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**Understanding the underserved student: barriers experienced by  
at-risk students during the Covid-19 pandemic**

Melissa Rosado

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Pepperdine University  
Graduate School of Education and Psychology

UNDERSTANDING THE UNDERSERVED STUDENT: BARRIERS EXPERIENCED BY  
AT-RISK STUDENTS DURING THE COVID-19 PANDEMIC

A dissertation submitted in partial satisfaction  
of the requirements for the degree of  
Doctor of Education in Learning Technologies

by

Melissa Rosado

October, 2022

Kay Davis, Ed.D. – Dissertation Chairperson

This dissertation, written by

Melissa Rosado

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

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## DEDICATION

To the terrified 17 year old first-generation college student, who made a decision to pursue a college degree to help pave a path for success for her family. To the community college English professor who assured her she could write and tutored her weekly until she published her first essay. To the UCLA admissions officer who ignored her imposter syndrome and encouraged and helped her to apply. To the UCLA student who took every difficult course available to her to try to prove to herself she belonged. To the graduate of her dream school, the proud sister of successful siblings, the leader, the fighter, the lover, the friend...

You did it. Now it's time for you to rest.

And to her best friend, Charlie, who over the last ten years witnessed her growth and provided loving company along her journey until his last breath. Thank you. You are forever loved.

## ACKNOWLEDGEMENTS

My doctoral journey is a culmination of years of academic growth and resilience. I would be remiss if I didn't recognize my growing tribe who have throughout the years provided me with the strengthening encouragement and support in my endeavors while anchoring me in my core values. You inspire the drive and motivation to grow.

I would like to thank the EOPS students who entrusted me with their experiences and stories. Your resilience continues to inspire the passion for what I do.

I would like to give special thanks to my partner who provided priceless support and care during this tumultuous ride. Your flexibility, love and grace converted a lonely journey into one full of connection. Your detailed love and specific care gave me the strength to keep going.

I would like to thank my dissertation chair whose help, guidance, and feedback challenged me to produce a dissertation paper I am proud of. Thank you for persevering with me.

I would like to thank my best friend, my spiritual companion, my confidant. You always exercised to see and patiently helped me to believe in what I could do and become in the midst of turmoil. Your love and support grounded me.

To my family, you are the impetus and heart for all that I have done. I love you tremendously. Thank you for your unconditional love.

Finally, I would like to thank my Lord and Savior, Jesus Christ, whose mercies and compassions are new every morning. For gently lifting my eyes to see You. And to His Body who cooperated with Him to flow out the grace and supply—may the Lord continue to bless you and keep you with His shepherding heart.

## VITA

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NCDA Global Career Development Conference

## ABSTRACT

The forced expeditious transition online induced by the COVID-19 pandemic caused a massive disruption to education. COVID-19 exacerbated the inequities that existed in education for years. As technology advances and integrates with education, it can both enhance inclusive instructional practices, as well as exacerbate issues of equity. Achievement gaps will persist unless colleges create equitable educational environments for all students, including “at-risk” populations such as those enrolled in the Extended Opportunity Program and Services (EOPS) program—a state funded equity program.

Through the lens of digital equity and inclusion theoretical frameworks, the purpose of this embedded mixed methods study was to understand the described barriers of EOPS students, as a representation of at-risk student populations, during the ongoing COVID-19 pandemic. A diverse sample of 249 students qualifying as low-income with at least one documented academic barrier from a Southern California community college who received EOPS services any time between the Spring 2020 and Spring 2022 terms participated in the study by completing an electronic survey. Findings indicate that during the COVID-19 pandemic, students faced unprecedented change academically and psychologically. While the responses varied amongst the participants, triangulation of quantitative and qualitative data resulted in four study conclusions. First, campus technological resources and facilities are essential to assuage the impact of the digital divide. Mental health is a critical component for adult student success and holistic, comprehensive student support services solidifies foundational supports necessary for student success. Lastly, online learning will continue to be the preferred choice of adult learners as it provides the autonomy and creates flexibility and options for meeting basic needs. At a

minimum, recommendations for practice include an updated student needs assessment, continued mental health services, investment in the EOPS program, and digital skills training.

This study builds upon research regarding the ongoing investigation of the effects of COVID-19 on college students while addressing what remains to be explored regarding at-risk student populations at California community colleges. The findings presented in this study provide insight to what educational institutions do to mitigate or reinforce educational inequities.

## **Chapter 1: Introduction**

The COVID-19 pandemic catastrophically affected daily life and common procedures, forcing a “new normal” upon many facets of society, including education (Bohn & Hogue, 2021). In response to the immense viral replication numbers and serious health consequences of COVID-19, higher education institutions had to make difficult decisions about how to conduct their academic year (Cipriano et al., 2021). In early spring on March 16, 2020, the White House issued guidelines in response to the devastation of COVID-19, restricting gatherings of more than 10 people (United States OCR, 2021). Three days later, California was the first state to issue a state-wide stay-at-home order and by early April more than 300 million Americans were directed to “shelter-in-place” (U.S. Department of Health & Human Services, 2021). The closure of educational institutions worldwide affected 91% of the world’s student population (Pragholapati, 2020). The abrupt campus closures for the 116 California community colleges, the largest system of higher education in the nation (California Community Colleges Chancellor's Office, 2013), stripped faculty and staff of their known procedures and resources to serve students. More than 2.1 million community college students with diverse backgrounds and needs and over 86 thousand faculty and staff were abruptly sent home (California Community Colleges Chancellor's Office, 2013). Institutions of higher education were forced to transition, almost overnight, from face-to-face modalities to virtual, online delivery, in many cases without having had substantial previous experience with virtual modalities (Fatonia et al., 2020; Paudel, 2020; Zgheib, 2021).

### **Online Education and the Digital Divide**

Prior to the 2019 pandemic, community colleges were considered champions in offering distance education opportunities for their students (Parsad & Lewis, 2008; Travers, 2016; Xu &

Jaggars, 2014). California community colleges has as part of its mission to have digital innovation and technology-focused initiatives at the forefront, endeavoring to deliver high-quality information technology services and innovative practices (California Community Colleges Chancellor's Office, n.d.a). Digital inequities have existed alongside technological efforts failing to foster digitally inclusive environments—where all students and individuals have access to information and communication technologies (ICTs) and experience its benefits (McLaughlin & Resta, 2020; National Digital Inclusion Alliance, 2021). This is especially a problem given that historically underserved students, low-income, first-generation students of color, and non-traditional adult learners are increasingly attending community colleges (Green, 2006). As adult learners juggle their various life roles while attending school, there is an increasing likelihood they will look for educational options that provide them with flexibility in time and location; especially at the community college (Ross-Gordon, 2011).

Commonly referred to as the digital divide, there exists a perceived gap between individuals who have access to technology and communication technologies and those who do not (Compaine, 2001; Katz et al., 2021; McLaughlin & Resta, 2020). While access to information and communication technologies have increased in recent decades, there remain inequalities in the ability to maintain that access (Buzzetto-Hollywood et al., 2018; Gonzales et al., 2021; McLaughlin & Resta, 2020). As Gonzales (2016) points out, access to technology in communities with low socioeconomic status is intercepted by pre-existing resource limitations and ongoing struggles associated with poverty and social inequality.

While education changes with the implementation and improvements in technology, the supports and accommodations that ensure that all students have the same access to these technological benefits does not. Over ten years ago, Yang and Hsieh (2013) reported that the

differing opportunities, needs, motivations, material circumstances, and life experiences amongst students correlates with their ability and the extent to which they were able to engage with technology. In a more recent study, Gonzales et al. (2020) describes not seeing much progress for low-income individuals since the early 2000s; explaining how student's online experience is often negatively impacted as they rely on broken, borrowed, or dependably unstable technology. Families with low socioeconomic status are often under-connected due to unstable wifi connection, shared wifi access, and slow or mobile-only in-home service (McLaughlin & Resta, 2020; Rideout et al., 2016). Rapid changes in hardware and software can leave students in low-income households stuck with outdated devices, defunct applications, and limited computing and network capacities (Buzzetto-Hollywood et al., 2018; McLaughlin & Resta, 2020; Watkins, 2018). School campuses have become a key point of access to the networked, technical world for lower-income students (Gonzales, 2016; Watkins, 2018) and thereby have the ability to exacerbate or expand existing educational inequities (Chandra et al., 2020; Day et al., 2021; Real, 2021; Sullivan, 2021).

### ***Barriers for Successful Online Education Experiences***

The success of an online course depends upon the design of the course and how it is taught (Jesus et al., 2017; Johnson et al., 2015; Yen et al., 2018). According to the Public Policy Institute of California, California community college instructors too often try to replicate a traditional course within an online format, not taking into account the differences between learning environments (Johnson et al., 2015). There are teaching approaches within face-to-face modalities that naturally support engagement, inquiry, and connection that can be difficult to recreate in a virtual setting (Berry, 2019; Dumford & Miller, 2018; Roache et al., 2020). Faculty with less experience may not receive the necessary pedagogical support in order to design

effective curriculum in an entirely new learning environment and thus struggle to produce quality student outcomes (Hodges et al., 2020; Yen et al., 2018). In summary, the need for effective course design is significant, but the institutional support is not always present.

Additionally, the success of an online course is contingent upon digital inclusion—the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to, and use of, information and communication technologies (McLaughlin & Resta, 2020). Barriers to digital learning environments exist in three primary ways corresponding to the three levels of the digital divide. In addition to the first level, the lack of access to the appropriate hardware and internet connection, barriers exist with varying levels of technological skills and readiness. The second level of the digital divide refers to the amount of students' prior technical knowledge and skill, motivation, practice of self-regulation and ability to become self-directed learners; digital readiness skills that affect their learning and performance in online courses (Buzzetto-Hollywood et al., 2018; Katz et al., 2021; Nilson & Goodson, 2021). Being successful in an online learning environment requires high levels of autonomy and time-management skills, digital skills lacking amongst students from underserved communities (Buzzetto-Hollywood et al., 2018; Johnson et al., 2015; Katz et al., 2021).

Without access to technology and subsequently the digital skills necessary to be successful in online learning environments, students may experience a paucity in the benefits and application of technology. The third level of the digital divide relates to the disparities in the returns and benefits from internet and technology usage and application (Katz et al., 2021; McLaughlin & Resta, 2020). When students have the computer literacy, navigation skills, connection capabilities, and technological readiness to be successful in online courses, the online educational experience can be stimulating and encourage critical thinking skills (Buzzetto-

Hollywood et al., 2018; Gonzales et al., 2021). It is no longer enough to provide students with access to computers and the internet; they also need the skills and dispositions that foster successful learning outcomes (Cueno & Norris, 2003; Gonzales et al., 2021; Hargittai, 2010; Powell et al., 2010; Watkins, 2018). Prior to the COVID-19 pandemic, educational inequities were prevalent in higher education in the United States amongst low income, first-generation students, and students of color (Buzzetto-Hollywood et al., 2018; Gonzales et al., 2021). The digital divide existed years before the impact of COVID-19 (Buzzetto-Hollywood et al., 2018; Gonzales et al., 2021). It is an issue of equity when certain populations of students lack access to the resources and supports necessary to be successful in a growing virtual world.

### **Purpose of Research**

The purpose of this embedded mixed methods study is to understand the experiences of at-risk students in the Extended Opportunity Program and Services (EOPS) program during the expeditious transition from in-person to fully remote instruction amidst the COVID-19 pandemic at a California community college to be addressed as SCA. Using the lens of both digital equity and digital inclusion theoretical frameworks, this study seeks to understand from the students' perspectives how campus interventions implemented at the beginning of the pandemic to mitigate possible barriers might continue to be effective for supporting the numerous challenges faced by EOPS students. For the purposes of this study, EOPS students are defined as students enrolled in the EOPS program at SCA, qualifying as low-income with at least one documented academic barrier. Academic barriers include but are not limited to being a first-generation student, having a disability, qualifying for remedial math and/or English courses, being an English Language Learner (ELL), etc.

### ***Research Questions***

The following research questions are to be answered as a result of this study:

- **RQ 1:** How do EOPS students describe the challenges/barriers they have faced during the abrupt transition to virtual instruction due to COVID-19?
- **RQ 2:** Were there differences in viewpoints amongst EOPS students who had taken online courses before the pandemic and those who had not?
- **RQ 3:** What campus interventions did EOPS students perceive as assuaging the impact of the virtual transition?
- **RQ 4:** What needs still exist for EOPS students as the pandemic continues?

### **The Setting: Orange Coast College**

As one of 116 California community colleges dedicated to providing students with the knowledge and background necessary to be successful in today's economy, SCA's mission is to serve the educational needs of its diverse local and global community (Orange Coast College, 2021). Community colleges such as SCA expand access to higher education to students who have been historically excluded more so than their university counterparts (Klempin & Karp, 2015). As a Hispanic Serving Institution, with 84% of students being underprepared for college, 30% non-traditionally aged students, a growing number of international students and ELL, the student population of SCA reflects its diverse communities and comes with diverse educational needs (California Community Colleges Chancellor's Office. n.d.a). Student support services such as the EOPS program play a critical role in providing an empowering community for low-income and historically underserved students while fostering an environment of inclusion and belonging for all students (California Community Colleges Extended Opportunity Program & Services Association, 2019). EOPS is a state funded academic counseling program designed to

encourage the enrollment, retention, and transfer of students facing language, social, economic and educational barriers (California Community Colleges Extended Opportunity Program & Services Association, 2019).

In March 2020, SCA issued an emergency order to close the campus. While the availability of resources drastically decreased, the institutional demand to meet the needs of students significantly increased and forced a transition of predominantly in-person courses and services to virtual modalities. Like many schools, SCA saw historic institutional resource commitment in several technological areas, including the acquisition of web conferencing technology (such as ZOOM), the increase of loaning of hardware and software licenses for faculty and students, and an exponential increase in learning management system usage (LMS) (Flaherty, 2020). The forced expeditious transition from in-person and blended instruction to complete virtual modalities contributed to the traumatic societal shift for faculty, staff, and students during COVID-19 (Kim, 2020).

In Fall of 2019, 2144 total course sections were offered to SCA students. Of those 2144 course sections, only 91, 4%, were online courses. SCA was predominantly an in-person campus prior to the pandemic. The following semester, Spring 2020, all course sections were required to abruptly switch to an online format mid semester in order to adapt to the state issued stay-at-home order. The announcement was made two weeks prior to SCA's week long spring break, giving faculty approximately three weeks to adjust their curriculum to an online format. At the time of the abrupt transition due to COVID-19, most faculty lacked online teaching experience, were not prepared, and were challenged with having limited support from educational technology teams (Bao, 2020). This unprecedented shift resulted in chaos and confusion for faculty, staff and students.

Furthermore, isolation, increased exposure to negative information, anxieties related to infection, etc., resulted in fear, loneliness, panic, anxiety, and depression for many students (Duan et al., 2020). Faculty, staff, and students were forced to transition their predominantly in-person educational activities and routines to virtual ones amidst physical, psychological, and practical turmoil (Anderson et al., 2020). Faculty and staff faced precarious employment; students an insecure future (Day et al., 2021). Therefore, transitioning to and conducting fully online courses during the COVID-19 crisis is incomparable to a planned technological implementation as people's mental state and course structure was severely impacted (Li et al., 2021). Once the adjustments and restructuring of courses was accomplished and the classes were ready, students were forced to complete them in this new virtual format without alternate options (Prokes & Housel, 2021). This transition from face-to-face to online learning should be examined from the students' perspective (Prokes & Housel, 2021).

Prior to the COVID-19 pandemic, educational barriers already existed for at-risk student populations, creating the need for programs such as the EOPS to help close that equity gap. EOPS is a state funded academic counseling program designed to encourage the enrollment, retention, and transfer of students facing language, social, economic and educational barriers (California Community Colleges Extended Opportunity Program & Services Association, 2019). With the rapid increase in the use of technology in the classroom, the digital divide became increasingly prominent and apparent, disproportionately impacting at-risk students. During the pandemic and the subsequent expedient virtual transition, students were separated from their academic resources, technological and infrastructural supplies posing additional challenges and barriers to online education for both instructors and students (Seble et al., 2013). In addition to the digital inequalities low-income, at-risk student populations face within the digital divide,

faculty were not given adequate training or time to transition in person courses to remote formats. Although the EOPS program is a significant contributor to student persistence and success for the historically underserved at the community college level (Soltani et al., 2017), the consequences of an abrupt virtual shift mid semester left student support services like EOPS unprepared to provide services for their students to succeed.

### **Overview of Methodology and Study Design**

This study uses a mixed methods methodology in order to capture the descriptions and experiences of the barriers EOPS students encounter during the COVID-19 induced transition to virtual instruction. A mixed methods study with an embedded design is where the researcher embeds a qualitative component into a quantitative data collection strategy (Kopač Gizela & Hlebec, 2020). An embedded mixed methods design adds a richness of data so that the personal experiences of the participants are better understood (Creswell & Creswell, 2018).

### **Role of the Researcher and Assumptions**

Due to my role as a counselor for the EOPS program, I play an active role with EOPS students—the subjects of this study. How I situate myself in the study can carry consequences and demands reflexivity (Pelias, 2018). Since 2018, I have been employed at SCA as a counselor for the EOPS program and during the time the study was held, the faculty coordinator. Prior to my employment at SCA, I worked as counseling faculty for 3 years serving disproportionately impacted, at-risk student populations in several California community colleges in southern California. The close proximity to EOPS students, low-income students, first generation college students, historically underserved students, and disproportionately impacted students fueled advocacy and validated the need to advocate for equity-minded practices at the community college.

I am a first-generation community college student who lived below the poverty line and started my education at a Southern California community college. As a first-generation low-income undergraduate student, I fit the qualifications to participate in the EOPS program. However, I was not a part of EOPS until I transferred to a four-year university. The stark difference between receiving support, services, and community through the EOPS program while navigating college versus endeavoring to succeed without much support left an impression on me and influenced my desire to serve disproportionately impacted students in a community college setting.

In this mixed methods study, I engage in reflexivity throughout the research process by practice of written memos. Journaling and reflecting on my own personal experiences during the research process helped me to understand and consider how my experiences could shape the interpretation of findings. I dedicated time to critically reflect in order to become self-aware and conscious of existing structures shaping the interpretation of the events and to mitigate biases in the interpretation of data (Mortari, 2015).

I believe that equity minded practice at the community college is imperative and that students disadvantaged by social, economic, educational or linguistic barriers must be supported to receive the resources they need to enroll and succeed at any California community college. I understand with and identify with the idea that the opportunities to become academically integrated into the college environment, connect with faculty and staff at the college, and/or overcome a lack of cultural capital or academic preparedness has a direct correlation to student success as documented in previous research (O'Gara et al., 2008). In relation to the participants in the study, I held the assumption that EOPS students will participate voluntarily and answer the questions given to them openly and honestly. I assumed that EOPS students experienced unique

challenges and significant barriers during the virtual transition of COVID-19. Finally, I believed that EOPS students at SCA have strong opinions regarding the virtual transition, how they were affected, and what can be done to assuage the impact on themselves and their communities.

### **Theoretical Framework**

This study utilizes two interrelated theoretical frameworks in order to understand the barriers and digital inequities described by EOPS students during the COVID-19 pandemic. The first framework is digital equity, the condition in which all individuals without exception have the information and communication technologies necessary for full participation and engagement (Mimura et al., 2021; National Digital Inclusion Alliance, 2021). The second framework is digital inclusion, the way in which digital equity is accomplished. Digital equity is the goal, digital inclusion is the means in which the goal is accomplished. Examples of digital inclusion include ensuring students have access to the appropriate technology including hardware, software and affordable robust internet, providing digital literacy training and quality technical support, etc. (National Digital Inclusion Alliance, 2021). Although many working definitions of digital equity and inclusion exist, this study adopted Digital equity and inclusion as defined by the National Digital Inclusion Alliance (NDIA). Highlighting and bringing attention to the experiences of EOPS students, a historically underserved population, is an essential precursor to developing effective policy for digital inclusion (Powell et al., 2010).

### **Definition of Terms**

Listed below are important terms organized into two categories relevant to the study.

#### ***California Community Colleges***

**Adult Learners.** Students beginning or continuing their enrollment in college at a later-than-typical age (Ross-Gordon, 2011).

