** : The preservation of the data in the digital library becomes difficult and it can rapidly become out of date and the data can be inaccessible due to technological developments.
- **Equity of access** : The speed of access decreases if more computers are connected to the internet and if this is not rectified, in future we may end up with error messages.
- **Bandwidth** : Digital library requires high band for transfer of multimedia resources but the width is decreasing day by day due to its over utilization.
- **Initial cost** : The cost of hardware and software and leasing communication circuit is generally very high and so it is impossible for the conversion of digital library.
- **Training and development** : Finding the right material for a specific task becomes very difficult as it has much larger volume of digital information and it requires proper training.

### **Challenges in Creating Digital Libraries**

Creating effective digital libraries poses serious challenges. The integration of digital media into traditional collections is not that

easy because the nature of the digital information is less fixed, easily copied and remotely accessible by multiple users simultaneously. Some of the more serious challenges in the development of digital libraries are given below.

### **Technical Architecture**

The technical architecture for digital libraries is not the same as the monolithic systems like the turn-key, single box OPAC's with which librarians are most familiar. Instead, they will be a collection of resources connected through a network, and integrated within one interface, most likely a Web interface. The resources supported by the architecture can include: bibliographic databases, indexes, finding tools, directories, photographs and electronic journals. To the users of a particular community these resources may appear on one single system, though they actually reside on different systems. Libraries need to enhance and upgrade current technical architecture such as :

- Fast internet connection and high speed local network
- Variety of digital formats supported by relational database
- Full text search engines to provide access to resources
- Variety of servers such as Web servers and FTP servers
- Electronic document management system



## **Building Digital Collections**

One of the largest challenge in creating a digital library is building of digital collections. The three methods of building digital collections include: digitization, acquisition of original digital works and access to external materials. It is very difficult to acquire digital works and doing in-house digitization is also costly. But the institutions with common goals can work together to minimize the cost. Based on the following factors the specific materials processed by a given institution can be identified.

- **Collection strengths** :Selected materials can be digitized and new works can be added by some of the libraries with a strong collection focus.
- **Unique collections** : If in a particular library they have only copies of something, then they are responsible for digitizing them.
- **The priorities of user communities** : Depending upon the demands and needs of the materials, the institutions can hold the materials with them and digitize.
- **Manageable portions of collections** :If there is no overriding criteria, the institutions can divide the materials among themselves and digitize it.
- **Technical architecture**:The technical architecture of a library will also be a major factor in selecting the materials to be digitized.

- **Skills of staff** :Based on the skills of the staff present, the institutions can play a major role in setting a node in a national scheme.

## **Digitization**

Digitization is one of the primary methods of digital collection building. Digitization is the conversion of books, journal articles, photos, paintings, microfilms into electronic form. This can be achieved either through scanning or rekeying. There are several theoretical approaches available to decide what portion of a collection is to be digitized. Some of the approaches are : Retrospective conversion of collections, Digitization of a particular special collection or a portion of one, Highlight a diverse collection, High-use materials, An ad hoc approach. Depending upon a particular institution's goals for digitization, these approaches can be used alone or in combination. In association with the approaches mentioned, there are few criteria for selecting individual items to be digitized. These include :

- Potential for long-term use
- Intellectual or cultural value
- Whether accessible than possible with original materials
- Whether copyright restrictions will permit conversion

## **Metadata**

In the development of digital libraries, Metadata that describes the content and attributes of any particular item in a digital library is another important challenge. Metadata is considered to be an important data for digital libraries as it is the key to resources and use of any document like library catalogue. Creating metadata is a time-consuming process and it needs specially trained personnel. Human cataloguing becomes very difficult as there is rapid expansion of the information environment. In order to overcome this problem, simpler schemes are being processed as solution for metadata. In the number of schemes present, the “Dublin Core” is one of the prominent schemes which determines the core elements needed to describe materials. This scheme defines a set of fifteen much simpler meta elements for library cataloguing. As there is no common standards defined for use in specified context, this becomes another barrier to information access in a digital library.

## **Naming, Identifiers and Persistence**

Digital objects and part of any document’s metadata can be uniquely identified by naming in a digital library. Names in a digital library is equivalent to an ISBN number in a traditional library. Names are essential for the identification of digital objects for the following purposes.

- Citations

- Information retrieval
- To make links among objects
- And for the purposes of managing copyright

Any system of naming developed should have unique name and its location must be separate so that it can be permanent and lasting indefinitely. The current method for identifying objects on the Internet is URLs which are very bad names because whenever a file is moved, the document is often lost entirely. Therefore, a global scheme of unique identifiers is required, that has persistence beyond the life of the originating organization. Moreover these names must remain valid whenever documents are moved from one location to another. Three examples of schemes proposed to get around the problem of persistent naming are PURLs, URNs and Digital Object Identifiers.

### **Copyright/Rights Management**

Digital library has objects that are less fixed, easily copied and remotely accessible by multiple users simultaneously. Unlike the private publications, libraries are considered to be caretakers of information and they don't own the copyright of the material they hold. It is impossible for the libraries to freely digitize the materials and provide access to the copyrighted materials in their collections. So they will have to develop mechanisms without violating copyright, called rights management for managing copyright. Some

rights management functions for copyright could include : usage tracking, identifying authenticating users and providing the copyright status of each digital object.

## **Preservation**

Another important challenge is preservation. In the preservation of digital material, the real issue is technical obsolescence. There are three issues of preservation : -

- Preservation of the storage medium:** The data on Tapes, hard drives and floppy discs can be refreshed, keeping the bits valid. The media used to store digital materials become obsolete in anywhere from two to five years before they are replaced by better technology. Materials stored on older media could be lost over the time because there will no longer be the hardware or software to read them. So storage medium has to be changed whenever necessary.
- Preservation of access to content:** This form of preservation involves preserving access to the content of documents, regardless of their format. To avoid information to become obsolete it is necessary to translate data from one format to another preserving the ability of users to retrieve and display the information content. But data migration is costly and information loss is inevitably introduced every time data is migrated from format to format.

•**Preservation of fixed-media materials through digital technology:** This issue involves the use of digital technology for replacing current preservation media, such as microforms. There are no common standards for the use of digital media as a preservation medium and it is also not clear whether digital media can be the task of long- term preservation. So it is necessary to create policies for long-term preservation and ensure that permanent copies are stored at designated institutions.

### **5 Directory of Digital Library Resources**

•**E-Prints at IISc :** [www.ncsi.iisc.ernet.in](http://www.ncsi.iisc.ernet.in)

It provides online publishing facilities for research scholars and academia.

•**TIFR Digital Library Initiative :** [www.tifr.res.in/~library/](http://www.tifr.res.in/~library/)

It gives access to several standard international publications and journals such as IEEE and Springer.

•**Center for Education and Documentation :** [www.ced.org](http://www.ced.org)

It has resources including books, journals and newspaper clipping on contemporary history and video documentaries on social change and development premises in Bangalore and Mumbai.

•**IGNCA Digital Library :** [www.ignca.nic.in/dgt\\_0001.htm](http://www.ignca.nic.in/dgt_0001.htm)

It holds varied documentation of resources such as digital images, audio and video recordings, animations, electronic books related to Indian arts and culture.

**•CSCS Media and Culture Archive :**

•[http://www.cscsban.org/html/media\\_archive.htm](http://www.cscsban.org/html/media_archive.htm)The resources include press clippings and reviews;pamphlets, reports and papers by government agencies, independent organizations and individual work; visual images, advertising and publicity leaflets and market research reports.

