

# PERSPECTIVES ON ANALYSIS AND FUTURE DIRECTIONS REGARDING THE PANDEMIC'S IMPACT ON ONLINE COURSES AND HIGHER EDUCATION

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## ABSTRACT

*In times of crisis, it is imperative for society to embrace a transformative process, despite the potential discomfort and challenges it may entail. The Covid-19 pandemic has rapidly and profoundly impacted every aspect of people's lives, including their daily routines, employment, and social interactions, both locally and globally. This study focuses on the educational sector to illustrate the significant changes occurring within higher education institutions. The driving force behind these modifications is the urgent need to digitize their teaching and learning methods. However, this transition poses challenges for educators, some of whom lack technological expertise in online teaching, while others are well-equipped to handle it. To remain competitive and deliver high-quality education amidst rapid digital transformation, disruptive technological innovations, and frequent changes, it is essential for universities and higher education institutions to actively address these challenges. This study delves into the obstacles and issues universities encounter in pursuit of their objectives, as well as the technological tools and strategies they have adopted to reshape higher education in response to the Covid-19 pandemic. The discussion and conclusion provide a concise overview of key concepts that can improve the digitization of education. On a broader scale, it is anticipated that the forthcoming period will be characterized by the prevalence of online services and the need to adapt to the evolving technological landscape.*

**Keywords:** COVID-19, Digitalisation, Digital transformation, Higher education institutes, Online learning, Pandemic

## INTRODUCTION

The current Covid-19 pandemic has resulted in unparalleled upheaval, resulting in substantial alterations in both economic and social spheres (Mou T-Y (2020, Mou, 2023). Moreover, the swift worldwide spread of the Covid-19 virus has caused a profound sense of astonishment across the globe. The global crisis has resulted in the closure of schools in about 180 nations, causing significant disruptions to the educational experiences of over 1.7 billion children, adolescents, and their families (Saavedra, 2020; Hari et al. 2023). To curb the spread of the virus, many governments and society organizations globally initiated social isolation efforts, enforced lockdown measures, and put limitations on interpersonal interactions with those outside one's immediate family. Despite the passage of two years since the start of the pandemic, many organizations still face ongoing challenges as a substantial number have not yet returned to physical workplaces. Instead, they have chosen to continue implementing remote work arrangements, commonly known as work from home (WFH). As a result, the ongoing pandemic has had a substantial impact on educational endeavours (Othman, 2021). The overall perspective was marred by a range of negative consequences, such as inflation that had become unmoored, financial strain, societal unrest, and most significantly, the student population grappling with difficulties arising from the altered methods of instruction and interpersonal engagement inside the academic and university setting (Alawamleh, et al. 2020). The education system has encountered an unparalleled health crisis that has significantly disrupted its fundamental structure. In light of the current uncertainty, it is imperative to get a comprehensive comprehension of students' experience with online learning during the COVID-19 pandemic

(Arifiati, N., Nurkhayati, E, 2020). Despite the extensive research conducted in this field, there remains a scarcity of knowledge pertaining to the difficulties encountered by students and the precise approaches they adopt to surmount these hurdles (Stone and Pate, 2020). It is imperative that the entire educational system, spanning from primary school to higher education, undergo a thorough reform within a short timeframe to facilitate the transition to an online teaching and learning environment. This adjustment is important to streamline the transition and examine a new sequence of delivery and academic framework for educating the pupils. Nevertheless, a little fraction of individuals managed to accomplish the task proficiently, while the rest of them faced challenges stemming from various factors (Azubuiké, O. B., Adegboye, O., & Quadri, H, 2021).

As a result of the disruptions brought on by the pandemic, the global higher education sector is in the midst of a substantial digital shift (Bambra, C., Riordan, R., Ford, J., & Matthews, F, 2020). This is impacting the formation of a new standard. Carolan et al. (2020) found that the sudden and obligatory shift to remote teaching has put teachers and students in unforeseen circumstances, necessitating rapid adaptation to virtual or online learning settings (Barton, D. C. 2020). The modern method of education that makes use of information technology and is carried out online is frequently referred to as "e-learning," and the word "e-learning" is widely used to characterise this method (Daniel, S. J., 2020).). Because to a number of unanticipated factors, colleges, universities, and other establishments of higher learning have been obliged to swiftly transform their instructional methods into an online or virtual format. Because of the nature of this modification, it was necessary to make use of technological resources that had already been developed, and it also required the participation of academics and researchers who may have lacked adequate technological expertise. It is vital for the university system to effectively deliver education of outstanding quality (Dhawan, S. 2020). This is because the educational environment is rapidly evolving against the backdrop of digital transformation, disruptive technology innovation, and the rapid growth of the educational landscape (Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E., 2020). The development of disruptive innovations reflects a moment that is defined by ambiguity and potential perils; yet, it also presents an advantageous juncture that adds skill and ingenuity into the field of education. As a result of the fact that many educational establishments at the higher education level were not adequately prepared for the aforementioned transition, time restrictions and stress were experienced by all parties involved. As a direct result of this, a number of establishments were unable to function for extended periods of time as a direct result of their lack of preparation (Drabowicz, T. 2017).

A disruption is either a sudden stop or an unexpected break in a routine or activity. The term "disruption" is used to refer to a break from the traditional ways that knowledge is transmitted within the context of the field of education. According to (Gillis, A., & Krull, L. M., 2020), has the capacity to surpass or dismantle outdated paradigms while simultaneously introducing novel alternatives. Unintentionally, they hinder the functioning of current educational models, initially by strengthening those models and then by offering new perspectives on the evolutionary trajectory of such models. An example of an educational innovation that might be called disruptive is the introduction of novel learning possibilities that challenge and modify the current techniques and systems of information delivery. Furthermore, it enhances current teaching methodologies by incorporating information and communication technology, sometimes referred to as "ICT." Both the teacher and the student are considered active contributors in the learning process according to the supported paradigm of the educational revolution, while the modern digital education enables the implementation of an open curriculum. Moreover, this phenomenon requires the creation of novel educational resources, platforms, environments, and approaches, as well as a change in the students' function and how they obtain and utilize academic information. Disruptive innovations can effectively meet the requirements of both existing consumer bases and the currently provided offerings. However, the length, scope, and magnitude of the transition should be used as the foundation for educational advancement and transformation. Universities should proactively foster engagement and promote critical thinking based on empirical facts to successfully transition away from outdated educational systems. This will facilitate the advancement of efficient migration from obsolete learning platforms.