**Andragogy.** A theory or set of best practices for adult education (Allen & Zhang, 2016).

**California Community Colleges.** The California Community Colleges system is the largest higher education system in the U.S, comprising 116 community colleges and 2.1 million diverse students (California Community Colleges Chancellor's Office, n.d.a). These 116 community colleges are split into 73 districts, with some districts overseeing multiple community colleges such like the Coast Community College District overseeing Orange Coast College (the study setting), Goldenwest college and Coastline community college (California Community Colleges Chancellor's Office, n.d.a).

**California Community College Chancellor's Office (CCCCO).** The CCCCCO is the official office that oversees all CCCs (California Community Colleges Chancellor's Office, n.d.a).

**Orange Coast College (OCC).** OCC's 164-acre campus is located in Costa Mesa, CA. OCC offers more than 135 academic and career programs. Nearly half the students on campus are enrolled in one of OCC's Career and Technical Education programs and enrollment averages around 22,000 students each semester (Orange Coast College, 2021).

**Equal Opportunity Program and Services (EOPS).** A state-funded student success program that aims to help low-income and educationally disadvantaged students succeed in college (California Community Colleges Extended Opportunity Program & Services Association, 2019.).

**Coronavirus also known as COVID-19.** Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus (World Health Organization, 2021).

**Distance Education/Learning.** Instruction in which the student and instructor are in different locations. Distance education may include interacting through the use of a computer

and communications technology, video or audio instruction in which the primary mode of communication between the student and instructor is online and may also include the use of print materials (Nilson & Goodson, 2021).

**Hybrid/Blended Education.** When face-to-face interaction is intentionally combined with online activity to aid student learning (Linder, 2017).

**Online Learning.** Internet-based courses offered synchronously and/or asynchronously (Nilson & Goodson, 2021).

### ***Digital Equity and Inclusion***

**Digital Divide.** When a group's access to digital technologies and resources differs based on a group's race, socioeconomic status, or national identity (McLaughlin & Resta, 2020).

**Equity.** Refers to achieving parity in student educational outcomes, regardless of race and ethnicity. Equity moves beyond issues of access and places success outcomes for disproportionately impacted students at center focus (USC Center for Urban Education, 2018).

**Digital Equity.** A condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy (McLaughlin & Resta, 2020).

**Digital Inclusion.** The activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to, and use of, information and communication technologies (McLaughlin & Resta, 2020).

**Disproportionately Impacted Students.** Students whose key access to key resources and supports and eventually their academic success may be tethered by inequitable practices, policies and approaches to student support (California Community Colleges Chancellor's Office, 2017). There are three main measures used to determine disproportionate impact in the

California community college system: the 80% rule, the proportionality index, and the point-gap index (California Community Colleges Chancellor's Office, 2017).

**First-Generation College Student.** Neither parent having completed a bachelor's degree or higher (Tucker et al., 2020).

**Historically Underserved Students.** Low-income students, those who are first in their families to attend college, and students of color (Green, 2006).

### **Significance of the Study**

While there have been a growing number of studies investigating the effects of the COVID-19 induced virtual transition within the realm of higher education, the pandemic is ongoing and thus warrants continued study. Administrators, faculty, staff, and students are still experiencing the profound disruptions to their work and struggling to adapt amidst persistent uncertainty about how long the pandemic will last (Haley, 2020). As COVID-19 is highly likely to persist in 2022 the affects and impact on students and higher educational institutions overall, warrant ongoing data collection and analysis from the perspective of students during the COVID-19 forced shut down, especially the historically underserved and disproportionately impacted students. This is necessary in order to avoid exacerbating the digital inequities that exist in education today (Sullivan, 2021).

This study provides a unique equity perspective in understanding the barriers EOPS students experience as they pivot to another learning platform as a result of the ongoing pandemic. While there are several studies on barriers experienced by low-income students and students with academic disadvantages within the context of distance education, more is needed in regards to the uniqueness of the effects of the pandemic (Li et al., 2021). The forced pivot to distance learning required mastering new learning platforms and forms of communication, a

sudden, complete dependence on digital devices and steady internet connection without much time to prepare (Katz et al., 2021). This study provides insight into what factors specifically contributed to students' ability to successfully navigate this new, unfamiliar learning environment amidst this upheaval. As the pandemic still fluctuates, educational institutions should pay extra attention to what students are facing with more serious situations and impediments (Li et al., 2021).

Prior to the pandemic, at-risk student populations experienced digital and educational inequities; COVID-19 exacerbated those inequities (California Community College Chancellor's Office, 2021; Gonzalez-Ramirez et al., 2021; Real, 2021; U.S. Department of Education's Office for Civil Rights, 2021). The digital divide disproportionately impacts people of color, indigenous peoples, low-income households, people with disabilities, people in rural areas and older adults (Moldavan et al., 2021; National Digital Inclusion Alliance, 2021; Stern & Adams, 2010). Making strides towards understanding the social and educational inequities that are being perpetuated in historically underserved communities is an act of digital inclusion.

Community colleges directly serve their local communities. One of the major goals of California community colleges is to combat rising inequality and build strong local workforces at the local level (California Community Colleges Chancellor's Office, n.d.a). In order to better understand the barriers experienced during the pandemic, the voices of the community need to be heard.

Through an embedded mixed methods design, this study provides necessary insight to what educational institutions do to mitigate or reinforce educational inequities. Distance education will continue to grow and many students will continue to learn remotely in some form until the pandemic recedes (Katz et al., 2021). An ongoing investigation of the evolving

technology skill expectations desired in higher education, the student perceptions and satisfaction with distance education experiences is imperative in order to make progress towards digital equity (Buzzetto-Hollywood et al., 2018). This study builds upon research regarding the ongoing investigation of the effects of COVID-19 on college students while addressing what remains to be explored regarding the specific EOPS population--a historically underserved, disproportionately impacted population at the California community colleges. This study aims to give voice to those often disadvantaged by digital requisites for student success.

While many researchers have studied the EOPS population and their success, not much research has been done within the context of emergency remote teaching environments. Students who at one time may have preferred virtual learning environments were deprived of choice and thus preparations for online learning--a brooding ground for educational inequities amongst vulnerable populations. The EOPS students at SCA are one of many programs experiencing the gravity of their students' situations. This study aims to understand the experiences of EOPS students in order to preemptively anticipate services in future times of crisis and abrupt changes.

## **Summary**

The purpose of this mixed methods study is to understand the experiences EOPS students, as a representation of at-risk student populations, face during the ongoing COVID-19 pandemic. This study uses an embedded mixed methods design in order to capture the described experiences of the barriers EOPS students encounter during the COVID-19 induced transition to virtual instruction. While many researchers have studied the EOPS population and their success, not much research has been completed regarding the impact of COVID-19 on at-risk student populations. This study aims to understand the experiences of EOPS students during a forced

virtual learning transition in order to provide insight regarding favorable student support services in times of emergency and crisis to facilitate equity-minded practices.

## **Chapter 2: The Literature Review**

The forced expeditious transition online induced by the COVID-19 pandemic caused a massive disruption to education (Ismaili, 2021; Katz et al., 2021; Prokes & Housel, 2021). Disruptions to education and campus closures were frequently reported prior to the pandemic when including instances such as ethical breaches, inclement weather, professor sicknesses, etc. (Day, 2015; Hildebrand, 2017). There has been a growing awareness and interest for institutions of higher education to establish an academic continuity plan for cases of crises such as natural disasters, acts of violence, and pandemics that force institutions to temporarily close unexpectedly of an uncertain duration (Day, 2015). In the early 2000s, the direction and magnitude disruptions had on students' academic performance were well documented and depended upon many factors including campus preparation (Smilde-Van Den Doel, Smit & Wolleswinkel-van den Bosch, 2006). Fifteen years later, research indicates that effective interventions and preparations for disasters must include considerations for multiple actors both on and off campus such as local/state political leadership, multiple potential problems on campus, and personal stressors in the campus community (Hildebrand, 2017). While historically, institutions of higher education have experienced many shifts in education, rapid adjustments, societal shifts, etc., the COVID-19 pandemic brought in unique challenges in both immediacy and extent (Prokes & Housel, 2021; Rajab et al., 2020).

Through a review of the literature, this chapter focuses on the impact COVID-19 had related to a historically underrepresented group— EOPS students attending community college. Previous studies and literature are analyzed and organized into sections related to the probable experiences low-income, academically challenged students faced during the virtual transition of the COVID-19 pandemic. This chapter begins with a recap of the pandemic crisis followed with

a brief overview of the setting, California community colleges and the EOPS program, including their mission and vision for success. COVID-19 is reviewed in relation to its impact on higher education and the abrupt, expedient virtual transition experienced by faculty, staff and students. Distance education is discussed in order to provide context to and comparison between what existed prior to the pandemic and emergency remote teaching. Finally, digital inclusion and equity is explained as the framework in which this study is founded; the importance of mitigating situations that increase the equity gap and the need to improve opportunities and attainments for historically excluded, disproportionately impacted students.

### **Pandemic Crisis**

COVID-19 exacerbated the inequities that existed in education for years. While the consequences and impact of COVID-19 are ongoing, preliminary data suggests educational losses on several levels of education in addition to increased anxiety and depression as a result of the pandemic (Hoofman & Secord, 2021; U.S. Department of Education's Office for Civil Rights, 2021). During the COVID-19 pandemic, life conditions were at stake disrupting the learning trajectory and posing great challenges for learners (Moloney & Moloney, 2020). Many students suffered collective traumas including but not limited to the anxieties of the pandemic and financial devastations, systemic and institutional racism, and a tumultuous election with polarizing disinformation (California Community College Chancellor's Office, 2021). The pandemic has disrupted every aspect of human life, including education, around the world (Paudel, 2020). While the effects of the pandemic may differ by age, maturity and socioeconomic status, COVID-19 has brought about adverse educational changes and health consequences amongst grade school, middle school, high school, college and professional schools (Hoofman & Secord, 2021; Katz et al., 2021; Verlenden et al., 2021; Zgheib et al.,

2020). These consequences have the potential to affect the work of colleges and universities for a generation (Day et al., 2021).

One major way in which the pandemic had tremendous impact on education was the forced expeditious transition from in-person to emergency remote teaching; the shift caused distress for both educators and students alike (Fuchs, 2021). The expeditious pace of the transition from in-person to 100% online learning saw historic commitment from students and faculty to adopt online platforms and LMS the education institutions provided regardless of preparation, comfort, and access to resources (Ismaili, 2021). Traditional courses taught face to face were moved 100% online either as a synchronous online course “a virtual meeting of a course with all participants engaged simultaneously” or as an asynchronous online course “where participants engage with course content at their convenience” (Prokes & Housel, 2021, p.583). Faculty and students were forced to adapt to these online modalities regardless of their familiarity, comfort, or online skill level.

Due to the sudden emergence of COVID-19, most faculty and staff members faced challenges of lacking online teaching experience, early preparation, or support from educational technology teams resulting in chaos and confusion for faculty, staff and students (Bao, 2020). The stressors experienced by faculty and staff consequently impacted students’ experience of learning. In addition to the typical stressors that college students experience such as transitions of maturity, first year adjustments to college, post-graduation plans (Ong & Cheong, 2009; Ross et al., 1999); the devastating pandemic and the subsequent expeditious move to online learning affected burnout with students exhibiting higher levels of exhaustion and cynicism (Gonzalez-Ramirez, et al., 2021). More research is necessary to understand the specific barriers and

challenges students experienced during the COVID-19 pandemic, especially as described by the students' themselves.

### **California Community Colleges**

In the 2019-2020 academic year, approximately 11.8 million students enrolled in community colleges nationwide (American Association of Community Colleges, 2021), making up 41 % of the general undergraduate student body in the United States (Keenan, 2020).

Community colleges, commonly referred to as two-year colleges, are local public institutions of higher education that reflect the needs of the community in which they reside (Bumphus, 2018).

Community colleges provide open access to a broad curriculum of courses including but not limited to long and short-term career and technical education leading to degrees and/or certificates, transfer preparation courses, non-credit education, pre-collegiate education such as remediation courses, adult basic education, English as a Second Language (ESL) courses, coursework for high school students and even baccalaureate degrees (Morest, 2013). The flexibility of the community college curriculum allows students to pursue their academic, vocational, or personal enrichment goals regardless of their background or academic history (Morest, 2013).

The open admission policy and flexible options of community colleges demonstrates a critical access point to higher education. Community colleges are pivotal for expanding access to higher education for populations that have been historically excluded (Gupton, 2017; Klempin & Karp, 2015; Mellow, 2018; Pusser et al., 2009). One example of such groups are student parents who account for one in four students who attend a community college nationwide as a result of the flexible and local education options available (Agrawal, 2019). For California specifically, over 69% of community college students are people of diverse ethnic backgrounds and over 40%

are working adult learners over the age of 25 (Foundation for California Community Colleges, 2022). Community colleges serve high proportions of students with diverse needs from marginalized backgrounds (Acevedo-Gil & Zerquera, 2016) and play an integral role in providing access to higher education for low-income students and students of color (Chacon, 2013; Kisker & Oulcalt, 2005; Melguizo, 2007; Morest, 2013; Reyes, et al., 2019).

Beginning an education at a community college is a practical option for many students who cannot afford or are not yet qualified to enter a four-year university right away (Quinton, 2014). For over a decade, studies have shown that underrepresented, historically excluded, low-income, and first-generation college students are more likely to start their post-secondary journey at a community college (Johnson & Mejia, 2020; Melguizo, 2007; Quinton, 2014). As an affordable higher education option, community college offerings play an important role for students and universities alike. These affordable options allow nearly 80,000 students to transfer from California community colleges to University of California (UC) and California State University (CSU) campuses each year (Johnson & Mejia, 2020; Melguizo, 2007). By offering students the opportunity to attend college regardless of their past academic performance and family background (Morest, 2013), California community colleges are important and impactful societal institutions providing access to higher education for diverse student populations who would not otherwise have the opportunity to pursue a college education.

For the past fifteen years, studies have reported that post-secondary education leads to better economic outcomes, social returns, and benefits across all demographic groups (Brand & Zie, 2010; Goldin & Katz, 2007; Hout, 2012; Johnson et al., 2020; Ritt, 2008). Increased levels of education have important economic impact because it has the potential to alleviate poverty and reduce gaps in income inequality for individuals (California Community College

Chancellor's Office, n.d.a; Johnson et al., 2020; Ward & Tierney, 2017). Therefore, providing access to higher education provides an opportunity to increase economic potential in that earning a bachelor's degree specifically, has the potential to mitigate the disadvantages in family background and socioeconomic status as it pertains to occupational attainment (Torche, 2018). Even amidst a rapidly changing economy, recent economic trends still indicate that a college degree continues to be the most important economic asset as the majority of jobs in the United States now require some form of higher education (Carnevale et al., 2016; Guevara-Cruz, 2018).

Serving 1.8 million students across 116 colleges and 73 districts, the California community college system is the largest system of higher education in the United States (California Community College Chancellor's Office, n.d.a). California community colleges offer lower division college courses at a significantly reduced cost, forty-six dollars a unit for California residents (California Community College Chancellor's Office, n.d.a). Courses can be applied towards career and technical education, pre-requisites for transfer to a university, or an associate's degree or certificate (California Community College Chancellor's Office, n.d.a). With California possessing the largest economy unique from the rest of the United States, it heavily relies on the career and technical education available at California community colleges (Bahr, 2019; California Community College Chancellor's Office, n.d.a). A primary mission of the California community colleges is to advance economic growth and global competitiveness through working with community stakeholders to educate, train, and provide services that contribute to workforce improvement (Donahue Higher Education Act, 1997). Therefore, the California community colleges system is the largest workforce training provider in the United States assisting students to double their earnings within three years by completing certificates or a degree (California Community College Chancellor's Office, n.d.a; Johnson & Mejia, 2020).

California is committed and invested in the economic growth and higher education services community colleges offers to its residents. On October 6, 2021, Governor Gavin Newsom signed legislation to improve college affordability and to increase access to higher education (State of California, 2021). As the largest investment in higher education modern history, the 47.1 billion higher education package demonstrates the state of California's commitment to eliminating equity gaps by increasing opportunities at California universities for more of its residents (State of California, 2021). Investing in the community college, invests in the potential for a trained workforce to meet the needs of a growing, robust economy.

Unfortunately, despite increased access and recent investments, community colleges are struggling to graduate certain populations of students and are showing substandard completion rates (Acevedo-Gil & Zerquera, 2016). According to the California Community College Chancellor's Office (2018), the most recent student success scorecard reports only 48.2% of students complete their educational goal within six years; a 0.03 percentage decrease from five years ago. This year, the Board of Governors for the California community colleges updated their "Vision for Success"—a reform effort that clarifies the goals and collective mission of the California community college system (California State Auditor, 2017). Recognizing the inequities that exist in higher education, the overarching goal of California community colleges is to reduce equity gaps across all measures by 40% within 5 years and to fully close those gaps within 10 years (California Community College Chancellor's Office, 2021, p.4; California State Auditor, 2017). Providing students with what they need in order to be successful is not only reasonable, but it is embedded in the conceptual framework of California community college system; it is their job (Castro, 2015).

## **Extended Opportunity Program and Services**

Research confirms the achievement gap that has long existed in the United States (Ching, 2018; Darling-Hammond et al., 2014; Malcom-Piqueux & Bensimon, 2017). Racial/ethnic and class-based disparities in college access, enrollment, and completion not only persist, but widen despite years of effort to counteract them through implementing programs and policies (Ching, 2018; Malcom-Piqueux & Bensimon, 2017). Achievement differences for both high school and college graduation rates particularly impact low-income students, students of color—especially Black, Latino, Native American, and Pacific Islander students, ELL, and students with disabilities (Darling-Hammond et al., 2014). First-generation students with low-income family backgrounds in high-poverty schools, have a lower likelihood of being academically and socially prepared for college or being considered college and career ready by the time they graduate from high school (Guevara-Cruz, 2018).

One of the ways in which community colleges alleviate increasing the equity gap and mitigate the challenges of student retention and completion, especially for disproportionately impacted students, is by providing access to student support services and programs. The EOPS program is a state-funded academic counseling program designed to support students facing language, social, economic and educational barriers (California Community College Chancellor’s Office, n.d.b). Established through the California Legislature Senate Bill 164 (1969) during a time of political unrest (Dills, 2003), the EOPS program adopts an “over-and above” motto and reputation to provide comprehensive services and activities that enhance student persistence and academic achievements (Soltani et al., 2017). SB 164, the “social reform” legislation encouraged the California community college system to develop programs and services designed to equalize the educational opportunities for students (Rio Hondo

Community College, n.d.). At its inception in Spring of 1970, the EOPS programs were implemented in 46 California community colleges; today there is an EOPS program at every California community college (Santa Barbara City College, n.d.).

Over ten years ago, a 2011-2012 National Postsecondary Student Aid study showed that less than 25% of first-generation college students overall persist towards a bachelor's degree compared to the 68% persistence rates of non-first-generation college students (Radwin et al, 2013). Approximately 11% of low-income, first-generation college students completed their college degree within 6 years (Cahalan et al., 2016). Students who meet the criterion for EOPS are disproportionately impacted in the areas of retention and persistence (Radwin et al, 2013). However, a study of the California community colleges found that EOPS students had higher outcomes than students who were not in the EOPS program (Willett et al., 2012). The EOPS program has statistically proven to have a positive impact on student retention and persistence.

Differences in completion rates are a result of a variety of factors including academic preparation and support, finances, and representation (Espinosa et al., 2019; National Center for Education Statistics, 2019). As an equity program, EOPS provides services that directly correlate with factors that influence disproportionate completion rates amongst groups including students of color, low-income, first generation students, ELL, etc. EOPS services include academic counseling support, financial assistance, social opportunities to promote community, etc. EOPS, an affirmative action program, was created to increase access to resources for low-income students with academic barriers through financial and technical support to assist with the completion of their educational goals and has successfully done so (Chacón, 2013) Students who qualify as low-income and identify with one of the aforementioned factors that influence

disproportionate completion rates (e.g. first-generation, English as a second language (ESL)) qualify for the EOPS program.