•**INFLIBNET** : Information and Library Network Centre :  
[www.inflibnet.ac.in](http://www.inflibnet.ac.in)

Important activities of it include Library Automation, Database Creation, Software Development, Human Resource Development, Information Services and Networking.

•**Digital South Asia Library** : <http://dsal.uchicago.edu>

It has maps, statistics, bibliographies, union lists, indexes, photographs, books and journals, as well as a reference collection that is strong in pedagogical tools for South Asian Language learning.

**Best Digital Libraries**

Though majority of the digital libraries that we have now provides invaluable sources of reference, there are some such as those listed below, that contain books, maps, films and audio – books that would be difficult to find in physical form.

1. **World Digital Library** :A source for manuscripts, rare books, films, maps and more in multilingual format.
2. **Universal Digital Library** : A Collection of one million books.
3. **Project Gutenberg** :More than 33,000 e-books to read and download.
4. **Bartleby** :An immense collection of books for consultation, including fiction, essay and poetry.
5. **Ibibio** :E- books, magazines, academic essays, software, music and radio.
6. **Google Books** :More than 1,00,000 books for consultation, download or on -line purchase.
7. **Internet Archive** :The largest digital library for downloading ebooks and audio-books for free.
8. **Open Library** :More than one million e-books of classic literature to download.

## **Conclusion**

Around the world the set of challenges in creating a digital library is taken into considerations. As a result, new initiatives, various projects and national schemes have been planned for exploring the key issues. For a long time, the process is continuing and the initial ideas in the development of digital library has been now replaced by



second thoughts. The main reason behind this is being discovered by the libraries after getting more experience. Ultimately, making a business case for digitization and investments in digital technology is more difficult than that is foreseen is made clear. The technical and legal constraints are to be resolved to overcome this problem. To see the advancement in creating a digital library, simple, manageable, evolutionary steps are to be taken rather than rapid revolutionary steps. This would take us to the day when the whole world would have digital libraries interconnecting all libraries to meet the academic and research needs.

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**LOSS OF LEARNING AS AN UNFINISHED BUSINESS IN  
EDUCATION AFTER THE PANDEMIC LOCKDOWN – A  
CRITICAL REVIEW OF AZIM PREMJI UNIVERSITY  
RESEARCH REPORT**

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## **Introduction**

As in many parts of the world, Children in India were the first victims who were affected by the impact of the COVID-19 pandemic lockdown. As the cases began to increase in the second week of March 2020, schools were the first to close down. In India for nearly one-and-a-half years the students are out of the classroom and are confined to online schooling and many have dropped out altogether. As students were left with no choice but to accustom themselves to the “new normal” of online schooling, pre-existing learning inequalities were magnified. These gaps, brought about by socioeconomic differences, manifested themselves in educational access, participation rates, and learning outcomes. Loss in learning is in terms of both, the curricular that would have been learnt had the schools remained open during the academic year and the abilities acquired in previous year that are forgotten. This article describes the findings of the research the Loss of Learning during the

Pandemic’ by Azim Premji University with added recommendations to combat the learning loss.

### **Outline of the Research on ‘Loss of Learning’ by Azim Premji University**

This study, undertaken in January 2021, revealed the extent and nature of the ‘forgetting/ regression’ kind of learning loss (i.e. what was learnt earlier but has now been lost) among children in public schools across primary classes because of school closure during the COVID-19 pandemic. The study covered 16067 children in 1137 public schools in 44 districts across 5 states. It focused on the assessment of four specific abilities each in language and mathematics, across classes 2-6. These four specific abilities for each grade were chosen because these are among the abilities for all subsequent learning – across subjects – and so the loss of any one of these would have very serious consequences on all further learning.

A child who was in class 1 in March 2020 will move into class 3 in 2021 without having engaged with the curriculum of class 2, except through sporadic online or community-based engagements. Thus, the loss of learning during the pandemic comprises the ‘forgetting/regression’ of a proportion of abilities children already knew, including the loss of foundational abilities that make it possible for children to take up further learning, and the absence of curricular learning for an entire academic year.

This study, therefore, was undertaken as a field-level empirical study to understand the extent and nature of learning loss among public school children across the primary classes because of school closure during the COVID-19 pandemic. The entire study was conducted in January 2021.

### **Methodology used**

The study was conducted with 16067 children in 1137 public schools and covered 44 districts across 5 states -- Chhattisgarh, Karnataka, Madhya Pradesh, Rajasthan and Uttarakhand. Teachers were selected based on prior knowledge of their engagement in school teaching-learning processes and were close collaborators in the field-level assessment of children's learning. Consent of all participating teachers was obtained for the study. Selection of children was based on discussions with teachers and efforts were made to cover children across all primary classes that the teacher had taught in the previous year, both girls and boys. A baseline assessment of these children on specific abilities in language and mathematics was done based on comprehensive analysis by the teachers to understand their learning abilities in the class they were in just before schools closed.

End-line assessment of current learning levels on the same specific abilities was done by administering oral and written tests to the same children. This was done by assessors in collaboration with

the teachers. The assessment was generally carried out in the community or even in homes. Assessments were done for children on only select foundational abilities for the previous class, across all the primary school classes they were in 2019-20. Assessment tools were designed in alignment with NCERT's Learning Outcomes for two subject areas, language and mathematics, for classes 1 to 5. Ageappropriate core content domains were identified and mapped to the NCERT Learning Outcomes for both subjects. Further, specific abilities for each of the learning outcomes that are the foundation for further learning were carefully identified. These specific abilities were selected from the abilities associated with the previous class because the absence of any one of these would deeply compromise the acquisition of more complex abilities and impact learning across subjects as the child moves through different stages in school.

## **Key Findings of the Research**

### **Learning loss in language**

- 92% of children on an average have lost at least one specific language ability from the previous year across all classes.
- Illustratively, these specific abilities include describing a picture or their experiences orally; reading familiar words; reading with comprehension; writing simple sentences based on a picture.

- 92% of children in class 2, 89% in class 3, 90% in class 4, 95% in class 5, and 93% in class 6 have lost at least one specific ability from the previous year.

### **Learning loss in mathematics**

- 82% of children on an average have lost at least one specific mathematical ability from the previous year across all classes.
- Illustratively, these specific abilities include identifying single- and two-digit numbers; performing arithmetic operations; using basic arithmetic operations for solving problems; describing 2D/3D shapes; reading and drawing inferences from data.
- 67% of children in class 2, 76% in class 3, 85% in class 4, 89% in class 5, and 89% in class 6 have lost at least one specific ability from the previous year.

### **Voices of Teachers and Parents involved in the study**

The findings from the analysis of the assessment data revealed only a part of the story related to learning loss among public school children during the period of school closure. The narratives from the field that were generated from families and children while the study was being done provide a snapshot of the context in which these key stakeholders find themselves.

Most of the public school teachers associated with the study were themselves intensely troubled to learn first-hand about the

extent of learning loss that their children have experienced during the period of school closure. Some teachers became emotional when they realized that children whom they tagged as ‘intelligent’ and could earlier ‘read so fluently, write so nicely and perform operations so easily’ were now struggling with ‘such simple questions’. Moreover, they along with the assessors could directly experience how children have been totally disconnected from the school. Teachers shared that they, therefore, are in a ‘double dilemma’ – whether to start from last year’s course work (2020-21) or the syllabus of the new class (202122).

During the visits to the communities for the assessment of children, parents were found to be deeply worried about their children’s education and constantly wanted to know when schools will open. They kept asking that if children could interact with each other in the community, why could they not do so in school as well? They were worried that children have forgotten all that they had learnt, since they do not ‘read anything’ at home.

