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## College students' educational experiences amid COVID-19 pandemic

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Salome Mshigeni <sup>A</sup>	A	<i>Assistant Professor, Health Science Department, California State University San Bernardino, California, USA</i>
Evangel Sarwar <sup>B</sup>	B	<i>Lecturer, Health Science Department, California State University San Bernardino, California, USA</i>
Eunice Kimunai <sup>C</sup>	C	<i>Healthcare Subject Matter Expert, Defense Health Agency/Department of Defense, Virginia, USA</i>

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### Keywords

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Challenges;  
college students;  
COVID-19;  
education experiences;  
pandemic;  
stress.

### Abstract

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Introduction: While lockdown and shelter-at-home strategies enforced by governments were critically needed to contain the rapid progression of the COVID-19 virus, in the U.S., hundreds of millions of learners and higher education institutions were significantly impacted with their daily operations. This study looks at the COVID-19 impact on higher education, with an emphasis on technology, mental health, and resources provided by the university. Methods: We utilized primarily qualitative research methods to assess students' responses of our survey and examined emerging themes. We analyzed each question for word order and identified phrases and keywords that students provided. Results: Our findings show that 49 of the participants did not find online education to be difficult nor did they have any technical issues, and this is promising for the future of virtual education. On the other hand, 68 of the students found the whole experience to be challenging, owing to a number of reasons (internet access, Blackboard knowledge, lacking motivation, and instruction-related challenges). In terms of stress levels, the majority of the students were stressed due to multiple factors (i.e., catching COVID-19, financial difficulties, staying engaged, finding childcare, maintaining relationships, losing family members). Interestingly, 96 of the students reported not using campus-provided virtual workshops. Conclusion: Recommendations for improvement are provided.

### Article Info

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Received 12 April 2021

Received in revised form 19 May 2021

Accepted 21 May 2021

Available online 25 May 2021

**DOI:** <https://doi.org/10.37074/jalt.2021.4.1.20>

## Introduction

The rapid progression of COVID-19 resulted in governments worldwide resorting to lockdown and shelter-at-home strategies to contain the spread of this deadly virus. With 161,513,458 confirmed cases and 3,352,109 confirmed deaths globally (World Health Organization [WHO], 2021), the United States has experienced 599,464 deaths as a result of this virus (Worldometer, 2021). Hence, COVID-19 became the deadliest pandemic of the 21st century. Due to the significant threat to human life and health posed by this virus, most governments around the world had to temporarily close (in 150 countries) educational institutions or switch to alternate delivery methods in a short time to protect vulnerable students, staff, and faculty populations. As a result, global higher education faced significant challenges that impacted hundreds of millions of learners (Crawford et al., 2020; Sahu, 2020; UNESCO, 2020).

The transition from traditional face-to-face teaching to the online environment created challenges for many educational institutions that tested the organizational agility and technological capabilities to ensure fair and equal student success. As Crawford et al. (2020) and Zhong (2020) point out, this transition has affected poorly resourced universities and socially disadvantaged students with limited access to technology in negative ways. Although online education is not a new method of teaching, the full transition to online mode initially was not prepared with adequate, high-capacity IT infrastructure, not all faculty were technology-savvy to teach online classes, and not enough resources were available to provide all students with the necessary online access in safe and quiet places (Sahu, 2020). However, it must be noted that, this study will only focus on students' experiences to transitioning to fully online mode as a result of COVID-19.

Uncertainties from such closures and social restrictions also affected the student population's health and well-being, which may have long-lasting effects, and need to be taken into consideration. Studies reported that students experienced anxiety, tension, and fears that cause psychological disorders such as acute stress disorder, post-traumatic stress disorder, depression, and suicide (Pragholapati, 2020). Students have reported that they are worried about their health, their family's health, finances, loss of family members' income, and the severe challenges of a global recession caused by this pandemic. Moreover, students are concerned about their grades and their future careers, which can demotivate them and hurt their academic performance and social engagement (Sahu, 2020; Dorn et al., 2020; Cao et al., 2020).

As affirmed by scholars like Son et al. (2020), mental health issues negatively affect student academic success due to loss of motivation, concentration, and social interaction, leading to social isolation. There is a need for effective and robust social support for students to help reduce these psychological pressures and change student attitudes regarding seeking support during such public health emergencies. Government and universities should work collaboratively to identify and address the mental health crisis by providing high-quality, easy to access, timely psychological and counseling services

to college students (Cao et al., 2020).