Because of the widespread disruption caused by the COVID-19 epidemic, there has been a discernible rise in the number of people opting to receive their education online. In recent years, there has been a significant shift in the field of pedagogy away from the more traditional face-to-face educational methods and toward the use of online courses. Additionally, there has been a transition away from individualised training and toward virtual training, as well as a transition away from conventional seminars and toward webinars (Gupta, R., Aggarwal, A., Sable, D., Chahar., 2022). It is projected that the fallout from the pandemic would usher in a significant new period of technological transformation and hasten the digitisation of higher education across the globe. The pandemic caused by the Covid-19 virus has caused substantial disruptions, which have both given opportunities and presented hurdles for the process of transforming higher education institutions (HEIs). In order to effectively adapt to the new conditions, educational institutions of higher learning, such as universities and other schools of higher learning, are being challenged with the task of reevaluating and reconstructing their educational programs, the delivery systems and the teaching-learning process. During this period of dynamic changes that are occurring in academic environments, the structure experienced a complete redesign, which resulted in a number of challenges and required a change in delivery models (Iivari, N., Sharma, S., & Ventä-Olkkonen, L., 2020). After analyzing the shortcomings, our objective is to address them by demonstrating the swift implementation of digital education and training at Higher Education Institutions (HEIs), achieved through the rapid adoption of digital delivery methods. Educational institutions must demonstrate a cognizance of potential challenges, adopt innovative tools and methodologies, and effectively incorporate technology into the teaching and learning process in order to successfully navigate the process of transformation. This also necessitated the utilization of teaching methodology that experts employed to introduce novel approaches and instructional methods, like such. This study aims to assess the diverse technological tools and approaches employed by universities, while also delineating the primary challenges faced by the academic community, encompassing professors, students, and the institution as a whole. The objective of this study is to analyze the diverse technology tools and methodologies employed by universities, along with the benefits and difficulties associated with these delivery modes. Additionally, the study aims to assess the students' receptiveness to the new educational landscape (Kaur, S., Bherwani, H., Gulia, S., Vijay, R., & Kumar, R. 2021).

The report includes findings obtained from conducting comprehensive analysis with college students and staff members discussing their experiences with online learning (LeBlanc, P. 2020). The study utilized grounded theory and employed an online data gathering methodology to construct a paradigm model for online learning experiences within this specific demographic (Lee, J., & Han, S. H. 2021). This research proposes a paradigm model that illustrates the progression of online learning, specifically focusing on its adoption, efficiency, and outcomes Lemay, D. J., Bazelais, P., & Doleck, T. (2021). The model includes the factors and circumstances that caused and enabled the start and advancement of the main occurrence. This study investigates the tactics utilized by students and instructors to overcome both external and internal barriers that impeded their learning. Additionally, it examines the contextual variables that impacted the efficacy of various tactics. Ultimately, the model evaluates the results of these activities. In the end, the previous paradigm model produced following units of significance Saikat, S., Dhillon, J. S., Wan Ahmad, W. F., & Jamaluddin, R. A. D. (2021). At first, the individuals with a vested interest expressed doubt or disbelief towards alternative teaching approaches, such as online learning. Gradually, their ability to regulate themselves became better and their comprehension of self-control became more profound. Digital literacy, especially concerning differences between generations, has a substantial impact on enabling learning (Soomro, K. A., Kale, U., Curtis, R., Akcaoglu, M., & Bernstein, M. 2020)., nurturing online communities (Szopiński, T., & Bachnik, K. 2022)., and encouraging personal development through virtual contacts. Afterwards, the influence of the entire learning environment on the future goals of online learning was taken into account. The criteria for online education were formulated based on the insights and expertise of individuals who have been directly involved in online learning.

## REVIEW OF LITERATURE

A large number of research studies have been carried out in order to explore various elements of online learning, such as student satisfaction, the acceptability of e-learning, criteria for success in distant learning, and the efficacy of online learning. Ayu (2020) asserts that the prevalence of online learning in higher education has grown significantly, becoming an essential component of global education. This may be attributed to the rise of online teachers, advancements in Internet technology, heightened student expectations, and the implementation of effective pedagogical strategies. An observation was undertaken by Dhawan (2020), carried out an observational study during the COVID-19 epidemic that explored the difficulties that are linked with online learning in Indian setting. An empirical study was carried out by Muthuprasad et al. (2021), and its primary purpose was to investigate the viewpoints and preferences of students with relation to online learning. The COVID-19 pandemic caused the closure of a large number of schools and institutes (p.2) when it first broke out. During the time of epidemic, a sizeable majority of respondents, particularly 70 percent, said that they were willing to pursue education through the use of online courses. Despite this, rural students struggle to access online learning programs due to lack of suitable broadband connectivity in their areas. According to the findings of the study, participants in online programs had the impression that the coursework was more difficult and unique than traditional classes because of reasons such as ineffective instructor contact, technological limitations on internet connectivity, and delayed instructor responses. Moreover, the personal connect which happens during the physical class setting was missing and such interaction are very supportive for learnings from the peer team members, per se. According to, The COVID-19 pandemic has had a tremendous impact on both the overall mental health of children and the quality of the educational opportunities available to them. However, students can overcome these problems through a variety of tactics, such as improving their technical aptitude, strengthening their resource management and utilisation skills, efficiently managing their time, and asserting control over the learning environment. In the research by (Bahasoan et al., 2020), it was seen that putting online learning programs into action during unexpected social situations could be hard if both teachers and students don't know how to do it right. In situations like this, looking at how Generation Z students learn can help teachers not only understand how their students learn, but also really get to know them in the setting of online education.

In the midst of the COVID-19 epidemic, a considerable amount of research has been performed to evaluate the aspects that effect students' enjoyment and academic progress in online courses. As a result, a huge body of scholarly work has been produced in this field as a result of these studies. In their research, Bozkurt and attempted to determine the relative efficacy of face-to-face or traditional teaching methods in compared to online or hybrid learning approaches. Specifically, they were interested in determining which method was more effective. According to the findings of the studies, it has been seen that students achieve much higher levels of academic success when they participate in online learning rather than traditional learning environments. The execution of a course design that has been well planned out and successfully carried out has the ability to increase the level of satisfaction that students have with the educational system. On the other hand, if the course is well-designed, there is a greater chance that students will interact with the online learning platform and achieve higher levels of academic success as a result. An observation was done by Friedman et al. (2021) and the study was conducted using data obtained from the Household Pulse Survey in order to investigate the current state of online education among children in the United States during the early fall session of the year 2020. The study's primary objective was to concentrate on those children who did not have access to the Internet or a computer. The data, as reported by the authors, revealed that on a nationwide scale, a proportion of 10% of children who participate in online education do not have enough access to both the Internet and a computer. There appears to be a concerning disparity in the intellectual capacity of youngsters living in the United States, according to the findings of the study. When it comes to assessing whether or not a student is happy with an online course, the quality of the instructor is an extremely important factor (Dumford and Miller, 2018). A

person is considered to be highly competent in the field of education if they have a profound comprehension of the educational needs of their students, demonstrate extraordinary qualities as a teacher, and are skilled at meeting those educational needs. In spite of the fact that students provide favourable feedback on the quality of professors who teach online, the studies that were discussed previously as well as the findings of the authors suggest that there are four primary criteria that greatly influence students' learning outcomes and satisfaction while participating in online sessions. These aspects are: 1) the structure of the class; 2) the caliber of the instructor; 3) the provision of timely feedback; and 4) the expectations that the students have from the class. Furthermore, as per the findings of Lasfeto (2020), students gradually adapt to the online learning environment and undergo a process of reorganization and recognition. During this process, they actively engage in preparing themselves for learning and apply various tactics to overcome any disruptions in their learning experience.

