

An Analysis of Online Learning Issues during the Covid-19 Pandemic

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ABSTRACT

The COVID-19 pandemic precipitated an unprecedented shift in global education systems, forcing a rapid transition from traditional face-to-face learning to online modalities. This research examines the multifaceted challenges and impacts of this transformation on undergraduate students, focusing particularly on their experiences during institutional lockdowns. This study investigates students' satisfaction, technological readiness, pedagogical effectiveness, and emotional well-being during the online learning transition. Findings reveal significant disparities in device accessibility, internet connectivity, and digital literacy, highlighting systemic issues such as the digital divide and platform usability challenges. Students expressed both positive and negative perceptions-while appreciating the safety, flexibility, and convenience of online learning, many reported dissatisfaction related to limited engagement, ineffective assessment methods, and reduced interaction with faculty and peers. Emotional and psychological stress, including feelings of isolation and decreased motivation, further complicated the learning experience. Educators similarly faced difficulties adapting to new technologies and pedagogical strategies under constrained timelines. The study underscores the importance of structured institutional support, government initiatives, and inclusive digital policies to address equity, access, and the evolving educational landscape. Recommendations include development of unified online platforms, improved faculty training, and hybrid learning models to enhance resilience and adaptability in education. These findings provide critical insights into improving the quality and inclusiveness of online education in a post-pandemic world.

Keywords: Online Learning, COVID-19 Pandemic, Emergency Remote Education, Student Satisfaction, Technological Challenges

INTRODUCTION

Globally, the coronavirus disease (COVID-19) spread swiftly, and on March 11, 2020, it was deemed a pandemic. World health organizations struggled to stop the onslaught of contamination, side effects on the people's health, increasing deaths and economic crisis. The situation was and is in many countries of great concern, with sustained attention and frantic attempts to implement a solution. The COVID-19 health crisis also deepened into a global crisis, with severe consequences on health and the economy [1]. In addition to personal fears about losing health and life, people still have to deal with uncertainties and doubts about how the daily routine and working activities will change, two external shocks that upend the stability and control of their lives and future. As a consequence of the outbreaks, many areas of life plunged into chaos, with a long-term impact on how people live and act. The emergency state has resulted in many "immediate" changes, some of which are likely to endure into the post-pandemic period. Digital and social technological platforms have become the most effective means of continuity in many areas. This covers the educational context in particular; in fact, the pandemic's primary impact on higher education in Europe and many other countries was the forced closure of educational institutions. Nearly all were required to switch from in-person to remote instruction as soon as possible, even if not in the same manner. In order to maintain educational continuity, government decrees have forced schools, colleges, and institutions to close and make the historic switch to online instruction or a mix of online and traditional instruction [2]. Platform providers and content providers, coupled with policies pushing to increase and diversify digital literacy, aided a shift toward online and virtual teaching. Student attendance was massive (90%), even if with many unforeseen difficulties caused by this

transition, students reported the need to upskill the level of cognitive digital literacy urgently. The involvement of available cognitive digital skills was just one facet of the profound implications in the balance and the use of the affordances and constraints of digital and social platform technology. How they enable innovative and exploratory modes of communication, intensively collaborative resource sharing, and peer-facilitated efforts to overcome bounded ignorance are just some of the unknowns unexplored during the pandemic.

LITERATURE REVIEW

Background of Online Learning

The emergence of COVID-19 has resulted in a complete shutdown of schools and educational institutions, forcing students to go for online learning. Due to the COVID-19 pandemic, educational institutions made a rapid transition from traditional to remote instruction. This abrupt pedagogic shift to emergency remote teaching has drawn increased interest in the online learning experiences and effectiveness [3]. The online learning experiences and effectiveness of undergraduates were evaluated from both positive and negative aspects. An online survey was developed to assess the students' evaluation of their online learning experiences, including teaching platforms, methods of assessment, and satisfaction with online learning when the lockdown was imposed. Focus group discussions were conducted to explore the factors behind their dissatisfaction with online learning during the COVID-19 pandemic. Inspired by the results, recommendations are also provided for the effective future application of online learning [2]. Due to the global COVID-19 pandemic, in early 2020, distance learning became a reality in many nations. Rapid shifts to online education were required to follow government health regulations and keep the public safe from the diseases spread by COVID-19. In Taiwan, the Ministry of Education announced that higher education institutions must suspend on-campus instruction and shift to online learning in accordance with an "Instruction Severely Affected by COVID-19 epidemic" in late February. The ensuing government directives saw the nationwide closure of all primary, secondary, and tertiary education institutions, as well as public libraries, museums, etc., as part of the effort to combat the nationwide spread of COVID-19. The shift online for learning and teaching was sudden and widespread over such a short timeline that it is widely seen as emergency remote teaching. Online learning has unique features distinct from pre-COVID-19 normal distance education. The latter involves fully online courses built by instructional designers with prior training for instructors, while the former often comprises traditional face-to-face classes that were converted or migrated to online learning owing to COVID-19 severity.

Impact of the COVID-19 Pandemic

The COVID-19 pandemic has caused a disruption in education systems worldwide, and the majority of educational institutions were forced to shift from traditional learning to online learning. Education shifted from traditional learning to online learning due to the COVID-19 pandemic. The aim of this study is to examine the online learning of undergraduate students under lockdown amidst the COVID-19 pandemic. This study evaluates platforms' performance, assessment methods, and students' satisfaction. The purpose of the study is to examine both the positive and negative aspects of online learning during the COVID-19 pandemic from the viewpoints of students. Additionally, the study is intended to investigate the causes of students' dissatisfaction with the transition from traditional to online learning during the COVID-19 pandemic, which was globally and suddenly implemented due to the circumstances.

Research questions consist of: 1. what were the positive and negative aspects of online learning during the COVID-19 pandemic from students' perspectives? 2. What were the factors behind students' dissatisfaction with the online learning experience during the COVID-19 pandemic? Zoom was the most widely used platform for online classes, while Google Forms was the favourite platform for quizzes. Participants mostly used mobile phones for online classes, quizzes, and assignments. The fact that students, teachers, and educational institutions were unprepared for this novel experience was proven. A third or more of the students who responded to the survey expressed dissatisfaction with their online learning experience, learning resources, interactions with teachers and peers, online tests and quizzes, and the way the digital platforms worked. According to the analysis's findings, students are required to master and utilize two to three distinct online learning platforms, as no single platform was utilized for all of the courses. The advantages include

greater engagement, safety, convenience, and efficiency. About 69% of the surveyed students reported that the online learning environment provided an effective learning experience. It was more effective than the traditional mode of learning (36%). About 9% reported that the COVID-19 pandemic has positively affected their learning experience.

To assess the impact of the shift to online education during the pandemic, a multi-institutional online survey was conducted. The pandemic created a radical change in the way all educational courses are taught. Near-total closures of educational institutions all over the world caused an unprecedented increase in at-home online learning. Globally, most educational institutions shifted education from traditional learning in classrooms to online learning. In Saudi Arabia, educational institutions were also forced to switch to online learning during the lockdown [2].

