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Impacts of COVID-19 on training in a tourism and hospitality institute in Kenya

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Abstract

The purpose of this study was to investigate the impacts of COVID-19 on training in tourism and hospitality institutes in Kenya. The specific objective was to examine the effect of COVID-19 on students learning expected outcomes and its impacts on their mental and emotional health, and post – COVID-19 era coping mechanisms. The study design was descriptive and combined both qualitative and quantitative research methods. A total of 105 students formed the sample size and represented international and local students. The finding indicated that the pandemic seriously affected curriculum contents, delivery methods and disrupted the learning annual calendar. About 43% of respondents had sleep disorders, while 44% had problems concentrating on what was being taught. More than 38% said that their irritability had increased and feared that they will contract the virus. This in total affected their performance and relationship with their peers and friends. The study recommends the introduction of guidelines on how to detect and manage the effects of the pandemic. Students should be involved in finding stress coping mechanisms as most of them have the signs. Further study in the areas is recommended on bigger samples and the use of other data collection and analysis tools.

Keywords: COVID-19, effects, learners, mental and emotional health

1. Introduction

Available literature from scholarly journals indicates that global pandemics are old as humanity and have caused devastation to humanity. Global pandemics such as plague, smallpox, influenza, cholera, and HIV AIDS are among those that caused the massive deaths and destruction of mankind's livelihood. In recent times, no other pandemic has received global attention like Covid-19. Among the reasons may be improved methods of information gathering, communications and transmission technologies, and improved epidemiology diagnostic science and technologies.

The development of air, land, and water transport may be the reason for the spread of the virus globally in less than a year. The effect of the virus has been felt in world economies and has destabilized global communities socially, economically, politically, and in medical systems.

The pandemic disrupted Kenya's education systems from early childhood, primary and secondary school level all way to tertiary and university level. Findings from Kenya's Basic Education COVID-19 response plan (MoE, 2020) documents the impact of the epidemics on public primary, secondary and technical training institutions. The Ministry of Tourism (MoT, 2020) also commissioned research to evaluate the impact of the pandemic on Kenya's Tourism industry and has already proposed recovery strategies to its stakeholder.

Despite tourism and hospitality training institutions playing a big role in the tourism industry, limited studies have been conducted to evaluate the impacts of the epidemic on tourism and training institutions in Kenya a gap this study intends to fill.

The general objective of this study was therefore to examine the impact of the pandemic on learning in Tourism and Hospitality institutes. The specific objective was to examine the effect of COVID-19 on students learning expected outcomes and its impacts on their mental health, and post-COVID-19 era coping mechanisms.

2. Literature review

2.1 Effect of COVID-19 on learners

The COVID-19 pandemic has caused one of the largest interruptions of education in history. It has impacted students and trainers around the world, from the lowest level of learning to the highest levels. It has disrupted humanity and the way he relates with social, physical, and environmental systems.

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Educational systems, curriculum, calendars, and expected learning outcomes have not been spared. The pandemic has also caused short and long-term destabilization of what may have been an ailing sector even before the strike of the pandemic. Tourism systems and stakeholders have mutual relationships with training institutions as they supply them with trained human resources. Scholarly findings indicate that the pandemic has crippled tourism and learning institutions at all levels and more than any documented in the 19th to 20th century (Azevedo, *et al.*, 2021; d'Orville, 2020; Semo, & Frissa, 2020; Agrati, 2021).

2.2 COVID-19 period and preparedness of learners and teachers

As we examine the impacts of the pandemic on the learners, it would be important to examine how it impacted the teachers. Loss of jobs hit families across the board, and teachers were not spared. In a hurry, teachers were expected to switch to different forms of remote learning which they were not prepared for. Elumalai, (2021) in his study for most training institutions did not have time to design and develop instructional tools needed to continue with learning during the pandemic period.

Research by Rapanta, *et al.*, (2020) elucidates that effective remote learning would come from a carefully designed instructional tool and proper planning. Govindasamy, (2001). Agrees with this statement and adds that the design process and the careful consideration of different design decisions have an impact on the quality of the instruction.