## RESEARCH GAP

Current research indicates a notable dearth of studies investigating the impact of course design, instructor competence, prompt feedback, and students' expectations and satisfaction with online courses during the era of the epidemic. Despite extensive study conducted by various scholars on the determinants of student satisfaction, along with the associated difficulties and limitations, this gap has been acknowledged. Due to the epidemic, educational institutions were compelled to transition to a new platform, necessitating educators and students to adapt to the unfamiliar learning environment. This was a result of the occurrence of the epidemic. All participants perceived this endeavor as a formidable task. Before implementing a major change in the curriculum, insufficient effort was made to ensure that the children's mental preparedness was effectively addressed. The main objective of this research is to examine the concerns expressed by students regarding the utilization of online education as a strategy to alleviate the impact of the pandemic and to prepare for unforeseeable future crises. The objective of this study is to examine several elements that impact students and their viewpoints, as indicated by the level of satisfaction they have with the overall experience. Furthermore, this study comprehensively examined several approaches that might be employed to enhance online courses, with the aim of effectively addressing students' educational requirements.

## SIGNIFICANCE OF PRESENT STUDY

The worldwide pandemic has significantly influenced the methods by which education is imparted across the globe. The epidemic has expedited the shift from conventional modes of schooling to digital and internet-based alternatives. When engaging with the teaching staff and students at the universities in issue, these organizations and institutions typically communicated with those groups utilizing the indicated technique. To proceed with the implementation of this plan, it is essential to accurately identify and thereafter resolve a diverse range of hurdles and challenges. We can go to the following step only after that (Gupta, 2021). The method of virtual learning includes the utilisation of movies that are brief and of a high quality, as well as interactive visual representations and exercises, instructive presentations, and active involvement, including the use of cold calling. The participation of students in the learning process is meant to be encouraged and sustained through the use of this strategy. After the outbreak has been contained and for the foreseeable future beyond, a sizeable proportion of the population is under the impression that the prevalence of online education will continue as it is and may even see further expansion. This is a prevalent and prevailing belief among the populace. This claim is supported by the fact that a significant number of people share the same viewpoint, which accounts for a large proportion of the population. Argue that a significant portion of educational instruction will be conducted via online platforms, leading to the availability of a wide range of academic programs for students. The academic achievement of a student can be impacted by various aspects, such as the quality of teaching and learning, the degree to which course objectives are achieved, the proficiency of instructors, and the utilisation of suitable

technology. One notable characteristic of online learning is the potential for students to engage in interpersonal interactions. The user actively engages in the discourse of ideas, providing input and actively soliciting the perspectives of a diverse global community involved in the pursuit of knowledge. Participants in the training program gain a deeper and more thorough understanding of the universe via the inclusion of various experiences and perspectives that are shared and discussed among each other during the course. It is reasonable to assume that all pupils will use technology and enthusiastically embrace its potential. Nevertheless, it is crucial to acknowledge that this presumption cannot be only derived from the myriad benefits linked to technology. To provide convincing evidence of the manifold advantages offered by contemporary technology, it is crucial to conduct a thorough analysis of the influence of online learning and virtual collaboration on academic performance. By employing virtual collaboration and online learning, policymakers can evaluate academic performance and adopt academic programs that have a major influence on a large number of higher education students. The study's conclusions have significant significance for the establishment and execution of public policy. A comprehensive study intervention is required. The current study is significant as it examines the difficulties encountered by students in the setting of online education, as well as potential tactics for the future incorporation of online courses. This aspect of the research carries considerable significance.

### **THE PURPOSE OF THE STUDY**

Due of the extensive epidemic, numerous aspects of public life were significantly limited, representing a significant deviation from previous eras. This demonstrated the extent of the transformation. It is crucial to highlight that this led to the total eradication of any form of education and training that were provided in a one-on-one format. Within the scope of these objectives for the study, we will evaluate not only the students' capacity to proficiently handle stress but also their study routines, academic achievements, and overall state of well-being. The main aim of this project is to examine the difficulties encountered by teachers and students and suggest practical and environmentally sustainable solutions. Furthermore, it suggests exploring other methods that might be employed to enhance the efficiency and user-friendliness of online education for a wide range of student demographics.

### **ASSUMPTIONS AND INFERENCES**

#### **Quality of the instructor and satisfaction of the students**

Paul & Jefferson (2019) posit that an increasing body of data indicates that teachers who exhibit authentic care for the educational experiences of their students are more likely to be efficacious. The assessment of a teacher's overall effectiveness can be partially accomplished by evaluating the level of satisfaction exhibited by their students regarding the knowledge they are receiving from their respective instructors. It is plausible to hypothesise that the utilisation of this approach makes a substantial contribution to the notable augmentation of student engagement, as well as the improvement of learning outcomes, inside the realm of online education. This scenario can be achieved if the instructor effectively articulates the problem at hand and cultivates student motivation. This particular research study examines the concept of teachers possessing a specific amount of experience.

*Assumption:* There exists a positive correlation between the level of skill of educators and the satisfaction experienced by pupils who are enrolled in online sessions.

#### **Course design and satisfaction of students**

The arrangement of the class holds substantial sway, both on an individual and collective level, over the extent of learning that occurs and the level of satisfaction attainable by pupils. Based on the findings of Bozkurt

and Jung Xiao (2020), it can be concluded that the implementation of dynamic course design yields superior outcomes in terms of attaining desired levels of success when compared to traditional course design. When formulating an educational curriculum, it is imperative to consider the diverse range of cognitive processes via which pupils may acquire knowledge and understanding. Students that participate in an online course may exhibit diverse learning styles; yet, it remains possible to cultivate the characteristics of a well crafted curriculum, notwithstanding these variations. This study assumption that course design influences student satisfaction

*Assumption<sub>2</sub>: The design of the course has a beneficial influence on the level of satisfaction experienced by students participating in online education.*

### **Prompt feedback and satisfaction of students**

Thompson and McDowell's research suggests that the provision of feedback to students facilitates teacher-student interaction pertaining to the students' overall performance. Furthermore, research has indicated that the timely delivery of feedback significantly impacts students' satisfaction levels. This finding is an additional contribution to the previously reported discovery. Based on the results of this study, it can be inferred that offering prompt feedback to students engaged in online learning positively influences their reported satisfaction levels with respect to their participation in online education (Thompson and McDowell, 2019). Thus, this study assumption that prompt feedback affects happiness.