Technological Challenges

A lack of technical skills and infrastructure was the most critical challenge in shifting to online learning during the pandemic in Jordan. Most educators have limited experience and background in using online teaching software, tools, and technologies. Insufficient technical knowledge and skills of educators inhibited the quick shift to online education. Faculty were faced with a difficult situation in handling problems related to online assessment, hardware, and software issues. They expressed strong dissatisfaction with online assessments during the pandemic due to their technical incapacity in managing online exams and the technical support provided by institutions. Most international online simulation programs did not allow individual access. The head of departments were unable to generate transition materials for new ideas about online learning, assessment, and classroom controls. Nearly all educators and faculty members were dissatisfied with online assessments for various reasons, such as limited insight into assessment methods, unawareness of software best practices, insufficient knowledge of assessment software and online quizzes, and poor generation of other online assessment methods by faculty. Institutions did not assist faculty in developing accurate knowledge and skills about online assessment and the facilities employed. Added to that, there was poor general knowledge of hardware and software protection systems by departments. Jordanian academic institutions developed a fast-paced approach to ensure the sustainability of online education due to infrastructure limitations on recently modified systems. Some institutions accelerated and instantaneously placed massive numbers of systems in their faculties to maintain their intervals. This was perceived as a hasty approach that yielded inconsistent quality and assurance outcomes across institutions. Most institutions provided interconnected internet-connected smart classrooms with adequate computer systems for faculty, but those facilities lack updates, training, and solid testing [4]. Some educators revealed that institutions imposed obligatory software packages and applications for the interactivity and recording of classes. They experienced some technical problems, especially in course delivery and communication methods. Educators provided positive feedback on their institution's role in enhancing education by allocating such software and facilities. Further studies regarding the use of e-learning management systems in higher education institutions in Jordan during the pandemic are needed. Academic culture should be re-established by education authorities in preparing top-down policies and regulations governing the ethical use of cyberspace, independent thinking, constructive criticism, and the usage of online courses in future endeavors for students and educators together.

Access to Devices

Access to suitable devices was often cited as a major barrier to online learning during the pandemic. It was learnt that half of the students received their laptops from the university, and the other half had their own devices [5]. The COVID pandemic brought unexpected, significant changes to almost all aspects of life, creating a large-scale "natural experiment" of massive online disruptions. As a result, a massive shift in the educational system took place [6]. A large number of institutions switched from a face-to-face to a completely online learning format. Given the growing availability and feasibility of online learning systems, blended learning models have been introduced across diverse learning and education systems. However, during the sudden and large-scale emergency transition to online learning, various limitations or challenges arose in heterogeneous situations across institutions, students, and educators. These issues became more critical and exhibited different aspects and divisions distinct from the initial challenges of online learning in traditional blended learning systems.

Most students stated that they had phones and computers and could continue their education. Recently, the modes of education delivery were massively changed to online to avoid disruption in the education systems; however, there existed concerns over the digital device use and infrastructure, mainly because of the possible inequalities among students. Also, many students responded negatively regarding the current devices. It suggests that the types of devices used for online learning mostly exceeded fairness in online learning. The digital divide in infrastructure existed. The students used various devices for their learning; however, the types of devices and their suitability in terms of access and learning quality across devices varied considerably.

The new and discovered inequalities in the access types and devices exhibited distinctive results or characteristics. The emergence of newly perceived inequalities in online learning appeared as the motto. Education delivery modes affect students' learning experiences, impacting the perceived inequalities or barriers/limits of digital equipment usage in academic institutions. Distant learning enabling devices, internet connectivity, and online pedagogy fairness questions continue to evolve after more than one year of plausible adjustments and without solid solutions for all or some magnitude. Adaptability of devices: students' previous adaptations, which enabled them to attend classes. Not all subjects and curricula are readily digitized.

Internet Connectivity

The pandemic has accelerated new modes of instruction in higher education. A shift to fully online learning was virtually unthinkable a few months ago, but today the shift is virtually complete for many institutions around the world. In late January and early February of 2020, thousands of institutions changed to fully online education as a preventive measure to curb the widespread spread of the virus. Due to COVID-19, some institutions may continue exclusively online instruction for the remainder of the academic year and beyond. Others may adopt a hybrid approach going forward—holding classes both in real spaces and virtual forums [7].

Even though an online presence is not new for higher education, pedagogy historically has relied—to various degrees—on a physical presence. In the anticipated future of higher education, the concept of the classroom will expand with learning communities formed as learning hubs in global cities, towns, and themselves in cyberspace, where there may be neither designated physical spaces nor fathomable geographic boundaries. These changes call for different infrastructures and operational strategies for readying future learning communities. The requirement for both physical and virtual spaces for connecting the separate nodes of present learning communities—ie the lecture hall and home premises—is but one aspect of the need for radically changed premises. A far bigger issue is this: how to be ready for future learning communities, now that the design of educational spaces has provoked ruminations on the what, why, and how of learning in the post-pandemic world? The challenge is formidable, although key questions about the new infrastructure are already evident. Will there still be big lecture halls where thousands of ears and eyes are equally tuned to just one professorial voice? Will there be small meeting rooms? Will there be breakout spaces? Will there be spot spaces nearby where students can chat, discuss, and socialize? Will there be spaces of silence for individual, concentrated studying? Will there be foresight platforms and devices for ensuring that both human and non-human actors in the new sites for learning are in good condition and ready for learning?

Platform Usability

This study sought to reveal students' perceptions towards online learning issues in terms of platform usability during ERE. This was conducted through analyzing students' perceptions of the issues in the online learning platforms they preferred. It focused on major relevant issues: Academic Usability, Interface Usability, Security & Privacy, Integration, Bugs & Glitches, and System Requirements. Data were collected through a questionnaire distributed among 165 random yet homogeneous participating students. A qualitative analysis was conducted to find out perceptions and insights in a thematic content analysis method.

The results indicated that the platform usability issues in online learning during ERE variations were mainly about user experience, ease of use, and security & privacy. Other relevant issues were also found in a more specific manner. Although the findings indicate that students' perceptions are various and different in depth and details, it can be concluded that students of CoLT are satisfied with their preferred online learning

platforms (OLLPs). The main issues might be affected by several factors such as age, gender, education department, technological savviness, and geographical location [8]. The first recommendation is to conduct further studies with large sample sizes in comparison with other colleges and universities in Saudi Arabia. The second recommendation is to conduct a mixed-methods research design in which both qualitative and quantitative data are collected together in a single study. Thirdly, a longitudinal study design or case study may provide affordances for follow-up research focusing on further development of online learning platforms.

One of the qualities that every program, let alone an educational platform, aims to have is being light on the system and connection. Around the world, many people still struggle with Internet speed, particularly in rural areas. The primary reason for this is that the majority of Internet service providers (ISPs) are for-profit businesses. Many courses will be partially or fully online as a result of the pandemic's encouragement of digital learning. The purpose of this study was to learn more about the platform preferences and the factors that influence them among King Saud University's College of Languages and Translation English majors during the ERE. HEIs have learned a lot about digital teaching and learning from the profound changes brought forth by the COVID-19 pandemic. According to the study's findings, Zoom was the most well-known. Despite being around for years, the Blackboard was ranked second in terms of preferences. The ease of use and smartphone compatibility were the main factors cited by both male and female participants. Other factors that participants took into account when making their choices were privacy and security as well as platform interoperability.