Likewise, studies by most scholars have agreed when the pandemic struck, few training institutions had the required resources and personnel to develop the infrastructure to manage the pandemic and allow the training to continue without interruption. Elumalai, *et al.*, 2021; Busuttil, 2020 and Roth, (2020) in their study found that a feeble system of support, which was worsened by lack of professional development capable of integrating computers into remote learning, left trainers less equipped to train during the pandemic where physical learning was impossible due to lockdowns and cessation of travel.

Busuttil, (2020) also found trainers had limited training pre-pandemic and did not have the technical support capability. This affected their desired quality of training as most of them had not prepared psychologically. Most teachers faced inadequate systems for tracking attendance online which was necessary to manage the learning process. A study by Kerr, (2006) and George, (2020) found that remote instruction did not allow teachers to have emotional bonds with their students, particularly younger ones. These emotional bonds are all-important to all students whether having their lessons online or homeschooling which was not the case during the pandemic period.

2.3 Digital divide of the pandemic

The pandemic also enlarged the Digital divides the gap between students who could offer to learn remotely and those who could not. Some learners were not privileged to have access to the internet and other devices needed to operate online studies. The same digital divide was observed from children whose parents were low-income bracket who could not afford any form of online studies during the pandemic (Garcia, Weiss, and Engdahl 2020; Tinubu Ali and Herrera 2020). Some of these learners have very uneven access to the online resources needed to take tests, *let alone*

complete them effectively. Hodges *et al.* (2020) acknowledged that low-income families with more than one child could not access a computer or other device for each child to continue with remote studies on the same day same hours. It was not possible to share most devices used to facilitate online studies even smartphones.

The pandemic has also widened performance gaps between disadvantaged students and their better-off peers and increased graduation and school dropout rates among disadvantaged students. Students have uneven access to the special instruction and supervised practice that helps them pass tests. This means that standardized testing during the pandemic will deliver results that are, by design, going to be even more closely correlated with life circumstances than is true during periods of regular classroom instruction. Equitable monitoring and testing during the pandemic, teachers in remote settings lack the tools that they have when they are in their classrooms to interpret test results.

In Kenya just like other developing nations, students living in rural villages did not have the resources needed to adapt and implement online studies. As a result of this, teachers working in these rural villages could not continue with studies unlike their counterparts in the urban areas who in one way or another tried different categories of remote learning. Students' normal learning and development were interrupted and disrupted mostly those from disadvantaged low-income backgrounds which widened the already existing training gap.

3. Methodology

This study design was both exploratory and descriptive and triangulated quantitative and qualitative research methods. The study area was Kenya Utalii College a Tourism and Hospitality training institute. The target population consisted of Kenyan students who come from different counties in Kenya and international students from Zambia. The respondents were classified into two clusters, one representing Kenya students while the other represented the international students pursuing different programs in the college.

Qualitative data was collected through researcher-administered interviews with selected respondents. Questionnaires were used to collect quantitative data. To investigate the respondent's level of anxiety and depression, variables were extracted from the Hopkins Symptoms Checklist (HSCL-25) while some were got from Perceived Stress Scale (PSS). These instruments are among the most used psychological instrument for measuring the perception of perceived stress.

Some of the psychological and emotional signs that were investigated in the questionnaires and interviews were: depression or anxiety, anger, irritability, feeling overwhelmed, unmotivated, troubled sleeping or sleeping too much, constant fear, problems with concentration, and making bad decisions.

Quantitative data was analyzed using SPSS while thematic and content analysis method was applied in analyzing qualitative data. A pilot study and test-retest methods were used to test data validity and reliability. The data collection tools had a Cronbach alpha of 0.700 which was considered adequate.