*Assumption<sub>3</sub>: Providing students with prompt feedback on their assignments enhances their overall satisfaction and engagement in the realm of online education*

### **Expectations and satisfaction of students**

Shenoy and Shenoy (2020) assert that a considerable proportion of web-based educational workshops adopt a constructive methodology to enhance students' pre-existing expectations, hence impacting the level of satisfaction derived from their educational encounters. The Expectation Disconfirmation Theory (EDT) is a conceptual framework utilised to assess an individual's level of enjoyment. It is postulated that increased expectations among students may exert a favourable impact on their level of satisfaction with online learning. This hypothesis is derived from the empirical evidence obtained through a comprehensive investigation aimed at examining the potential correlation between student expectations and their overall level of happiness (Shenoy and Shenoy, 2020). This study posits that there exists a relationship between student expectations and their degree of satisfaction.

*Assumption<sub>4</sub>: The level of satisfaction with online learning is positively influenced by students' expectations and their motivation to learn in an online environment.*

### **Performance and Satisfaction of the students**

Performance can be conceptualised as the result of the collective endeavours of both students and teachers. The acquisition of objectives and accomplishments carries substantial significance within the domain of education. Therefore, the primary objective of the comprehensive educational system is to achieve student achievement. The academic achievement of students exerts a substantial influence on the overall effectiveness of educational establishments, while also serving as a pivotal factor in promoting sound socio-economic progress. Academic achievement has a crucial role in facilitating the development of knowledge and skills. Jessie et al (2021), argue for the imperative of regularly administering assessments or examinations. The present study proposes the notion that there exists a presumption regarding the influence of student well-being on their academic achievement. Therefore, it is posited that the pleasure of students has a beneficial impact on the academic achievement of students within the context of online education. The studies propose that there exists a correlation between the level of satisfaction experienced by students and their overall academic achievement.

*Assumption<sub>5</sub>: The level of student satisfaction has a positive impact on their ability to learn knowledge through online training*

## Satisfaction as mediator

The purpose hypothesis seeks to clarify the significance of incorporating enjoyable activities into children's educational pursuits, while also ensuring academic advancement. When students possess a comprehensive understanding of the various aspects that exert effect on their academic performance, they frequently demonstrate a proclivity for achieving more favourable educational outcomes. According to the study conducted by Barrot et al. (2021), the study examined several institutional aspects, namely academic expectations, prompt feedback, course design, and instructor quality. Based on the results of this study, it is evident that various elements, including the quality of instruction, class structure, promptness of feedback, and individual student aspirations, significantly influence the extent to which students attain their educational objectives. Several factors can influence the level of success that students achieve in an online learning environment. These factors include the competence of the instructor, the organisation of the course, the timeliness of feedback provided to students, and the students' personal expectations. These several factors all contribute to the assessment of a student's satisfaction, which subsequently impacts their overall academic achievement.

*Assumption<sub>6</sub>: The academic achievement of students in online learning environments is contingent upon a multitude of aspects, encompassing the caliber of instructors, the design of the course, prompt feedback mechanisms, and the expectations held by students. Several factors have a role in influencing student satisfaction, which subsequently has a significant impact on their overall academic success.*

## RESEARCH QUESTION

The current pandemic has had a significant impact on a wide range of markets, with the education sector being the most notable one. This has led to a variety of consequences, including both positive and negative repercussions for the firm. Despite the prevalence of challenges, many institutions faced difficulties in adjusting to the changed conditions, with the bad implications outweighing the beneficial aspects. Certain individuals required a significant amount of time to successfully adapt to the new schedule, while others demonstrated quick adaptability. Specific people exhibited proficiency in adjusting to the new routine. On the other hand, a large portion of the population faced challenges in efficiently adjusting to the new way of thinking. This difficulty emerged as a result of the implementation of the new pattern. When students switch from traditional teaching methods to the modern approach of online learning, they have observed a significant increase in their stress levels. The introduction of extra barriers has had an adverse effect on the overall academic performance and grades of the young individuals. The described situation has negatively impacted the overall academic performance of the students. To commence the problem-solving process, the first phase entails gathering information from the varying viewpoints of the many stakeholders. The study was undertaken with the aims of identifying feasible remedies and enhancing the general public's opinion of online education. The aim of this study is to analyze the various difficulties, issues, and barriers associated with online education in order to foster the development of more efficient and suitable solutions.

## DATA COLLECTION

One of the educational institutions examined in the study is an establishment that provides virtual courses to its students. The study sought the involvement of students who are currently enrolled in educational institutions that offer online course options and online student registration. This involvement was asked through the completion of an online survey. The study utilized a random number generator to choose educational institutions, and each institution furnished a database containing information specific to its student body. On the other hand, participants who had completed online educational courses for approximately ten months during their entire academic journeys were specifically encouraged to take part in the study. This phenomena can be



explained by the idea that the length of time participants were exposed to the system played a crucial role in determining the severity of the symptoms they experienced. A digital survey was undertaken to collect data, where participants were given a specific time range to respond to the questions.

### **DATA ANALYSIS**

A later group of individuals made the decision to take part in the research as a part of the cohort by participating in the study. It is possible that the lack of the total number over the entirety of the analysis can be attributable to a number of circumstances that are difficult to explain. This is a possibility. In spite of this, it is still possible to gain the precise statistics as well as the particulars surrounding the inclusion of the sample and the participants by making direct contact with the original author of the study where the research was conducted. As a direct consequence of the material in issue not being made accessible to the general public, the analysis in question was carried out, and the results of the analysis were released.

### **HIGHER LEARNING INSTITUTIONS' APPROACHES AND RESOURCES IN THE FACE OF PANDEMIC DISRUPTION**

As a direct consequence of the Covid-19 pandemic's efforts to encourage social isolation among students, educational institutions have become increasingly reliant on online learning as a means of meeting the requirement of maintaining educational services during times of emergency. This is an unintended result of the measures that were made to stop the epidemic from spreading. Academics from all over the world have been put in the position of having to quickly adapt their research methods and body of knowledge into a format that is appropriate for usage on various internet-based platforms. The shift occurred suddenly and was compelled to take place as a result of the conditions that were already in place as well as the variables that were in the surrounding environment. In accordance with the findings of Govindarajan and Srivastava, (2020), the global pandemic necessitated a period of extensive experimentation with the implementation of remote education systems worldwide. This innovative strategy has been referred to as "emergency online education" in a number of academic studies (Rotas and Cahapay (2020); Neuwirth et al., (2021). As a result of the installation of the system, individuals and university authorities encountered difficulties, which necessitated a fast adaptation on the part of all parties concerned in order to ensure that the institutions continued to work without interruption. In addition, students required assistance in matters connected to technology during this period of development. Despite the fact that other businesses have demonstrated their competence to effectively complete the assignment, there are certain organisations that are capable of carrying out the task successfully on their own. On the other hand, there were some who made the decision not to participate in the project, while the majority of people found that the project's realisation was impossible to achieve due to the involvement of a variety of conditions and actors. The adoption of the system posed difficulties for members of the staff as well as administrators of the university. These individuals were required to quickly adjust in order to maintain the running of the institutions despite the inherent problems that were linked with the system. In addition, difficulties arose for students who required assistance with the technical components of their studies during this particular age. The mission was finished successfully by a number of distinct institutions, and there are yet more organisations out there that have the ability to execute the same thing Table 1. Despite this, a number of organisations decided against taking on the task, the vast majority of which arrived at the opinion that it was impossible to accomplish because of the myriad of intricacies and parties involved in the process.