Pedagogical Challenges

COVID-19 has disrupted education worldwide, posing numerous challenges related to educational technology and access. However, it is essential to investigate how students cope with emergency remote teaching. Teaching effectiveness is one of the critical issues of concern in online and blended learning environments. The unique characteristics of the crisis resulted in a need for alignment and integration of the blended learning framework elements in such environments. As teachers transitioned to online teaching during the pandemic, areas where they felt most unprepared and challenges encountered in post-transition teaching effectiveness were examined. Findings indicated that the pre-transition through post-transition stages experienced by teachers highlighted important supportive relationships in addressing changes in teaching practice. Within these relationships, the role of a supportive environment was essential to minimize teachers' feelings of being overwhelmed in managing change.

The COVID-19 pandemic ushered in an unprecedented and unplanned transition to online learning from Face-to-Face (F2F) formats for higher education institutions (HEIs) globally [4]. This abrupt and fundamental shift has profoundly affected students and faculty in varying ways and magnitudes. The pivotal role online technologies play in transforming the way HEIs deliver their educational offerings has been highlighted. To build on early COVID-19 developments, researchers sought to help HEIs' leaders and decision-makers effectively respond to emerging challenges. The review identified five formidable but crucial issues that complicate effective online transition: difficulties in making seamless online teaching and learning with the integration of various synchronous and asynchronous tools over time, barriers to technology accessibility for online learning at socio-economic levels, and difficulties in the development of online teaching competence in faculty and learning competence in students. Academic dishonesty in online assessment and issues regarding privacy and confidentiality significantly challenge the transition to online learning at the institutional level.

Engagement Strategies

COVID-19 has forced educational institutions to make an abrupt shift from traditional face-to-face classrooms to an online virtual mode of teaching and learning. The pandemic has changed how teaching is done in schools all across the world. A SWOT analysis is a technique that helps look at factors in terms of strengths, weaknesses, opportunities, and threats. The situation of COVID-19 and how it is affecting education worldwide can be examined as a study of the strengths, weaknesses, opportunities, and threats of the education system in the new virtual environment [9].

The strengths of education during the COVID-19 pandemic are such as a wealth of experience in teaching and learning at a distance, advances in technology, access to useful online resources, and good administration and

communication systems. The wide availability of technology that supports virtual learning has made it conceivable to shift education to online platforms on such short notice. Concerns regarding the quality of virtual education prompt questions about which areas were well covered and which were lagging behind in terms of strengths and opportunities. The weaknesses and threats of education during the COVID-19 pandemic include technical deficits such as poor internet connection, lack of devices and platforms, lack of experience and adaptation, and reduced access in different geographical and economic backgrounds. Many educational institutions are now realizing that considering learning, taking into consideration assignments, tests, informal assessment, and aversions is as much an essential part of higher education as presenting well-prepared content.

The teaching and learning experiences of undergraduate engineering students and their views on the strengths, weaknesses, opportunities, and threats of virtual learning during the COVID-19 pandemic have been studied and addressed through a preliminary survey. The sudden and total closure of schools, colleges and universities was the most apparent outcome of the COVID outbreak and led to a paradigm shift of the educational system from a traditional classroom setup to virtual learning. In analyzing the feasibility of adopting a new system and the factors which affect it, changes in education generally or in a specific region were studied through the lens of SWOT analysis to shed light on unforeseen effects [10].

Assessment Methods

Different assessment methods have been used while setting and conducting online assessments. Possible online assessment methods include open-book online tests, use of online natural-language processing, oral presentations one-to-one on video conferencing platforms and virtual wonder sessions [11]. During the online semester in the course offered, closed-book, computer-based, limited-time online MCQs were used for summative assessments. A closed-book, computer-based and limited-time take-home assignment was set, with the task timely released on a cloud-based platform. Student feedback collected on selected assessment strategies helps in the continuous improvement of practices adopted and reinforces the notion that assessments should interrogate students and their learning rather than the device they are using [12].

Due to the sudden transition from in-person to online, assessment and grading structures were plunged into a territory where there was no historical reference point. To maximize academic integrity during online assessments of the online semester, multiple-choice questions (MCQ) exam and clicker-style quiz were set in multiple versions with randomization in versions last minute and launched with the option to shuffle questions. The simultaneous urges to do enough, but not too much, in defending academic integrity and to avoid overburdening all involved mattered greatly. Academic misconduct has serious consequences, so combative strategies ceaselessly evolve, but broadly, for every offensive measure introduced, there is always a countermove to neutralize it. This is exemplified by students regularly malevolently posting images of MCQ answers on social media pages that benefit explain why complete integrity in assessments was simply non-verifiable.

Likewise, elevating the intellectual rigour such that the prime focus shifts from the assessment item to genuine consideration of a tough question. The transition from in-person to online highlighted inequities in access to live events that could lead to non-discriminatory assessment. However, as courses became modular, there was optimism that this could lead to a confrontation in the design of effective assessments and mitigation of potential negative unintended consequences. Translating in-person assessment types to the online environment presented both an opportunity and a challenge.

Curriculum Adaptation

In principle, online courses are designed with different affordances, uses, and expectations than those typically associated with face-to-face classes. Decisions of course structure, assessment, learning outcomes, delivery methods, and materials are usually made prior to the quarter. On the other hand, in an emergency switch to online learning, many previously face-to-face courses are suddenly transformed to what the authors term online courses. Since an emergency online course is based on an existing one, it retains many features, affordances, and instructional strategies that were designed for face-to-face courses. With the emergence of COVID-19, higher education institutions (HEIs) have closed their campuses and switched from face-to-face

instruction to online teaching. The immediate change from F2F to online created a variety of challenges for academic staff, academic development units, and students alike. It has been a rapid and intense 2.5 months since the switch started. In light of this, the purpose of this study is to identify how educational technologies contributed to the shift from face-to-face to online instruction during the COVID-19 pandemic.[4].

It is important to mention that the approach to distance education is evolving, and academic staff are continually examining existing courses and how best to adapt them to maintain learning outcomes. Although the written curriculum is often the focus, it is important to explore the delivered curriculum and how courses and curricula have been adapted to fit new modes. In addition to learning technology, curriculum adaptation is part of the lessons to be learned from this emergency switch to online learning. The authors believe that understanding how interventions fit with emergent practice and understanding what has changed in comparison to before the outbreak could better inform management responses.

Social and Emotional Issues

During the COVID-19 pandemic, students' lives and academia have been altered immensely. Education systems were turned upside down, resulting in a bored and demotivated student body. The new normal of online classes has distressed students and faculty. There are several aspects that can impact students' attitudes on online education. Students, in addition to being prepared for virtual learning during the COVID-19 epidemic, must be emotionally competent. Being able to express, control, and comprehend emotions is referred to as emotional competence. During the COVID-19 epidemic, teenagers' emotional competency requires extra consideration. Socialization during adolescence develops emotional competence, which is essential for both academic success and efficient functioning in adulthood. Adolescents, who are still developing their emotional competence, have been found to be less aware and accepting of their own emotions and to struggle with emotion regulation due to the inevitable social isolation brought on by COVID-19. A rise in mental health problems among teenagers and young adults due to inadequate emotional competence was documented in a number of early Western studies on the immediate effects of COVID-19 [13]. Adolescents must be emotionally capable in order to cope with the additional emotional strain that COVID-19 has created, which includes illness, the death of friends and family, financial hardships during the pandemic, and emotions of despair, anxiety, and depression. High emotional competence will assist students better manage their stress, loss, and despair in order to better adapt to the new online learning environment, much like online learning readiness.