Many of the children thought the assessment signalled the opening of school; numerous children from all classes converged to the assessment site with this hope. Some children did not even want to go back home after the assessment was done. How children are also looking forward to the reopening of schools is evident in this



remark from one of them – ‘if marriages, processions, and cricket matches are on, why are schools closed?’

### **Implications of the study**

The report on ‘Loss of Learning’ gives us a sense of the extent and nature of learning loss, Education sector need more understanding to address this in the classrooms – for example, efforts should be made to understand why the loss in some specific abilities is higher than in others. Effective school-level strategies will require to factor in these nuances, and this calls for a finer understanding through more detailed and continuing research in this area over the following academic year. Supplemental support, whether in the form of bridge courses, extended hours, community-based engagements, and teaching-learning materials will be necessary to help children gain lost abilities and to further their learning in the class they return to when schools reopen. While a portfolio of pedagogical approaches based on a finer understanding of the situation can be developed and made available, each teacher will have to address the specific situation in her classroom. From the report of the study we can understand that the it is critical to understand that this learning loss is not limited to public schools. Though private schools have taken the initiative of reaching children through remote modes, very little actual ‘online teaching’ has occurred; mostly, instructions and supplemental resources have

been shared.<sup>8</sup> Thus, the issue of learning loss must be addressed for all children across all types of schools and across all classes in schools.

## **Discussion**

This study has been done very effectively as has provided a wonderful description of the entire reality of the present scenario of the impact created by the Covid pandemic on school education. But it is very pathetic to see that no useful and purposeful measures have been taken to address this loss of learning among the school children. A few teachers are interviewed personally and they feel that the bridge course did not create an impact to combat the loss of learning that has occurred among the school students. Though bridge courses were taken up by all the boards of education to cope with the loss of learning, it didn't resolve the underlying issue and it is seen that students still face many challenges to cope with their new curriculum. Government should take immense steps to help students to cope up their learning loss and allow them to face their curriculum to achieve the intended learning outcomes of the different subjects.

## **Suggestions to address the loss of learning**

The following measures can be taken to address the loss of learning and help teachers and students to create an effective teaching and learning system.

- **Prioritize education:** Measures should be taken to prioritize education in the first phase of all emergency responses with immediate effect, and education sector should be included in the COVID-19 response policies undertaken by government to address the learning loss.
- **Increase the funding and support to education:** Government should take adequate measures to increase the funding and support to education in crises to a minimum of 4.2% of emergency assistance in line with its needs.
- **Encourage educational research:** Government should take appropriate steps to motivate researchers in education to develop useful research projects to address the impact caused by the pandemic lockdown.
- **Training of Teachers:** Teachers handling the classes should be trained to help the students to refresh their learning of the basic concepts by adopting activity based and learner centered teaching techniques.
- **Giving weightage to the Minimal levels of learning:** Measures should be taken to focus on the minimal levels of learning at each stage on the different subjects not giving due importance to grades and pass out marks.
- **Improving the social skills of learners:** Programmes and activities to improve the social connection and bonding

among the students and teachers and also within the students should be organized to help them build a network of community to enhance their social skills.

## **Conclusion**

We imminently need to focus on effective remediation not only to reverse the learning losses due to the pandemic, but also to ensure that these losses don't affect children's chance at improving their life outcomes, and subsequently the nation's economy. According to Anurag Behar, Vice Chancellor of Azim Premji University, Online education is ineffective because of the basic character of education, and not merely because of lack of access to the net and online resources, especially for school-age children. He also considers that education requires physical presence, attention, thought and emotions, all to be seen towards learning goals, step by step, often back and forth, and differently for each student. This requires intense verbal and non-verbal interactions amongst teachers and students, which is possible only in actual classes. This deep cumulative loss has to be confronted. The recommendations suggested can be given due consideration as a step towards overcoming these issues.

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**OPEN EDUCATIONAL RESOURCE (OER): AN OVERVIEW****Yogita Nanasahab Wakchaure**

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**Introduction**

Now the century has turned to globalization. In that perspective UNISCO had decided to fill up the digital divide gap between developed and developing countries. In November 2019, the 40th UNESCO General Conference adopted the UNESCO OER Recommendation which is the only international standard setting framework in this area worldwide. UNESCO believes that universal access to information through high quality education contributes to peace, sustainable social and economic development, and intercultural dialogue. OER are teaching- learning materials that everything from a single lesson plan to an entire textbook, that save students and teachers money because they are free to use, customize, and share. These are openly licensed, which makes it easy to personalize materials and infuse them with fresh, relevant content.

Since the last decade of the 20th century, life has changed dramatically due to technology. This change has affected every human being in different ways. The education sector is one such example. Now the century has turned to globalization. Where everything is globalized now. ICT is one of the most important parts

of this situation. In this virtual world, geographical boundaries no longer exist; And the world is open to all in terms of information. Millions of information is published every day in the whole world with some restricted licence. Even if such information is published on a daily basis, not everyone will be able to get that information because there is a charge for the use of that information or due to some legal issues, the information cannot be used. The same information was repeatedly discussed at UNISCO with the intention of making it available to all with certain provisions, and OER emerged as a result.

UNESCO is the only UN agency with a dedicated OER programme. The term “Open Education Resource” was first coined in 2002 at a forum organised by UNESCO on Open Courseware in Higher Education. The 40th UNESCO General Conference held in November 2019 adopted the UNESCO OER Recommendation which is the only international standard setting framework in this area worldwide. UNESCO believes that universal access to information through high quality education contributes to peace, sustainable social and economic development, and intercultural dialogue. OER provides a strategic opportunity to improve the quality of learning and knowledge sharing as well as improve policy dialogue, knowledge-sharing and capacity-building world wide.



## **Brief history of OER**

Since 2002, UNESCO has developed large-scale projects, with global projects with impact at the regional, national and institution level, to provide expert technical assistance to Member States in advocacy, capacity-building and policy support for open educational resources (OER). In parallel, UNESCO developed and supported a network of Chairs and Category 2 Centres working on the promotion of OER. UNESCO has led inter-governmental discussions on OER capacity building, policy, sustainability, quality, and accessibility issues and its applications to meet the UN 2030 Agenda for Sustainable Development.

UNESCO organised two World Congresses on OER With the support of the Hewlett Foundation, the first in 2012 with the Commonwealth of Learning in Paris, and the second in 2017 jointly organised with the Government of Slovenia in Ljubljana, with five regional for a co-organized also with the Commonwealth of Learning.

This momentum for promoting OER culminated with the UNESCO Recommendation on OER, which was adopted unanimously by the UNESCO General Conference at its 40th Session in November 2019. This Recommendation is the only existing international standard-setting instrument on OER and is the fruit of over a decade of efforts to bring together a wide diversity of

stakeholders. OER is a part of ‘Open Solutions’, alongside Free and Open Source software (FOSS), Open Access (OA), Open Data (OD) and crowdsourcing platforms.

### **UNESCO Recommendation on OER:**

The UNISCO decided that five recommendations for OER on this 40th general conference, these are as follows:

1. Building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER;
2. Developing supportive policy for OER;
3. Encouraging inclusive and equitable quality OER;
4. Nurturing the creation of sustainability models for OER; and
5. Promoting and reinforcing international cooperation in OER.

<https://en.unesco.org/themes/building-knowledgesocieties/oeer/dynamic-coalition>

### **Define OER:**

Open Educational Resources (OER) are "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property licence that permits their free use and/ or re-purposing by others". Open Educational Resources (OER) are guided by the idea that high-quality educational materials should be available to everyone. OER are educational materials that everything from a single lesson plan to an entire textbook, that save

students and teachers money because they are free to use, customize, and share. These are openly licensed, which makes it easy to personalize materials and infuse them with fresh, relevant content.