<b>Table 1</b> <b>CHALLENGES FACED BY STUDENTS IN THE ONLINE LEARNING ENVIRONMENT</b>
Adoption of Online mode of learning
Emotional connect
Active Academic Involvement
More time spent in class (day-today arrangements)
Managing several assignments
Strong and full Infrastructure support
High level of excellence and effectiveness
Decreased engagement
High Quality participation
Practical class understanding
Following Unstructured evaluation methods (different format)
Stress, tired and less concentration
Timely submission (assignment time management)
<b>Source: Primary Data collection</b>

The emergence of the pandemic has accelerated the advancement of the digital revolution in higher education, a trend that commenced several years ago but has swiftly led to significant transformations within a short span of time. The aforementioned occurrence was initiated a number of years ago, although it has already resulted in significant alterations over a very short span of weeks. Many higher education institutions (HEIs) recognise that the integration of technology in the educational system requires substantial modifications to teaching methods, core competencies, necessary skills, assessment systems, and approaches to student engagement (Sari and Nayır, 2020). It is crucial for educational establishments, particularly universities, to transition from prioritising lectures as the predominant instructional method and instead adopt problem-based learning approaches that actively engage students within a digital milieu (Marinoni et al., 2020). The transition from traditional face-to-face education to online or virtual education has had a significant impact on the overall learning process. This phenomenon has prompted a reassessment of the proficiencies and competencies that are currently anticipated from students within this novel educational context (Jensen, 2019). The degree of simplicity in the adoption and utilisation of the Online format for faculty orientation was seen to exhibit variation, as certain individuals perceived it to be straightforward while others regarded it as more challenging than its real complexity. Another finding derived from the study indicated that the degree of ease in adopting and utilising the technology exhibited variability. It is anticipated that the existing measures pertaining to social

isolation would persist for a significant duration. As a result of this, educational institutions are compelled to thoroughly reassess their curricula to align them with the requirements imposed by the new environment. The cultivation of digital learning methodologies and the provision of a comprehensive digital learning environment, accompanied by requisite resources and support mechanisms, are imperative for educational institutions, particularly universities, to foster a thriving online learning milieu. This phenomenon can be attributed to the growing popularity of online education. This approach represents the sole method through which the necessary tasks can be accomplished. It is widely accepted that online education will continue to exist for a significant duration in the future. The integration of technology throughout different phases of the educational process serves as a testament to the evolving landscape of education (Şahin et al. 0221).

To effectively implement digital education, it is imperative to utilise specific essential components. These factors encompass the establishment of a suitable infrastructure and the exploitation of diverse technical platforms, such as Blackboard, Moodle, and Microsoft Teams. Furthermore, it is imperative to deploy servers capable of accommodating the increasing demand for virtual education. Additionally, comprehensive training must be provided to both students and teachers to provide them with the necessary skills and knowledge in diverse online instructional methodologies. This is attributed to the imperative of fulfilling the demand for virtual education. Educational institutions commonly provide a diverse range of tools, including webinars and manuals, to enable teaching staff members to engage in continuous professional development. Furthermore, numerous academic institutions have forged strategic partnerships with commercial enterprises, such as Microsoft, to provide software, programs, and online platforms for collaborative electronic work inside academic communities. Examples of these offerings include Office and Teams. The aforementioned collaborations have facilitated the expansion of academic communities' resource accessibility. The findings of this survey suggest that a significant majority of persons still depend on temporary time-limited platforms. This assertion is substantiated by the evidence that. The facilitation of digitising the comprehensive educational process can be enhanced through a diverse range of online communication tools and platforms. These tools and platforms are accessible globally and can be utilised by individuals regardless of their geographical location. A recent empirical investigation was undertaken within an academic institution, wherein the researchers observed the prevalent utilisation of diverse technological tools for the purpose of delivering instructional assistance during the period of lockdown Table 2. These tools encompassed the university web platform, instant messaging applications such as WhatsApp and Telegram, video-conferencing platforms including Zoom, Skype, Google Hangouts, and Google Meet, as well as educational applications like Google Classroom. In addition to conventional modes of contact such as email and telephone, there was also an emphasis on maintaining open lines of individual communication with students. Furthermore, several additional technological tools, like Microsoft Teams, GoToMeeting, and Cisco WebEx, demonstrated their efficacy in facilitating the successful completion of desired objectives.

<b>Table 2 - Faculty Challenges during Online</b>
Technology currently in place
Contextual and situational
Staff Digital Literacy Training (Server Side Support)
Teaching and learning under cover of darkness
Students' difficulty learning (the results of the course)
Efficiency Loss Delivery
Moderate levels of student engagement compared to
High levels of student engagement

Objective evaluation of results compared to students engagement and involvement in class sessions
Lowered quality of activity amongst students
The level of teamwork dropped
Discussion, Debate, and Involvement: Content Quality
Decreased level of engagement with case studies has decreased.
Not allowed to use all available Assessment techniques
Wasn't able to follow it fully. Rubik's Cube (as a Project)
<b>Source: Primary Data collection</b>

Faculty members possess a diverse range of instructional strategies at their disposal. These strategies include the utilisation of online videos for delivering lectures, sharing various forms of content such as slides, videos, and presentations, engaging in communication through chat-based platforms, facilitating debate forums or workgroups, evaluating students' progress and providing guidance, recording explanations and making them easily accessible to students, among other methods. The quality exhibited a diverse range of fluctuations and modifications contingent upon the infrastructure employed. When employed in tandem, these instruments can be utilised either synchronously or asynchronously, contingent upon the specific demands of the given circumstances. To foster and maintain students' engagement and enthusiasm towards the course content, it is imperative to adopt an instructional approach that incorporates many modalities of course delivery, including online possibilities. The achievement of this objective can be attained by opting for an online distribution method that is customised to meet the unique needs of the student being catered to. To ensure the clarity of educational objectives for each activity, it is necessary for teachers to furnish audiovisual resources, allocate a specific timeframe for students to do their tasks, and utilise pertinent technologies, such as tutoring, mentoring, and student assessment. Therefore, it is imperative to devise ways that effectively promote peer collaboration among students and facilitate seamless communication among teachers. Although a significant number of institutions examined encountered challenges and limitations in this domain. In recent years, there has been a development of effective methods for online instruction and assessment in direct reaction to the widespread epidemic that has emerged in recent times. These treatments have been developed in direct reaction to the widespread epidemic that has lately erupted. The selection of an appropriate assessment methodology holds significant importance as it is the final stage following a comprehensive educational process, signifying its culmination. Throughout the transition from traditional, face-to-face classroom instruction to online education, educational institutions have encountered notable challenges and made noteworthy progress in the realm of teaching and learning amidst periods of enforced confinement. This transformation has taken place throughout periods of enforced confinement inside the region. Either the process itself exhibited defects, or the products failed to fulfil the predetermined standards regarding their level of effectiveness.