The EOPS program at SCA consists of one director, five full-time counselors, three part-time counselors, and one full-time specialist serving 1200 low income, disproportionately impacted students every semester. EOPS is an institutionalized program that follows the Title V education code mandating each student to complete three counseling appointments every semester (Dills, 2003). EOPS students maintain their EOPS requirements in exchange for services such as priority registration, financial assistance for books, laptop loans, comprehensive support and community, etc. (Dills, 2003). The high level of involvement and support given in the EOPS program yields a 92% success rate at SCA amongst the EOPS students thereby becoming a significant contributor to student success at SCA.

Prior to the COVID-19 pandemic, the front-desk staff was supported by part-time temporary and student workers, but during the first week of the campus shut down, all part-time and temporary workers were laid off. Therefore, in addition to needing to create a new virtual process to reach our students, the EOPS program was short staffed with only one full-time support staff member to take care of program responsibilities. Although the EOPS program is a significant contributor to student persistence and success for the historically underserved at the community college level (Soltani et al., 2017), the consequences of an abrupt virtual shift mid semester also left student support services like EOPS unprepared to provide the needed services for students to succeed.

### **Experiences of Adult Learners**

As adult learners, students over the age of 21, have increased in number in institutions of higher education over the years, their typical designation as “non-traditional students” is no

longer exclusively theirs (Allen & Zhang, 2016; Ritt, 2008). The term “non-traditional” student is typically referred to students 25 years of age and over but now has been broadened to include characteristics not typically associated with college such as delaying entry to college by at least a year, having dependents, being employed full-time, being financially independent, attending school part-time, etc. (Ross-Gordon, 2011). Over forty percent of California community college students are working adults over the age of 25 but when including one or more of the updated broadened characteristics, non-traditional students occupy the majority of California community colleges (California Community College Chancellor's Office, 2021). Non-traditional students are the fastest growing population of college undergraduates, and currently make up about 75% of the college population (Babb et al., 2021; Ross-Gordon, 2011).

Consideration for adult learners and non-traditional student populations should thus be explored separately from other student populations as their characteristics lead to unique educational experiences (Allen & Zhang, 2016). For example, adult learners often consider themselves more mature than their “traditionally aged” peers, causing them to feel invisible or isolated (Allen & Zhang, 2016). Furthermore, balancing many responsibilities outside of school limits non-traditional students from engaging with faculty and classmates (Ross-Gordon, 2011). During the COVID-19 pandemic and shelter-in-place orders, non-traditional students who were already vulnerable due to multiple life stressors were especially affected (Babb et al., 2021).

### ***Andragogy***

Institutions have the potential to play an important role in creating supportive learning environments by incorporating theory and research into their educational practices (Bierema & Merriam, 2014). A commonly accepted adult learning theory is known as andragogy- a set of best practices for adult education that distinguish adult education from childhood pedagogy

(Allen & Zhang, 2016; Bierema & Merriam, 2014). In the early 1970s when Malcolm Knowles first introduced adult learning theory in the United States, it was a groundbreaking, controversial stance that adults and children learn differently (Knowles et al., 2012). Androgogy holds six primary assumptions about adult learners: adults are assumed to prefer self-directed learning environments, adults bring a rich resource for learning in their reservoir of life experience, the readiness of an adult to learn is closely related to their developmental and social roles, adults are more problem-centered than subject centered in learning, adult learners exhibit a high degree of internal motivation, and lastly adult learners need to know the reason for learning something (Allen & Zhang, 2016; Bierema & Merriam, 2014). While a pedagogical model emphasizes educational content, an andragogical model emphasizes process (Bierema & Merriam, 2014). In an androgogical model, the educator sets a climate for learning that physically and psychologically respects adult learners (Bierema & Merriam, 2014).

### **Distance Education and COVID-19**

Several arguments related to the COVID-19 impact on education are related to online education specifically (Dhawan, 2020). In order to understand the impact COVID-19 had on education, it is important to understand what technology was available, applied and utilized prior to the pandemic. Prior to COVID-19, distance education—instruction in which the student and instructor are in different locations which may include interacting through the use of a computer and communications technology, video or audio instruction—was far from a new phenomenon in higher education. Technological advances have changed the way instruction occurs (Bowen et al., 2013; Chinkes & Julien, 2019; Cojocariu et al., 2014; Ismaili, 2021; Wojciechowski & Palmer, 2005). Distance education in higher education was an equity effort, founded on the premise that knowledge could be accessible to more than just a privileged few (Kentnor, 2015).

Distance education made learning possible without face-to-face interactions between the student and their instructor (Kentnor, 2015).

Within the scope of distance education are several learning modalities. Examples of technological advancements in education are reflected in the various distance education modalities: online education is defined as a form of distance education that exclusively uses the internet as the mechanism of delivery (Harasim, 2000; Kentnor, 2015). Blended learning, the combination of traditional and online education with a set ratio of online and offline learning (Ismaili, 2021), has proven to be successful dependent upon a number of factors: student self-preparation and motivation, active engagement, and the quality of the course design (Bowyer and Chambers, 2017; Jowsey et al., 2020; Qamar et al., 2021). Hybrid learning, much like blended learning, utilizes technology to create a variety of flexible learning environments for students, intentionally incorporating technology tools in face-to-face courses to enhance student learning (Linder, 2017). Distance education assists in providing diverse learning options, appealing to students who require flexibility (Bowen, 2013; McManus et al., 2017; Pei & Wu, 2019; Roache et al., 2020).

### ***Benefits of Distance Education***

Flexibility is not the only advantage to distance education, there are several benefits to online education—internet-based courses offered synchronously and/or asynchronously. Online education increases access to learning by enabling access to courses without restrictions or geographical constraints (Al-Samarraie et al., 2018; Goi & Ng, 2008). In some studies, online education has as part of its definition, a student-centered, innovative approach to education; a customized learning experience adapting to the needs of the learner (Cojocariu et al., 2014; Dhawan, 2020; Al-Samarraie et al., 2018). As technology advances, so do the opportunities for

online education to provide accessible and affordable options for students flexibility (Bowen, 2013; McManus et al., 2017; Pei & Wu, 2019; Roache et al., 2020).

Distance education offerings have increased in popularity and course offerings. Approximately 6 million were taking distance education courses in degree-granting postsecondary institutions prior to the pandemic (Allen et al., 2016; National Center for Education Statistics, 2022). Over the last decade, the use of technology in education has exponentially increased worldwide (Chinkes & Julien, 2019; Dunn & Kennedy, 2019). Online education is endorsed not just by higher education institutions, but by the students themselves as seen by its growing demand.

With the appropriate incorporation of technology, instructors can facilitate high quality engagement and interactions between teachers and students (Al-Samarraie et al., 2018; Bowen et al., 2013; Dumford & Miller, 2018; Henrie et al., 2015; McBrien et al., 2009; Simonson, 2015). Krause and Coates (2008) define student engagement as, “the effort and commitment that students give to their learning” (p.1). Blended learning courses facilitate increased involvement and engagement by students, subsequently increasing enthusiasm, perseverance and commitment to the learning process (Bokolo et al., 2020). The potential for active engagement between students and their teacher through the use of online learning technologies reduces the amount of class time students are sitting passively, thus increasing motivation (Moro, 2018). Most importantly, online education made it possible to continue educating students during the COVID-19 induced temporary shutdown of educational facilities worldwide.

Across the span of ten years, studies demonstrating positive student learning outcomes for online/distance education explain that what matters most in effective learning is excellent teaching, as any instructional strategy can be supported by a number of technologies

(Chickering, 1996; Jackson & Anagnostopoulou, 2018). As instructors endeavor to provide the most effective learning environments for the diverse needs of students, courses can benefit from technological tools and practices in order to support learners of all backgrounds (Yen et al., 2018). Effective teaching and success rests on the same principles across all platforms regardless of whether you are learning in-person or remotely (Nilson & Goodson, 2021; Soffer & Nachmias, 2018).

### ***Distance Education and Community Colleges***

Over the years, online course enrollments have particularly increased at community colleges (McFarland et al., 2017; Parsad et al., 2008; Xu & Jaggars, 2014), where a large proportion of their population are “non-traditional” students, adult learners, low-income students, and students of color (Snart, 2017). As early as 2006, community colleges enrolled more distance learners than any other higher education institution (Parsad & Lewis, 2008; Travers, 2016; Xu & Jaggars, 2014). With the flexibility and affordability that comes with taking online courses, distance education learning modalities attract non-traditional students who are more likely to have employment and family obligations (Jaggars, 2014; Snart, 2017; Xu & Jaggars, 2014). Online courses provide the diverse population of community college students with the advantages of flexibility, at-home convenience and reduced travel time, allowing them to use their time more efficiently (Jaggars, 2014).

Unfortunately, while community colleges seek to be flexible and innovative, adapting to students’ needs by offering online course options (Fredericksen, 2018), community college students yield less than favorable results when taking them. Studies have found a connection between taking online courses and completion with students taking online courses being less likely to earn a degree than those taking traditional, in-person courses (Huntington-Klein et al.,

2016; Shea & Bidjerano, 2018). Regardless of the community college students' age, gender, ethnic background, grades, successful course completion, or online course load, exclusively taking online courses reduces degree completion for community college students (Stadler & O'Reilly, 2021). This becomes especially problematic for students with disproportionately impacted completion rates. Non-traditional students who are more inclined to flexible online options because of their employment and family obligations outside of school are the same population of students who are disproportionately impacted at the community college. In light of completion, online course options present itself as more of an obstacle than an advantage.

Online courses are also found to have negative impact on course completion and retention. In 2015, the Public Policy Institute of California reported only 16% of online courses in their sample of community college courses had passage rates of 70% or higher, compared with the 44 % of traditional courses (Johnson et al., 2015). Huntington-Klein et al., (2017) found that for the average community college student, taking an online course lowers the probability of taking another course within the same field. Jaggars (2014) reports that very few community college students wished to take all of their courses online, and instead either took part of their course load online or opted for hybrid courses. At face value, online courses provide the necessary accommodations and flexibility that are attractive to non-traditional community college students, but their ability to succeed in them may deter them from taking online courses in the future.

In summary, evaluations regarding the effectiveness of online education have failed to reach consistent conclusions (Paulsen & McCormick, 2020; Pei & Wu, 2019). While there is considerable evidence to suggest that online learning is at least as effective as face-to-face learning, the evidence is by no means conclusive (Lack, 2013; Nguyen, 2015; Paulsen &

McCormick, 2020). Several research studies suggest that online and classroom-based instruction result in equivalent outcomes for students in most higher education settings (Shea & Bidjerano, 2021). Benard et al. (2014), reporting on 16 meta-analyses regarding the effectiveness of blended learning, indicated that students who take online courses succeed at equivalent rates at a variety of outcome measures as traditional classroom learners. When online courses and learning are well designed, no significant differences should be expected regarding the effectiveness of online courses when compared to traditional, face-to-face learning (Dumford & Miller, 2018; Muilenburg & Berge, 2005). Thoughtful and effective design have a direct impact on course completion and success.

While disagreement may exist regarding the effectiveness of online course modalities versus traditional forms of learning, studies firmly identify community college students to be potentially at risk for worse outcomes. Several studies contribute to the conclusion that online courses do less to promote student academic success when compared to their in-person course counterparts (Bettinger et al., 2017; Johnson et al., 2015; Kaupp, 2012). Substantial evidence indicates that students perform substantially worse in online courses than in traditional face-to-face courses for a variety of reasons (Bettinger et al., 2017; Johnson et al., 2015; Kaupp, 2012; Xu & Jaggars, 2014). The multiple factors that determine online course success may not be as plentiful as the online course offerings themselves.

Negative experiences with online learning can arise from technological problems, the lack of instructor and peer presence, poor time-management skills, low self-directed learning abilities, and insufficient levels of self-motivation and accountability (Jaggars, 2014; Travers, 2016; Wojciechowski & Palmer, 2005). Although virtual modalities and online education provide an essential resource for the diverse needs of students, it simultaneously requires

different student success skills and capabilities than those required to be successful in the classroom (Simonson et al., 2015; Travers, 2016). Students frequently struggle with skills such as self-regulating and self-pacing learning and engagement as part of adjusting to the online learning environment (Kocdar et al., 2018). Nguyen (2015) reported that while the data indicates no significant difference between the success outcomes of online courses versus those taken in-person, the data also indicates differences amongst certain groups and characteristics of students. The issue is not with distance education itself, but with the conditions required to create a successful learning environment for disproportionately impacted students.

Online education holds many challenges for the student and educator alike (Wojciechowski & Palmer, 2005). Online course attrition may be as much as 20% higher than in face-to-face programs (Jaggars et al., 2010). Online courses reflect the comfortability and expertise of the designer with the success of an online course being dependent upon the appropriate use and implementation of technology (Jesus, et al., 2017; Yen, et al., 2018). Effective online course design involves more than taking in-class instruction and trying to replicate it virtually (Bowen et al., 2013). There are features of an in-person environment that naturally support engagement, inquiry, and connection that can be challenging to recreate in a virtual setting (Berry, 2019; Dumford & Miller, 2018; Roache et al., 2020). Similar to the characteristics an online learner must possess to be successful in an online course, the instructor must possess the skills, training and support necessary to develop and implement a successful online course.

Teaching online effectively requires specific competencies; skilled face-to-face teachers do not necessarily make quality online teachers (Polly, 2012). Developing a sense of community online can increase course completion rates but it relies on the instructor and their online course

design (Bolliger & Halupa, 2012; Dumford & Miller, 2018). Additionally, students' negative perceptions regarding their online learning experiences has the potential to affect dropout rates, the motivation to learn, and can lower student satisfaction with online learning (Muilenburg & Berge, 2005). Student satisfaction is one of the key elements in determining the quality of online learning in that it leads to higher motivation and persistence in learning (Soffer & Nachmias, 2017).

### **Digital Divide and Emergency Remote Teaching**

Emergency remote teaching is not equivalent to a pre-planned online learning environment (Hodges et al., 2020; Whittle et al., 2020). Moving instruction online during an emergency requires a rapid transition without much structural or institutional support and is usually required to be completed at a speed that forces faculty to improvise quick solutions under pressure and difficult circumstances (Hodges et al., 2020). The primary objective for emergency remote teaching is not to re-create a robust online educational system but rather to provide temporary access to instruction and instructional supports quickly (Hodges et al., 2020). The COVID-19 induced emergency remote teaching environment created challenges for both instructors who were forced to teach their entire face-to-face course online and also for students who needed to adapt to the involuntary online learning environment instantaneously (Rajab et al., 2020; Qamar et al., 2021). For many instructors and students during the pandemic, the remote learning environment was new (Fatonina et al., 2020; Paudel, 2020).

Prior to the COVID-19 pandemic, educational inequities existed as they relate to technology. While recent educational initiatives have sought to close the achievement gap and improve student learning for at-risk students through new uses of technology, Darling-Hammond et al., (2014) report that at-risk students were unable to benefit from particular innovations

seeking to use computers for teaching. Black and Latino students often lack access to the instructional expertise and resources that develop the cognitive skills that drive our knowledge-based economy (Watkins, 2018). A series of studies found that community college students in certain sub-groups such as male students, younger students, black students, and students with lower GPA's, had lower success and performance in online courses in comparison to traditional face-to-face courses (Jaggars, 2014; Jaggars & Xu, 2010; Xu & Jaggars, 2011, 2014). While online education has the potential to increase access and thus level the playing field for disproportionately impacted students, the unique needs and situations of these students can greatly impact their educational experiences (Dumford & Miller, 2018). The population that requests and benefits from online resources the most may simultaneously be the most underprepared for them.

### ***The Digital Divide***

Researchers since the inception of virtual learning have coined the term, “digital divide” to describe the lack of access to a device and appropriate internet connectivity amongst demographic groups (Compaine, 2001; McLaughlin & Resta, 2020; Katz et al., 2021). While most of the United States has some access to the internet (Gui & Argentin, 2011), access to technology in low-income communities points to ongoing struggles related to broader resource limitations associated with poverty and social inequality (Gonzales, 2016; Ragnedda & Muschert, 2013). Access to the internet is more difficult when access to basic human needs such as food, transportation, and healthcare are also difficult (Gonzales, 2016; Sims, 2013). As Gonzales (2016) points out, disparities in internet access should thus be considered from the perspective of the ongoing economic and social cost to maintain access for low-income

communities--transportation to public libraries, hardware frequently broken or outdated, burdensome internet bills.

This initial definition of the digital divide has since been expanded to include two additional levels of digital inequality, with access to a device and connectivity only representing the first level of the digital divide (Gonzales, 2016; Katz et al., 2021; McLaughlin & Resta, 2020). Technology needs to be up-to-date and stable for effective online initiatives to be sustainable (Al-Samarraie et al., 2018). All three levels are interlocked with physical access being the most fundamental (Katz et al., 2021).

The second-level of the digital divide refers to discrepancies in digital skills and engagement (Gonzales, 2016; Katz et al., 2021; McLaughlin & Resta, 2020; Rideout et al., 2016). The assumption that people who have grown up with the digital media are universally savvy is incomplete because socioeconomic status is an indicator of how people are incorporating the internet into their everyday lives (Bullen et al., 2011; Hargittai, 2010; Rideout et al., 2016). Differences in digital proficiencies create inequalities because digital skills are a crucial tool for people's social inclusion and professional development (Gui & Argentin, 2011; Ragnedda & Muschert, 2013). As mentioned previously, digital skills are also a crucial tool for online learning success. Research has shown significant differences in digital skills dependent upon economic, educational, geographic, and demographic disparities (Bullen et al., 2011; Hargittai, 2010; Van Deuren & Van Dijk, 2014). Limited access to the appropriate technology affects the ability to develop digital proficiencies and skills necessary for social, professional, and educational opportunities.

The third level of the divide is related to undergraduates' online learning experiences including disparities in the benefits, use and application of technology and the internet (Katz et

al., 2021; McLaughlin & Resta, 2020). Users with high quality access and adequate skills do not necessarily obtain the same returns on their internet use (Van Deursen & Helsper, 2015). Internet communications and subsequently its effective use can positively influence social capital in communities by fostering new avenues for communication (Simpson, 2005). Digital skills should result in tangible outcomes (Van Deursen & Helsper, 2015), therefore it is important to understand who benefits from the internet and in which ways does internet use convert into a broad range of offline outcomes (Stern & Adams, 2010). The three levels of the digital inequalities are interrelated and can create a substantial digital divide impacting social, professional, and educational development.

Each level of the digital divide contributes to the digital exclusion of the corresponding demographic groups (McLaughlin & Resta, 2020). As it stands now, technology as it is currently being employed is contributing to inequities and the digital divide more than disrupting them (Gorski, 2009). First generation college students and students of color are more likely to be on the negative end of the digital divide (Buzzetto-Hollywood, et al., 2018).

### ***Challenges with Emergency Remote Teaching***

COVID-19 exacerbated existing inequities as they relate to the digital divide (Chandra et al., 2020; Day et al., 2021; Real, 2021). Research on the efficacy of online learning prior to the pandemic was premised on students choosing to take those courses online with faculty who had prepared to teach online (Katz et al., 2021). The emergency remote teaching environment forced teachers without previous experience, to transition their courses online and teach their students with varying motivation, digital skills, or experiences of under-connectedness (Katz et al., 2021). The levels of the digital divide correspond with the barriers students experienced during COVID-19.

COVID-19 added significant barriers for poor and low-income families (Day et al., 2021; Gonzalez-Ramirez, 2021; Katz et al., 2021). A frequent complaint by students during COVID-19 was network instability (Fatonian et al., 2020; Gonzalez-Ramirez, 2021). Almost one-fifth of U.S. households do not have internet access, and these families are more likely to include first-generation and low-income college students (Buzzetto-Hollywood et al., 2018). As COVID-19 shut down schools, business and workplaces, internet was a lifeline. Without the internet, social, professional, and educational activities were difficult if not impossible during the virtual transition.

Many students lacked the hardware and software necessary to be successful in school and encountered difficulties in securing suitable workspaces during the pandemic (Day et al., 2021). The expeditious transition to involuntary digital environments brought digital inequality to the forefront for undergraduate college students who had depended on campus WiFi, university devices, and study spaces as they suddenly lost those supports when campuses closed (Katz et al., 2021). As students were forced to work, study, and learn at home during the pandemic, they often shared internet, hardware, and work spaces with parents, siblings, and sometimes children of their own (Getahun, 2021).