Results show that the unexpected switch to online courses, especially for extended periods, has increased social isolation as well as detachment and disconnection from the student body. These feelings seem to have increased more in engineering students than in the broader student population during the short period after the shift to remote education [14]. In line with current literature on the subject, a heightened sense of social isolation among engineering students is expected during the pandemic context. One of the main results is that engineering students agree that the assessment methods and materials used in their classes during the lockdown were tailored to e-learning. The results of recent research on student satisfaction with the way their courses were modified for the remote format are conflicting. Due to the short timeframe for readjusting lessons, evaluation techniques, and teacher support to the online format, adaptation to online education was a highly discussed subject during the COVID-19 health crisis.

Isolation and Loneliness

The COVID-19 pandemic resulted in many months of nationwide lockdowns and social distancing rules, causing widespread concern that mental health problems linked to isolation and loneliness would escalate [15]. Studies of the effects of global lockdowns suggest that loneliness has increased markedly worldwide. The roll-out of pandemic restrictions in China has coincided with reports of increased loneliness among the adult population. In the UK, prior to the pandemic, around 5% of the adult population reported feeling lonely most or all of the time; surveys carried out in March 2020 suggest that this figure has risen to as high as 36%. Hence, it is a possibility that, after months of enforced separation, experienced loneliness and social isolation will be heightened among families divided by a national border.

Loneliness is a complex construct with numerous associated health problems, many of which are linked to disorders of mental health, including depression, anxiety, and post-traumatic stress disorder [16]. Perceived social and emotional loneliness is associated with self-reported health problems, including cardiovascular issues, cognitive decline, higher body mass index, and other disorders. Lonely individuals report both higher incidence and increased severity of health problems. Indeed, the severity of loneliness is reported to be similar to that of obesity or smoking, and a risk factor such as this is of particular concern to public health.

The UK government has also recognized a crisis in loneliness; the then Prime Minister described loneliness as major public health issue comparable with obesity and smoking and called on the public health body to investigate. This report outlines the health and economic impacts of loneliness on society and sets out discretionary actions for government agencies, the voluntary sector, and local authorities to address social isolation. However, in order to address loneliness, the construct clearly needs to be understood. Quantitative studies have utilized existing items in surveys to provide evidence of types of loneliness reported among the adult population, but such a complex phenomenon cannot be fully understood using such an approach. In addition, most studies have focused on social mechanisms of loneliness and failed to consider the possible benefits of solitude for well-being, hence overlooking an important facet of the broader construct.

Mental Health Concerns

Adverse effects of such a major change may be inevitable. It is believed that university students are one of the groups most affected by that situation. University students under the age of 30 years, living in big cities, and using different information technology devices and the Internet the most frequently, completed the online survey. The survey included an assessment of educational forms, indicators of early signs of depression, coping strategies in stressful situations, and health assessment. Nearly half of the respondents (49.8%) experienced educational form changes from hybrid to online, while 26.7% were in the same educational form. It has been demonstrated that students in the online learning mode showed significantly higher scores in the measure of early signs of depression compared to those in a hybrid mode. It is worth emphasizing a different tendency for some variables in the adopted assessment in the examined group of students. Distinctions were also shown in the analysis of coping strategies, depending on the form of education [17]. It was suggested that it is worth conducting a longitudinal study to determine whether the course and severity of early signs of depression alter over time. Unfortunately, various mental health issues can be exacerbated due to significant life changes, social isolation, and the mode of teaching delivery.

Support Systems

As higher education institutions are increasingly turning to remote teaching, many students are falling behind and at risk of coming out of it worse because of barriers presented by the rapid uptake of online teaching tools. Issues of engagement underlie many other digital challenges in Australia's universities, where expectations shifted rapidly from face-to-face teaching at the start of the semester to digital contexts for students and staff. Forward planning that takes less engaged students into account may prevent mass COVID-related dropouts later in the semester [18]. Internally, there are calls to better integrate online students into their university communities through a mix of humanized learning, free support services, engaged teaching, and technology. Externally, by broadly aligning with university designs, individual academics can be flagged as digital champions in their faculties, capable of reshaping student and staff experiences of digital engagement and support [19]. Institutions would benefit from inviting students to respond to assessments with native applications where possible. A bigger picture approach is also warranted to embed remote and digital participation in learning ecology management. The experience of IT companies in providing national virtual communities for people with disabilities has much to offer.

Change to online learning environments can potentially go beyond maintaining learning opportunities to reimagining how learning benefits all. More diverse student cohorts may want something different than their predecessors—both in the substance of learning, through types of engagement previously sidelined or excluded, and educational environments, through access to learning providers and learning activities touted as flexible but that may have been more exhausting, dampening motivation. Transitioning fully online at short notice raised concerns about students being disengaged, as evident in the loss of use of new discussion forums.

Actions taken strongly reflected existing academic-student relationships. Nevertheless, changed learning experiences could be valued as transforming learning opportunities, enabling evolving forms of student-teacher engagement and peer teacher-learner engagement. These stakeholder investigations highlight their unique sensitivities to changed environments, extending the findings of the original project to sustain their engagement in improved educational spaces.

Equity and Accessibility

The sudden and wholesale change to online learning for students and educators raised questions of equity and access. Considerations of equity and access (including increased access over fewer devices, concerns of affordability, the adequacy of bandwidth for students' needs, and the relevance of the curriculum to students' realities) dominated discussions on the transition to fully online learning [20]. It became clear, especially after numerous media reports framed university students as a 'privileged' population who had a computer and internet access at home, that not all university students were alike — a conclusion that academic staff had long held. Rather than unintelligent or incapable of following the course materials, it became apparent for the first time to many educators that there were serious equity issues that needed to be addressed. Some interventions needed to occur urgently (not last-minute adjustments), while others could take place long-term (including continued advocacy for long-term institutional changes). Many Australian universities that were consulted for this study are well aware of student issues regarding equity and access. In addition to those identified previously, universities reported on a range of other student issues concerning wellbeing and mental health support, digital trauma, and coordinated, informative communication from central administration (with many moving towards this end). The idea of a 'return to normal' was commonly interpreted as the prior situation before the arrival of COVID-19. Returning to 'normal' conversations and criticism of online learning and taking this form of education less seriously — after months of triumphs and tribulations — were to be approached with caution. Many responses to the pandemic reflected this; for example, those who teach urban and regional planning with several studio courses noted that the impact of COVID-19 on studio teaching was a 'point of difference' from many others. Questions regarding a 'return to normal' were generally not addressed in discussions unless directly asked, as they brought forth a 'very volatile mix of mixed emotions'.