## Study purpose

As such, this paper aims to look at the impact of COVID-19 on higher education and the challenges faced by university college students during their transition to online learning, focusing on three themes *a) Technology, b) Mental Health and Stigma, and c) Resources Available* to the students. Currently, there is a gap in the literature to address the intersection between these three unique elements presented in our study. There are a myriad of literature that talks about the impact of the pandemic to higher education whilst they focus on the themes separately. However, we realized that there is much research needed to look at all three areas in combination, reflecting on the impact they have together in the success of higher education and the student population who were inadvertently forced to adopt this learning style of online education. As such we have specifically examined students' feedback regarding issues of transition to fully online instruction and access issues related to technology with the intention of providing recommendations for future preparation and transition to virtual education in a first-generation minority serving academic institution. Given that COVID19 raises many uncertainties about the future, our study also looks at the mental health challenges, available university resources, and students' coping mechanisms to address these various issues in one study. Based on our findings, we also make evidence-based recommendations on how to address such challenges, limitations, and the need for future studies to address other shortcomings.

## Literature review

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2020), 107 countries including the United States had implemented national school closures by March 18, 2020. The abrupt closure of many learning institutions led to uncertainties about what the future holds for both students and faculty as virtual learning became the new norm. According to Van Wart et al., (2020), online education is frequently discussed, and its insight highly influenced by what one values. For example, most accreditation bodies are concerned about technical standards and teaching effectiveness. Many academic institutions are concerned about reputation, rigor, and students' satisfaction rates. Further, faculty may care about their workload, subject coverage, and student engagement, while students may be concerned about their learning achievement, instructors' interactions, and timely responses to needs, and the comfort of classroom environments (Van Wart et al., 2020).

In this paper, we explore students' perception on the delivery of online education during a pandemic with an emphasis on three main areas: technology; mental health and stigma; and the availability of campus resources. These three main areas were chosen based on our literature review and needs observed for our university demography, which is further elaborated below. We applied the tenets of Moore's Theory of Transactional Distance and its significance to promoting

quality in virtual education (Fallon, 2011). Further, this theory helps us demonstrate how complex it is to implement a successful virtual learning environment keeping in mind that every system has pros and cons. It must be noted that the constantly evolving environment surrounding virtual education makes it difficult for educators to use a single theory upon which to base practice and research on. Although there are many other theories in the literature that can be employed for the purposes of this study, we will only be focusing on Moore's theory. For example, classical theories that emphasize on the independence and autonomy of the learner, industrialization of teaching, or interaction and communication style theories were not our preferred method simply because this study focuses on two elements found in Moore's theory: Dialogue and structure that leads to enhanced learner autonomy, in order to mirror our study purpose (Fallon, 2011).

### ***(i) Technology***

Technology has always been an important tool to deliver many forms of learning materials in institutions of learning. Its usefulness cannot be emphasized enough in delivering and accessing education during school closures. Students' experiences with the transition to fully online learning has both been positive and also negative. Some students had a smooth transition as they were already utilizing online classes, while other students had obstacles, including the lack of internet access. According to Chick et al. (2020), there are a number of challenges with the use of technology for learning, such as some faculty struggling with novel technology or some participants struggling with poor bandwidth connections. These issues can be overcome by having technology-savvy staff conduct large classes or conferences at a multi-institutional or regional level with rotating faculty among more than one program (Chick et al., 2020). Most universities continued to struggle with the issue of technology. Other challenges include students lacking proper equipment, online security threats, inability to deliver in-person labs remotely, and strained Information Technology departments.

### ***(ii) Mental health and stigma***

The pandemic has left many people vulnerable to mental health problems and suicidal ideation (Gunnell et al, 2020). Mental health consequences are likely to be present for longer and peak later than the actual pandemic timeframe (Gunnell et al., 2020). There are many psychological effects that school closures and uncertainties have had on learners including students sharing feelings of being stressed, anxious, and isolated. Many studies have highlighted the plight of low-income students in the wake of COVID-19. Aucejo et al. (2020) found that 55% of lower-income students were more likely to delay graduation when compared to their higher-income counterparts. Further, the negative economic and health impacts of COVID-19 have been significantly more pronounced for less advantaged groups.

Some of the public health responses to reducing or eliminating any suicide risk associated with the COVID-19 pandemic include mitigations that can be provided by mental health services and individual providers, such as delivering care in different ways (e.g., digital modalities); developing support for health-care staff affected by adverse exposures (e.g., multiple traumatic deaths); ensuring frontline staff are adequately supported, given breaks & protective equipment, and have access to additional support (Gunnell et al., 2020). Other modalities can be provided by the government, such as adequate resourcing for interventions (Gunnell et al., 2020). Hence, universities should place an emphasis on mental health support by updating the health guidelines and providing online guidance and lectures to offer strategies for managing stress when coping with the pandemic. Any student experiencing feelings of heightened anxiety about COVID-19 should be provided with prompt and proper psychological support (Al-Rabiaah et al., 2020). Universities should consider matters relating to financial support and the general living expenses of needy students. Universities should pay more attention to students with anxiety and depression symptoms and provide more mental health knowledge, such as the common symptoms of anxiety and depression and ways of alleviating negative psychological effects by opening online training courses or setting channels of one-to-one online counseling for students (Wang et al., 2020).