Unfortunately, persons with low-income backgrounds participate in a cycle of “un-adoption” in which they adopt broadband connectivity at home, and then drop it for financial or other reasons, only to re-subscribe again when their conditions make it necessary (Powell et al., 2010). Today, while individuals are significantly more likely to have access to internet-based platforms than they were ten years ago, access to digital media technologies remains tenuous for students growing up in resource-constrained homes and communities (Watkins, 2018). Ibacache et al. (2021) reported students communicating through chat instead of with a webcam during

classes because bandwidth was too low. A lack of high-speed internet affects students' ability to participate in educational activities and complete their schoolwork (Ibacahe, 2021).

For many families without access to internet at home, bringing their children to the library is a part of their daily or weekly routine (Powell et al., 2010; Real, 2021). During the pandemic, many lower-income Americans are relying more on their smartphones as their only technological device (Buzzetto-Hollywood et al., 2018). In a typical school year, study spaces are plentiful; the cramped study environments during the pandemic posed an academic disadvantage to low-income students who are more likely to live in crowded situations (Getahun, 2021; Katz et al., 2021). Unequal access to fully functional digital devices and to consistent high-speed internet (first-level digital divide) affects students' likelihood of developing the necessary skills to fully engage in digital learning environments—second-level digital inequality (Katz et al., 2021).

COVID-19 also exacerbated the internal barriers (Ibacahe et al., 2021), the discrepancies in digital skills and engagement (Katz et al., 2021), thus instigating the second level of the digital divide. In addition to the self-regulation motivation, and previous education experience necessary to be successful in an online learning environment (Buzzetto-Hollywood et al., 2018; Katz et al., 2021), COVID-19 severely impacted students' mental health (U.S. Department of Education's Office for Civil Rights, 2021). Digital skills and engagement were impacted not just by a lack of technological access during COVID-19, but as a result of stress and mental illness.

Firstly, the impact of rapidly increasing technology induced high levels of stress. As technology is continually transforming the college and university environment, technostress among students expressed itself as burnout, decreased learning engagement, reduced performance, etc. (Wang et al., 2020). It is often assumed that university students are tech-savvy

and thus free from technostress (Bullen et al., 2011; Hargittai, 2010; Qi, 2019; Rideout et al., 2016). Technostress is a maladaptation problem, a technology induced strain, that occurs when individuals fail to cope with technology changing environments (Cooper et al., 2001; Wang et al., 2020). The extended state of COVID-19, and with it the high level of prolonged stress and isolation, led for many to experience a societal pandemic burnout (Queen & Harding, 2020).

Secondly, the trauma of a global pandemic affected mental health. Research has broadly demonstrated a connection between the experience of natural disasters and psychopathology (Davis et al., 2010; Di Pierto, 2018; Galea et al., 2007; Guttierrez et al., 2005; Kessler et al., 2008; Weems et al., 2007). In a study that examined the impact on students during Hurricanes Charley and Frances, Guttierrez et al. (2005) found that 63% of respondents experienced moderate to extremely high levels of stress due to personal loss. In cases of long-term campus closure, dramatic changes to schedules and expectations would further add stress to students and faculty (Real, 2021). In a study examining the academic performances of students at a local university after the L'Aquila earthquake, Di Pierto (2018) found that not only did the earthquake significantly reduce the probability that a student would graduate on-time but that the students of the University of L'Aquila were likely to have suffered from physiological and psychological stress following the event. Di Pierto (2018) points out the importance of attending to educational needs in addition to psychological needs concluding that not only should higher education institutions quickly move educational programming to a new location after a natural disaster ensuring continuity in education, but academic staff and students need a secure and safe learning environment.

Similar conclusions were found by Davis et al. (2010) while studying the psychological impact of university students from Hurricane Katrina. Students displaced as a result from

Hurricane Katrina experienced symptoms of depression, PTSD, and psychopathological symptoms (Davis et al., 2010). The severity of traumatic exposure affects the subsequent adjustment to the trauma; the longer the duration of an interruption, the greater the time to recover (Davis et al., 2010; Gonzalez-Ramirez, et al., 2021). The effects of COVID-19 are ongoing resulting in a long and traumatic interruption to many facets of society and life.

Students' mental states during the pandemic are very different during those of ordinary times (Li et al., 2021). Safety measures taken during the COVID-19 pandemic including but not limited to sheltering-in-place, social distancing, physical distancing, etc. were taken to control the spread of the pandemic but simultaneously caused various psychological problems (Bozdağ, 2021). Extended stress, loss, grief, isolation, and uncertainty has taken a toll on many students' psychological well-being (U.S. Department of Education's Office for Civil Rights, 2021).

Stress has far-reaching consequences on students' ability to learn. According to the American Psychological Association (2020), education itself was reported by 87% of Gen Z adult students to be a source of stress. Stress often impairs information retrieval, memory, and focus (Vogel & Schwabe, 2016). During COVID-19, students' experiences of loss and grief are paramount. As of April 5, 2021, Kidman et al. (2021) reports 37,300 to 43,000 children experienced a parent dying of COVID-19 in the United States in comparison to the 3,000 children left without a parent after the attacks on September 11, 2001 (p.745). According to the Centers for Disease Control and Prevention (CDC), communities have faced increased mental health challenges related to COVID-19; younger adults, racial and ethnic minorities, essential workers, and adult caregivers reported experiencing worse mental health outcomes, increased substance use, and elevated suicidal ideation (Czeisler et al., 2020). Psychological reactions of individuals during the pandemic have significantly influenced the potential for emotional and

social problems (Novins et al., 2021). The uncertainty and impact of the pandemic made planning for the future difficult for many adult college students (American Psychological Association, 2021). These emotional and social problems impact and inhibit students' ability to learn effectively. Due to the stress of the pandemic itself, the learning skills and abilities necessary to be successful in an online course without the same face-to-face community, created challenges and barriers to distance learning.

### **Digital Inclusion and Equity Minded Practice**

The unprecedented global impact of COVID-19 undoubtedly impacted all populations and societal groups. As it relates to education, the expeditious virtual transition into emergency remote learning environments impacted administrators, faculty, staff and students in tremendous ways. As technology advances and integrates with education, it can both enhance inclusive instructional practices (Edyburn, 2011; Thomas & Hong, 2013), as well as exacerbate issues of equity (Chandra et al., 2020; Day et al., 2021; Gorski, 2009; Ismaili, 2021; Moldavan et al., 2021). The preexisting challenges and digital inequalities that existed in education only increased as a result of the pandemic. While technology removed the geographical barrier and financial barriers that exist in education, at the heart of equity-minded practice is the understanding that not all students or potential students have or are provided with what they need in order to realize their full potential (Castro, 2015). Technology has the capacity to increase or minimize the equity gap.

Equity is not equality or equal treatment but equal education results; that all students without exception are guaranteed parity in student educational outcomes (Linton, 2011; USC Center for Urban Education, 2018). Equity includes in its definition students being provided with the individual support they need to reach and exceed a common standard (Ching, 2018; Linton,

2011). A tool is as effective as its user and design. To move away from the digital divide that often impacts historically excluded populations of students, opportunities must be in place to prioritize digital equity and inclusion (Moldavan et al., 2021).

Technology presents both possibilities and obstacles for higher education institutions (Ismaili, 2021). Bensimon (2005) argues that achievement gaps will persist unless colleges accept responsibility for achieving equity and for creating educational environments that foster the success of all students, especially the disproportionately impacted students. Equity minded practice frames inequity as a problem of practice rather than a problem with students therefore it is the responsibility of the institutions, faculty, and staff to create equity for all students (Malcom-Piqueux & Bensimon, 2017).

For example, learners who lack exposure and experiences with technology, may be at a disadvantage when given the opportunity to learn with technology in the classroom as they will have significant differences in their knowledge and skills (Lowel & Morris, 2019). Technology and the internet has the potential to remove educational barriers such as physical and financial restraint but it is the responsibility of the institution to support students with the efficient use of technology to improve the online learning experience (Kara, 2021). Providing or increasing access to the same instructional content and technological resources does not necessarily mean equitable learning opportunities (McLaughlin & Resta, 2020). Digitally inclusive environments create access for all students, including historically excluded populations. Through the use of digital technologies, digitally inclusive learning environments provides access not only to educational opportunities but also to opportunities to meaningfully participate in the same learning, employment, social and citizenship activities as others (Seale et al., 2010).

Digital equity is the condition in which all individuals and communities without exception have the information technology capacity necessary for full participation in society, democracy and economy (National Digital Inclusion Alliance, 2021). The digital divide disproportionately impacts people of color, indigenous peoples, low-income households, people with disabilities, people in rural areas and older adults (Moldavan et al., 2021; National Digital Inclusion Alliance, 2021; Stern & Adams, 2010). Disparate access to technology can exacerbate social stratification in comparison to equal access which can reduce marginalization (Seale et al., 2010). Digital inclusion refers to the activities necessary to ensure that all individuals and communities without exception, have access to and use of Information and communication Technologies (ICTs) and experience its benefits (National Digital Inclusion Alliance, 2021).

### **Summary**

In an analysis of the literature, there is increasing evidence indicating that COVID-19 exacerbated existing digital inequalities for at-risk, disproportionately impacted students on all three levels of the digital divide (California Community College Chancellor's Office, 2021; Gonzalez-Ramirez, et al., 2021; Real, 2021; U.S. Department of Education's Office for Civil Rights, 2021). While there are several studies indicating no significant difference between the effectiveness of virtual learning modalities when compared to traditional face-to-face modalities (Bowyer and Chambers, 2017; Jowsey et al., 2020), studies also indicate that online education is effective when both students and teachers are equipped with the digital skills, resources and support to successfully complete and design a collaborative, engaging online course (Johnson et al., 2015; Wojciechowski & Palmer, 2005).

However, there are three levels of digital inequalities with corresponding barriers that disproportionately impact low-income students of color (Bettinger et al., 2017; Johnson et al.,

2015; Kaupp, 2012). Several studies indicated that community college students who take online courses are less likely to complete their course and exhibit an increased risk of delaying graduation (Huntington-Klein et al., 2017; Shea & Bidjerano, 2018; Stadler & O'Reilly, 2021). Students experiencing the digital divide and various related digital inequities exhibit the greatest need for flexible online options but are less likely to be successful in them.

COVID-19 brought in a forced expeditious transition of both courses and student supports removing the ability not only to choose but restricting the ability to prepare for the virtual learning environment due to the shelter-in-place order by the State of California (Katz et al., 2021). Students were at the mercy of several factors beyond their control as faculty and staff improvised ways to continue providing access to learning and support services with decreased institutional support (Hodges et al., 2020). The trauma of the virtual transition was interlaced with the personal traumas of the pandemic creating an environment less conducive for an effective learning environment. Overall, COVID-19 has had a significant negative impact on at-risk students (U.S. Department of Education's Office for Civil Rights, 2021).

Equity minded practice holds institutions and practitioners accountable for mitigating the challenges that disproportionately impact students (Malcom-Piqueux & Bensimon, 2017). The California Community College Chancellor's office has written equity minded practice into its vision for success as the overarching goal for all 116 California community colleges (California Community College Chancellor's Office, 2021). This embedded mixed methods study endeavors to identify the described barriers EOPS students faced from the perspective of students during the tumultuous transition of the pandemic. EOPS students represent vulnerable environments disproportionately impacted by the digital divide due to their low-income status and academic barriers.

In reviewing the literature, there are still gaps in the research related to the unique impact of COVID-19 as it is still ongoing (Day et al., 2021; Moloney & Kim, 2020; Paudel, 2020). COVID-19 initiated an emergency remote teaching environment that is not the same as distance education in a normal setting (Hodges et al., 2020; Whittle et al., 2020). Online education assumes choice both on the side of the instructor and student to be in that learning environment (Rajab et al., 2020). Students and teachers who choose to engage in the online learning modality are thus able to prepare for their courses.

Furthermore, student support programs that are in place to combat the effects of educational inequities such as EOPS were faced with similar challenges to continue to provide support and services in a virtual environment. EOPS students represent the most disproportionately impacted group across campuses in the state and there exists a gap in the literature regarding their experiences during the pandemic from their point of view. Understanding the described experiences of EOPS students can provide the necessary insight to prepare for future emergencies that lead to emergency remote learning environments.

Therefore, through an equity lens, this study seeks to investigate the following research questions: (a) How did EOPS students describe the challenges/barriers faced during the COVID-19 abrupt virtual transition? (b) What campus interventions did the EOPS students identify as having the greatest impact on their academic success during the COVID-19 pandemic? (c) What campus interventions did EOPS students perceive as assuaging the impact of the virtual transition? (d) Were there differences in viewpoints amongst students who had taken online courses before the pandemic and those who had not? While literature and studies are unfolding in regards to the pandemic and its impact on education, few articles highlight the perspective of students, particularly at-risk, disproportionately impacted students. The collective response to the

COVID-19 virtual transitions could result in an exacerbation or expansion of existing educational inequities and it is imperative for administrators, faculty, and staff to attend to this potential (Buras, 2020; Sullivan, 2020).

### **Chapter 3--Methods**

This study provides such understanding from the students' own perspective.

Understanding the experiences of at-risk, historically underserved student populations can inform administration and leaders of the necessary resources and efforts that would best support them in ongoing online learning environments. Given the increased demand for ongoing distance education options, the findings of this study can preemptively inform administration, faculty and staff of services that can help to mitigate the impact of previously experienced barriers.

As the COVID-19 pandemic continues to unfold, studies have explored and sought to understand how the pandemic has affected education. While various studies have examined the virtual transition during COVID-19 (Katz et al., 2021; Khan & Iqba, 2020; Li, et al., 2021; Roach & Rowe-Holder & Muschette, 2020) and online learning during COVID-19 (Dhawan, 2020; Kan et al., 2021), there remains a lack of research that highlights the impact on community college students from the students' perspective. Li et al. (2021) and Kara (2021) studied the barriers college students experienced during the pandemic, but both studies examined the general student population. There is a gap in the research specifically related to the experiences of disproportionately impacted and marginalized students during COVID-19 from their own perspective. This study seeks to understand with an equity and digital inclusion lens the described barriers EOPS community college students are experiencing during emergency remote learning environments. This chapter includes discussion of study design, the role of the researcher, sampling and data collection methods, electronic survey tool, human subject considerations, proposed data analysis and means to ensure the validity of the study.

## Study Purpose & Research Questions

The purpose of this embedded mixed methods study was to understand the barriers EOPS students are facing during the imposed transitions from in-person to fully remote instruction amidst the COVID-19 pandemic at SCA. The following four research questions guided this study:

- **RQ 1:** How do EOPS students describe the challenges/barriers they have faced during the abrupt transition to virtual instruction due to COVID-19?
- **RQ 2:** Were there differences in viewpoints amongst EOPS students who had taken online courses before the pandemic and those who had not?
- **RQ 3:** What campus interventions did EOPS students perceive as assuaging the impact of the virtual transition?
- **RQ 4:** What needs still exist for EOPS students as the pandemic continues?

A single data gathering electronic survey was used to collect both qualitative and quantitative data. An interactive level of interaction between the data occurred, where the quantitative and qualitative strands of data are considered during the analysis and interpretation phase of the research (Creswell & Plano Clark, 2011). The quantitative and qualitative data were of equal priority in addressing the research questions.

## Research Design

This study utilized a mixed methods methodology with an embedded (concurrent) design where the researcher combined the collection of both quantitative and qualitative data through a single electronic survey (Creswell & Plano Clark, 2011). The embedded design enhances the application of a traditional qualitative or quantitative study design (Creswell & Plano Clark, 2011). Following the framework and philosophy of Creswell & Plano Clark (2011) and Creswell

& Creswell (2018) this mixed methods study relied on a pragmatic worldview by collecting both quantitative and qualitative data concurrently in an embedded design.

The premise of selecting this embedded (concurrent) research design is that a single data set is not sufficient to answer the research questions (Creswell & Plano Clark, 2011). The embedded design allows for a more complete understanding of the research purpose than a single quantitative or qualitative data set would (Creswell & Creswell, 2018). The embedded design enhances the application of a traditional quantitative or qualitative design by providing a richer data set comprising both quantitative and qualitative data (Creswell & Creswell, 2018; Creswell & Plano Clark, 2011). The qualitative strand in this study provides the necessary context that when coupled with the generalizable quantitative data provides a more comprehensive account and understanding of the research problem (Creswell & Plano Clark, 2011).

Furthermore, the mixed methods approach provides an opportunity to draw on the strengths of both quantitative and qualitative research while offsetting their individual weaknesses (Creswell & Plano Clark, 2011). Qualitative data provides a detailed understanding of a phenomenon therefore only requiring a small sample (Creswell & Creswell, 2018). Quantitative data provides potential for generalized results and thus examines a larger number of people to assess the responses to a few variables (Creswell & Creswell, 2018). Combining the quantitative and qualitative data provides a more complete understanding of the research problem while offsetting the limitations of each type of research data (Creswell & Plano Clark, 2011).

### **Role of the Researcher**

Researchers today need to disclose the position they hold in relation to their research because their writing reflects their own cultural, social, and political interpretations (Creswell &

Poth, 2018). Therefore, reflexivity must be taken into consideration when interpreting and analyzing results of gathered data (Creswell & Creswell, 2018). As a counselor for the EOPS program, I have witnessed the difficulties EOPS students experience during the pandemic. The EOPS program resides within the student support services division at SCA and therefore, as part of my job I assist students in receiving support services and assistance and refer students to various resources on campus. My role as a counselor involves listening to the experiences and testimonies regarding the barriers experienced by EOPS students. My position also includes witnessing the interventions that have the greatest impact on student success as my role is very much involved in resource facilitation and retention.

My assumptions, based on both the literature and my experience, include that EOPS students have found themselves on the negative side of all three levels of digital inequality. The three levels of digital inequality include a lack of access to appropriate devices and internet connection, discrepancies in digital skills and engagement, and disparities in utilizing the benefits and application of technology and the internet (Katz et al., 2021; McLaughlin & Resta, 2020). Based on the qualifications necessary to participate in the EOPS program, especially their low-income status, my assumption is that EOPS students lack the adequate hardware and Wi-Fi connection at home and heavily relied on campus study spaces and computer loan programs. As a result of their low socioeconomic status, I believe many EOPS students are at a disadvantage in regard to their technological skills and therefore the utilization of technological benefits and application when compared to non-EOPS students. As a counselor for the EOPS program, I hold bias in respect to counseling as a support and intervention in its positive relationship with student success. I believe the EOPS program provides the services and support necessary for student success.

Several practices were implemented to minimize researcher bias (Creswell & Creswell, 2018). Practices of reflexivity were used throughout the study in order to mitigate personal biases. I kept track of my personal experiences and learning during the data collection and analysis process. Furthermore, the qualitative analysis software used provided transparency of how the narrative data was coded and interpreted.

### **Target Population and Sample**

This study utilized a purposive sampling technique (Creswell & Creswell, 2018), intentionally recruiting EOPS students at SCA. The criteria to participate in the study were as follows:

1. Students who were enrolled in the EOPS program during the pandemic—anytime between Spring 2020 and Spring 2022 semesters.
2. Both part-time or full-time students who are currently or previously (since Spring 2020) enrolled in SCA.

The EOPS program office staff generated a report of students who met the aforementioned criteria and sent the researcher their SCA student email addresses. For students to qualify for the EOPS program, they must be a California resident, a full-time student enrolled in at least 12 units, meet the income requirement with zero expected family contribution as determined by financial aid, and exhibit at least one academic barrier (California Community Colleges Extended Opportunity Program & Services Association, n.d.). A dependent students' parents must make 27,000 or less in order to meet the income threshold (Orange Coast College, n.d.). Examples of academic barriers include but are not limited to being a first-generation college student, being an English Language Learner, qualifying for remedial level English or math courses, etc. (California Community Colleges Extended Opportunity Program & Services

Association, n.d.). The EOPS program student yield a population that is disproportionately impacted in the California community college system (California Community College Chancellor's Office, 2021). Each semester, the EOPS program serves 600-1000 students and those students carry over into the following semester if they continue to meet the program requirements. During the 2020-2021 academic year, there were nearly 300 students who either graduated or dropped from the program. As of January 2022, there are 700 current and active students in the EOPS program. 1200 students were sent an invitation email with a link to the electronic survey based on either current program involvement or previous program involvement since the Spring of 2020.