### **Sustainable Development Goals (SDG):**

At an international level, the adoption of the Recommendation constitutes a conclusive step towards building more open and inclusive knowledge societies and towards the achievement of the UN 2030 Agenda. Indeed, the implementation of the Recommendation will contribute to the achievement of at least six Sustainable Development Goals, these are as follows:

1. SDG 4- Quality education,
2. SDG 5- Gender equality,
3. SDG 9- Industry, innovation and infrastructure,
4. SDG 10- Reduced inequalities within and across countries,
5. SDG 16- Peace, justice and strong institutions and
6. SDG 17- Partnerships for the goals.

### **OER Dynamic Coalition:**

In order to implement the actions laid out in the Recommendation, UNESCO has established a multi-stakeholder mechanism to facilitate international and regional cooperation, namely the OER Dynamic Coalition. UNISCO has launched the

OER Dynamic Coalition on 2 March 2020. It has been established to support the implementation of the UNESCO OER Recommendation. It is composed of experts from Member States, with a focus on UNESCO National Commissions, Intergovernmental Organization (IGOs), UNESCO Category 2 Centres, specialised institutions, civil society and the private sector.

This concept originated from the Ministerial Statement delivered at the 2nd World OER Congress, which was signed by the 14 Ministers responsible for Education on the event's Ministerial Panel. It is also referenced in the Preliminary Report for the Draft Recommendation sent out to Member States in April 2019 and was endorsed by the Category 2 Meeting on the draft Recommendation, held on 27 and 28 May 2019.

Its vision is to expand and consolidate commitments to actions in the area of OER, and to promote and reinforce international cooperation among all relevant stakeholders. The principles of gender equality, geographic distribution, and open and accessible participation for all stakeholders to contribute ideas, knowledge and information are guiding principles of the OER Dynamic Coalition. The OER Dynamic Coalition is made up of four Working Groups dedicated to the first four Areas of Action laid out in the Recommendation, namely: capacity building, supportive policy, inclusive and equitable quality OER, and sustainability

models. Its main role is to share necessary expertise, ensure networking and create cooperation towards the implementation of each Area of Action.

These action lines of the UNESCO OER Recommendation are as follows:

**Capacity Building:**

Developing the capacity of all key education stakeholders to create, access, reuse, repurpose, adapt, and redistribute OER, as well as to use and apply open licences in a manner consistent with national copyright legislation and international obligations.

**Policy:**

It is encouraging governments, education authorities and institutions to adopt regulatory frameworks to support open licensing of publicly funded educational and research materials, develop strategies to enable the use and adaptation of OER in support of high quality, inclusive education and lifelong learning for all, supported by relevant research in the area

**Effective, inclusive and equitable access to quality OER:**

It supporting the adoption of strategies and programmes including through relevant technology solutions that ensure OER in any medium are shared in open formats and standards to maximise

equitable access, co-creation, curation, and searchability, including for those from vulnerable groups and persons with disabilities

### **Sustainability:**

Supporting and encouraging the creation of sustainability models for OER at national, regional and institutional levels, and the planning and pilot testing of new sustainable forms of education and learning.

### **OER Commons**

OER Commons is a public digital library of open educational resources. Explore, create, and collaborate with educators around the world to improve curriculum. The tens of thousands of open resources available on OER commons are free and they will be forever to use but it needs building communities to support them, developing new collections, and creating infrastructure to grow the open community. Grassroots donations from people like us can help them transform teaching and learning. OER commons has given some services to the users with the help of different platforms i.e.Collection, Common core and STEM Literacy.

### **Collection**

Digital librarians develop their curated collections to bring users the best of their digital library offerings

## **Common core**

Common core resources organised for user needs. Under this they are taken some projects:

### **Common Core OER Collections**

The collection of the common core is high-quality, Common Core-aligned resources carefully gathered from across the web to freely use, and even to reuse and adapt to the needs of your own classrooms and districts. Common Core-aligned curriculum aims to support and challenge all students to develop critical thinking skills and to become independent learners.

### **Common Core Courses for ELA and Math**

Four full-year digital courses, built from the ground up and fully-aligned to the Common Core State Standards, for 6th and 7th grade Mathematics and 11th and 12th grade English Language Arts (ELA). Created using research-based approaches to teaching and learning, the Open Access Common Core Course Collection for Mathematics and English Language Arts is designed with studentcentered learning in mind, including activities for students to develop valuable 21st century skills and academic mindset.

### **Common Core Groups**

These groups are communities of practice built around finding,

curating, and collaborating around resources that are aligned to the Common Core.

### **Instructional Shifts**

Main aim of this to help experienced educators identify and modify their instructional practice to instantiate the academic behaviors aligned with the Common Core State Standards, the Instructional Shifts section calls out specific resources such as those focused on text complexity, making evidence-based claims, modeling in mathematics and critical reasoning.

### **Professional Development**

Their expertly curated professional learning and teacher resources for improving user practice and implementing Common Core instructional shifts in the classroom. Their teaching teams can collaboratively use these freely available resources to support implementing the Common Core school and district-wide.

### **STEM Literacy**

STEM literacy is for everyone who is interested in teaching & learning. STEM literate individuals are able to use concepts from science, technology, engineering and mathematics to understand complex problems and to innovate with others to solve them. A STEM literate person considers how STEM can improve the social, cultural, economic, and environmental conditions of their local and



global communities. Building STEM literacy ensures we have both the scientists and global citizens we need to thoughtfully build equitable and sustainable futures.

### **OER Commons services**

**OER Commons Hubs** - A Hub is a custom resource center where groups can create and share collections associated with a project or organization. Projects, institutions, states and initiatives make use of Hubs to bring groups of educators together to create, organize, and share collections that meet their common goals.

**Information Services** -Data integrations, content curation, and partner services

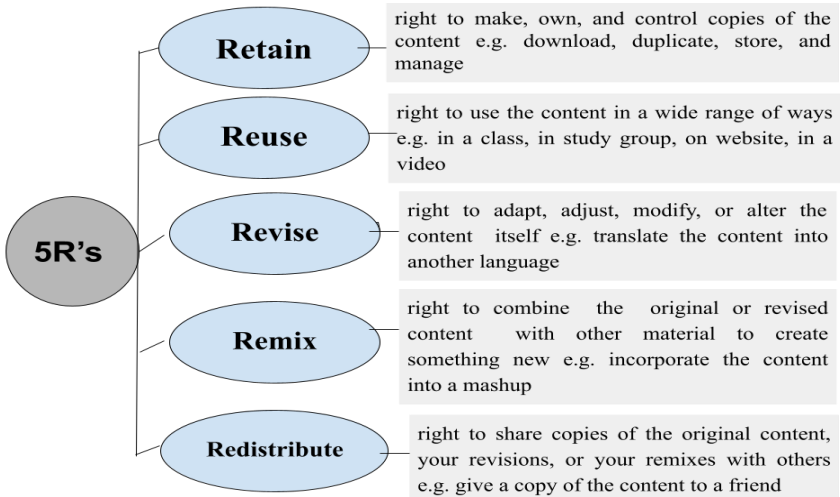
**Microsites** -Microsites are ISKME’s comprehensive solution for hosting and indexing a unique content library while facilitating collaboration for a specific targeted audience. Microsites are best suited to organizations who seek their own unique library with its own domain that sits apart from OER Commons.