Digital Divide

Education Delivery in a Pandemic: An Analysis of Digital Divide and Other Dynamics of Remote Learning in Nigeria In 2015, the United Nations adopted the Sustainable Development Goals, the new development agenda to replace the Millennium Development Goals. In furtherance of the SDG 4 universal education agenda, Nigeria, similar to other countries, made laudable progress in hitting many of the targets. However, other metrics show that significant challenges persist in achieving the SDG targets. These challenges include high out-of-school rates of school-aged children, poor school infrastructure and learning environment, limited access to early childhood development opportunities, inadequate funding of public education, widespread poverty, mobility challenges, and issues of culture and religion. The new coronavirus was found in Wuhan, China, in November 2019. Within months of its discovery, COVID-19 spread over the world, affecting almost every nation. To contain the spread of COVID-19, many countries instituted lockdowns that led to the shutdown of their economies. Traditional school services in schools, colleges, and universities were also impacted by the closure of schools. It was estimated that the epidemic affected around 1.6 billion students across 190 nations, with school closures affecting 94% of the global student body. In Nigeria, the outbreak of COVID-19 and the concomitant lockdowns led to significant disruptions in the country's education system. School closures in Nigeria affected 39,440,016 primary and secondary school learners. The country's federal and state governments attempted to take measures to cushion the effects of the school closures. The non-state sector also joined the efforts of the governments in this regard. Upon the closure of schools and the lockdown of city roads, education stakeholders in Nigeria devised and implemented various learning interventions using technological platforms, internet-based tools, and traditional media such as television and radio. These learning interventions constituted the country's response to the education emergency imposed by the COVID-19 pandemic. Students from higher socioeconomic homes are more likely to attend public schools, whereas those whose parents or guardians are willing and able to pay more to access better learning resources are thought to be more likely to attend private schools. However, with the disruption to education caused by the COVID-19 pandemic and the subsequent widespread adoption of remote learning across Nigeria, it is likely that learners

from financially privileged households represent the demographic that has more access to quality learning opportunities. From a policy standpoint, the fact that these households represent a considerable demographic is also consequential. The preoccupation of this study is on previously unspecified inequity in access to relatively basic and timely learning resources such as lesson notes, past questions and materials, and supplementary pre-recorded lesson videos for on-demand access during the pandemic. Also unspecified, but relatedly, is the reasoned assertion that learners from government secondary schools in rural/suburban areas have much less access to resources than those in urban public schools in Lagos State.

Inclusion of Diverse Learners

Institutions are being pressed to develop new services and support mechanisms for diverse learners because of rapidly changing knowledge and technology. By opening up possibilities for students with a variety of backgrounds to participate in education in new ways, the transition to remote education brought on by the COVID-19 pandemic has heightened these demands. Diverse learners' access to remote education must be measured, and assessments must account for availability as well as equality. Emerging information technology may "decrease the barriers to learning offered by traditional education" [21]. However, for diverse learners, many of the same barriers still exist. The students reported that many barriers in access to on-site education re-emerged, such as the difficulty of not being able to fully participate, feeling isolated, or not being able to hear/see well enough to learn.

The transition to remote education has also brought new barriers for diverse learners, especially those who are hard-of-hearing or deaf members of a spoken-language majority community, some of whom have benefited from improved access with on-site instruction when new digital tools have been used. At the same time, access to those tools is uneven, especially in crisis contexts when institutions scale back spending, training, and tool maintenance. The lockdown during the COVID-19 pandemic also introduced new challenges, including the fact that educators with varying degrees and kinds of digital expertise attempted to balance rapidly shifting access to learning. Some students with disabilities faced barriers with digital-only formats, such as access to video on streaming platforms. Students with disabilities and STEM students with disabilities faced challenges during the quick switch to online instruction necessitated by the COVID-19 pandemic [22]. Students emphasized that many of the accommodations they typically received in in-person instruction were inaccessible in virtual environments.

Faculty Adaptation and Training

Teaching on-site has traditionally been the standard practice at universities throughout the world. Faculty and students are typically subject matter experts, writers, and ontologists in face-to-face teaching. Learning Management Systems are typically viewed as ancillary tools, meant to augment lectures with literacy. However, since the COVID-19 pandemic forced an immediate switch to online education, faculty suddenly found themselves in the role of teaching designer and learning architect [23]. It must be noted that merely providing educational media does not necessarily equate to people learning. Prior to the pandemic, the use of the Learning Management System at the institution was uneven across faculties. At best, an LMS had supplemented on-site education with added assessments, readings, and a repository for handouts. Most staff left the creation of content and online delivery to junior staff or specialist educators, while senior educators had little experience.

Nevertheless, the primary intent of this technological affordance was to provide repeatability rather than meaningful learning. That is, to augment a standard flying script with a library of recorded on-site lectures so that absent students could still submit an assessment. However, on-site lectures are often poorly presented in a rushed and ill-organized manner. To provide recorded lectures as a substitute for bad education negates the very effort to switch modalities, as it converts an opportunity for rejuvenation into a replication of a regime in which the requirements of learning exceed those demanded for teaching. The move online has thus entailed an increase in workload for most faculty, similar to a rookie taking on an entirely new role with tight timeframes. Despite this increase in burden, the requisite attendance at executive meetings remains, as does the responsibility to nurture collegiality.

This added pressure has engendered a focus on managing the fallout from the switch, rather than on novel pedagogical approaches. Academics need ample time to learn the educational architecture of novel media, in addition to the logistics of operation [24]. As a result, barriers began to appear. For many staff, IT troubles impeded engagement, while others complained of being unable to obscure bodily images from the virtual environment. Faculty stress was exacerbated further by high levels of disquiet about students' skills and developmental readiness for remote learning. A divide became apparent between faculty who managed the switch well, despite concerns of it being a novel role and heuristic difficult to manage, and those who were almost entirely overwhelmed.

Professional Development

Previously built-in professional development opportunities, such as seminars, workshops, and conferences for administrators, were either cancelled or moved online. Professional development opportunities mainly offered asynchronous courses, such as webinars and mini-courses, which were made available through different platforms. Within these platforms, questions and discussion topics were mostly already answered. As a result, many teachers found it very hard to find meaningful questions to engage in professional development opportunities. Tech-savvy teachers were contacted by other teachers seeking help with setting up online courses, which were primarily Google Classroom or Zoom. They were more comfortable answering questions about technology than pedagogy, but had to spend extra time prepping their own lessons and courses anyway.

Once teachers had more time to find focus or a balance with their teaching, they quickly turned to social media seeking inspiration, ideas, resources, and support as they had done so many times before. Facebook groups became a hub for resource sharing and collaborating with lessons, assignment ideas, and fun engagement strategies to keep students on task during instruction. Ideas, resources, and supports were shared from teachers' personal workbooks to templates to asynchronous activities to workspaces. Teachers began collaborating outside of their towns and state lines, offering tips on how to connect with families, maintain student engagement outside of normal school hours, and even considering the needs of passionate learners, such as gifted students.

On the administrator level, a few regions opened their visions and thoughts through conferences. One main takeaway was to be empathetic. Speaking from positions of power and influence, administrators had the responsibility to ease worries. Suggestions included frequent communication and releasing information forwarded from other regions' needs assessments. The importance of basic needs like internet, access, and food was acknowledged and believed to slowly improve with planning and flexibility as teachers began to assume their responsibilities around technology and pedagogy [25].

Teaching Strategies

In response to the challenges posed by COVID-19, educators have rapidly transitioned from traditional face-to-face teaching to online modes of education. This study seeks to provide the latest understanding of teaching and learning strategies employed during the pandemic in English as a Foreign Language (EFL) classes across the Middle East and indicates the most effective strategies. A systematic review of 20 research articles published between April 2020 and July 2022 was carried out. Seven coding categories were determined based on the publications' focus: (a) EFL teacher/lecturer "online teaching" strategies; (b) EFL students' online "learning" strategies; (c) the "impact" of online learning; (d) "challenges" of online learning; (e) "solutions" to the challenges of online learning; (f) "digital/electronic" platform; and (g) the "research tools/methods" used. This study identifies the strategies used by instructors and students to facilitate online learning during the pandemic and highlights the most effective strategies that can be utilized by policymakers, educators, and academics in similar situations. In this way, this study makes a contribution to the field of EFL online instruction during the pandemic and for future pandemic scenarios.