### **Data Collection Strategies and Procedures**

This embedded mixed methods study has an equivalent status design where both the qualitative and quantitative components are equally important in understanding the research problem (Venkatesh et al., 2016). This study implemented a single data collection process through an online survey collecting both quantitative and qualitative data concurrently through closed and open-ended questions (Creswell & Creswell, 2018). The online survey was created and designed using Qualtrics, a web-based survey administration tool.

An electronic survey was considered the best approach for this study for several reasons. An electronic survey protects the students' identity enabling anonymity (Jones, 2019). Due to the sensitivity of the nature of the questions, a survey where students are not asked to answer the questions in front of a person allows for more open and honest answers (Andres, 2012). An electronic survey also promotes more participation, especially in a pandemic, where students' living situation and time commitments have changed in order to accommodate the economic challenges, responding to an electronic survey is less time consuming than participating in an

interview process. The electronic survey provided a convenience factor both in its time commitment and ease of access (Gray, 2009).

### **Survey Process**

While online surveys offer advantages over traditional survey approaches including the possibility of larger samples due the convenience and low cost, they typically have a lower response rate than more conventional questionnaires (Menon & Muraleedharan, 2020). Response rates for surveys have decreased in the past decade (Zhang et al., 2017). Furthermore, keeping up with emails is more difficult now than it has been in years (Rogers, 2020); email fatigue has become an inevitable consequence of the pandemic (Segal, 2021). Due to these constraints, the anticipated response rate was for at least 20% of the targeted population to participate. Of the 1200 EOPS students who received an email with a link to the electronic survey, there were 249 total responses, 21% of the targeted population.

In order to help increase the response rate, students were invited to participate in the survey in two primary ways. The first invitation was sent through email; an email was sent out from the researchers SCA email address to the student email address list created by the front office staff. The email list was comprised solely of SCA email accounts, regardless of the participants active status at SCA. Students current and active in the EOPS program also received an announcement through Canvas (LMS) within the Canvas EOPS community center. Messages and announcements sent through Canvas also send an email copy to the student. Only EOPS students have access to the EOPS community center preventing non-EOPS students access to the link. Therefore, each active student will receive two emails with an invitation including a link to the survey.

The email included the purpose of the study with informed consent information and an explanation of the incentive offered for participation in the study. The incentive consisted of a lottery drawing for five Amazon gift cards in the amount of fifty dollars each. Zhang et al. (2017) found a five percent increase in response rates from participants when an incentive was highlighted in the subject of an email; this study therefore included the incentive in the subject heading. At the end of the full survey, participants were asked if they were interested in participating in the lottery and if so, a link to a separate Qualtrics survey was provided where they could input their contact information for e-gift card distribution. Per request of SCA's institutional effectiveness department, included in the email were instructions on how to participate in the lottery drawing regardless of their participation in the survey. The lottery drawing occurred after three weeks with communication to all who joined the lottery by the end of the 4th week of the survey process. Communication to the winners included instructions on how to claim their e-gift card. After the winners of the e-gift card accepted their gift, all participants were notified that the lottery drawing had concluded.

The survey was sent out during finals week at SCA, two days before a holiday weekend and graduation. The survey was thus kept open for two weeks. After the first week of releasing the survey, participants received a follow-up email and a Canvas LMS message. The reminder email contained a reminder that the survey was still open, instructions on how to participate in the lottery drawing, and a link and QR code to the survey. The Canvas LMS message mirrored the email but did not have a QR code within it. Upon entering the survey hyperlink, students were provided with a brief explanation of the purpose of the study, an informed consent clause, and instructions for completing the survey.

## **Tools and Instruments Used**

The online survey was created and designed using the Qualtrics web-based survey administration tool. Several studies found a positive correlation between a shorter questionnaire and an increased participation and completion rate of online questionnaires (Harrison et al., 2019; Zhang et al., 2017). Therefore, both the quantitative and qualitative questions were kept short in length and in number in order to maximize survey completion from the participants. The survey consisted of likert scale, close-ended limited response questions and open-ended qualitative questions.

The survey was organized into four general sections that correspond to the literature and research questions. With the exception of the first section that captures demographic data from the participants, each section will include both closed-ended and open-ended questions. The first quantitative section was composed of close-ended limited response demographic questions. The demographic section captured data such as the students' age, gender, program of study, and details regarding their course units. In order to continue to protect students' anonymity, rather than ask for students to disclose their major, students were asked to choose the subject area related to their program of study. Similarly, students were not asked to identify how many years they have been at SCA but instead how many units they have attempted. Due to the diverse needs of community college students and their diverse timelines, asking about units instead of years in school specifically allows the researcher to understand and gain insight on their academic history without narrowing down who that student might be based on how long they have been at SCA. The demographic section is intended to facilitate an understanding of research question two.

The second section of the survey focused on the impact COVID-19 had on students personally, amongst their community, and their experiences with SCA academically. The third section focused on the challenges, skills, and procedures EOPS students experience with technology. The fourth and final section of the survey focused on the experiences of EOPS students learning online during the pandemic. Closed and open-ended questions were included in sections two through four and provided data to answer research questions one through three.

The validity of the survey was established using accepted content validity procedures. The survey items were drafted according to the existing literature regarding the impact COVID-19 has had on students, emergency remote teaching challenges, and digital equity and inclusion. Two content experts from the SCA EOPS program were provided with the research questions and survey items and suggested additions and/or changes to the structure and organization of items. The content experts are experienced community college educators who were familiar with the challenges faced by EOPS students.

Following survey content validation, the survey was created within Qualtrics. An electronic pilot process occurred to ensure survey reliability. The final survey was presented to 15 college-aged students at a different college; they were instructed to complete the survey within one week. The college students invited to participate in the pilot met similar demographics to EOPS students. Time completed and questions completed were observed. The researcher contacted the students who participated in the survey the following week and gathered feedback regarding the survey's difficulties, the amount of time it took, and gathered suggestions. Overall, the students participating in the pilot felt the survey had a good flow, was balanced in the level of seriousness of the questions and how they were spread out, and the types of questions asked by the survey were appreciated.

## Human Subjects Considerations

The research study was submitted to the Pepperdine University Institutional Review Board (IRB) for approval under Exempt Category 2 U.S. Code of Federal Regulations, DHHS (CFR), [Title 45 Part 46 \(45 CFR 46\)](#) (see Appendix). This study poses minimal risks to the targeted EOPS student population as subjects were invited to participate in an anonymous survey. Participation was on a completely voluntary basis with no negative repercussions to their learning experiences or program status if they choose or not choose to participate. The director of EOPS and the Dean of Counseling at SCA were supportive of the study, facilitating the approval from SCA's IRB. To protect the identity of the school, the approval letter is not included in this document.

Students were informed of the voluntary nature of involvement and how their identity will be protected as well as procedures used by the researcher to ensure confidentiality. The invitation email and Canvas LMS announcement by the researcher contained the basic information about the study, informed consent information, information about how to access the electronic survey and how to contact the researcher for any follow up questions or concerns. The offered incentive of e-gift cards via a lottery was explained in the informed consent which also explained that contact information gathered will be separate from survey responses. At the end of the survey, participants were asked if they were interested in participating in the lottery and if so, a link to a separate survey was provided to collect their name and the best email to contact them for gift card distribution.

All survey data is password protected and stored on a password protected computer. Data is also backed up on a password protected, encrypted hard drive with the researcher being the only one to have access to it. The EOPS director will be provided with a summary of the results

of the study upon completion of the study. All survey data will be destroyed upon completion of the study after the required 3-year time period.

### **Data Analysis**

The Qualtrics electronic survey administration tool was the primary platform used to collect both quantitative and qualitative data. The captured data was analyzed separately and distinctly and then merged in order to interpret and compare the results. The quantitative data was analyzed within the Qualtrics platform and HyperRESEARCH was the software used for the thematic analysis of the open-ended responses. HyperRESEARCH is an electronic research analysis tool that enables its users to code and analyze data with text, graphics, audio, and video sources (Researchware, Inc., 2021).

The quantitative data was analyzed and summarized primarily through descriptive statistics. Frequency distributions were used for the demographic items. Data was also cross-tabulated using demographic items in order to address research question two and examine the differences in experiences between various demographic groups. The survey items of the three primary sections of the survey, COVID-19, Technology, and Learning online, were categorized into subgroups during the quantitative analysis phase.

The open-ended questions allowed participants to elaborate on their experiences. Thematic analysis is a method to condense open-ended survey data by using a three-step process in which data is categorized, summarized, and reconstructed to capture important concepts or themes (Champa et al., 2021). The qualitative data was downloaded from Qualtrics into text files, then uploaded into HyperRESEARCH. An initial code book was developed through an emergent thematic process. An iterative process was then used to code and recode the responses. The themes that emerged from the qualitative data aligned with the subtopics the survey items

were organized according to. Therefore, the survey item subtopics were utilized as a-priori thematic categories by which the emergent themes were organized. A peer-reviewer was engaged to review the final coding to ensure a reliable and accurate interpretation had been made.

The quantitative and qualitative findings were analyzed separately. The findings from each data set were compared in order to arrive at the study conclusions. The triangulation of the two forms of data developed a comprehensive and rich understanding of the study issue.

### **Means to Ensure Study Validity**

Several strategies are involved to ensure internal validity. First, the survey was validated by content experts and piloted prior to distribution. In relation to the qualitative component of this study, researchers should reflect how on their personal background, culture, and experiences could potentially shape interpretations especially during the coding process (Creswell & Creswell, 2018). To minimize potential researcher bias, I implemented reflexivity throughout the duration of the study to minimize potential research bias. I recorded notes and memos during the process of research and reflected on how my own personal experiences with EOPS students may shape my interpretations of the themes and codes. A rigorous analysis process was used including the use of qualitative analysis software to provide a transparent process of the coding process. Engaging with a peer-reviewer prior to the interpretation of thematic analysis findings provided support for a reliable interpretation process. Lastly, the triangulation of the two forms of data in answering research questions and arriving at study conclusions supports the internal validity of this research. This triangulation of types of data enhances the likelihood that conclusions are accurate (Creswell & Plano Clark, 2011).

## **Chapter Summary**

This study utilized a mixed methods methodology with an embedded (concurrent) design where the researcher combined the collection of both quantitative and qualitative data through a single electronic survey (Creswell & Plano Clark, 2011). Furthermore, this study utilizes digital equity and digital inclusion theoretical frameworks in order to understand the barriers and digital inequities described by EOPS students during the COVID-19 pandemic. The EOPS program was utilized as a vehicle to target at-risk student populations. Chapter 4 presents the quantitative and qualitative data collected in narrative style with descriptive tables and figures. The presentation of the findings is organized according to the sections and subsections of the survey. Chapter 5 presents the interpretation of the findings as evidenced by the data analysis, the study conclusions, implications, and recommendations for further research and practice.

## Chapter 4: Findings

The purpose of this embedded mixed methods study was to understand the described barriers EOPS students faced and continue to experience during the COVID-19 pandemic at a local community college in southern California. The college is referred to as SCA throughout the presentation of findings. As an embedded mixed methods study, students who qualified and received any form of services from SCA's EOPS program were invited to complete an electronic survey consisting of both open and close-ended questions. The online survey consisted of four sections: demographic and background information, COVID-19 impact, technology, and learning online. The guiding research questions were as follows:

- **RQ 1:** How do EOPS students describe the challenges/barriers they have faced during the abrupt transition to virtual instruction due to COVID-19?
- **RQ 2:** Were there differences in viewpoints amongst EOPS students who had taken online courses before the pandemic and those who had not?
- **RQ 3:** What campus interventions did EOPS students perceive as assuaging the impact of the virtual transition?
- **RQ 4:** What needs still exist for EOPS students as the pandemic continues?

This chapter describes the findings of both the quantitative and qualitative data. Following a description of the survey respondents, the findings are organized according to the four sections of the survey. Within each survey section, the quantitative findings will be presented first followed by the qualitative thematic analysis findings.

### Description of the Sample

A purposive sampling approach was utilized to target at-risk students at SCA. The EOPS program served as a vehicle to identify the most at-risk student population on the SCA campus—

low-income students demonstrating and at least one academic barrier. To qualify as a candidate for this study, participants were required to be at least 18 years of age, past or present EOPS students, having qualified and received services from EOPS anytime between the Spring 2020 and Spring 2022 semesters. Since the COVID-19 shelter-in-place order transpired in March 2020 and subsequently initiated an emergency remote teaching protocol, a list of 1200 students were generated through the EOPS office to identify students who qualified for EOPS and received EOPS services anytime between January 2020 and May 2022. Therefore, participants are past or present students at SCA who qualified for or received services from the SCA EOPS program anytime between Spring 2020 and Spring 2022 semesters.

The survey was distributed in May 2022, mid-week during finals week, two days before graduation and a holiday weekend. The invitations were sent only to SCA email addresses regardless of their current active status in EOPS or SCA. Of the 1200 SCA student email addresses that received an invitation, 249 useable responses were received representing approximately 21% of the target population.

### **Demographic Findings**

The first section of the survey captured demographic data about the participants in order to provide a comprehensive view of the factors influencing the experienced barriers during the COVID-19 pandemic. The demographic data consisted of eleven close-ended questions. The discussion of the findings includes the number of responses for each individual question as not all participants responded to all of the survey items.

#### ***Age and Language***

Of the 249 total responses 71% ( $n = 177$ ) of respondents were of traditional age, between the ages of 18-24, 19% ( $n = 47$ ) were between the age of 25-34, six percent ( $n = 14$ ) were

between the ages of 35-44 and four percent ( $n = 11$ ) were 45 years of age or older. The total responses for language spoken in the home is high ( $n = 313$ ) due to respondents having the ability to check more than one language spoken in their home. 44% ( $n = 138$ ) of the 313 total responses checked English as the primary language spoken at home, the majority of respondents indicated a language other than English as the primary language spoken at home ( $n = 175$ ). 34 % checked Vietnamese ( $n = 107$ ), 13% Spanish ( $n = 42$ ), and eight percent Other languages ( $n = 26$ ) including Farsi, Chinese, Arabic, Portuguese, Uzbek, Indonesian, Turkish, Korean, Slovak, Tagalog, Swedish, and ASL. The sample of students reflects a diverse language sample.

### ***Area of Study***

The areas of study were categorized according to the departments at SCA as listed on the SCA website. While each department houses every major available at SCA, students still had the opportunity to select “Other” and write in their area of study as a response. Therefore, apart from “undecided,” “Liberal Arts” or blank entries, each written response listed as “other” was added to the accurate department. The Business ( $n = 48$ ) department represents the majority of the respondents’ area of study. Followed closely by Social and Behavioral Sciences ( $n = 40$ ), Math, Sciences, and Engineering ( $n = 38$ ), Consumer & Health Sciences ( $n = 37$ ). Unknown/Other ( $n = 25$ ), Visual and Performing Arts ( $n = 19$ ), Computing and Technology ( $n = 19$ ), and Literature & Languages ( $n = 16$ ) and Kinesiology & Athletics ( $n = 4$ ) represent the least popular areas of study. Amongst responses known, Science, Technology, Engineering, and Mathematic (STEM) related majors ( $n = 63$ ) account for 26% of the respondents’ area of study.

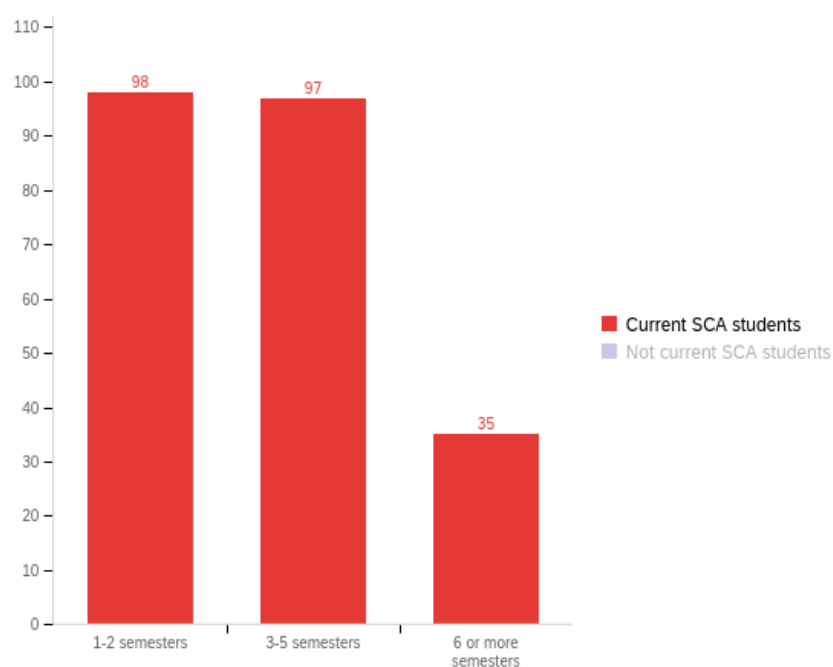
### ***SCA Current Status and Semesters at SCA***

Of the 249 total responses, 92% ( $n = 230$ ) of respondents stated they were current SCA students as of the Spring 2020 semester. As Figure 1 demonstrates, 43% of current SCA students

( $n = 98$ ) have been at SCA for 1-2 semesters, 41% ( $n = 97$ ) have been at SCA for 3-5 semesters, and 15% ( $n = 35$ ) have been at SCA for 6 or more semesters.

**Figure 1**

*Length of Time at SCA (By Semester) of Current SCA Students*

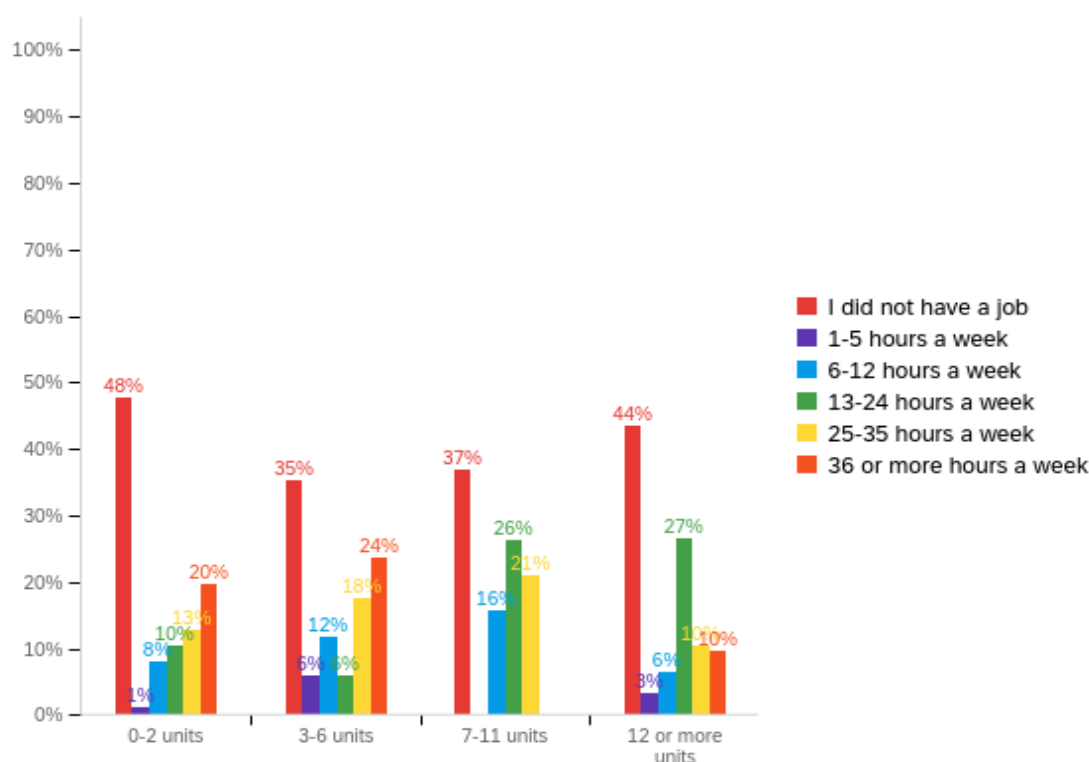


### ***School and Workload***

Figure 2 displays a comparison between how many units students took and the amount of hours they worked prior to the COVID-19 pandemic. EOPS requires students to be enrolled in 12 or more units in order to receive services unless approved by a counselor. Of the 246 total responses, only 50% of students ( $n = 124$ ) enrolled full-time at 12 or more units. 35% of students ( $n = 86$ ) took 0-2 units, indicating they could have not been a student yet at SCA which would account for 0 units or they were taking a 1-2 unit elective course. The remaining 15% ( $n = 36$ ) of students were enrolled part-time, between 3-11 units indicating enrollment in a few courses.