### **INCREASED OBSTACLES AND DIFFICULTIES IN THE PRESENT CONTEXT**

The instructional activities experienced rapid adaptations in response to the disruptive effects brought about by the Covid-19 pandemic. As previously said, the abrupt transition from in-person instruction to remote learning needs a significant adjustment in the educational approach for both students and educators (Carolan et al., 2020). The implementation of this modification is imperative due to the imminent obsolescence of conventional education in its present configuration. A subset of the student population has expressed their dissatisfaction with the implementation of remote learning during the COVID-19 epidemic. The students have identified challenges related to internet accessibility and ocular strain as significant elements in their

experiences. Conversely, a considerable proportion of students held the viewpoint that engaging in online coursework proved advantageous as it served to compensate for the instructional time that was missed during the prolonged period of school closure. The implementation of this adaptive method encountered challenges and complexities throughout the entire process (Goudeau et al. 2021). According to the study conducted by Marinoni et al., (2020), it is imperative for educational institutions to possess a thorough understanding of the various challenges that may arise during the process of transformation in order to facilitate a seamless transition and achieve beneficial outcomes. The implementation of this measure is crucial for the attainment of a seamless transition. Ensuring uninterrupted transfer is crucial for facilitating a seamless process. The utilisation of suitable methodologies is vital to increase the likelihood of achieving success in addressing these challenges. The aim of this study is to evaluate the viewpoints of important stakeholders engaged in the learning process, including students, instructors, and institutions, in order to provide a comprehensive analysis of the challenges encountered in the realm of education.

Upon careful examination of the students' experiences, it becomes evident that the transition to online education posed several significant challenges, primarily stemming from technological difficulties. Several experts place significant emphasis on the potential for online education to exacerbate the existing digital divide (Powell et al. 2022). It is essential for universities and higher education organisations to put resources into ensuring that all students have equal access to suitable information technology infrastructure, internet connectivity, and technical support in order for them to be successful in overcoming this obstacle. Given the current state of affairs, it is of the utmost importance for educational institutions to develop and implement policies with the goal of mitigating any potential disadvantages that may be encountered by students who come from socioeconomically disadvantaged families. It is of the utmost significance to create a learning environment that is both equal and welcoming to people of all backgrounds. The challenges faced by communities that do not have appropriate technology resources will be even larger. The ability of students to maintain their concentration in a fully online learning environment has been found to be hindered by a number of factors, which have been recognised as such through empirical research. This analysis takes into account the feelings associated with boredom, the experience of being socially isolated, an inadequate allocation of time for engaging with a wide range of topics, and a lack of competency in the ability to self-organise one's thoughts and activities (Zhang et al. 2022). The issue of isolation in course design has been highlighted by professors, who underscore the importance of achieving a harmonious equilibrium between student-centered, personalised learning and collaborative learning. Furthermore, proponents advocated for the implementation of virtual communities of practice as a strategy to augment the level of collaboration and engagement among students within a shared academic setting. Indeed, the equitable provision of technological resources to all students necessitated an increased level of mentorship and contact between academics and students. The increasing prevalence of mentorship and personal coaching in educational institutions can be attributed to the shift towards a new paradigm in teaching and learning. The aforementioned transformation is the result of a transition towards a novel standard in the realm of education.

The teachers faced challenges due to the mandatory change, as they had to quickly adapt to unfamiliar online teaching methods without adequate training in certain cases. The aforementioned situation posed several challenges for the educators. The swift transition from conventional in-person education to online education necessitates a teaching faculty that possesses diverse levels of experience to effectively utilise the wide range of pedagogical methodologies and specialised skills available to them. A potential divergence in perspectives may exist between senior academics, who predominantly employ traditional research methodologies devoid of digital tools, and their younger counterparts in academia, who possess a greater level of comfort and proficiency with emerging technologies. Due to their limited exposure to technology and their habitual dependence on face-to-face contacts, certain instructors have not yet attained a sufficient degree of proficiency to adequately oversee their students' online academic endeavours. According to academic scholars, professors are reported to encounter

primary challenges in meeting the significant demand for specialised skills. These skills include advanced computer proficiency, specialised communication skills adapted for online environments, adept utilisation of diverse teaching and learning tools, and the ability to promptly address specialised issues that may arise during instructional sessions. Another problem that arises is the capacity to proficiently employ a wide range of instructional and educational resources. Following a preliminary phase of acclimation to novel circumstances and the implementation of empirical investigations, scholars have formulated several significant theoretical constructs that can be effectively employed to address challenges inherent in remote education. Prior to commencing their work, instructors in the field of online education must undertake the initial task of establishing a suitable physical environment, encompassing elements such as lighting conditions and acoustics. Insufficient levels of physical infrastructure provide a substantial hindrance to a considerable number of educational institutions. In order to facilitate the transition to online sessions, it is necessary to do a thorough content evaluation of the in-class sessions. It is advisable to integrate group activities into the instructional approach in order to cultivate enthusiasm and promote active engagement among pupils. This approach not only stimulates the students' inquisitiveness, but it also cultivates an environment that promotes cooperative learning. Due to the inherent characteristics of online education, it is imperative to prioritise the incorporation of activities that are closely aligned with the subject matter being instructed. Nevertheless, the organisation and management of group activities posed a significant difficulty in the context of online environments. It is expected that a significant number of educational establishments, particularly higher education institutions, would transition to a hybrid approach that combines conventional in-person interactions with virtual modalities in the foreseeable future. Academic professionals bear the obligation of guaranteeing that students in both traditional and non-traditional educational environments are provided with a superior quality education.