Owing to the limited availability of literature on the subject area, this study relied on the students, lecturers, and other non-teaching staff in Kenya Utalii College to get more

insight on the impacts. It's agreeable that measuring such impacts would be very difficult since many learning institutions are still coping with the mutating effects. Therefore, the finding is not conclusive but will contribute to the discussion and provide some literature and insight that other scholars can build on.

4. Research finding and discussion

A total of 105 students were examined with a gender distribution comprising 66% females and 34% males. Of the interviewed students, 22% were from Travel & Tourism Management, 20% from Food & Beverage Service, 11% from Laundry & Dry Cleaning 10% from Banqueting, 10% from Kitchen Operations, 9% from Food Production, and 5% from Hotel Management. Nearly all (99%) of the

students agreed that the Covid 19 pandemic had affected their learning.

The finding indicated that the pandemic seriously disrupted learning in Kenya Utalii College. About 65% of learners felt that the academic year 2020 was lost and there was no way of recovering it. Despite the college offering some programs online, 71% of the learner said that they could not afford to switch online as their mobile phone were not smart while others could not afford to buy bundles. About (41%) of the respondents opined that their career has been ruined and given a chance would switch to another career. The study noted that the institute did not have the required infrastructure to facilitate remote learning as both the learners and the trainers were not prepared for the abrupt change. Table 1.1.

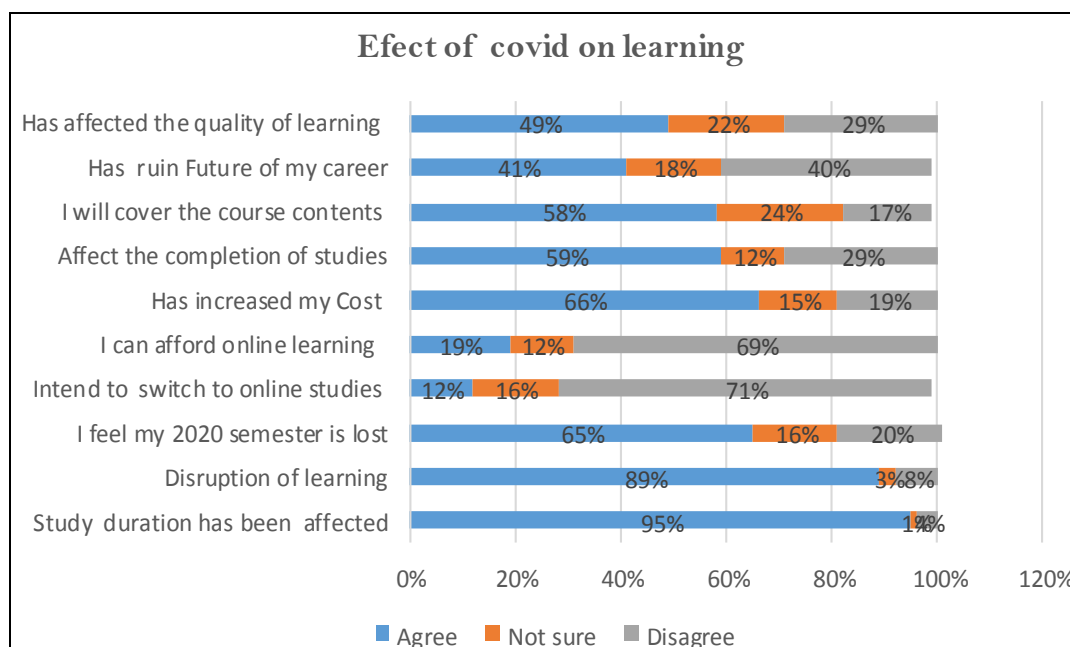


Fig 1.1: Effect of Covid on learning

4.1 Global comparison of the pandemic effect on learners

Just like Kenya's scenario, the pandemic has created a big interruption of education history, affecting all learners globally (Sunita, 2020). Azevedo *et al.*, (2021) pointed to the fact that the overall effect of the pandemic if not well managed could turn into a generational catastrophe.