**Figure 2**

*Hours a Week Worked Compared to Units Taken per Semester at SCA*



The majority of student respondents enrolled full-time at SCA, worked while going to school prior to the pandemic. 36% ( $n = 45$ ) worked up to 24 hours a week and ten percent ( $n = 13$ ) worked 25 to 35 hours a week and another ten percent ( $n = 12$ ) worked full-time while going to school full-time. On the opposite end of the spectrum, about half of the students who reported they were not attending SCA or only taking one to two units also did not have a job ( $n = 41$ ). 19% ( $n = 17$ ) of students reported working up to 24 hours a week, 13% ( $n = 11$ ) worked 25 to 35 hours a week and 19% ( $n = 17$ ) worked full time.

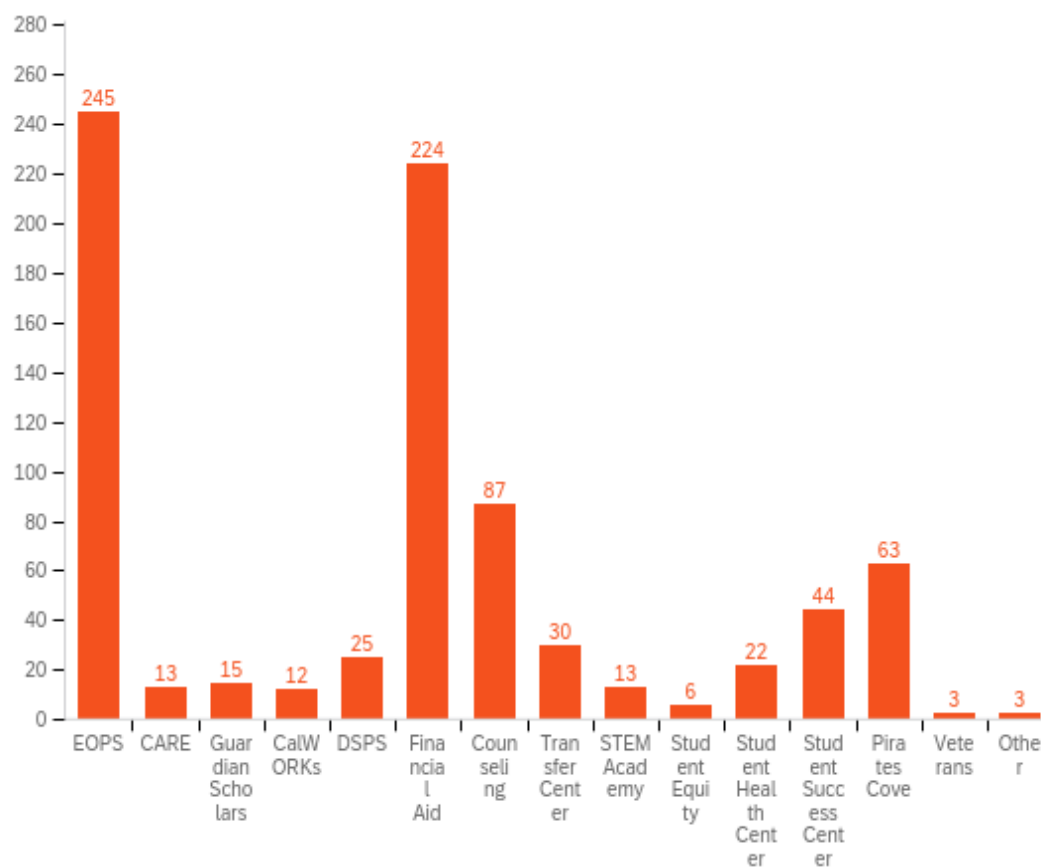
### ***Support Programs***

In order to get context regarding the supports students had access to for the purposes of understanding the barriers experienced during the COVID-19 pandemic, students were asked

what programs and services they receive/d support from while at SCA. Figure 3 ( $n = 249$ ) displays the variety of services available to students at SCA with 98% indicating receiving support and services from EOPS ( $n = 45$ ) and 90% Financial Aid ( $n = 245$ ).

**Figure 3**

*Programs and Services Utilized at SCA*



Since EOPS requires students to apply for Financial Aid every year it is expected for students to utilize the Financial Aid office and services. Similarly since EOPS requires three counseling contacts within the EOPS program, students may not utilize the general counseling department ( $n = 87$ ). 25% of students received services from the campus food bank--Pirates Cove ( $n = 63$ ) and 18% receive academic support in the form of tutoring and workshops from the Student Success center ( $n = 44$ ). Less than 12 % of students indicated receiving support from other campus

services including but not limited to the Transfer Center ( $n = 30$ ), DSPS--Accessibility resources ( $n = 25$ ), and the Student Health Center--Physical and Mental health support ( $n = 22$ ).

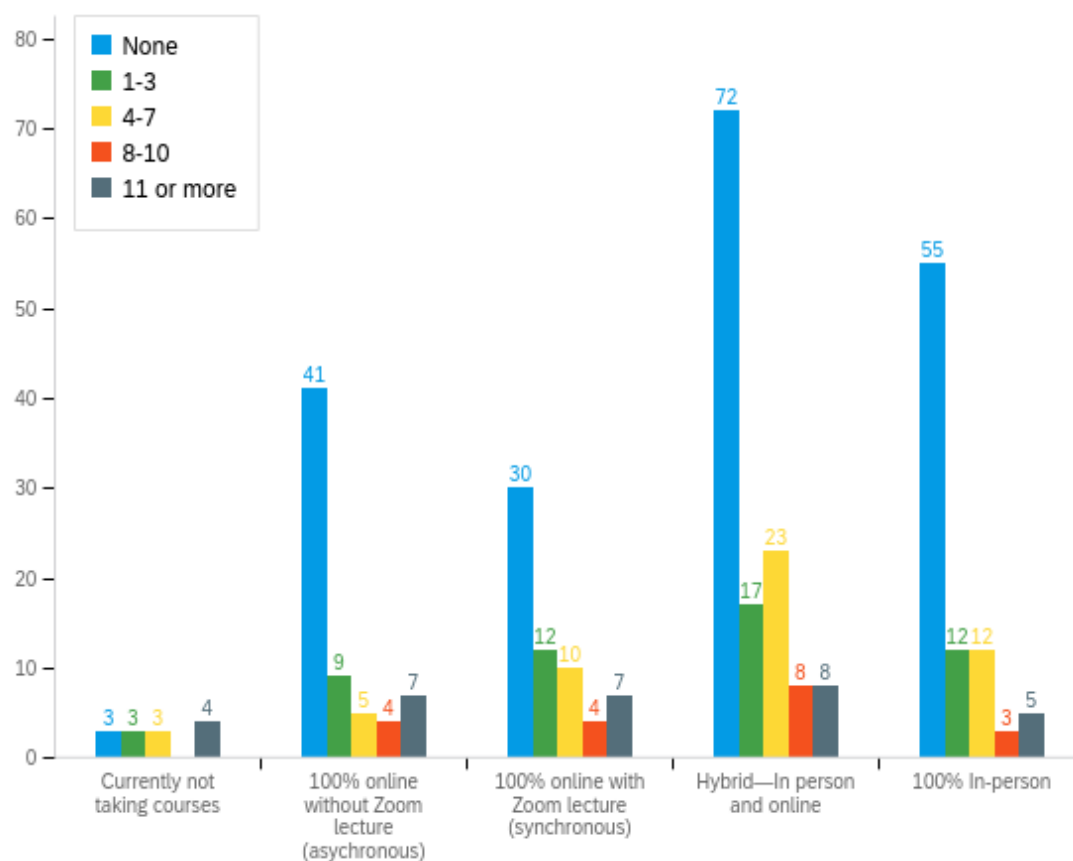
### ***Online Course Experience***

Of the 249 respondents, the majority (55%) of students reported never having taken an online course prior to the pandemic ( $n = 136$ ). Sixteen percent ( $n = 40$ ) reported having taken at least one course or one to three online units, 22% ( $n = 54$ ) reported taking two to three online courses or between four to ten online units, and eight percent ( $n = 19$ ) took 11 or more online units, approximately four or more online courses prior to the pandemic.

In Spring 2020, the SCA campus was open again and significantly decreased their online course offerings to 30%. When current SCA students were asked to indicate all formats their current courses were being delivered ( $n = 249$ ), only 35% ( $n = 87$ ) indicated 100% online. 51% ( $n = 128$ ) selected hybrid courses--in person and online, and 52% ( $n = 63$ ) indicated 100% online with or without a Zoom option. The high choice count ( $n = 357$ ) indicates students had multiple formats for their courses in Spring 2020. Figure 4 compares the number of online units students completed prior to the pandemic with their choice of learning format in Spring 2020. Although the majority of students (55%) did not take online courses prior to the pandemic, once in-person course options became available in Spring 2020, 72% ( $n = 257$ ) of available course options selected by respondents were of an online format.

**Figure 4**

*Number of Online Courses Taken Prior to the Pandemic Compared with Learning Modality Preference*



### Survey Findings Overview

In addition to demographics, the online survey had three sections: COVID-19, technology, and learning online. Participants responded to 16 close-ended questions and 8 open-ended questions integrated into the three sections of the survey. The discussion of the findings are presented according to the sections and includes the number of responses for each individual question as not all participants responded to each of the survey items. The findings for each section of the survey is further divided into subsections reflecting the topics and themes of the items. The quantitative data will be presented first, followed by the thematic analysis findings.

Nine topics (Table 1) guided the development of the thematic categories resulting in 28 themes. Coding of the eight open-ended questions resulted in 1213 coded passages. Table 1 displays the thematic categories and theme distribution for all qualitative data.

**Table 1**

*Thematic Categories*

Survey Section		Thematic Category	Code Count
1	COVID-19	Institutional Support	441
1	COVID-19	Academic Impact due to COVID	186
1	COVID-19	Health	73
1	COVID-19	Basic Needs	45
2	Technology	Hardware, Software, and Wifi Access	58
2	Technology	Digital Skills	51
3	Learning Online	Technology Comfort and Preference	170
3	Learning Online	Communication and Connection	114
3	Learning Online	Barriers outside of the Classroom	74
		<b>Total</b>	<b>1213</b>

## COVID-19

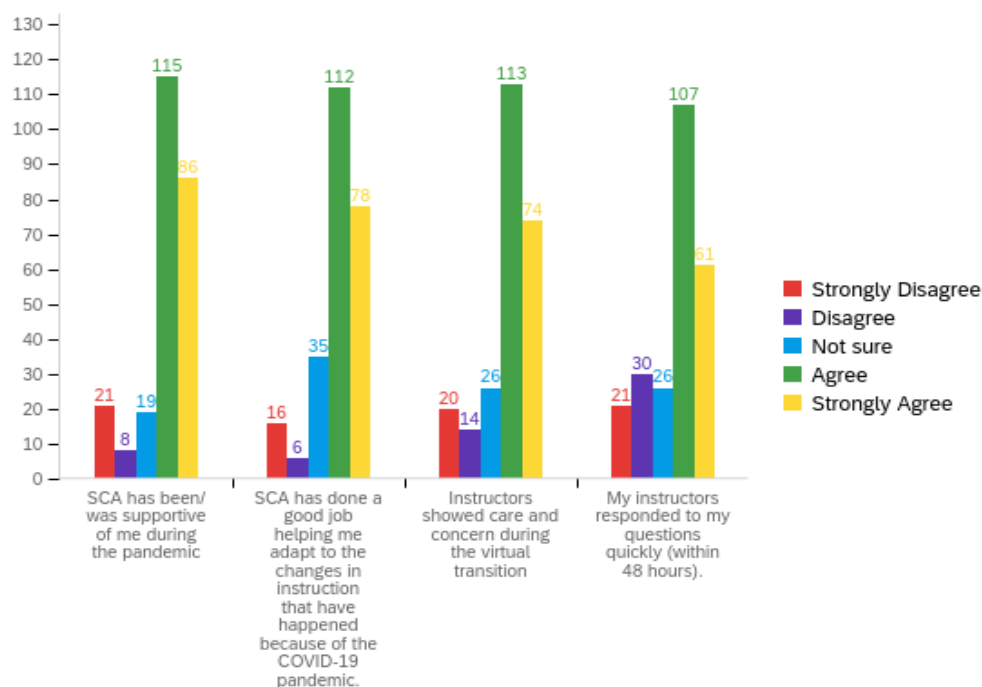
This section of the online survey included six likert-scale questions and one multiple choice question. In addition, there were four open-ended questions. The questions focused on four specific topics related to the COVID-19 induced campus closure: institutional support, academic impact, basic needs, and health.

### *Institutional Support*

Participants were asked to indicate their level of agreement with the following statements related to SCA as an institution: “SCA has/was supportive of me during the pandemic” ( $n = 249$ ) and “SCA has done a good job helping me adapt to the changes in instruction that have happened because of the COVID-19 pandemic” ( $n = 247$ ). Similarly, participants indicated their level of agreement with the following statements related to instructors of SCA: “Instructors showed care and concern during the virtual transition” ( $n = 247$ ) and “Instructors showed care and concern during the virtual transition” ( $n = 245$ ). Figure 5 indicates that the majority of students felt supported both by SCA and instructors during the pandemic and during the virtual transition.

**Figure 5**

*Level of Agreement with SCA and SCA Instructor Support During the Pandemic*



In every sub question, the number of respondents that strongly agreed with each statement was larger than the combined number of students that disagreed and strongly

disagreed. 81% ( $n = 201$ ) of total respondents ( $n = 249$ ) strongly agreed or agreed that SCA has been supportive during the pandemic, 77% ( $n = 190$ ) of total respondents ( $n = 247$ ) strongly agreed or agreed that SCA did a good job helping them to adapt to the changes in instruction, and 76% ( $n = 187$ ) of total respondents ( $n = 247$ ) strongly agreed or agreed that instructors showed care and concern during the virtual transition. The highest number of disagreements ( $n = 30$ ) accounting for 12% of total respondents ( $n = 245$ ) was regarding the statement that SCA instructors responded quickly to student questions; nevertheless, 69% of students ( $n = 168$ ) agreed or strongly agreed with that statement.

### ***Thematic Findings***

Institutional support as a thematic category resulted in 441 coded passages for six themes. Table 2 displays the frequency of each theme with the code counts. Direct quotes are provided for each of the six themes.

**Table 2**

#### ***Institutional Support Themes***

<b>Institutional Support</b>	<b>441</b>
Feeling Unsafe	57
Appreciative of COVID Safety Measures/ PPE	81
Support from Professors/Faculty	46
Counseling-Academic	66
EOPS Support	118
Holistic Student Support	73

**Feeling Unsafe.** Participants were asked whether they feel safe now that campus is open ( $n = 164$ ). 57 participants indicated that they do not feel safe for reasons that included more

than COVID-19. This theme was a more common response by participants. Several students felt unsafe citing the increased crime on campus, explaining “I have always received messages about personal and car robberies during the pandemic,” “The rates of stolen parts from cars are scaring me,” “Many bad things have been happening in the parking lot throughout the year.”

However, the majority of participants who indicated feeling unsafe on campus cited reasons related to COVID-19 and specifically to the easing of safety measures, “Covid is still here and people have stopped wearing masks. I need more virtual classes available since I don’t trust the safety of in-person classes.” Other participants have cited the impact to their mental health, “I don’t feel safe when someone is coughing [...]. Social anxiety has increased” , “I feel a bit anxious recently since the case number has begun to rise again, and there are people who are now comfortable without their masks in school.”

**Appreciation for COVID-19 Safety Measures.** The majority of participants who felt safe on campus showed positive regard and gratitude for the safety measures on the SCA campus indicating that “everyone wears a mask and everything is clean” and “I feel safe on campus because instructors and staff do a good job at keeping the mask mandate.” The majority of participants indicated that their feeling of safety is contingent on the COVID-19 safety precautions including mandated testing and vaccinations describing that “The vaccine mandate and mask recommendation make me feel safer” and “I feel safe on campus because of the clear<sup>4</sup> requirement, mask mandate, and all of the sanitation supplies.” When asked to describe an experience when they felt the most supported during the COVID-19 pandemic, one participant described, “I also liked the strict mask mandate as I feel much safer with it actually being enforced rather than faculty and staff being lenient about it (they are doing a great job of enforcing it.)”

**Support from Professors/Faculty.** When describing their experiences of feeling the most supported during the pandemic, the vast majority of participants described experiences related to instructional faculty being flexible and understanding of their struggles related to the virtual transition. 52 participants described appreciation for instructors' leniency with assignment due dates, "Professors gave additional time and/or adjusted assignments to work with our situations" and help with the transition, "My experience has been great, professors worked harder to make sure we are successful." Specific instructors were also highlighted for their care and compassion, "During Spring 2020, [she] was very compassionate and kind to all students as we adjusted to online classes."

A first year, English language learner who had never taken online courses prior to the pandemic describes how professors assuaged the impact of the virtual transition and made it positive for them:

The ease of access of class was something that was surprising. The professors were very supportive of transitioning into an online environment whenever there were a couple of students who tested positive. They understand that participation in class is hard when it is online [...].

**Counseling-Academic.** Sixty-six coded responses indicated academic counseling had an impact on participants feeling supported by SCA during the COVID-19 pandemic. Counselors were reported as being "really helpful and supportive" and "constantly reaching out, which made me want to continue doing my work" and providing "assurance" along with a listening ear. Academic counselors, specifically EOPS counselors were acknowledged for providing both academic and emotional support as well. Furthermore, several participants acknowledged EOPS counseling as the most helpful program and service during the COVID-19 campus closure. One second-year SCA student who worked part-time during the pandemic reported:

EOPS counselors were big on mentoring me, letting me know I wasn't alone. They let me know they were proud of me, and it honestly meant so much to me. They will forever hold a special place in my heart as they really believed in me. Thank you so much!

**EOPS Support.** EOPS was the most acknowledged student support program with 118 coded responses speaking positively of EOPS support and services. “EOPS provided a bunch of resources and grants that helped greatly,” “helped me adapt to new college life” and was even revered as being a “godsend during the pandemic.” A second-year SCA student who had never taken online courses prior to the pandemic described EOPS support in this way:

I felt really supported by EOPS from the beginning of the pandemic and their understanding of the effects it can bring students. For me it was difficult to do well as I'm used to an in-class setting. EOPS helped me with finding the proper help whether it be financially or emotionally. They knew immediately where to direct me. Not only that but how they would create little baskets for the end of the semester to show support for their students on finishing up a successful semester. As well as the opportunities to receive money for students who are struggling financially. This all has allowed me to be more independent and mindful in how I decide to spend my time.

Several SCA students described being financially supported by EOPS, “EOPS paid for the materials needed for courses that I have to take,” “EOPS offered additional financial support and supplies outside of school needs such as toiletries,” “EOPS also provided the target gift cards so that I can get not just the study supplies but whatever I need.” EOPS also helped students feel welcomed, as one first-year SCA student describes:

I was a new college student during Fall 2020 and I found EOPS at SCA to be the only organization who seemed to keep me engaged and welcome me as a student at SCA. I felt as though they bridged the gap between the online courses and the spirit of the school.

EOPS support included a myriad of services that extended beyond academic needs.

**Holistic Student Support.** When describing an experience they felt most supported by during the pandemic, participants described supports that were “above and beyond,” “mentorship,” “care and compassion,” help that cared for the physical, psychological, emotional, in addition to the academic well-being of the student. One participant described multiple layers

of care, “The tutoring, guidance, and counseling services immensely helped, aided, and assisted me with troubles regarding confusion about entering college for the first time, enrolling in courses, finding help for assignments, and fitting into [SCA].” The EOPS program was most frequently mentioned as a program that went “above and beyond.” Additional programs recognized as providing holistic, well-rounded care included EOPS, DSPS, the Tutoring Center, Technology loans and support through the Library, CalWORKs, Pirates Cove, and Financial Aid.