**Professional Learning & Teacher Training** -It supports educators in improving how they collaborate, design, curate, and lead innovation in their work. It connects educators with ideas, training, tools, and opportunities that strengthen their professional practice to make it more inclusive and relevant to learners.

## 5R's

The “open” in OER indicates that these materials are licensed with copyright licenses that provide permission for everyone to participate in the 5R activities: retain, reuse, revise, remix, and redistribute.

**David Wiley describes the 5Rs are as follows:**



### Advantages of using OERs:

- **Expanded access to learning:** Users can access OERs anywhere in the world at any time, and they can access the material repeatedly.
- **Scalability:** OERs are easy to distribute widely free of cost.

- **Quick circulation.** The information may be disseminated rapidly as compared to published information in books or journals. And the quick availability of material may increase the timeliness and/or relevance of the material being presented.
- **Showcasing innovation and talent:** A wide audience may learn of faculty research interests and expertise. Potential students and donors may be impressed, and student and faculty recruitment efforts may be enhanced.
- **Ties for alumni:** OERs provide an excellent way for alumni to stay connected to the institution and continue with a program of lifelong learning.
- **Continually improved resources:** Unlike textbooks and other static sources of information, OERs can be improved quickly through direct editing by users or through solicitation and incorporation of user feedback. Instructors can take an existing OER, adapt it for a class, and make the modified OER available for others to use.

### **Shortage of resource related challenges:**

- Resources supporting inclusive education
- Indigenous language-based and culturally relevant resources
- Gender-responsive resources

- Pedagogy-embedded resources to support teachers' open education practices for enabling knowledge deepening and creation
- Relevant and affordable resources for Technical and vocational education and training (TVET) and skills development
- High-quality and accessible resource for non-formal learning
- Resources to support lifelong learning by learners at different ages

## Conclusion

OER is one of the biggest programmes which is helpful in the education sector. It is a big platform to an intellectual property license that permits their free use and/ or re-purposing by others.

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**USE OF E-LEARNING TOOLS AND ITS APPLICATIONS****S Daniel Sathya Singh**

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Tirunelveli

**Introduction**

E-learning includes all forms of electronically supported learning and teaching. The information and communication systems, whether networked learning or not, serve as specific media to implement the learning process. This often involves both out-of-class-room and in classroom educational experiences via technology, even as advances continue in regard to devices and curriculum. Elearning is the computer and network-enabled transfer of skills and knowledge. E-learning applications and processes include Webbased learning; computer- based learning, virtual education opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CDROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. Elearning is suitable for distance learning and flexible learning, but it can also be used in association with face-to-face teaching. There are a variety of e-learning platforms, both synchronous and asynchronous, that users can implement in educational, business or independent environments.

## **Learning Management System tools**

The use of learning management systems is almost ubiquitous. These powerful software suites enable digital learning by administering e-learning courses, online examinations and analyzing student performance data. A few examples of these platforms are Moodle, Blackboard Learn, Canvas, Sakai, and Schoology. Learning management systems are also prevalent in the enterprise. The best corporate LMSes are scalable, customizable, goal-oriented and userfriendly. Some of the best enterprise-level LMSes are Adobe Captivate Prime, Docebo LMS, Loop, TalentLMS, iSpring Learn, Northpass, and eFront.

## **Social media tools**

Social media also provides widely useful avenues for elearning. Social media has become a popular learning tool in part because services like Facebook, Twitter, YouTube and LinkedIn are second nature to many users. These platforms are suitable for bringing communities of learners together and allowing them to share e-learning content. Facebook and LinkedIn users can create groups to share information and ideas, and members of the groups can communicate freely about the shared material. Groups created on LinkedIn might be perceived to have an added level of credibility because users display their career credentials on their profiles. Twitter can be used to connect learning communities over a specific

topic or event by utilizing a hash tag. YouTube users can also post and access educational content for free on YouTube, as well as comment on and rate the videos. LinkedIn also has a paid platform for e-learning embedded within it called LinkedIn Learning which features over 1,000 business courses. The topics of these courses vary from web development to digital marketing. Business professionals can pay a monthly fee to use these courses to keep their skills up to date.

### **Massive Open Online Courses (MOOC)**

Independent learners can also take advantage of Massive Open Online Courses (MOOCs) on the web. MOOCs are courses of study made available to a large group of people over the internet, usually for free. It is great for learners who want quality training on a given topic for free. Users can log into the MOOC's website and sign up for a given course. Certain MOOCs may charge a student looking to earn a specific certificate for the completion of their coursework.

Some popular MOOC platforms include:

- Coursera
- edX
- FutureLearn

Other platforms, such as Udemy and Skillshare, are similar to a



MOOC in that they are massively available online. However, they are different in that they charge the user and focus more on practical engagement with material as opposed to passive learning methods, such as lectures that come with more university-centric MOOCs. No matter the platform, e-learning is a flexible, adaptable way for professionals and students alike to bolster their skills.

### **Gamification tools and applications in E-learning**

With the emergence of the Internet, mobile apps, and gamification, educational activities have transformed into e-learning — using technological processes to facilitate learning and turn it into an exciting experience. When it comes to gamified eLearning, it's not usually about designing a full-blown video game. It's about taking elements that make games engaging, motivating or educational and incorporating those into the learning experiences you design. To use gamification in eLearning, its best practice to incorporate elements such as:

#### **Stories**

Create a compelling storyline to captivate your users and take them on a journey. Create a story that embeds users in the plot as they tackle each section of the content. This is a great way to create immersive content and keep learners engaged throughout.

Incorporating characters or avatars to represent employees can add an extra layer of fun to this.

### **Visual design**

Eye-catching visuals and aesthetically pleasing designs can make your eLearning more appealing and draw your users in. Combine bright colours and graphics for a visually-stimulating learning experience.

### **Competitions**

Allow users to compete against others in their team or anonymous players, or even against themselves to keep motivation levels high. Consider including leader boards so learners can see how they're performing against their peers.

### **Challenge**

Reward your learners with smaller, more frequent tasks and then ramp up the difficulty level as the session progresses. This will not only help them get into the swing of things, but leave them primed and ready for more difficult, rewarding challenges using what they have learnt along the way.

## **Rewards**

Incentivizing your users in the way of rewards such as badges, medals or unlocking new levels can help to boost their motivation and keep them engaged for longer periods of time.

## **Feedback**

Providing instant feedback when a learner completes a task or quiz is a great way to keep them focused and engaged as it allows them to track their progress as they move through the different stages of the game.

The e-learning authoring tools with gamification are Duolingo, Codecademy Go, Khan Academy, Udemy, Tinycards, Sololearn, and Coursera

## **Conclusion**

Use of E-learning tools and applications provide how elearning can be used in education such as making use of learning management systems, social media tools gives learning platforms for the learners to interact and collaborate the ideas and information for learning, similarly massive open online courses helps the learners to study or get knowledge from the available different courses. Gamification tools and applications provide interactive learning,

motivation to learners, learning through fun, involvement in learning.