For many universities, addressing mental health issues among students can be challenging especially since the students are remote and not in campus. Furthermore, students may not be able to access resources provided by the university as a result of not knowing their availability and also not being present on campus.

### ***(iii) Resources available***

Resources available for students that are provided by universities include academic and advising support services, online learning support, counseling services, career services for students concerned about employment opportunities, and resources for international students (Center for Disease Control and Prevention [CDC, 2020a]). For students struggling with coping during the pandemic, the CDC offers the following considerations for learning institutions, which include: (1) encourage employees and students to take breaks from watching, reading, or listening to news stories, including social media if they are feeling overwhelmed or distressed; (2) promote employees and students eating healthy, exercising, getting enough sleep and finding time to unwind; (3) encourage employees and students to talk with people they trust about their concerns and how they are feeling; (4) communicate with faculty, staff, and students about mental health support services available at the university; (5) consider having an employee assistance program (EAP) through which faculty and staff can get counseling; (6) share facts about COVID-19 regularly with students, faculty, and staff through trusted sources of information to counter the spread of misinformation, reduce stigma, and mitigate fear; (7) encourage positive, proactive messaging, education, and role-modeling and speak out against negative behaviors that stigmatize individuals who

test positive for or are exposed to COVID-19, including negative statements on social media, by promoting positive messaging that does not discourage mitigation behaviors and testing; (8) consider posting signs for the national distress hotline; (9) ensure continuity of mental health services, such as offering remote counseling; and (10) encourage students, faculty, and staff to call 911 or the National Suicide Prevention Lifeline if they are feeling overwhelmed with emotions like sadness, depression, anxiety, or feel like wanting to harm themselves or others (CDC, 2020a).

Most universities do not offer all the resources recommended by the CDC but do offer some of the resources mentioned above. While many students are still reporting challenges during the pandemic, they are generally not taking advantage of resources provided by universities.

## **Methodology**

### ***Study design***

This study draws from undergraduate students' responses to their virtual education experience during the 2020 COVID-19 pandemic time. We utilized primarily qualitative research methods to assess students' experiences and their willingness to utilize free campus resources provided to them during a pandemic (i.e., virtual workshops and counseling services). Also, we gathered information regarding their technological challenges. Qualitative research can be used as a vehicle for gaining new perspectives on known phenomena that can help researchers access more in-depth information that may be difficult to obtain using quantitative methodology (Mshigeni et al., 2020). As suggested in the literature, qualitative data can tell a story from the perspective of the study participants, researchers, and of the reader (McCall et al., 2019). Therefore, this study has aimed at presenting stories of undergraduate students' experiences of virtual education by drawing from real life examples of what first-generation college students have had to endure during a pandemic.

### ***Study population and ethics***

We decisively chose health students because of their diverse student body. Although the student population's chosen major may help them better grasp the public health issues faced by the majority of students and also aid in the understanding of creating solutions for navigating the issues now and in the future, we acknowledge that the students' experiences in navigating the issues during a pandemic will be different than that of a public health or healthcare professional. Upon Institutional Review Board (IRB) approval, we distributed a survey among 150 students and received 117 responses from those who were enrolled during the past academic year in one specific course (Spring 2020 through Spring 2021). A well-structured informed consent was administered whereby participants were informed that their contribution to this study was completely voluntary and that it will not affect their current grade in the course. No student was coerced to participate in the study. Further, participants were informed that there were no right or wrong answers,

and they were free to discontinue their participation at any time if they felt uncomfortable to continue. There are no public use data for this study. This study was approved by the Institution Review Board (#IRB-FY2021-29) of the university being studied.

### ***Study setting***

As a designated minority serving institution, the university where this study was conducted is comprised of a large number of low-income first-generation college students with a diverse racial and socio-economic backgrounds. Eighty-eight percent of students are seeking an undergraduate degree, 82% attend college on a full-time basis, 81% are first-generation college students (parents without a bachelor's degree); 66% are Hispanic, 12% are White, 6% are non-resident foreign students, 5% are African American, 5% are Asian, 4% Unknown, 2% are Two or More Races, and <1% are Native American/Alaskan Native or Native Hawaiian/Pacific Islander. Fifty-eight percent of the undergraduate students are identified as low-income students and solely depend on Pell Grants for their source of financial support. The average age for undergraduate students is 22 years. Overall, the university resembles the average state university campus with a slightly greater number of females (63%) enrollees than male (37%), very similar to most other programs in the United States.