In Kenya, most learning institutions postponed exams and in some cases, they were replaced by alternative testing methods such as online testing for final exams. Prolonged closures made it impossible to implement any form of remedial program. The pandemics forced all institutions to reduce instructional and learning time, which in turn may affect their performance (Khan, *et al.*, 2019).

Some training institutions opted to use homeschooling and ignore the distractions in front of their faces all the time which are naturally drawn. Jan, 2020; Dusseau, 2020 and Brown, *et al.*, 2020). It also assumes that every person has a smartphone or a computer dedicated to him. This is not the case as the available device may share amongst other siblings and parents for activities that they were intended for before the pandemic. In some homes, this is not the case.

In the case of online studies, students whose parents were well educated had an advantage on online studies as compared to those from low-income families. Online studies

that were adopted during the lockdown as noted earlier in the text has been associated with an increase in the digital divide widening the gap amongst learner at all level Lai, 2021; van de Werfhorst, 2020). How the gap is to be managed remains one challenge in post corona period. The next section examines the effect of the pandemic on learners.

4.2 Findings on Effect of Covid on respondent's mental and emotional health

4.2.1 GGG

This section gives finding on the effect of the pandemic on the mental health of the students. Son, *et al.*, (2020) in their noted that mental health issues have a relationship with student's performance and their academic success. It affects their motivation and concentration in class, social interactions between the student and others. Those suspected to have with mental or emotional issues should be advised to seek professional counselor or doctors to manage their stress which if not well managed may cause mental illness.

4.2.2 Emotionally

The students responded to stress in many different ways. Common emotional effects are irritability, unhappiness,

fear, self-doubt, impatience, anger, frustration, anxiety, panic, and despondency, feelings of inadequacy, insecurity, hopelessness, emotional withdrawal and depression. These findings are similar to that of Annalakshmi, and Jayantha (2019) in their study on Repercussion of Stress and Coping Strategies among Students.

These symptoms were in most cases identified by those close to the students since most of those suffering were not aware of anything wrong.

4.2.3 Coping with mental health issues

The finding from the study indicated those respondents with signs of stress and anxiety, sought help from their classmates while others had no one to run to. None had sought assistance from their lecturers, clinical officers or the college counselor.

4.2.4 Sleep disorder

The finding showed that about 43% of the respondents have sleep insomnia while about 41% indicated that they have challenges in waking up in the morning and sometimes do not sleep at all. Likewise, 44% admitted that they have difficulties in concentrating on what was taught in class. Sleep is associated with academic performance in colleges. Research by Son, *et al.*, (2020) and Rodríguez-Hidalgo, *et al.*, (2020) noted that sleep deprivation increased inability to concentrate in class, feeling of depression, student attaining low grades, increased anxiety, and in some cases thoughts and attempts to suicide. Increased levels of stress impair

sleep by prolonging how long it takes to fall asleep. McEwen, & Karatsoreos, (2020) found that sleep loss triggers the body's stress response system, which may lead to elevation in stress hormones, cortisol, which in addition disrupts sleep.

4.2.5 Loss of interest, fear and worry

Similarly, 42% of the respondents said that they have lost interest in studying and feared that the career had a dull future. Others feared that they may get sick while others feared that their relatives or colleagues may transmit the virus. Fear is documented to affect the brain architecture of memory and learning. Arnsten, (2009) and Ullah, *et al.*, (2016) found that students who confront fatal and chronic fearful experiences often lose their learning capacities and do not perform well as compared to those without fear. Fear has been associated in some cases with poor academic performance while others fail exams and get low grades.

4.2.6 Irritability and anger

Close to 38% of the students indicated that their level of irritability has gone up and was affecting their relationship with their peers. Irritability is a common symptom of anxiety and going through a stressful period can make a person feel more irritable than usual. Miron-Spektor, *et al.*, (2011) in their study found that students with severe anxiety are easily upset, by those close to them both literally and figuratively their close partners. Table 1.2.