In light of the ongoing pandemic, the use of emergency remote teaching required a complete suspension of all institutional activities. To facilitate the adoption of a sustainable framework for online education, it is imperative for educational institutions to harness technology in order to reconceptualise pedagogical strategies, overhaul assessment methods, redefine the role and utilisation of traditional faculties (providing specialised instruction), and prioritise value through the reimagining and continuous enhancement of the service model. The institutions under examination exhibited a dearth of adequate avenues for discourse and engagement between faculty members and students. Hence, it is advisable to improve the platform in order to facilitate heightened involvement and communication between these two cohorts. However, it is crucial for students, educators, and administrators to actively participate in collaborative endeavours focused on offering assistance and conducting assessments of the progress resulting from the digital revolution. To effectively execute this shift, higher education institutions must confront the financial restrictions and limits posed by their current information technology infrastructure. The loss in government funding would precipitate a corresponding reduction in the budgets allocated to public institutions. Simultaneously, the uncertain economic climate would engender a decline in enrolment figures. The constrained accessibility of IT infrastructure within academic institutions may hinder their capacity to fully embrace digital transformation, hence necessitating focused expenditures to enhance their technical capabilities. Despite these hurdles, educational institutions typically keep an optimistic perspective towards this change.

### **CUMULATIVE OUTCOME OF RESPONSES- QUALITATIVE ANALYSES**

1. They found that the most difficult obstacle they faced was related to the educational environment that existed within the students' dwellings. An issue that surfaced as a notable secondary impediment that the folks in question encountered was the problem of insufficient computer knowledge and skill.
2. The existing problems that students are experiencing were made worse by the pandemic. This was especially true in terms of the enhancement of their educational experience, the preservation of their mental well-being, the maintenance of their financial stability, the facilitation of social interactions, and the preservation of their mobility rights. Further, the global health crisis has

made the difficulties that students are already experiencing in terms of their mobility and freedom of movement even more difficult to manage.

3. The learning environment, which is marked by a wide variety of challenges, constitutes a substantial obstacle that students are required to overcome. The difficulties include a wide range of disruptions that might present themselves in residential and hostel settings, such as those that are brought on by noise. Additionally, there are constraints regarding the availability of suitable study rooms and essential resources. These limitations are rather significant. Noise interruptions are one of the various sources of distraction that folks may come across to their attention.
4. There has been a considerable and detrimental influence on the availability of educational possibilities for students as a result of the implementation of lockdown procedures. This is especially true with regard to the students' involvement in activities such as internships and laboratory experiments. Furthermore, this phenomena has resulted in a decline in the amount of interpersonal engagements that take place between children and their teachers and classmates, which has contributed to an increase in the prevalence of feelings of depression, tension, and anxiety among the student population.
5. It has been claimed that students who come from houses that are economically deprived have experienced difficulties in their financial situation as a direct consequence of the actions that were implemented during the lockdown. Those students who were mentioned earlier have expressed that they believe their experiences can be attributed to the protocols that were put into place.
6. Concern was expressed by a sizeable section of the participants regarding the limited participation of educators within the context of digital educational environments. Consequently, this phenomena results in a fall in the participants' intrinsic urge to engage in academic activities, ultimately leading to a decrease in the overall educational standards. The underlying cause of the perceived lack of academic engagement may be primarily linked to several major characteristics, the most prominent of which are the restricted connection between the teacher and the students and the existence of multiple distractions inside the classroom environment.
7. Students have reported feeling more socially isolated as a result of the use of preventative measures that were designed to enhance the likelihood of the virus being transmitted from person to person. Limitations on involvement in collaborative work and extracurricular activities that take place outside of the school grounds are included in the preventative measures. A dearth of intellectually interesting academic discussions or debates was noticed to be taking place in the neighborhood of the tea and coffee establishment. This was observed to be the case.

## **DISCUSSION AND CONCLUSION**

The global impact of the Covid-19 pandemic and the emergence of digital learning support tools have created unforeseen opportunities for transformative changes in higher education on a global scale. In the contemporary era characterised by digital advancements, it is quite unlikely that online education would cease to exist. Despite the emergence of the Covid-19 pandemic, online education has continued to play a crucial role. The findings of the study indicate that various technological tools such as educational applications, streaming conferences, web-based learning platforms, video conferencing tools, Massive open online courses (MOOCs), and instant messaging tools are employed to enhance the effectiveness of online learning. The expeditious and obligatory shift to online learning resulted in a multitude of challenges for the various stakeholders involved in the educational processes, including students, instructors, and universities. Certain individuals responded immediately, while others required a period of contemplation, and for a select few, the experience presented a delightful opportunity for growth and development. It is imperative for universities to acknowledge these challenges and promptly allocate resources to address them. Special emphasis should be placed on the digitalisation of the educational process, ensuring that academics, office employees, and students receive comprehensive training in specialised technology. This will enable them to enhance their skills and effectively adapt to the demands of a technology-driven environment. In order to address the issue of equitable access to key technical resources, it is imperative for educational institutions to prioritise the enhancement of their technology infrastructures. Achieving comprehensive digital transformation at this level necessitates a financial investment. The complete ramifications of the transition to virtual learning for the future of higher education remain incompletely understood. However, it is clear that universities should strive to create a nuanced combination of face-to-face and online instruction. This approach will allow them to effectively utilise the available technological resources, meet the expectations of students, and enrich their learning experience within the present digital milieu. In light of the shift towards online education and recent research, this study aims to

adopt a proactive approach in order to consolidate key insights on the transition from traditional higher education to online learning. The human element is a substantial impediment to the advancement of technology. In order for the transition process to yield optimal results, it is imperative that there is alignment among institutional administration, leadership, and all relevant stakeholders, including teachers, students, and technical personnel. In order to facilitate a successful transition in higher education, it is imperative that faculty development and the implementation of specialised policies be prioritised. These measures are necessary to foster institutional resilience and enhance preparedness for crisis management in the foreseeable future (Wang & Chiou, 2022). The proliferation of digital technology and subsequent expansion of individuals' information accessibility have introduced an era characterised by unparalleled threats to personal privacy and security. To foster an atmosphere characterised by transparency and reliability in the realm of online education, it is imperative for educational institutions to address these obstacles through the implementation of codes of conduct.