### ***Instrument development***

A survey was constructed after a thorough literature review and input gathered from the research team after examining emergent themes from other studies. We asked a sample of students in this program five questions that solicit their experiences regarding the delivery and access of higher education. We asked the following: (i) *what is your experience with the transition to fully online instruction from March 2020 through March 2021?* (ii) *What challenges have you experienced accessing your virtual classes?* (iii) *What is your experience (if any) with stress and/or anxiety during the pandemic?* (iv) *What coping mechanism has worked best for you?* and (v) *what University stress-free workshops have you taken advantages of?* The simplicity of our survey design allowed for an easy interpretation of the data as we only focused on three key areas: technology, mental health and stigma, and available university resources.

### ***Data analysis plan***

We used qualitative analytic methods to analyze the responses of our survey by examining emerging themes. We analyzed each question for word order and gave special attention to phrases and keywords that the students provided in their responses. We created word themes that we closely examined, and color coded the responses manually into appropriate labels in the context of Moore's Theory of Transactional Distance and its significance to virtual education (Fallon, 2017). Based on this theory, the questions were designed with data collection in mind that examined the efficacy of the virtual classroom as it exists,

pertaining to the quality of dialogue and structure and the overall impact on learner autonomy. The study was designed to gauge these two areas of dialogue and structure as it pertains to the quality of the student's learning autonomy taking into consideration both the positive and negative impacts, and identifying ways to break down the student's sense of isolation by forming university communities of practice by providing the tools necessary, improving the interaction, and support.

During the coding process, we detected over 85% consistency in identifying the same themes across each question. As a team, we agreed on all coded category terms prior to data collection, during, and after data analysis and this is a technique that we have found to be effective as documented in the literature (Hawley, et al., 2021). Further, we used Moore's ideas on structure and dialogue as essential parts of distance learning. Themes that were shared by more than 90% of the students were considered to be our major findings. For example: students technological experiences & challenges (Tables 1 and 2) present the structural aspect of online education. Secondly, students sharing their stress/anxiety levels, how they cope, and how often they utilized campus free workshops (Tables 3, 4, and 5) presents the dialogue aspect of online education (Fallon, 2011; Hawley, et al., 2021).

## Results

Analysis of data based on the three areas namely (i) Technology, (ii) Mental Health and Stigma, and Available Resources are presented below.

### Students' Experiences

Table 1: College Students' experience with the transition to fully online instructions (N = 117)

<i>i. What is your experience with the transition to fully online instructions?</i>	
Trending Responses	Number
Not Difficult Transition	49
Difficult Transition	43
All Others (Miss in-person experience/less motivated/self-teach/adjustment to new routine/time management issues)	25

Table 1 above presents students' responses on their overall experience with transitioning to fully online instructions in the past year (Spring 2020 through Spring 2021). Forty-nine of the responses were positive about fully online transition, on the other hand at least 43 students faced significant challenge transitioning to fully online instruction. Also, there is a sample of 25 students who found the experience as annoying, confusing, having to adjust, and difficult initially but got better with time.

## Challenges

Table 2: College Students' Challenges experienced in accessing fully online classes (N = 117)

<i>ii. What are some challenges (if any) in accessing fully online instructions?</i>	
Trending Responses	Number
Non-Technical Challenges: Group Assignments/ Staying Focused/ Time Management/ Power Outage/ Resource Sharing at home/ Missing In-Person Activity Adjusting/ Self-Learning; No Peer Support	46
Technical Challenges: Internet Access/ Slow Wi-Fi/ No Wi-Fi/ ZOOM/ Blackboard	37
No Challenges: Prefer Online, No Technical Issues	27
Instructions Challenges: Lots of assignment/ Professor not used to Online Teaching/ Lack of Communication/ Lack of Clear Instructions	7

Table 2 above presents students responses on the challenges they experienced while accessing fully online instruction during the past year (Spring 2020 through Spring 2021). Among respondents, 46 of the students reported challenges that were not technical (staying focused, not liking group work, lack of resources, lack of peer support, etc.). On the other hand, 37 of the students reported challenges related to technical issues such as internet access, slow or no Wi-Fi, challenges with Blackboard navigation, and how to use ZOOM technology. Further, on a lighter note, 27 of the students reported they did not face any challenges. Only 7 students reported challenges that were related to communicating with professors and unclear instructions due to professor's transition to teaching online.