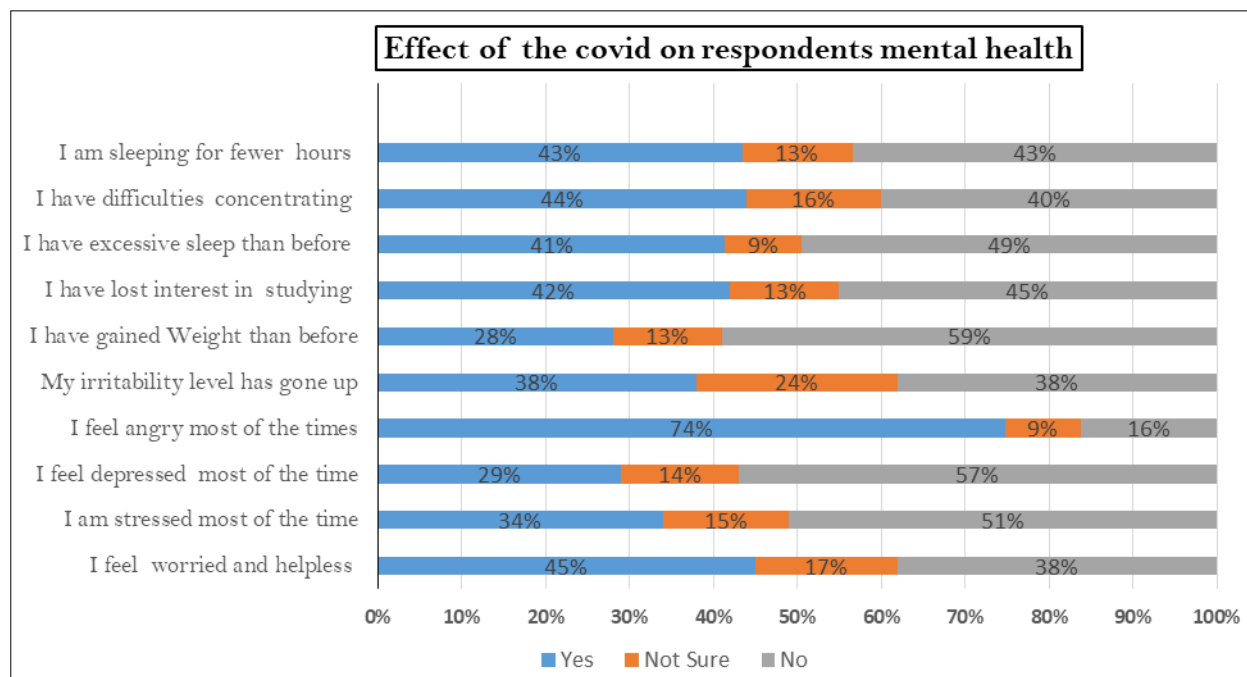


Fig 1.2: Effect of the pandemic on respondent's mental health

The findings from the respondents in Kenya were not different from other countries in the world. The pandemic did not only affect the learner but also the teachers. Globally, the disruption by the COVID-19 pandemic also dealt a big blow to the mental health and psychosocial services offered in many education institutions (Doraville, 2020; Semo, and Frissa. 2020; Villegas, *et al.*, 2021). The closures due to COVID-19 also affected the ability of teachers to work as most of them were either affected directly or indirectly. Many students shared feelings of stress, anxiety, isolation, and depression, which they linked

to the lack of contact with their school community.

From the experience from the pandemic it was noted that schools are not only crucial as an education provider, but also as supported learners socio-emotionally. Schools have provided safe space for vulnerable students, psychological support, and responds to their socialization needs, and created a sense of community. There was fear of infection and some teachers were infected and others lost their lives thus affecting their performance. To others, they lost their jobs while others lost their livelihood. Teachers are also parents and so must juggle their learner's activities, such as

helping their learners with homework, with their own job responsibilities.