In response to the worldwide spread of the COVID-19 pandemic, governments worldwide enacted nationwide lockdowns. As such, all pre-tertiary students were compelled to return home and transition to learning via online modes. Universities and colleges switched from traditional face-to-face education to online education overnight. Physical classrooms turned into others' living rooms, bedrooms, and kitchen tables. All the parties

involved (including students, lecturers/instructors, and universities) participating in the educational process were compelled to become familiar with the new e-learning technology. This meant new sets of rules and social protocols for all lecturers and learners. The controllers of the virtual learning environment, namely, the universities/institutions, were responsible for providing the initial instructional package and ensuring the smooth running of e-learning in collaboration with the faculty members who taught the courses [26].

Student Perspectives

Despite the unease regarding the COVID-19 virus, the need for social distancing required switching to online education. The initial concerns were the unpreparedness of the students and instructors toward this novel method of education [2]. Unfortunately, this abrupt shift negatively affected both students and instructors alike, as all educational institutions had to be closed for safety concerns.

The rapid conversion from a traditional, in-person style of education to an online one had an adverse effect on the quality of education. Even though in normal situations, online education has its own advantages and disadvantages, switching to this novel mode of education and its execution at the very last minute saw many visible gray areas in its execution. Instructors lack sufficient training, a common platform through which student-instructor interaction can take place, and in addition, many instructors are used to face-to-face instruction methods in the classroom; these factors made the overall grade percentage lower than hoped. How to create a virtual learning atmosphere and provide the proper tools, both technological and pedagogical, was not discussed with instructors, making it very difficult for English as a Foreign Language (EFL) instructors to deliver lessons smoothly and entirely online.

The question of whether students prefer online education over traditional education provokes much discussion. There must also be careful, detailed consideration of the fact that in-person education might not be a feasible option anymore. The outbreak of COVID-19 revealed how fragile the world's known orders are, and unprecedented situations can completely restructure how everything is done [27]. The emergence of new teaching trends following the pandemic paves the way for an era in which education is substantially delivered only online becomes an indubitable fact.

The students thought that during the pandemic, the major change would be a significant improvement in face-to-face teaching delivery. However, the participants through interviews mentioned that lecturing summarily as taking courses from YouTube, without any estimation of how many hours it would take to complete processing online materials, and inadequate guidance toward finishing an online course assignment; these factors negatively affected their satisfaction with online learning, design, and delivery.

Feedback on Online Learning

Online learning has rapidly become the only means for institutions and students to continue their education and learning globally. Students from universities and colleges found themselves unexpectedly undergoing the online learning experience and using various digital learning platforms to keep pace with their studies, which is a new experience for many of them. This triggered a dramatic change or transition under difficult circumstances. There was no time for planning or preparation, as students' conduct and behaviour were strictly bound by the lockdown policies to control the spread of the COVID-19 Pandemic. Therefore, it is worth investigating the online learning experience and the perception of students considering the factors affecting their satisfaction level [2].

Mainly, students' satisfaction levels regarding the Conduct of Learning and Teaching, Students' Readiness, Online Assessment Tools, Online Learning Materials, Support Services, Wellbeing & Engagement, and Digital Platforms Functionality were gained insights using descriptive statistics and correlations. Moreover, students' evaluation and feedback of digital tools employed during the COVID-19 Pandemic, and students' perceptions of the factors affecting the online learning experience were collected. Therefore, it is expected that the results of this research would provide evidence to support insightful conclusions and recommendations that could ameliorate both the administration and students' online learning experience.

The transition or shift to online learning was effective as it helped students feel safe to avoid attending in-person classes and helped institutions avoid financial losses. Nevertheless, the ease of use of both the institution's learning management system and information sharing plummeted. Overall, the students were neither satisfied nor dissatisfied with the learning management system and information sharing platforms. Yet, the most important improvement needed was to increase access to/availability of the university's online platforms. As for the worldwide employment of pervasively used platforms, more than a third of students are dissatisfied with various aspects of this tool.

Adaptation Experiences

The COVID-19 pandemic has greatly affected life around the globe, including education systems. Many educational institutions were closed, shifting education from traditional to online methods. This affects students' learning experiences significantly; hence, Online Learning Experience (OLE) is a serious matter to be evaluated. OLE can be evaluated by viewing students' satisfaction with the online study process and factors affecting this satisfaction. This study aims to evaluate the online learning of undergraduate students under lockdown amidst the COVID-19 Pandemic. This study is expected to evaluate platforms' performance, assessment methods, and students' satisfaction. It looks at the advantages and disadvantages of online education during the COVID-19 pandemic from the viewpoint of the students. During the COVID-19 pandemic, this study is anticipated to explore the reasons for students' discontent with online education. A Sequential exploratory design was adopted. In the first phase, quantitative surveys were collected from 483 participants. In the second phase, positive and negative aspects of online learning and students' satisfaction were studied through a quantitative approach with a target of 853 participants. SSM was used to explore and identify the factors behind the students' dissatisfaction with the online learning experience during the COVID-19 Pandemic through focus groups and discussions of 21 participants. SPSS was used to assess participants' satisfaction with online learning during the lockdown.

The Findings revealed that most participants used their mobile devices to attend online classes. This study confirmed that teachers, students, and educational institutions were not prepared for this new experience based on the experience of pandemic online learning. More than a third of the surveyed undergraduate students were dissatisfied with the online learning experience, including adaptable learning, learning materials, interaction with colleagues and teachers, online exams and quizzes, digital platforms' functionality, and satisfaction. According to the analysis's findings, there are advantages and disadvantages to the online learning strategy during the COVID-19 pandemic. Effectiveness, safety, convenience, and increased participation are the benefits of online learning during the COVID-19 pandemic. It is hoped that the results of the study will help educational institutions, teachers, and academic planners to recognize the factors affecting students' OLE during the COVID-19 Pandemic.

Comparative Analysis with Traditional Learning

Due to the pandemic, educational systems worldwide experienced remarkable disruption, with the closure of schools, educational institutions, colleges, and universities at all levels. This led to a rush to shift from traditional education systems to online learning systems to continue the educational process. Different ways to ensure the continuation of educational processes through online teaching were developed using different technological tools, including video conferencing, electronic portfolios, and a combination of these means. However, the transition to online learning came with many difficulties for all parties involved in the educational process, including teachers, students, and educational administrators. Online education refers to courses that are taught entirely over the internet without any face-to-face classroom interaction. Various technologies and applications, including e-mail, internet forums, online lectures, chat rooms, and e-learning platforms, are being used. The turn to online education was difficult for some educational systems. In some countries, the move to online teaching was an easy task because most students owned computers and smartphones and had access to the internet and online classes. Unfortunately, there were many countries where accessing computers, smartphones, and internet resources was limited, and students had to learn through their mobile phones. The necessary tools to help teachers go online rapidly were not available in many cases, and many teachers faced the challenge of a lack of technical and pedagogical training and/or qualifications to be able to teach online effectively.