### Stress and/or anxiety

Table 3: College students' experience with stress and/or anxiety (N = 117)

<i>iii. What is your experience with stress and/or anxiety during this period, (if any)?</i>			
Trending Responses (Stress)	Number	Trending Responses (Anxiety)	Number
Staying engaged while learning online	35	High Stress/ Very Anxious	94
Catching COVID-19	14	Low Stress/ Not Anxious	14
Balancing different aspects of life/ Childcare/ Schooling	13	Medium Stress/ Slightly Anxious	9
Financial difficulties	12		
Getting job/ Internship after graduation/ Uncertainty/ Not knowing what the future holds	10		
Maintaining relationships/ Loss of loved ones	10		
Mental well-being	9		
Lockdown/Graduating on time	8		
Other	6		

Table 3 above presents students' responses pertaining to stress and/or anxiety experienced during the pandemic (Spring 2020 through Spring 2021). A large number of the students (35) found it stressful to stay engaged while learning online; others (13) found it challenging to achieve a balance between different aspects of life such as schooling and finding childcare. Some of the students experienced stress as a result of catching COVID-19 (14) or going through

financial difficulties (12). For a number of the students (10) shared that the future has been very uncertain as a result of the pandemic (i.e., job hunting, internship hunting) and others (10) have found it stressful to maintain relationships. At least nine students reported their mental well-being has been challenged and some have worried (8) about the lockdown or graduating on time. When asked specifically about their anxiety levels, at least 94 of the students were very anxious, followed by nine students who experienced moderate levels of anxiety, and the remaining 14 students had a low stress level.

### Coping mechanism

Table 4: College students' coping mechanism (N = 117)

<i>iv. What coping mechanism has worked best for you?</i>	
Trending Responses	Number
Take care of your body: Exercise regularly	27
Connect with others/ Talk to others/ Support animal (pet)	25
Arts and craft/ Paint/ Coloring/ Gardening/ Cook/ Bake/ Hike	19
Distracting oneself/ Staying positive/ Optimistic/ Music/ Watch movies/ Video games	13
Take care of your body: Meditate/ Prayer/ Breathing	12
Attend a workshop/ Use of online apps	6
Take care of your body: eat healthy/ Get plenty of sleep/ Massages	7
Take breaks from watching, reading, or listening to news stories	5
Maintaining a journal/ Poems	3

Table 4 above presents students responses on different types of coping mechanisms that they used during the pandemic (Spring 2020 through Spring 2021). The majority of them either exercised (27) or connected with friends/families (25). Also, a good number of students (19) kept busy by self-engaging in arts & crafts, painting, coloring, gardening, cooking, baking, or hiking. At least 13 of the students found self-distraction activities to be useful (i.e., watching movies, playing video games, or just staying optimistic). Others (12) opted for meditation, prayer, and breathing activities, while some students (7) engaged in healthy eating habits, getting plenty of sleep, and getting massages. A small minority of the sample (6) attended workshops or used online apps to stay busy. The remaining sample either abstained from TV watching, reading, or listening to the news (5), while others distracted themselves by maintaining a journal or reading/writing poems (3).

### Resources utilization

Table 5 above presents students' responses on their utilization of stress-free campus workshops and services that were provided virtually during the Spring 2020 through Spring 2021 pandemic time. Despite the availability of free workshops, 96 of the students did not attend any of the free offered university stress-free workshops. On the other hand, 10 students reported taking advantage of virtual services such as: Stress Management; Pet Stress Away; Destressing

Table 5: College students' use of university stress-free workshops (N = 117)

<i>v. What university-provided stress-free workshops have you taken advantage of?</i>	
Trending Responses	Number
No or None	96
Yes: Stress Management/ Pet Stress Away/ Destressing the Holidays/ Managing Your Moods/ Avoid Burnouts	10
Yes: Faculty: One-on-One counseling session/ Direct Email Tips	5
Yes: REC Center App: Zumba/ Yoga/ Pilates/ Cardio	6

the Holidays; Managing Your Moods; Avoid Burnouts. Further, we learned that, at least five students either reached out to faculty directly, utilized tips from direct campus emails, or received one-on-one counseling sessions. Finally, six students reported utilizing Campus Recreation Center App that provides them with instant virtual classes such as Zumba, Yoga, Pilates, and Cardio.

### Discussion

Although it is not possible to discuss in detail every student experience shared in this study, there are five emergent themes we consider to be the most relevant points.

### Students experiences

As indicated in Tables 1 and 2, nearly half the participants did not find online education to be difficult nor did they have any technical difficulties, and this is promising for the future of virtual education. On the other hand, however, a number of students found the whole experience to be difficult or rather challenging owing to a number of reasons (internet access, slow or no Wi-Fi, poor Blackboard navigation knowledge, lacking motivation to self-teach or adjust to the routine, or simply missing the in-person experience). This finding is supported by previous literature. Chick et al. (2020) mentions several challenges with the use of technology for learning including both faculty and students struggling with novel technology and/or poor bandwidth connections. It is very much possible that the students were missing out on the "social presence" that they are accustomed to when they are in a campus learning environment. Van Wart et al., (2020) discussed the importance of student-to-student interaction and how it can be achieved in a virtual environment by allowing students to experience shared learning through the use of threaded discussion boards. Hence, for those students who miss the in-person experience, tools to support online interactions should be used in order to foster an interactive online experience.