### ***Academic Impact***

Participants were asked to verify with a “yes” or “no” whether or not various statements described their experience during the COVID-19 pandemic. Four of these statements can be grouped to describe the academic impact COVID-19 had on the participants: “I took fewer classes/units during the pandemic” ( $n = 247$ ), “I dropped all of my courses during one or more semesters as a result of the pandemic” ( $n = 246$ ), “My timeframe for graduating changed due to the COVID-19 pandemic” ( $n = 246$ ), and “My GPA declined during the time of the pandemic” ( $n = 247$ ). For all four statements, the majority of the participants responded with “no” indicating that COVID-19 did not impact them academically in these ways.

The EOPS program requires students to enroll in 12 or more units, full-time status, unless they have an accommodation from Disabled Student Program and Services (DSPS) or receive approval from an EOPS counselor to do so. The EOPS program may have had an impact on unit enrollment as only 27% ( $n = 67$ ) of participants took fewer classes/units during the pandemic. Similarly, only 18% ( $n = 44$ ) of participants selected “yes” to dropping all of their courses one or more semesters as a result of the pandemic. EOPS students must request approval from a counselor before dropping a course and must be low-income, thus receiving Financial aid.

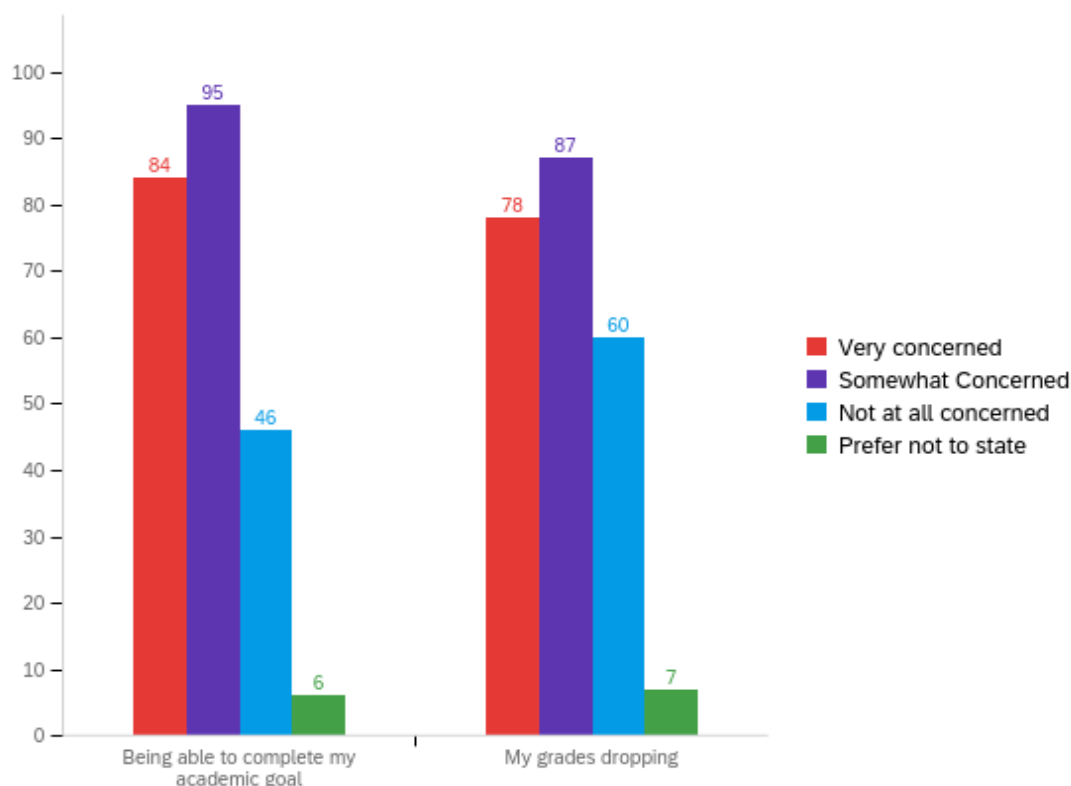
Dropping courses affects students' ability to receive financial aid or could require a student to pay back federal grant money, possibly influencing students not to drop their courses.

The number of participants who indicated that their timeframe for graduating changed due to the COVID-19 pandemic was a little higher at thirty six percent ( $n = 89$ ). Similarly, participants whose GPA declined during the time of the pandemic also increased when compared to the other three statements, with 37% ( $n = 91$ ) of participants indicating "yes." Nevertheless, the data suggests that the COVID-19 pandemic did not result in the majority of the participants taking fewer courses, dropping all of their courses, changing their graduation timeline, or their GPA decreasing.

However, when participants were asked to indicate their level of concern regarding "being able to complete [their] academic goal" ( $n = 231$ ) and "[their] grades dropping" ( $n = 232$ ), the majority had concerns. Figure 6 shows 36% ( $n = 84$ ) of participants selecting "very concerned" and 41% ( $n = 95$ ) of participants selecting "somewhat concerned" in regards to being able to complete their academic goal. Similarly, 34% ( $n = 78$ ) of participants selected "very concerned" and 38% ( $n = 95$ ) of participants selected being "somewhat concerned" in regards to their grades dropping.

**Figure 6**

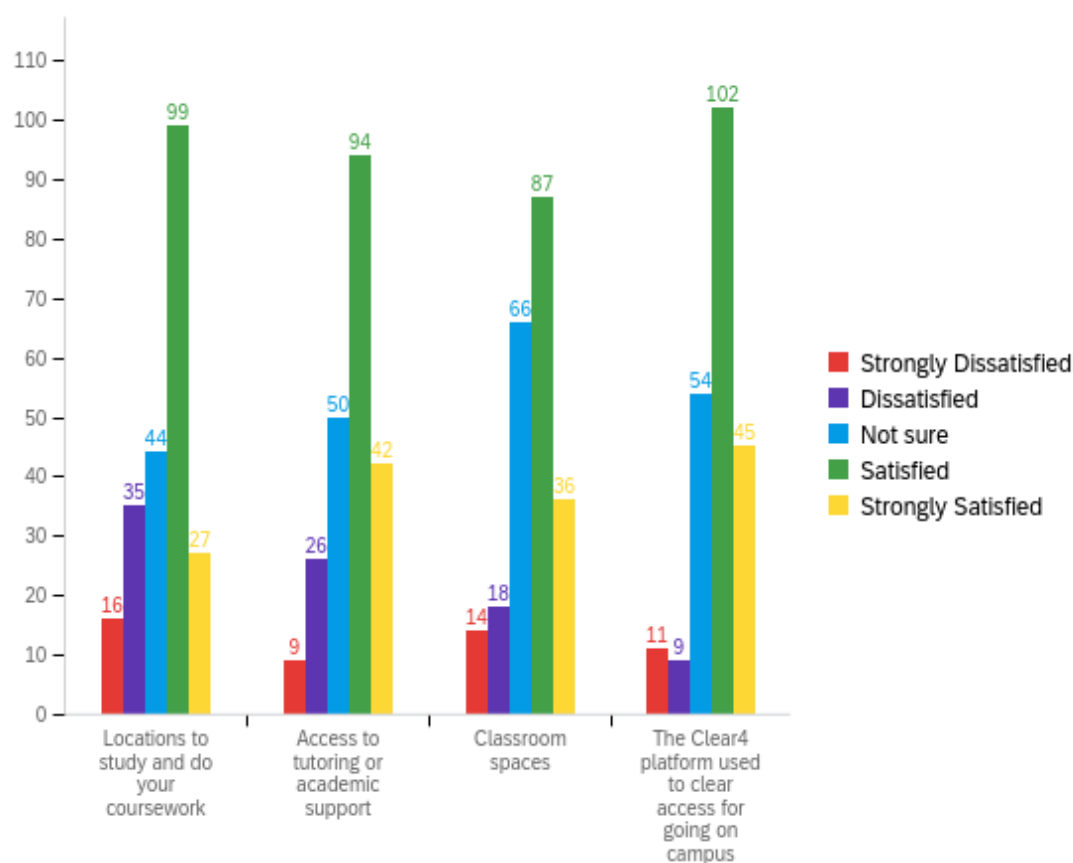
*Level of Concern for Academic Goal Completion and Grades Dropping During the Pandemic*



Lastly, participants were asked to “indicate [their] level of satisfaction with the following factors during the pandemic”: locations to study and do coursework ( $n = 221$ ), access to tutoring or academic support ( $n = 221$ ), classroom spaces ( $n = 221$ ), and the Clear4 platform used to clear access for going on campus ( $n = 221$ ). While the question specifies satisfaction with the four factors during the pandemic, in the Spring 2022 semester, the campus re-opened and it was not specified whether students should respond according to their experience while the campus was still closed or their experience now while it is open. Nonetheless, Figure 7 demonstrates that the majority of participants were satisfied in all four areas.

**Figure 7**

*Level Of Satisfaction with Study Locations, Tutoring and Academic Support, Classroom Spaces, and the Clear4 Platform During the Pandemic*



This question had the highest number of neutral responses, “not sure,” than any of the academic support themed likert-scaled questions which could be attributed to students continuing to take all their courses online. Amongst students who utilize campus facilities, 57% ( $n = 126$ ) of total respondents ( $n = 221$ ) were satisfied or strongly satisfied with locations to study and do coursework at SCA, 62% ( $n = 136$ ) of total respondents ( $n = 221$ ) were satisfied or strongly satisfied with access to tutoring or academic support at SCA, 56% ( $n = 123$ ) of total respondents

( $n = 221$ ) were satisfied or strongly satisfied with classroom spaces and 67% ( $n = 147$ ) of total respondents ( $n = 221$ ) were satisfied or strongly satisfied with the Clear4 platform at SCA.

### ***Thematic Findings***

Academic Impact as a thematic category resulted in 186 coded passages for six themes. In addition to COVID-19 having an impact on students' life outside of school, COVID-19 is described by participants on having an impact academically in various ways. Table 3 displays the frequency of each theme with their corresponding code counts. Direct quotes are provided for each of the six themes.

**Table 3**

#### *Academic Impact due to COVID Themes*

<b>Academic Impact due to COVID</b>	<b>186</b>
COVID positive impact	11
COVID-19 Physical impact and Loss	14
Difficulty Learning at Home	34
Difficulty Learning Online	40
Dropping Courses/Taking fewer units	26
Virtual Transition	61

**COVID Positive Impact.** While there were several described barriers and difficulties associated with COVID-19 and the virtual transition, 11 coded passages described the pandemic as also having a positive impact on students. When participants were asked to tell a story of how the COVID-19 campus closure impacted their education, one non-traditionally aged first year student described COVID-19 as a positive impetus on their education:

Campus closure actually gave me the rare opportunity to go back to school. So there was a positive impact for my education due to the COVID-19. Without the pandemic, I do not believe I would be back in school right now. Accessibility to online courses has helped me achieve my academic goals.

Other participants were grateful for the increased access to online courses as a result of the pandemic, “It made classes available to me online that normally wouldn't be” and provided flexibility for multiple responsibilities such as being “given the opportunity to go to school as a mother.”

**COVID-19 Physical Impact and Loss.** 14 coded responses described the loss of life, physically contracting COVID-19, and concern related to the spread of the virus. One participant expressed, “My brother lost his life to COVID.” A second year, non-traditionally aged student recounts her experience of COVID-19 affecting her family and her mental health:

My sister was in the hospital for two weeks in a ventilator. I was beyond stressed mentally. Seeing my family worry that she was not going to make it out alive was the most dreadful thing. Thankfully she survived and is finally healthy and returned home to her small children. It truly impacted me mentally, I was going to school I was not able to not concentrate during class time I had anxiety.

Other participants described a definite concern; concern for “spreading the disease to my parents who are 65+ years old” and concern for falling behind in class as a result of getting COVID-19, “all I wanted to do was get rest.”

**Difficulty Learning at Home.** Participants were asked to describe their biggest barriers (if any) to being successful in their courses during the pandemic. Although a less common theme, 34 participants described several difficulties with learning from home. Many participants described not having “a study space” or a “quiet study space” along with distractions such as, “having two kids at home, a newborn and a five-year old.” Similarly, the distractions at home made it hard for many participants to focus, “Online is harder to learn because being stuck with so many people at home, I couldn't focus and I didn't feel happy at home in the first place.”

The EOPS program serves low-income students and therefore many of them reside in small living spaces. One low-income student described the difficulty of living at home with multiple people:

I live with my family during the pandemic in a very small apartment (bc that was the only place we could afford). It was extremely difficult to do zoom with others in the apartment and sharing a room with a sibling who also had to do zoom classes as well.

Similarly, another student recounts “living in a 1 Bedroom apartment with my family and we all had covid.” Learning at home presented challenges of distractions, sharing wifi, a lack of a personal quiet space, and difficulty focusing.

**Difficulty Learning Online.** 40 coded responses described the difficulty of learning online, especially when participants were asked to describe the biggest barrier to being successful in their courses during the COVID-19 pandemic. Several participants described the fatigue associated with the increased screen time, “I definitely get exhausted from Zoom and being on my screens for too long” and “I would still attend zoom classes, but right after I would feel extremely tired.” When asked to tell a story of how the COVID-19 campus closure impacted their education, one first-year technology major “wasn't sure of how to navigate the website, what kind of aids were available, or which academic path to take.” Others described struggling with isolation and lack of engagement, “I struggled a LOT with the online environment and my GPA suffered. I have a learning disability and the lack of engagement with the online courses proved to be extremely difficult.” Most participants indicating that “it was harder to study” also described the increase of distractions. One first year student who also worked full time during the pandemic described:

It was very hard to actually learn. Classes were easy but it was difficult to learn from the comfort of my house. There were so many distractions and it was easy to skip and not feel bad about it because of everything that was happening.

However, students were not the only ones struggling to adapt. Responses recorded that “Instructors had a hard time adapting to online teaching” and “some professors wasted a lot of time not knowing how to use something online.”

**Dropping Courses and Taking Fewer Units.** Throughout the open-ended items of the survey, 26 coded responses indicated that the COVID-19 pandemic resulted in several participants dropping their courses or reducing their unit load. One participant is no longer a student at SCA because they decided to drop all their courses and “stop moving forward until everything was back to normal.” Another student described, “I had to drop a couple of classes when COVID hit [...]. It also hindered me by not transferring as soon as I originally planned due to me struggling mentally and academically.”

**Virtual Transition.** 61 coded responses throughout the open-ended items of the survey described both positive and negative experiences as a result of the virtual transition. Some participants experienced difficulties, “I feel my education has declined when COVID happened” while others expressed gratitude towards, “The quickness in which the classes got converted to online so that we could continue our education.” Several participants referred to the virtual transition as a barrier to their education as it took time to adapt and adjust, “Shifting to doing everything online [...] was a bit foreign to most students and took a while to get use to” and “Switching from online to in-person was a little bit of a shock for me because of how slowly I adjusted.”

The virtual transition was also recognized to be ongoing, “It was definitely difficult for all of us at first because immediately transitioning to online and NOT on campus was and still is hard” and,

Switching from online to in-person was a little bit of a shock for me because of how slowly I adjusted. It took some time for me to readjust to the in-person environment again and some professors did not accommodate for that.

Much of the reported difficulty that came with the virtual transition was related to participants' experiences with different professors, "Learning each professor's teaching was hard and very inconsistent" and,

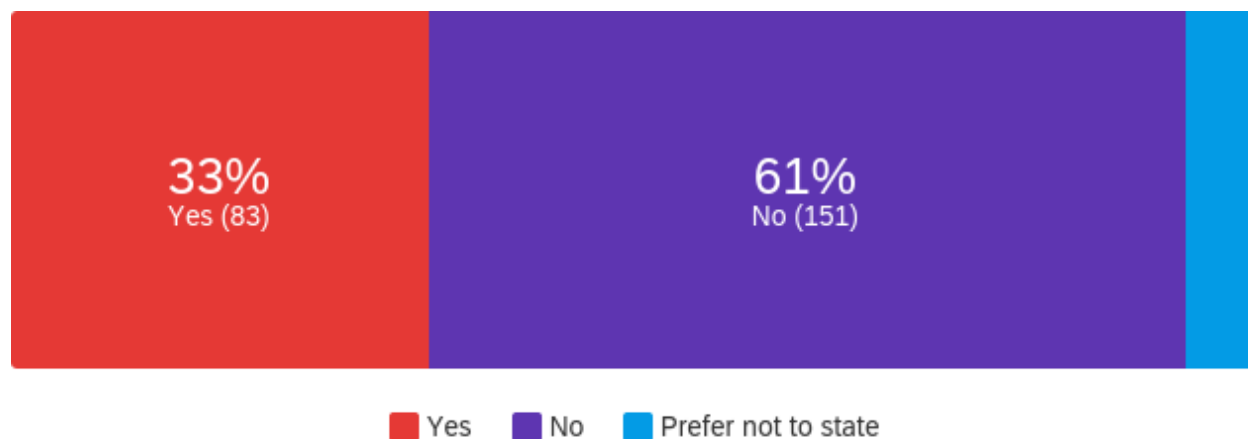
SO many of my professors had no idea what to do. And it was at the time taken out on the students and their GPA. Or they knew everything and students were still catching up with the technology and programs they were using (especially if you started at [SCA] in 2020).

### ***Health***

Questions within this topic related to the participants physical and mental health. Figure 8 demonstrates that one-third, 33% ( $n = 83$ ) of participants had someone who was significant to them be hospitalized or lose their life due to COVID-19 ( $n = 249$ ). The survey responses also dropped after this question.

**Figure 8**

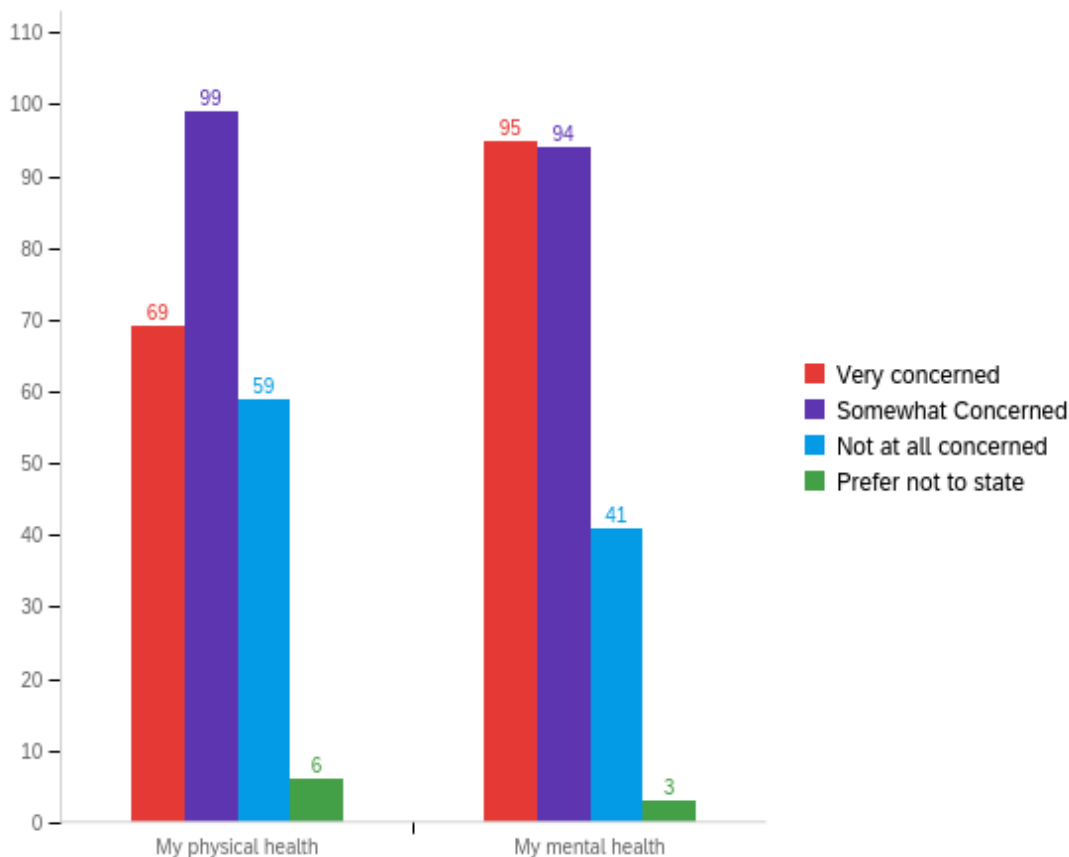
*Percentage of Students who Lost Someone Significant due to COVID-19*



Therefore, the level of concern for the physical ( $n = 233$ ) and mental health ( $n = 233$ ) amongst the participants was high. Figure 9 demonstrates the levels of concern during the COVID-19 pandemic, shelter-in-place order while the SCA campus was shut down.