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**POSITIVE MENTAL HEALTH: BUFFERING, BOLSTERING,  
AND RESILIENCE TO BUILD MENTAL HEALTH****E Michael Jeya Priya**Assistant Professor of Biological Science  
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Palayamkottai, Tirunelveli**Introduction**

Mental health and mental illness are determined by multiple and interacting social, psychological, and biological factors, just as health and illness in general. The clearest evidence relates to the risks of mental illnesses, which in the developed and developing world are associated with indicators of poverty, including low levels of education. The association between poverty and mental disorders appears to be universal, occurring in all societies irrespective of their levels of development. Factors such as insecurity and hopelessness, rapid social change, and the risks of violence and physical ill-health may explain the greater vulnerability of poor people in any country to mental illnesses (Patel & Kleinman 2003). Economic levels have important implications for family functioning and child mental health (Costello et al. 2003; Rutter 2003). Mental, social, and behavioural health problems may interact to intensify each other's effects on behaviour and well-being. Substance abuse, violence, and abuses of women and children on the one hand, and health problems such as heart disease, depression, and anxiety on the other, are more prevalent and more difficult to cope with in conditions of high

unemployment, low income, limited education, stressful work conditions, gender discrimination, unhealthy lifestyle, and human rights violations (Desjarlais et al. 1995). Concepts of mental health include subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one's intellectual and emotional potential. It has also been defined as a state of well-being whereby individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities. Mental health problems affect society as a whole, and not just a small, isolated segment. They are therefore a major challenge to global development. No group is immune to mental disorders, but the risk is higher among the poor, homeless, the unemployed, persons with low education, victims of violence, migrants and refugees, indigenous populations, children and adolescents, abused women and the neglected elderly.

### **Stress Buffering**

A buffering effect is a process in which a psychosocial resource reduces the impact of life stress on psychological wellbeing. Having such a resource contributes to adjustment because persons are less affected by negative life events. The buffering model of social support states that effective social support networks lessen the adverse psychological consequences of stress. Social support,

instead of merely protecting an individual against the negative impact of stress, may itself be important in ameliorating depressive symptoms. The concept of the stress-buffering model is that certain resources help to reduce the impact of negative life events on an individual's health status. An accumulation of adverse occurrences can be related to health problems, but life stress may have less effect among people who have more psychosocial resources. In this sense, the resource serves as an insulating factor, or buffer, between the stressors and the disease outcome, so that people who have more resources are less affected by stress.

### **Social support**

One type of stress-buffering agent is *social support*. Social support can be defined as resources provided by others that help a person to cope better with problems. Research has shown that persons with more social support are less affected (or unaffected) by negative life events. Supportive relationships contribute to wellbeing because they provide a source of intimacy, acceptance, and confiding about emotions (emotional support), which provides buffering effects across a broad range of life stressors. Supportive persons may also offer useful advice and guidance (informational support). By providing such resources, personal relationships help to reduce the impact of stress on depression and anxiety. Some studies have also suggested that social support can provide buffering effects

that reduce the risk of mortality from cardiovascular disease or cancer. An implication of the stress-buffering model is that interventions to enhance available social support or to teach persons positive attitudes about commitment, control, and challenge can help make persons less vulnerable to negative events. Such interventions can be conducted in school, clinic, or community settings so as to improve people's coping ability and thereby improve the mental and physical health of the population.

### **Bolstering in enhancing mental health**

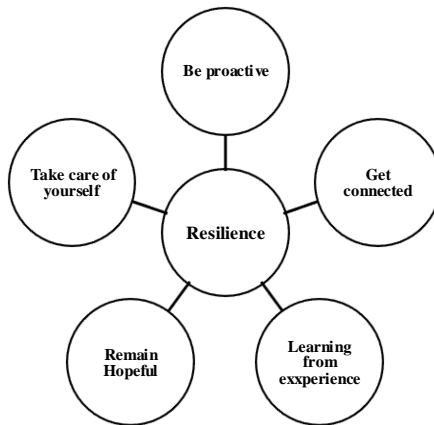
The bolstering effect of positive psychology is seen when positive emotions, processes, conditions, and/or relationships act to maintain mental health despite the crisis. The building effect emerges when the individual is able to use the crisis in a transformative way to develop new practices (e.g., greater strengths use), new processes (e.g., more self-compassion), and new outlooks (e.g., enhanced meaning) that can lead on to improved mental health in the future."Bolstering is a term that is used to describe the method that a person uses to get rid of cognitive dissonance and reassure them. Bolstering can occur as self-bolstering or it can even happen when one person bolstered another. Thus the way that bolstering occurs depends on the person and their behavior, thought the process, and the way that they perceive themselves. One method of bolstering that can happen is a person could compare themselves to other people



who they perceive as making bad decisions. A person could also completely ignore the negatives and thus ignore the downsides of an issue or a person could just avoid the entire issue entirely.

### Resilience during pandemic

Resilience refers to the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress. Resilience can help protect you from various mental health conditions, such as depression and anxiety. Resilience can also help offset factors that increase the risk of mental health conditions, such as being bullied or previous trauma. If you have an existing mental health condition, being resilient can improve your coping ability.



### Ways to improve Resilience

- **Skill Acquisition** -Acquiring new skills can play an important part in building resilience, as it helps to develop a sense of

mastery and competency. Skills to be learned will depend on the individual. Acquiring new skills within a group setting gives the added benefit of social support, which also cultivates resilience.

- **Goal Setting**-The ability to develop goals, actionable steps to achieve those goals, and to execute, all help to develop will-power and mental resilience. Goals can be large or small, related to physical health, emotional wellbeing, career, finance, spirituality, or just about anything.
- **Controlled Exposure**-Controlled exposure refers to the gradual exposure to anxiety-provoking situations, and is used to help individuals overcome their fears
- **Make connections** -Resilience can be strengthened through our connection to family, friends, and community. Healthy relationships with people who care about you and will listen to your problems, offer support during difficult times and can help us to reclaim hope.
- **Avoid seeing crises as insurmountable problems**-We cannot change the external events happening around us, but we can control our reaction to these events. In life, there will always be challenges, but it's important to look beyond whatever stressful situation you are faced with, and remember that circumstances will change.

- **Accept that change is a part of living-** By accepting that which you cannot change, it allows you to focus on the things that you do have control over.
- **Move toward your goals-** Creating small, actionable steps makes our goals achievable, and helps us to regularly work towards these goals, creating small “wins” along the way.
- **Take decisive actions-** Instead of shying away from problems and stresses, wishing they would just go away, try to take decisive action whenever possible.
- **Nurture a positive view of yourself-** Working to develop confidence in yourself can be beneficial in preventing difficulties, as well as building resilience.

## Conclusion

Positive psychology factors that can be incorporated into interventions, including helping people find a sense meaning and coherence, providing information on coping skills and how to engage in positive refocusing and re-appraisal, highlighting the importance of drawing upon one’s self-compassion, courage, grit, gratitude, hope, and other character strengths, giving priority to the things that foster positive emotions and optimism, and, finally, finding ways to foster positive relationships, positive resonance and HQCs. These positive psychology factors

can be woven into new public interventions and/or incorporated into existing programs that have proven to be successful during past pandemics such as self-administered computer training mental health first aid and cognitive behavioral therapy groups together with those that have shown early effectiveness in the COVID-19 pandemic such as mobile phone delivery of music therapy mobile phone counseling and social media interventions

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## DIGITAL LEARNING IN HIGHER EDUCATION

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### **Introduction**

In the present time, the wide reach of internet and smart gadgets for digital access to learning resources happens to be the potential saviour as it brings learning resources to the learners. In fact, due to far reaching impact of digital learning at global as well as at local level, it has become a way of learning. The learner's response on the use of different digital learning platforms shows that the use of digital learning technology increases student engagement in course, barrier free access to learning materials and the use of adaptive technology in digital content show definite improvement in their performance. Digital learning is replacing traditional educational methods more and more each day. With how classrooms are changing rapidly, it is best to forget methods that you may remember from when you were in school and start thinking about newer teaching and learning techniques based on digital learning tools and technologies. In India, where mobile penetration is very high and with millions of people connected to the internet, the potential to digitally educate the masses seems very rich. In the past few years there has been a considerable rise in Digital and Live

Virtual Classrooms at different levels of learning. The inclusion of digital learning in the classrooms can vary from simply using tablets instead of paper and using elaborate software programs and equipment as replacing to the simple pen. Digital learning has come to play a crucial role in education. It empowers students by getting them to be more interested in learning and expanding their horizons.