### Challenges

Further, we found out that a sample minority of the students experienced instruction and content-related challenges such as assignments accompanied by poor communication

or instructions from their professors, making them draw their own conclusion that some professors were not used to online teaching. These findings call for a structured, planned, and sustained learning environment whereby instructors are prepared to design their courses in a way that affords students an easy-to-work-with platform, using added features that will enhance communication (i.e., blackboard-generated emails and announcements – Fallon, 2011). Further, we recommend a teaching presence, a concept that refers to student's perception on the quality of communication in lectures, direction, and individual feedback from their instructor (Van Wart et al., 2020). If properly planned, the students may not have to experience the social isolation that can lead to unnecessary anxiety regarding their classroom environment.

### ***Stress and/or anxiety***

We also explored another area in this study that focused on stress and the levels of anxiety the students experienced as a result of online education (Table 3). We found more than half of our students were stressed due to multiple factors (i.e., contracting the virus, having financial difficulties, staying engaged, finding childcare, maintaining relationships, losing family members to the virus, or simply not knowing what the future holds after graduation). This finding is supported by previous literature. Some of the issues that have been a cause of stress and/or anxiety for many students include being worried about their health, their family's health, finances/loss of income, grades and their future careers (Pragholapati, 2020; Sahu, 2020; Dorn et al., 2020; Cao et al., 2020). The lockdown experience did, in fact, increase student's anxiety levels on how to best plan for their lives upon graduation (Bozkurt & Sharma, 2020).

### ***Coping mechanism***

We asked the students to share what coping mechanism worked best for them (Table 4) as part of their online learning experience during the COVID-19 pandemic. It is impressive to learn how the students kept busy with regular exercise or meditation, breathing, and prayer, while some of the students opted to eat healthy and get plenty of sleep as part of their physical health regimen. On the other hand, some students found self-preservation in a positive way by doing a number of activities such as talking to friends and family, using support animals, and learning arts and crafts (painting and coloring). Others improved their kitchen skills by baking, cooking, or gardening. Further, some students chose to stay optimistic and keep busy by watching movies or playing video games while making sure to stay away from depressing news stories. This finding is supported by the CDC, which offers the following considerations for students including to take breaks from listening, reading and watching news stories, including social media; promoting healthy eating, exercising, and getting enough sleep; and talking with trusted individuals regarding feeling of stress and/or anxiety (CDC, 2020a).

### ***Resources utilization***

Finally, we asked student participants to share with us what university-provided stress-free workshops they have taken advantages of while pursuing their education in the midst of the pandemic (Table 5). It was interesting to learn that only a small sample of the students have been utilizing the resources by attending workshops such as stress management, pet-stress away, destressing the holidays, how to manage your moods, and avoiding burnout. While these resources were provided during the day in between classes, particularly during lunch times, some students found the efforts to be at odds with their "school or work schedule" and did not attend. Other students shared that they did not feel comfortable attending these workshops on Zoom, and in front of strangers, as they did not wish to be perceived as people who are struggling with mental health, depression, stress, or high anxiety levels as a result of the pandemic.

### ***Implication for practice***

The American Council on Education (ACE) released a Mental Health, Higher Education, and COVID-19 guideline in the spring of 2020 as part of their approach to leadership support on campus well-being. One of their major strategies is the need to ensure that communication to students is consistent, caring, and clear at all times since many students have reported a lack of regular and compassionate communication from their institution as a primary stressor during COVID-19 (ACE, 2020; Gates et al., 2020). Also, despite robust campus emails to advertise these workshops, some students still shared that they were not aware of such services. Perhaps a different approach in connecting with the student population, perhaps by using mobile apps, should be applied in order to reach out to college students, who are technologically inclined to use mobile devices rather than read emails from their desk- or laptop computers (an old-fashioned means of communication). A few students took their own initiative by either contacting faculty directly for one-on-one counseling or by using the recreation center apps where they self-engaged in Zumba, Yoga, Pilates, or Cardio exercises.

### ***Learning loss and dropout rates as a result of COVID-19***

According to Dorn et al. (2020), learning loss among low-income, Black, and Hispanic students is greater because lower income students are less likely to have access to high-quality remote learning or to a conducive learning environment, such as a quiet space with minimal distractions, electronic devices that they do not need to share, high-speed internet, and parental academic supervision. Only 60 percent of low-income students are regularly logging into online instruction while 90 percent of high-income students do (Dorn et al., 2020). Engagement rates are also lagging behind in schools serving predominantly Black and Hispanic students, with just 60 to 70 percent reported logging in regularly (Dorn et al., 2020). This poor virtual attendance increased low performance outcomes for low-income students.