The study noted that school closures eliminated some of these critically important aspects of school beyond academic activity, such as the development that occurs through personal relationships among students and between students and teachers, after-school activities that support learner's mental and emotional well-being and skills development, and a sense of routine.

With the interruption of their usual activities at school, during the epidemic, learners have lost in-person contact with families and associates. Other families fear that loved ones are in danger of serious illness and even death. This uncertainty affected their mental health and performance during this period.

Families' resources also have been largely impacted by the economic downturn that followed the disruption. There is overwhelming evidence that low-income learners and their families have much less access to nutrition and shelter and other basic life necessities thus affecting their mental health.

It was noted that learners transitioned to online learning overnight and have had to follow classes without the direct supervision of the teacher or the interactions with other students affected their emission and feeling and was seen as an abrupt interruption of life. This came as a shock in their academic life where different learners and teachers coped differently.

In the era of COVID -19, Agrati, 2021 and Lee, and Tan, (2018). Noted that teachers were tasked with implementing distance learning modalities, often without sufficient guidance, training, or resources. Several teachers lacked the most basic ICT skills and were struggling to teach remotely (Riel, *et al.*, (2016). Teachers' physical health was put at risk when required to provide face-to-face education for the learner of essential workers and vulnerable COVID-19 has had varying impacts on employment and salaries.

In the public sector in Kenya, teachers who were on contracts were affected, as most contracts were not renewed. Non-payment of teacher salaries due posed a problem for individuals, families, and community well-being and also hindered the delivery of quality education Idren Rakoczy, (2009). The study observes that many more teachers just like the learners may also need psychological support if they are to meet the needs of their students.

4.3 Coping Mechanism to the Pandemic

As we gradually move onward during the pandemic and return to what is now referred to as the "new normal," it is prudent that we do not let learners' development fall away and revert to a constricted focus on academics alone. If we do this, we will have ignored ignore and potentially aggravate the distress that many learners are facing. This would disadvantage low-income students even further in accessing education within this period. It is advisable that Institutions should not fail to recognize the natural variation in students' strengths across a broader range of skills, or "patterns of thoughts, feelings, and behavior" (Borghans *et al.* 2008).

5. Conclusion and recommendation

5.1 Learning environment

The pandemic has caused the largest interference of education in history. Prolonged closures threatened the operation of the academic calendar and examinations, it was

found that Students transitioned suddenly to online learning, without necessarily having the practice or experience to learn well online, and the transition required them to shift their device-use habits from leisure to study. Exams were postponed while others were canceled altogether. Exams were substituted with continuous assessments, and final exams that traditionally summed the student performance were interrupted.

The epidemic increased the cost of learning and institutions were forced to invest in infrastructural development. Learners paying school fees were unable to be their guardians and parents were either directly or indirectly affected. Training institutions should therefore come up with a mechanism that cushions students from low-level income as some of them may not afford their financial obligations. Otherwise, students may be forced to drop their programs or defer.

The short-term and long-term effects will be determined by how the institutions adapt to the new normal. Managing the spread of the virus through social distancing affected the class utilization where bigger classes were split. Teaching practical subjects which involved sharing resources were affected. This increased the lecturer student's contact hour for those attending physical classes. The college ICT infrastructure was not capable of offering remote learning and neither the students nor the lecturers had the required laptops or smartphones to facilitate online lessons. The students and the lecturer were not emotionally and technically prepared for other forms of training as most of the units taught were practical in nature and required physical presence. Exams and other forms of assessment were affected and the annual calendar events.

5.2 Infrastructure development

One of the key conditions to reopening most training institutions was the capacity to guarantee a safe return to physical premises, while keeping physical distance and following public health measures, such as the use of masks and frequent hand washing. Such conditions were difficult in schools with overcrowded classes and limited resources. To meet these requirements training institutions will require additional budgets and investments.

5.3 Mental and emotional health

The emotional and mental wellness of the students has an effect on performance. It also affects the way students relate with their peers and the learning institution. This pandemic has affected the mental and emotional health of a good number of students. It's the responsibility of the learning institution to observe and monitor learners within the Covid period in order to detect those requiring assistance.