The emergence of online learning in a very short period has brought several challenges to many educational organizations around the world. It is impossible for anyone to be totally prepared for the move to online learning in such a short time. Many assessments have been conducted to evaluate how well universities responded to this sudden challenge, the outcomes of shifting to online teaching, and its impact on students and teaching. The reactions to this challenge are varied, even among similar universities. Moreover, some universities took a long time to prepare students and faculty before shifting to online learning and did not teach online at all. Obviously, there is a gradient of the ability of colleges/universities to migrate rapidly to online courses. The ability to switch to online or blended learning was outside the control of university managers, but even for the universities to which it was possible, the level of preparedness and training for both faculty and students was very different. The speed of this reaction to the crisis was very wide.

Future of Online Learning Post-Pandemic

In the spring of 2020, the COVID-19 pandemic precipitated a widespread shutdown of public life throughout the world. Schools and universities found themselves in an unprecedented situation, switching to a complete distance learning mode within a few days or even hours. Such an abrupt upheaval was challenging for instructors and students [28]. The aim of this study was to analyse Austrian college students' experiences with this new mode of learning during the first COVID-19 lockdown. It was expected that such experiences varied by demographic, academic, and technical factors and that online learning quality issues were more disquieting than personal learning environment issues. An online survey was conducted with college students, tackling demographic, academic, and technical factors, as well as separately measured challenges, benefits, and important factors in online learning. Among the most significant obstacles were noted as missing motivation, Internet issues, limited interaction between students and teachers, difficulty focusing, difficulty striking a balance between school and life, learning issues, and a lack of support. The most significant problems with online learning quality were found to be deficiencies in the caliber of online discussions and the lack of an online classroom environment. The survey revealed that online learning was particularly beneficial in terms of savings in commuting time, a more relaxed learning environment, and the ability to catch up on missed lectures. Despite these drawbacks, students identified benefits in the new learning situation. US students reported having more time for family, hobbies, self-care, and personal growth. Indian students reported practical advantages, such as time saved commuting and having online videos of lectures to refer to after class. Students' favorable opinions of the distance-learning scenario varied depending on a number of parameters. Researchers examined how people felt about online learning during the lockdown and discovered that while self-efficacy and enjoyment of distance learning were better indicators of acceptance than computer experience or anxiety, perceived usefulness and ease of use were important mediators between these factors and attitudes toward and intention to use distance learning in general. Thus, pedagogical and psychological factors as well as specific technical aspects seem central in determining how university students perceive distance learning generally and online learning during the COVID-19 lockdown specifically. Online learning itself is not new or unique to the COVID-19 pandemic. Before COVID-19, higher education institutions had long pursued various e-learning strategies, both in the form of fully online learning and blended online/offline formats. E-learning has both advantages and disadvantages. Investigating students' preferences, it was found that online learning was considered better in offering a clear content structure and supporting individual learning processes.

Hybrid Learning Models

With the technology development and the Stakeholder Interests, Hybrid Models are providing a new hope for learning. It is expected that the hybrid model will be legalized and spread widely across the educational environment. Apart from how much, a variety of possibilities and formats of hybrid solutions are proposed. On the one hand, 75% of respondents have agreed that mixing online and face-to-face techniques and the learning material formats would be more convenient and effective. Hybrid learning is defined as a model for delivering instruction that combines the traditional face-to-face classroom, the instructor, and learners physically present in the same location with virtual eLearning, in which at least one of the learner and instructor is located in a different place from the traditional one, when the instruction delivery is supported by a variety of high technologies.

Secondly, Blended Learning is any combined use of online learning tools and techniques that supplements the face-to-face learning and teaching process. Learning experience shared by both places—the traditional learning environment and the online system of knowledge was successfully implemented. These expected and predicted advantages were confirmed with the actual conditions raised, such as more time being preserved for a variety of learning opportunities, class-contributed preparation works and gallery activities. However, with the digitalization and onboarding of the new system, the construction of courses and materials on the platforms produced more workload, while the absence of a basic system concerning group work dynamics was found. Assuming that the online format of a classroom studying environment is for students' convenience, on the one hand, respondents said it was helpful in terms of flexibility, accessibility, and objectivity. On the other hand, the limitations were raised in the survey, such as uncertainty and increased delays, as well as less social communication, which students were less prepared for and lost while transitioning from the physical to the online learning environment.

While looking at the students, it is examined why students chose online education as well as their perception regarding its quality compared with traditional courses. It is argued that the current e-learning alone is not enough. Findings provide a snapshot perspective that students have a favourable attitude towards online education, largely because of the convenience provided by its ability to help them manage their life commitments in a more convenient way. It's anticipated that those who did not manage to enrol in the first phase will still be accommodated in the upcoming learning process—eLearning—in the future. The Action Plan on the Transformation of Theory and Based Education has already been discussed and passed by the conference, and the university has already started to put it into practice by proposing and adopting a plan for a blended model.

Long-term Changes in Education

Because of the COVID-19 pandemic, dimensions of education that many considered immutable suddenly changed drastically, revealing some surprisingly supple assumptions. The immediate switch to online formats made formally recognized limitations of new media starkly visible, but it also revealed entirely new potentials. For the first time, educational institutions that had been considered resistant to change suddenly had to become flexible and all-digital. Suddenly, daily routines collapsed, not just for students, but for everyone working in education. The awakening state of the early weeks also distinguished different scenarios. Students suddenly had greater chances regarding time, space, and place for self-determined situations for education. But they also had to face the formal and informal tensions of the remnants of school charters, routines, patterns, and individual student agency [28].

This capitulation of education in public life slowly changed again: new routines, new school lives, new opportunities, and new impacts. The range changed from practical tips on how to learn better in this new situation to the description and reflection of new ideas and practices for content and curricula that would not have been pursued otherwise. Not only did teaching move online, but this sudden switch also made online teaching more systematized in higher education than before. Huge efforts were made to foster infrastructure, platforms, training of staff, and care for low-income students. Due to platforms for quick adaptation of teaching, a sudden and larger-than-ever number of students experienced learning online. Some may have taken it as an adaptation to lessons about autonomy and agency in the face of a sudden switch and lost control, like never before, in any other learning situation. In public discussions, several solutions were urgently sought, but there were only questions for answers.

Higher education institutions had pursued various e-learning strategies long before the COVID-19 pandemic; relatively few professors in higher education had integrated them in their courses. In contrast, in many media and educational contexts, it was implied that education would now unreflectively continue to be like this. E-learning, in various forms, was already an established part of the curriculum. Regarding almost any learning situation designed by an instructor, there was a good chance that some aspects were designed to be online. Digital transformation was part of the health literacy agenda, reflecting the digital transformation happening in research, jobs, and daily life. In many countries, students have already brought their own devices to school, and those schools were safer; the benefits of flipped classrooms were widely documented.

POLICY RECOMMENDATIONS

This research surveyed undergraduate students studying in Jordan during the COVID-19 Pandemic about their online learning experience. It aims to assess the online learning experience and identify problems encountered, in addition to analyzing their satisfaction level in online learning. The findings of the study's analysis demonstrate how institution closures affect students' online education. Many of the students have experienced a variety of issues and are not happy with their educational experience. Many recommendations are proposed to enhance students' online learning experience and to increase their satisfaction [2].