### **Digital Learning**

Digital education is fun learning for all cadres and particularly effective for child learning as the innovative audio-video feature boosts the cognitive elements in a child's brain. The INFO-TAINMENT combination involved in digital learning makes it more practical, applicable and relatable to our life and surroundings in an interesting manner.

### **Definition of Digital Learning**

In order to overview some main aspects of digital learning, I would like to describe its main components and define the general terms: Educational technology is defined by the Association for Educational technology refers to all valid and reliable applied education sciences, such as equipment, as well as processes and procedures that are derived from scientific research, and in a given context may refer to theoretical, algorithmic or exploratory processes: it does not necessarily imply physical technology. Computer-supported collaborative learning (CSCL) uses

instructional methods designed to encourage or require students to work together on learning tasks.

Learning takes place through conversations about content and grounded interaction about problems and actions. This collaborative learning differs from instruction in which the instructor is the principal source of knowledge and skills. CSCL uses social software such as blogs, social media, wikis, podcasts, cloud-based document portals (such as Google Docs and Drop box) and discussion groups and virtual worlds such as Second Life. Social networks have been used to foster online learning communities around subjects as diverse as test preparation and language education.

### **Impact of digital learning**

Well-developed learning, enhanced and supported with digital tools, can:

- Enhance the student experience
- Potentially improve student outcomes
- Widen participation
- Improve accessibility and inclusion

There are however also risks with adding a digital element to learning that could result in:

- ✓ Challenges reconciling the inconsistent experience resulting from the differences between the physical and digital student experience
- ✓ Impact on connectivity and bandwidth on the experience



- ✓ Technology displacing effective practice
- ✓ Poor experience due to insufficient skills and capabilities across staff and students

### **Overview of digital learning in the sector**

Digital learning is an opportunity to rethink the way we design and deliver university courses from the ground up. Many universities will aim to provide a parity of experience to all students, whether they study online or in person, locally or from abroad. Students, in turn, will benefit from a greater choice of pace and place of learning. The wide adoption of digital learning will mean that our ideas of what it means to belong to a university community will need to be reconsidered. Personalised and proactive, digital learning could help build and nurture lifelong relationships for both students and staff but they will also need support to develop the digital skills, confidence and resilience required to succeed in the new environment. A systemic approach to digital learning will help to break down the silos between different tools, adopting instead an ecosystem-based approach. Emphasising the importance of an intuitive and consistent experience (alongside reliable and secure) will enable students and staff to make the most of the promise of digital learning.

It is tempting when discussing technology-enhanced learning to focus on the digital technology element, not least because of the cost and challenge of learning how to use it. However, we are very

clear that the pedagogic considerations are vastly more important. All successful education and training requires close attention to learning design and content creation, and technology-enhanced learning is no exception. To start with the learning outcomes and work back to the teaching inputs has never been more imperative than in this period of digital transformation.

## **Challenges of digital learning**

### **Missing Social Interaction**

College is an inherently social time for many of us. It's where we meet lifelong friends, even our future Partner. The social energy of a physical classroom can help with learning: There's lively discussion, people bouncing their ideas off each other, forming groups, lifting each other up. All these opportunities missing in online course

### **Need for Self-Discipline**

Many students struggle with self-discipline in a higher education classroom setting. In an online course, it's even easier to "skip class" or put off an assignment.

### **Lack of Teacher Contact**

It's easy to underestimate how much teacher interaction with students get on a physical campus. There is the instruction time itself, with real-time question-and-answer. Then there's potential for conversation right before and after class, but these all aren't available in digital learning. It is also possible that these technologies will be

less able to engage reluctant learners in the way a dynamic and charismatic teacher can.

### **Poor Time Management**

This challenge is related to the self-discipline piece, but it deserves its own entry. One of the major advantages of online learning is that students can learn at their own pace. Though that advantage can also be a liability, There's a point at which "their own pace" turns into "procrastination and a mad rush at the end of the semester." It's important to help students manage their pace well before the deadlines hit.

### **Technological Difficulties**

Some students without reliable internet access and/or technology struggle to participate in digital learning. We tend to take it for granted that everyone has access to a recent-model laptop or desktop computer. However, even for a generation of digital natives, not every student has the same access to technology. Many rely on their Smartphone or a tablet for all of their online activity. Some will have limited access to broadband or Wi-Fi, even — all of their data comes through their phone plan.

### **Digital Education gives to all stakeholders.**

- Online education is the fastest-growing segment of higher education and its growth is overrepresented in the for-profit sector.

- A wide range of audiences and stakeholders—including faculty and academic leaders, employers and the general public—are skeptical about the quality and value of online education, which they view as inferior to face-to-face education.
- Students in online education, and in particular underprepared and disadvantaged
- Students underperform and experience poor outcomes. Gaps in educational attainment
- Across socioeconomic groups are even larger in online than in traditional coursework.
- Online education has failed to improve affordability, frequently costs more, and does not produce a positive return on investment.
- Regular and substantive student-instructor interactivity is a key determinant of quality in online education; it leads to improved student satisfaction, learning, and outcomes.
- Online students desire greater student-instructor interaction and the online education community is also calling for a stronger focus on such interactivity to address a widely recognized shortcoming of current online offerings.
- Students view this as a flexible option allowing them to study as per their time and pace. The use of social media – from

blogging to on-line social networking to creation of all kinds of digital material is central to many teenagers' lives.

- Teachers too find it convenient to prepare their learning plans well aided by technology. Teaching becomes a smoother experience with a perfect mesh of personalized packages having a blend of animations, gasification and elaborate audio-visual effects.
- Education institutions see the rapid rise in enrollments and added revenue.

## **Conclusion**

The purpose of education is to enlighten the all people of society, if it is not fulfilled its aim, there will be two groups named developed or underdeveloped. Like wise the online or digital learning would have benefited by the all sections of the society, unless until it could be considered as a strange thing by the non-participated groups. Online learning can make education more accessible and convenient for teachers and students, but it's not without its challenges. The right structure, technology, and course materials can better equip students to succeed, in classroom and beyond. Innovation should be poured into making digital education more interactive and robust. In contemporary days the online and digital learning is a needed one, no one can ignore or avoid the changes of technical world. The online courses or digital learning may have the chance to incorporate the reciprocal ethics which will strengthen and create a strong bond

between the teacher and students community like conventional teaching practice. The governments and non-governments organizations may establish their assistance to promote the online education in every nuke and corner of the society with free of cost.

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## PARENTS' PERCEPTION OF STUDENTS TECHNICAL SKILLS

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### **Introduction**

During the COVID-19 pandemic lockdown, face-to-face training may want to now not be carried out continuously, and choice methods of getting to know had to be organized. To our knowledge, so far, there is very restrained groundwork on parents' satisfaction in the special situation of the COVID-19 pandemic, mainly focusing on a descriptive relaying of the status quo (Andresen et al., 2020; Anger et al., 2020; Huebner et al., 2020; Wildemann and Hosenfeld 2020; Thorell et al., 2021). Moreover, exploring parents' satisfaction with school in general is relatively scarce, and if existing, mug up focus on the parents of younger children (Cryer et al., 2002). To date, no probing has worked the predictors of parents' school perceptions if their children belong to the adolescence cohort. However, knowledge about parents' satisfaction with school is also important for older children, as especially during the sensible time of the adolescent phase a coherent social environment is important for the development of a young person (Perry et al., 1993).