Other challenges that can reduce academic motivation and hurt academic performance and general levels of engagement that are harder to quantify include the likelihood that the pandemic is likely to cause social and emotional disruption by increasing social isolation and creating anxiety over the possibility that parents may lose jobs and loved ones could fall ill (Dorn et al., 2020). Milestones such as graduation ceremonies have been canceled nationwide, along with sports and other extracurricular events, and this may have discouraged full academic participation for low-income minority students. At the institution where this study was conducted, the total dropout rate for freshmen who did not re-enroll in Fall 2020 was 15.20% (EdSource, 2020). The dropout rates by race/ethnicity are as follows: Asian students (14.7%), Black students (17.5%), Latino students (14.4%), and White students (17.9%) (EdSource, 2020).

### **Limitations**

Although our study is very timely and highlights students' challenges transitioning from a face-to-face, traditional style of instruction to a fully online mode of education, there are some limitations and gaps that require additional research. The challenges discussed here are limited to student experiences of the digital transformation of instructional operations during the COVID-19 pandemic. There is a need for additional research on instruction migration and delivery methods adopted by various university faculty and students as they got accustomed to the online mode of instruction, focusing on tools that positively and negatively facilitated the process (Adedoyin & Soykan, 2020). Based on student responses, technology competency/prior experience was frequently cited as a challenge. However, we want to underscore the need to assess student/faculty/university administrators' levels of competency in accessing and using technology for future classes/courses as campuses continue to remain closed while they maintain social distancing during this pandemic (Adedoyin & Soykan, 2020).

Another limitation identified is the lack of student collaboration/involvement to strengthen the research. Including students as collaborators in identifying questions and solutions to students' challenges would have positively reinforced this study (Gates et al., 2021). Moreover, our study is limited in that we did not gather responses about the challenges that faculty also faced during this transition. Future studies that reflect the struggles of faculty in their transition to full-time online instruction can help provide better instruction migration and delivery models that can enhance students' learning experience and alleviate the stress of educators to provide effective online education. As noted by Adedoyin and Soykan (2020), we also advocate for research actions that will facilitate the development of a uniform online learning model that will apply to all disciplines to solve the problem of compatibility.

Finally, as Tasso et al. (2021) bring to our attention, there is a lack of research devoted to students' overall life circumstances not related to university experiences which can affect their overall academic performance. There is a need for research that studies college students' interest in engaging psychotherapy and teletherapy delivery methods

and how college counseling centers can impact student willingness to get involved during a pandemic.

### **Recommendations**

Per our study, the transition to a fully online mode was much needed to conform to the CDC guidelines of social distancing (i.e., staying six feet away from others avoiding crowds and poorly ventilated spaces, etc.: CDC, 2020b). However, we also acknowledge that many challenges were identified. In this section, we provide recommendations that are based on observations and findings from the student needs as reflected by their survey answers.

### **Technology**

Several logistical challenges, including compulsory modification in technology and behavioral attitudes of embracing online learning and teaching, were associated with remote learning platforms. Universities engaged in digital transformation that involved the movement of instruction online to give room for flexibility in teaching and learning from anywhere. The transition took place at an extraordinary speed. However, not all universities had a smooth transition. Instruction delivery, methods, and tools were prioritized while overlooking the digital competence of students and faculties. From our findings, many of the students did not have prior experience with this platform and, as a result, it took them longer to attain a full understanding of how to navigate online platforms or fall behind. Based on the evidence, we recommend offering digital literacy/training to all stakeholders and building resources at the beginning of the semester/quarter to ensure an effective learning environment, such as easy access to all learning modules, and seamless navigation of technology such as ZOOM, Blackboard, and so on (Pandit & Agrawal, 2020).

Moreover, online learning is dependent on devices and internet capabilities. Bad internet connections, no access to computers, or outdated software/devices will not allow smooth, or any, online learning. This dependence was also reflected in the student responses. Therefore, a way to gauge the technological equipment needs of faculty and students is critical. Universities should have some provision of equipment in place to help the students and faculty with this transition.

### **Technology and research innovations**

This pandemic is not the first encountered, nor will it be the last. Higher academic institutions ought to be prepared for future needs. Based on our findings we acknowledge the need for more research on online learning/distance education to provide novel innovation to meet the latest challenges of online learning (Adedoyin & Soykan, 2020): models that are tailored to the new online learning changes, continuous review of the institutional digital transformation process, more scalable, personalized, and efficient online learning models that will reduce instructor workload implementation, and renovation of the learning process

with student expectations in mind.

### **Socioeconomic**

We are aware of the inequality due to the socioeconomic status of students. Not all students own a personal computer or rely on university computer and free internet services and this was affirmed by students in their responses. Transition to fully online education has affected students with low socioeconomic backgrounds significantly (*Los Angeles Times*, 2020). The rate of internet accessibility has been affected by the level of poverty due to the inability to afford a broadband connection and is susceptible to additional challenges such as sharing or even lack of devices or space to study (Adedoyin & Soykan, 2020). Moreover, Adedoyin and Soykan (2020) also point out the obligations of governments and universities to make sure socioeconomic interventions are put in place, in the form of service innovation or corporate social responsibilities to provide free internet. Students in our survey felt they were being cheated because of being charged the same fees despite the university closures. Therefore, we recommend universities begin providing some sort of discounts for students on books from the bookstores, laptops, and connect students with other nonprofit organizations which provide needed resources such as food boxes, clothes drives, and bill pay, to name a few, in order to alleviate financial hardships.