There are many well-known international online learning platforms, such as Edmodo, Microsoft Teams, and Zoom. However, each educational institution uses different online learning platforms, and many face many difficulties in using these platforms. In order to conduct online lessons, communicate with professors and colleagues, share resources, and assess students online, educational institutions must either employ well-known international online learning platforms or develop a single learning management system. Additionally, the platform must be tailored to address the issues of both teachers and students while ensuring a high degree of satisfaction.

Many respondents are dissatisfied with online learning. Besides, many unsatisfied students experience issues with learning materials, interactions with colleagues and teachers, and exams and quizzes. Therefore, each educational institution needs to create an academic continuity planning committee to review and evaluate online learning, adopt new technologies, monitor the learning process, and adopt flexible methodologies to facilitate learning. Most of them used mobile phone devices to attend online classes and do their exams and assignments. As a result, students must have equal access to technology, educational resources, and Internet infrastructure.

Government Initiatives

COVID-19 came all of a sudden, and no country was ready to tackle the situation. Everyone has to suddenly change their way of living. COVID-19 made some noise in China in two months and appeared on the world map. The whole world was busy in making instant actions and efforts to deal with this unexpected scenario. Over time, the governments have taken immediate actions in response to the outbreak. The governments of different countries imposed lockdowns, and the entire working population was either told to stay at home or asked to work from home. The education field has also been largely affected due to this pandemic. All educational institutions were ordered to either shut down or implement a distance education system. The sudden shifting of education from offline to online in the digital era, the whole education system was seldom affected, and online learning became a necessity and an alternate choice. Every country showed its efforts in promoting the use of the E-learning platform to provide the continuity of education during this COVID-19 time. India also promoted the use of ICT in education during the COVID-19 lockdown. The educational institutions were shut down from mid-March in India. On 19 March 2020, the PM of India took the initiative of Janata Curfew on Sunday, and when everything was at a standstill, the PM ordered a lockdown in the whole country for 21 days, which was later extended for some more time. The central government made efforts to make education reach each and every student through ICT initiatives, with the collaborative efforts of the state government. The DIGITAL India initiative, along with other E-learning projects taken by governments, somehow prepared them to tackle this pandemic. The government publicized these existing E-learning projects and proposed new tools for school students and TEACH for the teacher community to provide the continuity of education. The central government initiated 12 DTH Education TV channels to air 12 different subjects through the collaboration of 6 national channels with the Ministry of Human Resource Development. Other initiatives taken by the central government for the school are the line-launched education TV Channels, a 24/7 portal-based open school, education on air, special classes for jittery and differently-abled students, TV and free e-books for classes 1-8. The state governments incorporated these initiatives taken by the central government in their methods, such as state government initiatives special classes through WhatsApp, Zoom, and Google meet. [29]

Institutional Policies

The shift to emergency remote teaching posed significant challenges ranging from technology adoption to online course delivery. In addition, these approaches primarily focused on technology provision. In many Asian countries, massive Open Online Course platforms were set up to widen access to online education. On top of that, policies were enacted to monitor institutions and the quality of online class delivery. However, there are emerging calls for feedback from local institutions, educators, and students. Furthermore, with the non-cognitive aspects of learning remaining inadequately addressed, some educators were concerned that learning would suffer, leading to inequality in learning. Although many students were satisfied with their learning experience, they encountered various issues. Overall satisfaction with the ongoing online learning situation is moderate. However, only a few students were satisfied with the adequacy of their subject matter knowledge after taking the course. Low levels of satisfaction were found across online interaction with peers and instructors. More importantly, a great number of students were dissatisfied with the exam process. Institutions are encouraged to use ID verification, artificial intelligence and proctoring services, and innovative assessment methods.

RESEARCH DESIGN AND METHODOLOGY

The study examines the problems related to online learning during the COVID-19 epidemic using a qualitative research design based on secondary data analysis. Instead than depending on primary data collecting, this method synthesizes existing knowledge from several reliable sources to provide a thorough grasp of the subject.

CONCLUSION AND FINDINGS

Higher education saw an abrupt and drastic change as a result of the COVID-19 epidemic, which compelled schools to switch from traditional in-person instruction to online learning settings. Undergraduate students' experiences throughout this time were investigated in this study, with particular attention paid to technological difficulties, instructional efficacy, student satisfaction, and social and emotional effects. The results show that although online learning offered flexibility, safety, and continuity during the crisis, it also brought up serious difficulties that had an impact on the overall caliber of the educational process.

Limited access to appropriate equipment, unreliable internet connectivity, inadequate digital literacy, and challenges utilizing various online platforms are among the main problems noted. In addition to feeling more stressed, alone, and unmotivated, students expressed discontent with less interaction, inadequate assessment techniques, and low interest. Teachers also had difficulties quickly adjusting to new instructional strategies and technological advancements, frequently without adequate institutional support or training.

The study emphasizes the potential advantages of online learning, such as accessibility, ease, and chances for flexible learning, despite these difficulties. The experience has highlighted the significance of creating efficient online pedagogies, enhancing teacher training, and fortifying digital infrastructure. It also highlights the necessity of inclusive approaches to close the digital divide and guarantee that every student has fair access to education.

In conclusion, the shift to online instruction during the epidemic presented both a difficulty and a chance for educational reform. The emergency shift revealed serious gaps in equity and readiness, but it also offered insightful information about how educational systems may change. Institutions can progress toward more resilient, inclusive, and flexible forms of education by incorporating the lessons learnt, especially by implementing hybrid learning strategies that combine the advantages of traditional and online learning settings.

Future work

Based on the results of this study, a number of areas for further investigation can be determined to improve comprehension and enhance online and hybrid learning settings.

First, longitudinal study methods should be used in future studies to look at how students' attitudes, levels of involvement, and academic achievement change over time. A long-term view might offer deeper insights into adaptation processes and the long-term effects of digital learning, as this study only documented events during a particular stage of the pandemic.

Second, Comparative study across many contexts, such as institutions, fields, and socioeconomic groups, is also necessary. Such research would assist in determining how variables such as field of study, geographic location, and resource accessibility affect the efficacy of online and hybrid learning methods. In order to overcome the disparities brought to light by the digital divide, this is especially crucial.

Third, in addition to students, future research should include the opinions of several stakeholders, such as educators, administrators, and legislators. More thorough and useful solutions would result from an understanding of the obstacles teachers' experience, such as a lack of training, an increasing workload, and challenges with online evaluation.

Fourth, it is advised to do experimental and intervention-based research to assess the efficacy of particular tactics meant to enhance online learning. Innovative assessment strategies, student engagement tactics, interactive technology utilization, and mental health support programs are a few examples.

Fifth, as hybrid and blended learning approaches are expected to predominate in post-pandemic education, further study is required. Best practices for curriculum creation, delivery, and assessment in hybrid contexts should be investigated, along with the best ways to combine online and in-person training.

Lastly, future studies should concentrate on accessibility and inclusivity, especially for students with impairments and those from underprivileged backgrounds. To make sure that all students benefit from digital education, it will be crucial to look into inclusive teaching techniques, equal access to resources, and adaptive technologies.

In general, future research should focus on creating high-quality, inclusive, sustainable digital education systems that can withstand future upheavals rather than just emergency measures.

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