The study found that most of the respondents had more than one symptom of stress among them being sleep disorder, anger, irritability, poor concentration, and lack of motivation to study. Others demonstrated fear and worry about themselves, their career, and even their parents and relatives.

6. Recommendations

The study recommends that there should be a mental health policy with clear guidance on how students with mental or emotional health maybe assist, how issues related to mental and emotional health may be handled without discrimination or breach of patient confidentiality.

Training institutions should constitute a counseling committee to examine the effect of the epidemic on learners and the lectures. The committee should monitor students' trends in irregularity and indiscipline and share it with the management and parents. It should also monitor teacher-student relationships, with the aim of helping students improve their emotional, behavioral, interpersonal characteristics, and make better choices in life.

Learning institutions should prepare and put in place measures to manage students who drop out of the programs due to Covid related reasons. Follow up research on the effect of the pandemic on psychological and emotional health, its effects of student's performance and payments of fees and other financial obligations.

7. References

- Azevedo JP, Hasan A, Goldemberg D, Geven K, Iqbal SA. Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. *The World Bank Research Observer*. 2021;36(1):1-40.
- Agrati LS. Remote Support through Technologies: A Research-Training on Teachers "Sophisticated Knowledge'. In *Teacher Education in the 21st Century-Emerging Skills for a Changing World*. In tech Open. 2021.
- Annalakshmi N, Jayanthi AC. Repercussion of Stress and Coping Strategies among Students. 2019.
- Bozkurt A, Jung I, Xiao J, Vladimirsch V, Schuwer R, Egorov G, *et al*. A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*. 2020;15(1):1-126.
- Brown N, Te Riele K, Shelley B, Woodroffe J. Learning at home during COVID-19: Effects on vulnerable young Australians. Peter Underwood Centre for Educational Attainment. 2020.
- Buonsenso D, Roland D, De Rose C, Vásquez-Hoyos P, Ramly B, Chakakala-Chaziya JN, González-Dambrauskas S. Schools closures during the COVID-19 pandemic: a catastrophic global situation. *The Pediatric Infectious Disease Journal*. 2021;40(4):e146-e150.
- Busuttill L, Farrugia RC. Teachers' response to the sudden shift to online learning during COVID-19 pandemic: implications for policy and practice. 2020.
- d'Orville H. COVID-19 causes unprecedented educational disruption: Is there a road towards a new normal? *Prospects*. 2020;49:11-15.
- Dusseau A. The Case for Home Schooling: Free-range A home education handbook. Hawthorn. 2020.
- Elumalai KV, Sankar JP, Kalaichelvi R, John JA, Menon N, Alqahtani MSM, *et al*. Factors Affecting the Quality of E-Learning during the COVID-19 Pandemic from the Perspective of Higher Education Students. *COVID-19 and Education: Learning and Teaching in a Pandemic-Constrained Environment*, 2021, 189.
- Elumalai KV, Sankar JP, Kalaichelvi R, John JA, Menon N, Alqahtani MSM, Abumelha MA. Factors Affecting the Quality of E-Learning during the COVID-19 Pandemic from the Perspective of Higher Education Students. *COVID-19 and Education: Learning and Teaching in a Pandemic-Constrained Environment*, 2021, 189.
- George ML. Effective teaching and examination strategies for undergraduate learning during COVID-19 school restrictions. *Journal of Educational Technology Systems*. 2020;49(1):23-48.
- Govindasamy T. Successful implementation of e-learning: Pedagogical considerations. *The internet and higher education*. 2001;4(3-4):287-299.
- Jan A. Online teaching practices during COVID-19: An observation case study. Available at 2020. SSRN 3584409.
- Kerr MS, Rynearson K, Kerr MC. Student characteristics for online learning success. *The Internet and Higher Education*. 2006;9(2):91-105.
- Khan YL, Lodhi SK, Bhatti S, Ali W. Does Absenteeism Affect Academic Performance Among Undergraduate Medical Students? Evidence from "Rashid Latif Medical College (RLMC)." *Advances in medical education and practice*. 2019;10:999.
- Krivova AL, Kalliopin AK, Korotaeva IE, Shafazhinskaya NE, Ermilova DY. Social Networks as a Means of Monitoring Students' Progress. *Propósitos y Representaciones*. 2021;9(SPE3):1264.
- Krönke Matthias. "Africa's Digital Divide and the Promise of E-learning." 2020.
- Lai J, Widmar NO. Revisiting the digital divide in the COVID-19 era. *Applied Economic Perspectives and Policy*, 2021;43(1):458-464.
- Lee WO, Tan JPL. The new roles for twenty-first-century teachers: Facilitator, knowledge broker, and pedagogical weaver. In *The teacher's role in the changing globalizing world*. Brill Sense. 2018, 11-31p.
- Manullang SO, Satria E. The review of the international voices on the responses of the worldwide school closures policy searching during the COVID-19 pandemic. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 2020;5(2):1-13.
- Nurul Mostafa, Kamal Z. Distance Education for Rohingya Learner during COVID 19 Emergency: Bangladesh Rohingya Response Perspectives; Challenges, Recommendations, and Proximities. *Distance Education for Rohingya Learner during COVID-19*. 2020.
- Rapanta C, Botturi L, Goodyear P, Guàrdia L, Koole, M. Online university teaching during and after the COVID-19 crisis: Refocusing teacher presence and learning activity. *Post digital Science and Education*. 2020;2(3):923-945.
- Riel J, Lawless KA, Brown SW. Listening to the teachers: Using weekly online teacher logs for ROPD to identify teachers' persistent challenges when implementing a blended learning curriculum. *Journal of Online Learning Research*. 2016;2(2):169-200.
- Roth K. Technology in Education: The Ongoing Debate of Access, Adequacy and Equity. 2020.
- Semo BW, Frissa SM. The mental health impact of the COVID-19 pandemic: Implications for sub-Saharan Africa. *Psychology Research and Behavior Management*. 2020 ;13:713.
- Sunita ML. Education in the Era of COVID-19: Innovative Solutions to Real Challenges. *The Educational Review, USA*. 2020;4(11):193-198.
- Van de Werfhorst, Kessenich HE, Geven S. The digital divide in online education. *Inequality in digital*