Prior swotting also confirmed that generally during adolescence, parents continue to provide important developmental contexts for their children, particularly in form of discussion as well as role models (Behnke et al., 2004). The parents' satisfaction with school expresses the quality dimension of the family-school relationship, which is associated with the educational development of students in general (Khajehpour and Ghazvini 2011; Charbonneau et al., 2012: 60f).

Further, from an economic angle, parents are seen as important users of schools. Schools operate as institutions within an educational market and have the responsibility to meet the needs of their users or customers (Matland 1995; Fend 2008: 109ff). As parents are one relevant user group, their satisfaction should be of great interest for schools to maintain and report high-quality levels (Charbonneau et al., 2012; Peters 2015: 342f).

### **Technology skill**

Technical skills are qualities acquired by using and gaining expertise in performing physical or digital tasks. There are many different kinds of technical skills. Traditionally, people working in mathematics, computer science, mechanics and information technology have used many technical skills. Today, however, many more industries rely on employees with technical knowledge. For example, retail and food service workers often need to know how to use point-of-sale (POS) software. Technical skills vary widely



between industry and job type. For computer programmers, knowledge of various coding languages is considered a technical skill. Customer service representatives may need technical skills relating to customer management and telephone systems. Teachers might need technical skills related to instructional technologies and software applications ranging from student behaviour monitoring to grading.

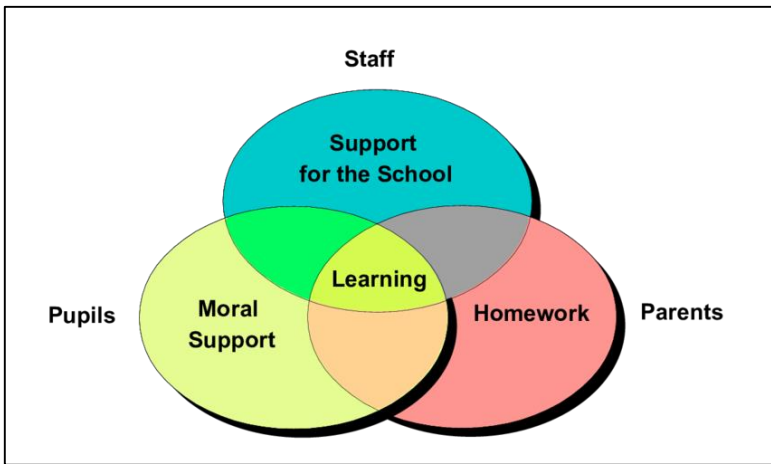
Technical skills are important because nearly every job relies on different tools, programmes and processes. If you have sought after technical knowledge and skills common in your industry, you'll be a more competitive candidate. For example, while a carpenter may have a positive demeanour and excellent customer service skills (these are good examples of "soft skills"), his skillful handling of tools and heavy machinery will be crucial to his technical and practical success.

### **Parents' Perception of Technical skill**

The parent's engagement is essential for interventions involving support for their children's development in school. The early school years of a child with encouraging and supportive parents set a good structure for educational improvement. Using text-messages or other communication systems to inform parents about their child's educational progress may have positive effects. With unique and personalised information in a text message, parents feel they have more knowledge about their child's day at kindergarten, therefore a

clear information path is produced. If the child did not remember what they ate for lunch or did during the day, parents can check their mobile phones to be updated.

A spare use of how teachers could communicate with parents is to emphasise on what the children need to improve rather than what they excel at. Technology has the potential to send personalised or general messages. Schools have an important role in how families get the most transparent and useful information. (Smythe – Leistico & Page, 2018) In a study by Can (2016) investigating parents' opinions on using a mobile application for communicating with the teachers found that the majority of parents expressed a positive attitude on using a mobile app to communicate with the teacher. It was consistent with probes that parent’s attitude toward using mobile communication apps as useful.



Collaboration between parents and teachers is essential for the student's future achievements in school. To help parents be more included in the school activities, a good info- system should be established - some suggestions for school authorities that want to implement a mobile application as a parent-teacher communication system are informing and training the teachers before using the new app. This allows the teachers to understand the usefulness and benefits of the new technical device. Providing encouragement from school authorities may attract the teachers to the use of the new system, and also increase their intention of using it. (Ho, Hung & Chen, 2012)

### **Implement of ICT**

Contemporary swotting shows that the rates of the children's use of ICT increase day by day, that the age at which they become acquainted with ICT decreases and that the applications they use diversify. (Holloway, Green and Livingstone, 2013; The Organisation for Economic Co-operation and Development [OECD], 2011; Radyo Televizyon Üst Kurulu [RTÜK], 2013).

Television, cameras, computers, and smartphones have become a part of the children's lives in our modern society (Akkoyunlu and Tuğrul, 2002). As well as readily accessing many applications that imitate the games in smartphones, children can also easily access entertainment-purpose TVs, DVD players, music players, computers

and the Internet. Furthermore, they can also easily use digital and phone cameras in order to talk to the other members of the family and their relatives (Plowman, McPake and Stephen, 2010).

ICT has also started to be used frequently in education, as well. technology has been increasingly included in education as of the 2000s, and various practices have been carried out (Marsh, Brooks, Hughes, Ritchie, Roberts and Wright, 2005; Rideout, Vandewater and Wartella, 2003; Kucirkova, Messer, Seehy and Panadero, 2014; Veenstra, van Geert and van der Meulen, 2010; Hansen, 2009; Rasanen, Salminen, Wilson, Aunio and Dehaene, 2009). It is expressed by educators that an ideal time for meeting ICT and giving training on the use of ICT is the education period (Tekcan, 2009).

The sense of curiosity of the children in this age group is promoted thanks to ICT, and the possibility to learn by living, trying and error is provided to the children in this age group. For this reason, ICT is used in various fields in education. For example, ICT is used in such fields as developing exercise skills, cognitive development, counting and mathematics and reading and writing skills, and thus, it becomes easier to give children feedback on their actions (Demir and Kabaday1, 2008).

## **Conclusion**

The parents' views on the use of technology in the early childhood period differ significantly by the gender of parents in terms of the

family guidance in technology use, benefits of the technology, technology application areas, harms of the technology and suggestions dimension. Accordingly, the scores taken by mothers in the sub-dimension of the family guidance in technology use and the harms of the technology are higher than the scores of fathers. It's carried out by Kılınc (2015), parents' views on the use of technology by students in the education period were examined by the gender variable, and it was given that male parents have more positive views on the use of technology in the education of children when compared to female parents in the dimension of technology application areas. This can be explained by the fact that the children of mothers are more sensitive about the use of technology in certain aspects.

Furthermore, parents' views on the use of technology in the early childhood period differ significantly by the working status of the mother, the age of the child and the number of children the parents have. This may be explained by the fact that the workload in working conditions is similar to the workload regarding the roles of parenthood at home, the children are all in the gaining period despite their age differences and having similar features and the educational and developmental sensitivity shown by parents towards each child is equal no matter what the number of children is.

An additional focus is that the parents' views on the use of technology in the early childhood period differ significantly by the level of income of the family in the dimensions of the skills of using

technological devices and the harms of the technology. It was taken by the parents with a low level of income in the dimension of the skills of using technological devices are higher than the outcome taken by the parents who have a middle level of income. This can be explained by the fact that the technological facilities that parents provide to their children increase as the level of income increases, and they experience the harm that the use of these technological devices can give to the child.

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