### **SUGGESTIONS BASED ON THE STUDY INTERVENTION**

1. In order to mitigate potential challenges, it is crucial to prioritise readiness and preparation before embarking on the implementation of online learning. If this action is not undertaken, it may become required to identify and address any obstacles that arise during the implementation phase, hence necessitating the organisation of training sessions.
2. In the context of virtual classrooms, the implementation of diverse pedagogical strategies, including but not limited to interactive discussions, formative assessments, and interactive question-and-answer exchanges, can effectively enhance student engagement. The achievement of this objective can be realised by means of facilitating the process of learning. Furthermore, it is recommended that use cases be presented in a concise, illustrative, and potentially captivating manner. For instance, demonstrations or puzzles can be classified within this particular category.
3. Please endeavour to produce information that primarily focuses on the pragmatic aspects of the program. The content should encompass a diverse range of instances, real-world situations, and a dedicated section aimed at promoting open and uninhibited discussions.
4. Instruction and guidance on the proper implementation of the integration of technology into the educational framework is necessary in order to enhance the overall efficacy of instruction and learning outcomes. The consideration of training design, whether conducted in-house or outsourced, can be enhanced by placing particular attention on using current technology.
5. Considering the substantial amount of time that students typically spend in their home environment throughout their engagement in online programs, it becomes feasible to provide counselling and mentoring services to the family members of these students. The utilisation of online platforms facilitates the examination of individuals' motives and levels of interest across many subject domains.
6. It is imperative that individuals facing stress, despair, or anxiety are afforded the opportunity to access counselling services provided by the Institute. Furthermore, the Institute should assume responsibility for effectively addressing mental health challenges. The inclusion of professionals and experts in thesis sessions is feasible, contingent upon the availability of sufficient resources.
7. The faculty is currently convening meetings and engaging in discussions to determine the most effective method for delivering education through online platforms. One has the option to engage the services of professionals from either internal or external sources. In the realm of online education, the cultivation of skills assumes paramount importance as it necessitates a distinctive methodology and a requisite degree of proficiency.
8. It is advisable to enhance the quality of the content in order to make it more engaging and inspiring. Additionally, it is suggested to integrate captivating subject matter into each presentation. Furthermore, it would be advantageous to increase the utilisation of visual aids such as graphics and diagrams.
9. Questionnaires designed to gather data pertaining to the requirements of students and academic staff. It is advisable to implement an intervention based on the needs of the individuals involved, while considering the already available data. The utilisation of this strategy is likely to lead to enhanced participant engagement and increased active involvement during the sessions.
10. The presence of a robust internet infrastructure, encompassing a reliable Wi-Fi network, is of utmost importance for educational institutions. Additionally, it is crucial for these institutions to provide an online platform that can effectively serve students without internet access in their homes or encountering insufficient connectivity. This phenomenon is attributed to the growing prevalence of pupils experiencing limited access to internet connectivity inside their households.



11. To fulfil the expectations of the broader populace, it is imperative to conceive, construct, and deploy a digital platform that possesses the capability to cater to their demands, exhibits user-friendliness, and demonstrates a notable degree of efficacy. The design of the chat window and the streamlined question-and-answer structure of the user interface have been developed with the intention of optimising interaction by ensuring a seamless and engaging experience. The feasibility of this is facilitated by the user-centric design of the interface.
12. Due to the diverse socioeconomic backgrounds of the student population, it is imperative to ensure the provision of essential infrastructure. The utilisation of modern technology can give rise to some challenges; nonetheless, it is possible to overcome these obstacles by meeting the essential prerequisites

## IMPLICATION OF THE STUDY

The purpose of this research was to provide university administrators responsible for online education with practical insights, enabling them to make informed decisions using precise facts. To reach these conclusions, we will initially pinpoint areas of concern and subsequently suggest multiple viable remedies that can be effectively applied. The findings of this study will contribute to improving the current online program at the college, resulting in a higher degree of efficacy. The primary aim of this research is to examine the viability of establishing an online learning model throughout the entire educational institution, encompassing all of its separate departments and classes. Furthermore, it endeavors to tackle the pragmatic obstacles that students are anticipated to encounter due to the transition to online education, aiming to provide practical solutions to these challenges. This is done with the aim of averting students from lagging behind in their schooling.

## REFERENCES

- Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International journal of educational research open*, 1, 100011.
- Arifiati, N., Nurkhayati, E., Nurdiawati, E., Pamungkas, G., Adha, S., Purwanto, A., & Azizi, E. (2020). University students online learning system during Covid-19 pandemic: Advantages, constraints and solutions. *Systematic reviews in pharmacy*, 11(7).
- Azubuiké, O. B., Adegboye, O., & Quadri, H. (2021). Who gets to learn in a pandemic? Exploring the digital divide in remote learning during the COVID-19 pandemic in Nigeria. *International Journal of Educational Research Open*, 2, 100022.
- Bambra, C., Riordan, R., Ford, J., & Matthews, F. (2020). The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health*, 74(11), 964-968.
- Barton, D. C. (2020). Impacts of the COVID-19 pandemic on field instruction and remote teaching alternatives: Results from a survey of instructors. *Ecology and evolution*, 10(22), 12499-12507.
- Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91-96.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of educational technology systems*, 49(1), 5-22.
- Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). COVID-19 and student learning in the United States: The hurt could last a lifetime. *McKinsey & Company*, 1, 1-9.
- Drabowicz, T. (2017). Social theory of internet use: Corroboration or rejection among the digital natives? Correspondence analysis of adolescents in two societies. *Computers & Education*, 105, 57-67.
- Gillis, A., & Krull, L. M. (2020). COVID-19 remote learning transition in spring 2020: class structures, student perceptions, and inequality in college courses. *Teaching Sociology*, 48(4), 283-299.
- Gupta, R., Aggarwal, A., Sable, D., Chahar, P., Sharma, A., Kumari, A., & Maji, R. (2022). Covid-19 pandemic and online education: Impact on students, parents and teachers. *Journal of Human Behavior in the Social Environment*, 32(4), 426-449.
- Iivari, N., Sharma, S., & Ventä-Olkkonen, L. (2020). Digital transformation of everyday life—How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care?. *International journal of information management*, 55, 102183.
- Kaur, S., Bherwani, H., Gulia, S., Vijay, R., & Kumar, R. (2021). Understanding COVID-19 transmission, health impacts and mitigation: timely social distancing is the key. *Environment, Development and Sustainability*, 23, 6681-6697.
- LeBlanc, P. (2020). It's time to take time out of learning and reinvent higher education.
- Lee, J., & Han, S. H. (2021). The future of service post-Covid-19 pandemic, volume 1: rapid adoption of digital service technology (p. 225). Springer Nature.
- Lemay, D. J., Bazalais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Computers in human behavior reports*, 4, 100130.

- Marinoni, G., Van't Land, H., & Jensen, T. (2020). The impact of Covid-19 on higher education around the world. IAU global survey report, 23(1), 1-17.
- McBurnie, C., Adam, T., & Kaye, T. (2020). Is there learning continuity during the COVID-19 pandemic? A synthesis of the emerging evidence.
- Montacute, R. (2020). Social mobility and COVID-19. The Sutton Trust.
- Prior, D. D., Mazanov, J., Meacheam, D., Heaslip, G., & Hanson, J. (2016). Attitude, digital literacy and self efficacy: Flow-on effects for online learning behavior. *The Internet and Higher Education*, 29, 91-97.
- Saikat, S., Dhillon, J. S., Wan Ahmad, W. F., & Jamaluddin, R. A. D. (2021). A systematic review of the benefits and challenges of mobile learning during the COVID-19 pandemic. *Education Sciences*, 11(9), 459.
- Soomro, K. A., Kale, U., Curtis, R., Akcaoglu, M., & Bernstein, M. (2020). Digital divide among higher education faculty. *International Journal of Educational Technology in Higher Education*, 17, 1-16.
- Szopiński, T., & Bachnik, K. (2022). Student evaluation of online learning during the COVID-19 pandemic. *Technological forecasting and social change*, 174, 121203.

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