### **Professor and online instruction delivery**

Palvia et al. (2018) highlight the lack of institutions' understanding of online pedagogy and online learning styles and faculty competence teaching online. All of these reduce the quality of education and student's learning experience. Not all classes are suitable for online teaching such as chemistry or biology laboratory courses as pointed by the students who participated in this study. There is a need for adequate planning, training, and implementation of best practices and innovative strategies that enhance student learning beyond face-to-face classes, increasing faculty-student interaction, and reducing the workload on faculty (Palvia et al., 2018). Instructors play an essential role in motivating students to interact in online classes through their presence and communication patterns and transferring the teacher-centered approach to learner-friendly learning environment (Zboun & Farrah, 2021; Paudel, 2021). Lecturers/instructors must be trained in online technology to improve their ability to use online learning applications to make interesting and acceptable teaching materials that will increase enthusiasm and positivism in studying (Ladyanna & Aslinda, 2021). Careful planning from instructors as well as students is needed for a successful online learning experience to occur. Ullah et al. (2021) recommend using blended learning methods to achieve student learning outcomes in the 21st century.

### **Psychological**

We acknowledge that a crisis like COVID-19 has caused students to be stressed and traumatized; and students have affirmed this through their survey answers. We agree with

Bozkurt and Sharma (2020) that universities should focus on teaching how to share, collaborate, and support instead of only focusing on educational content. The online platform is an excellent opportunity to test online pedagogy-centric approaches. Still, we should amplify the emotional presence by acclimatizing empathy and care by focusing on different types of presence, such as teaching presence, cognitive presence, and social presence (Bozkurt & Sharma, 2020). We recommend building a support community where knowledge and experience are shared to provide an efficient and meaningful learning process that is directed not only to learning, but also to provide therapy, empathy, and care. We would also like to highlight Gates et al. (2020) in their recommendation of self-compassion, akin to self-love, that entails recognizing that "our imperfection is part of human experience." Much work using mindfulness, a form of present-moment attention, is also recommended based on our findings that entails professors being connected with students to foster a sense of being more available to students via emails, Zoom meetings, discussion boards, phone calls, and so on.

Cuseo and Figueroa (2021) note the need for greater emotional wellness of students during this pandemic. We feel campus counseling centers should include ways to reach out to students using the online platform to provide emotional support to students seeking help in addressing emotional challenges. For example, we found many students did not take advantage of the online workshops provided via Zoom due to their busy work schedules; however, a small percentage of them found it very convenient to use the recreation center app. Further, from our survey, we observed that not many students-initiated contacts with counseling services for emotional challenges. This could be due to the stigma associated with seeking help for mental health. We agree with Cuseo and Figueroa (2021) that the online platform can be used to deliver increased emotional wellness programs, infused into existing programs such as the beginning of semester student orientations, seminars, and peer mentor training. Research suggests that mindfulness training, which involves intentional practice in the art of detecting distraction, has been associated with helping students remain focused. Training will give students less defensive and more effective coping strategies to keep their minds on lectures, 'get more out' of their academic work, and experience lower levels of anxiety in response to academic stressors. We recommend university counseling centers incorporate 15-minute, focused-breathing mindfulness exercises for students that will help them to destress and alleviate negative emotions (Cuseo & Figueroa, 2021).

### **Conclusion**

Certainly, the transition to fully online education during the COVID-19 pandemic has been a unique experience for most higher learning institutions. COVID-19 experience has given academic institutions a new perspective on how to act and react on a short notice. In times of crisis, academic institutions should be equipped to act quickly in order to implement alternative teaching and learning strategies that will maintain instruction continuity (Grafton et al., 2021). While we acknowledge the limited scope of this study, it

does present a valuable insight on effective preparation of college education in times of crisis. Our study offers a unique perspective by not only taking into consideration the effects of distance learning on communication, structure and learner's autonomy due to issues of technology, and effects that have on mental health and the stigma related to mental health issues, but also points out the importance of enabling students with available resources as part of a holistic approach in addressing the impacts of this pandemic on higher education. We have highlighted the application of Moore's theory to address the quality and the extent of communication in improving the learner's outcomes. Academic institutions succeed when students are mentally and emotionally healthy, and technologically prepared to function despite the absence of face-to-face interactions (ACE, 2020). The COVID-19 experience is urging us to change how we run academic institutions, with a simple reminder of taking a holistic approach by incorporating all aspects of a university campus in an over-arching support system.

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