- preparedness of students and schools before the start of the COVID-19 pandemic. 2020.
- 29 Van Jaarsveld GM. The effects of COVID-19 among the elderly population: A case for closing the digital divide. *Frontiers in psychiatry*, 2020, 11.
 - 30 Villegas CC, Peirolo S, Rocca M, Ipince A, Bakrania S. Impacts of health-related school closures on child protection outcomes: A review of evidence from past pandemics and epidemics and lessons learned for COVID-19. *International journal of educational development*, 2021, 102431.
 - 31 Son C, Hegde S, Smith A, Wang X, Sasangohar F. Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of medical internet research*. 2020;22(9):e21279.
 - 32 Rodríguez-Hidalgo AJ, Pantaleón Y, Dios I, Falla D. Fear of COVID-19, stress, and anxiety in university undergraduate students: A predictive model for depression. *Frontiers in Psychology*, 2020, 3041.
 - 33 McEwen BS, Karatsoreos IN. What is stress? In *Stress challenges and immunity in space*. Springer, Cham. 2020, 19-42pp.
 - 34 Ullah M, Khan MS, Sultan K. Relationship between fear and the students' academic achievement in the context of war hazards. *Gomal University Journal of Research*. 2016;32(1):111-118.
 - 35 Miron-Spektor E, Efrat-Treister D, Rafaeli A, Schwarz-Cohen O. Others' anger makes people work harder not smarter: The effect of observing anger and sarcasm on creative and analytic thinking. *Journal of Applied Psychology*. 2011;96(5):1065.