**Figure 9**

*Level of Concern Regarding Health During the COVID-19 Shelter-In-Place Order*



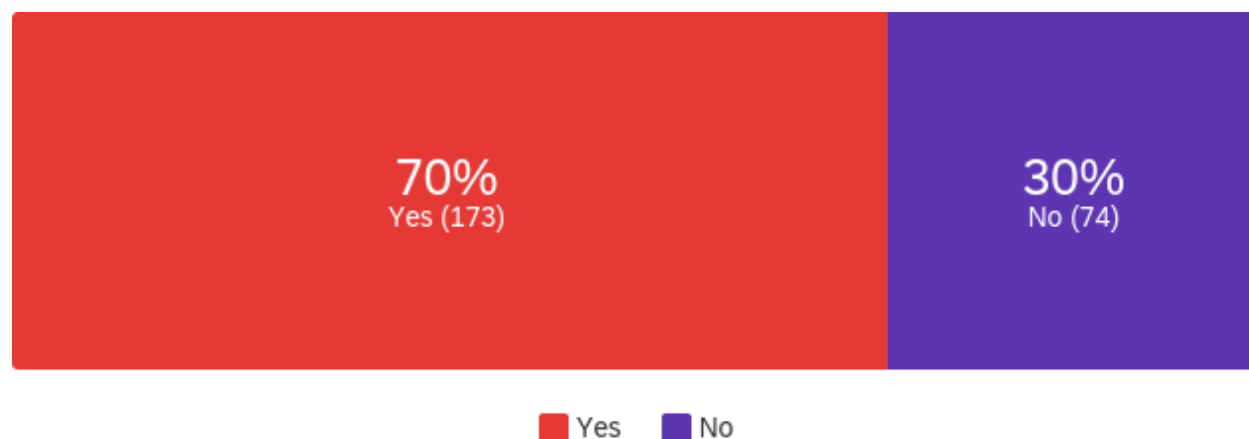
Only 25% ( $n = 59$ ) of respondents ( $n = 233$ ) had no concern for their physical health and 18% ( $n = 41$ ) of respondents ( $n = 233$ ) had no concern for their mental health. 72% ( $n = 168$ ) of respondents had at least some concern for their physical health and 81% ( $n = 189$ ) of respondents had at least some concern for their mental health.

When asked whether the participants experienced “long term” COVID-19 symptoms ( $n = 247$ ), 76% of them ( $n = 187$ ) did not. However, Figure 10 demonstrates that the majority of

participants' mental health was impacted. Of the 247 total responses, 70% ( $n = 173$ ) of participants stated their mental health was impacted as a result of the pandemic.

**Figure 10**

*Impact on Mental Health as a Result of the Pandemic*



Similarly, 73% ( $n = 169$ ) of respondents ( $n = 233$ ) had at least some concern regarding feeling isolated as a result of the pandemic. The COVID-19 pandemic impacted the participants' mental health more than it did their physical health.

### ***Thematic Analysis***

Health as a thematic category resulted in 73 coded passages for one theme: mental health. The mental health theme describes the impact towards the participants emotional, psychological and social well-being. Participants also described the utilization of mental health services.

**Mental Health.** Participants were asked to describe their biggest barrier (if any) to being successful in [their] courses during the COVID-19 pandemic. Several participants responded with anecdotes related to the decline of their mental health. One second year student and English Language Learner described:

My mental health really declined during the pandemic. I had to move back home and that was a hard transition for me. [...] My friends were out of state and I felt really lonely. That made it hard to feel motivated to succeed at school. When one of my parents lost their job, I was also very affected by that.

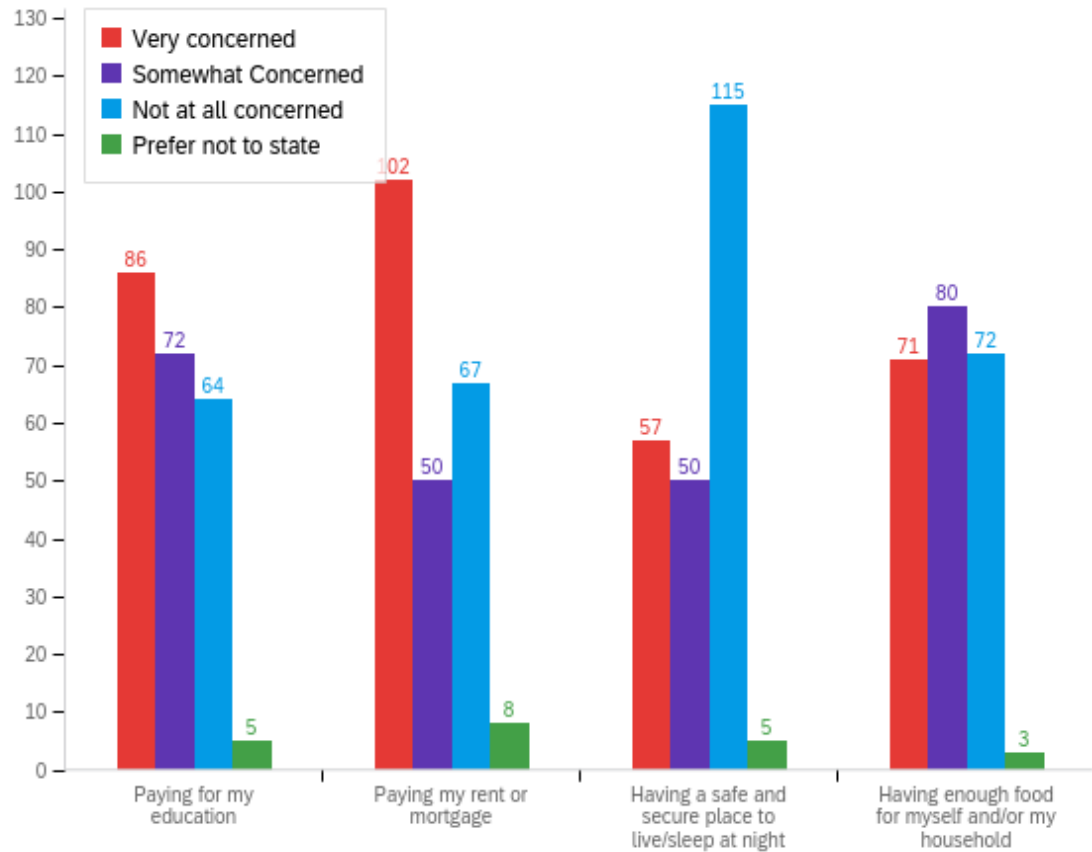
Anxiety, “Covid has been a very scary time which has caused a lot of pain” and instances of depression “I was depressed for a couple of months” were characteristics used by many participants to describe the changes and transitions during the pandemic. Participants also described stress, “I thought I would not pass the course due to severe stress” and a lack of motivation:

The tallest hurdle to jump for me during the pandemic was my mental health. Much of my motivation went down the drain when everything shut down and milestones in my life were impacted greatly because of covid. I developed depression and creating motivation has become and still is a tough situation for me. Not being able to have regular every day interactions with my peers did not help.

Positively, when participants were asked to describe an experience when they felt supported by SCA, several participants referenced the support from on-campus health services, “I felt the most support through the counseling services at the health center.” Many participants utilized or were referred to mental health services on campus which provided “resources to cope” and resources to “adapt to new college life.”

### ***Basic Needs***

Participants were asked to indicate their level of concern regarding factors related to their basic needs. While most participants had no concerns regarding having a place to live/sleep at night ( $n = 227$ ), the majority of participants indicated having at least some concern regarding paying for their education ( $n = 227$ ), paying their rent or mortgage ( $n = 227$ ), and having enough food for themselves or their household ( $n = 226$ ). Figure 11 demonstrates the participants level of concern across the above-mentioned factors related to their basic needs.

**Figure 11***Level of Concern Regarding Basic Needs*

The majority of participants demonstrated financial concern. 70% ( $n = 158$ ) of respondents ( $n = 227$ ) had at least some concern regarding paying for their education and 67% ( $n = 152$ ) of participants ( $n = 227$ ) had at least some concern regarding paying their rent or mortgage. Less than half of participants ( $n = 107$ ) had some concern regarding a safe and secure place to sleep, but 66% ( $n = 151$ ) of participants ( $n = 227$ ) had at least some concern regarding having enough food for themselves and/or their household. The open-ended survey questions to be discussed later in this chapter provide more context and insight regarding institutional support, academic impact, health, and basic necessities during the COVID-19 pandemic.

### *Thematic Analysis*

Basic Needs as a thematic category resulted in 45 coded passages for two themes. During the pandemic, several participants were experiencing insecurities related to food and secure housing. Table 4 displays the frequency of each theme with their corresponding code counts.

**Table 4**

#### *Basic Needs Themes*

<b>Basic Needs</b>	<b>45</b>
Food Insecurity	32
Insecure Housing	13

**Food Insecurity.** 32 coded responses were related to food insecurity and expressing gratitude for the SCA’s food bank. One participant stated, “I am thankful for the [SCA food bank] food distribution. The food distribution helped me fuel my energy to pass all my grades” and another similarly described having “adequate food to support my health” due to SCA’s food bank. Some participants experienced both housing and food insecurities, “My biggest barrier was just living. I didn’t know if I’d have the money to eat or pay rent.”

**Insecure Housing.** As many participants living situation changed such as needing to “move out of [their] apartment during the pandemic” or “because rent was getting higher I wasn’t getting paid enough” focusing on school became more difficult:

Finding a roof over my head was a challenge. I slept in my car, so the prospect of going to college was out of the picture. I focused solely on working more just to feed myself, pay my phone bill, car insurance, and gym membership to have a place to shower. I also had to deal with some emotional baggage having left my abusive home in Maryland, so I attended group therapy at Laura's House. I didn't have health insurance at the time either. And when I finally enrolled in classes at [SCA] I did not have reliable Internet at the place I used to live at. I went to work extremely early in the morning to use the Wi-Fi.

While the number of participants that described food or housing insecurity were low, experiencing the lack of these basic needs created concern and a significant barrier.

## Technology

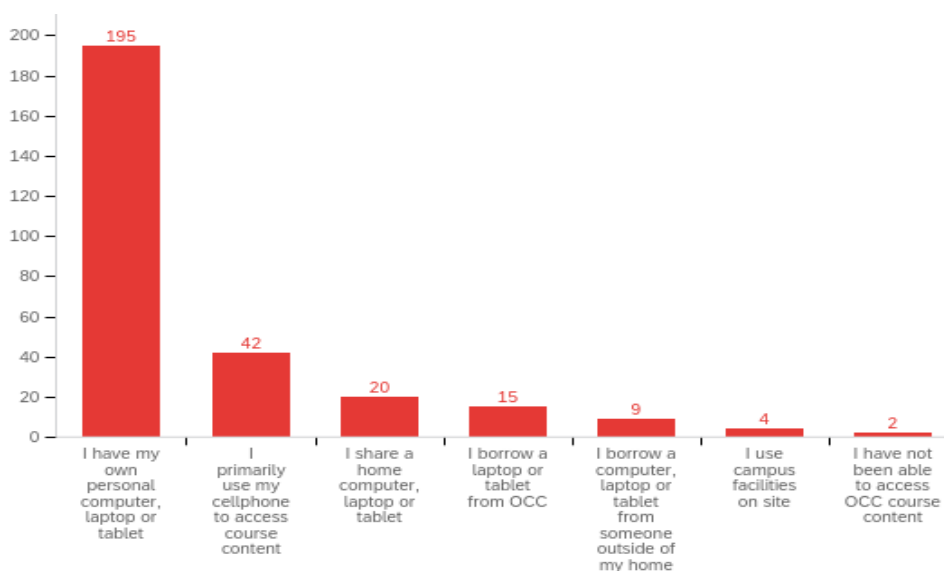
This third section of the online survey was comprised of two likert-scale questions, two multiple choice questions and two open-ended questions. The four close-ended questions in this section focused on the following subcategories: Wifi Access, Hardware and Software, and Technological skills during the SCA campus closure as a result of the COVID-19 pandemic. The quantitative findings will be discussed according to each subcategory below.

### *Hardware, Software, and Wifi Access*

Participants were asked to identify how they primarily access online course content and to check all that apply ( $n = 287$ ). Figure 12 demonstrates the type of hardware participants used to access course content. The majority of students at 68% ( $n = 195$ ) indicated having their own personal computer, laptop or tablet.

**Figure 12**

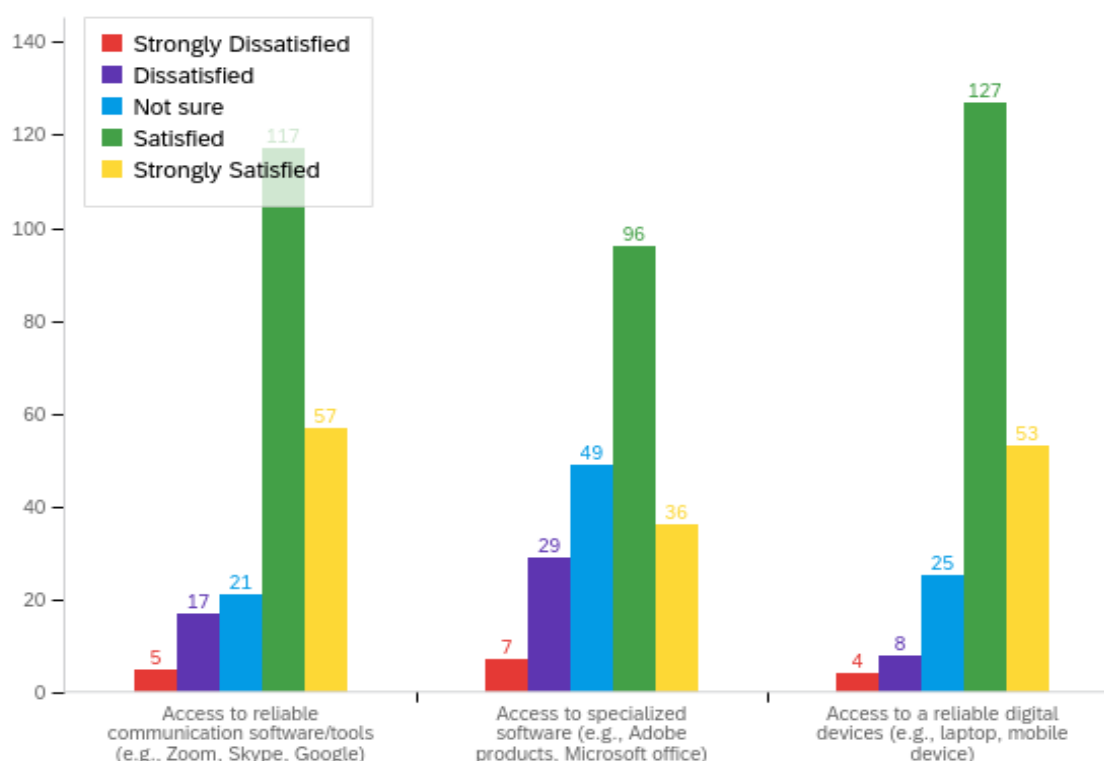
#### *Devices Used to Access Course Content*



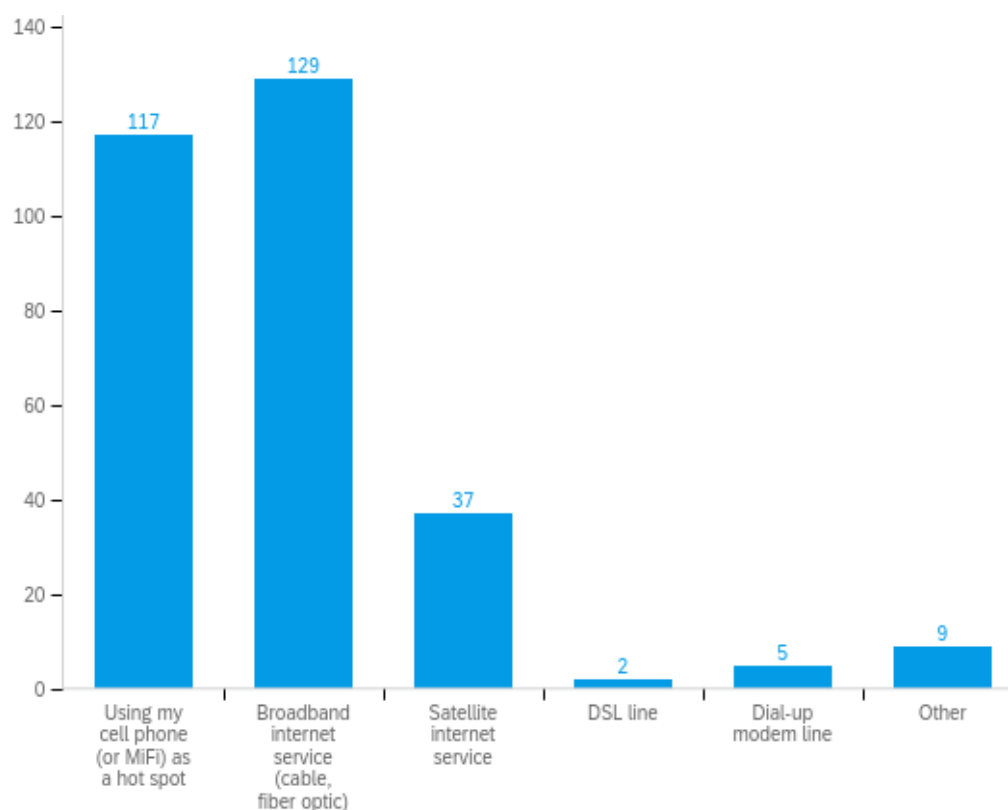
Along the same lines, when participants were asked to indicate their level of satisfaction in regards to access to reliable digital devices ( $n = 217$ ), 59% ( $n = 127$ ) were satisfied and 24% ( $n = 53$ ) were strongly satisfied. Access to reliable communication software/tools ( $n = 217$ ) and specialized software ( $n = 217$ ) yielded similar results in regards to satisfaction. Figure 13 demonstrates the levels of satisfaction participants had with access to reliable hardware and software.

**Figure 13**

*Level of Satisfaction with Reliable Hardware and Software*



Participants were asked to indicate how they primarily access the internet at home. Due to the ability to select multiple options, the choice count was 299. The top selected wifi option at 43% was broadband internet service ( $n = 129$ ) but was followed closely by using a cell phone hotspot ( $n = 117$ ) at 39%. Figure 14 displays the array of wifi options selected by the participants.

**Figure 14***How Wifi is Accessed at Home*

When asked whether the participants were satisfied with their access to reliable internet/service ( $n = 217$ ), 24% ( $n = 52$ ) were strongly satisfied and 41% ( $n = 90$ ) were satisfied. This indicates that the majority of participants were satisfied with their wifi at home with only 18% ( $n = 39$ ) having some level of dissatisfaction.

***Thematic Analysis***

Hardware, Software, and Wifi as a thematic category resulted in 58 coded passages for three themes. Table 5 displays the frequency of each theme with their corresponding code counts. Direct quotes are provided for each of the three themes.

**Table 5***Hardware, Software, and Wifi Access Themes*

<b>Hardware, Software, and Wifi</b>	<b>58</b>
Computers and Facilities on Campus	20
Hardware and Software Incompatibility	16
Insufficient WiFi	22

**Computers and Facilities on Campus.** 20 participants indicated reliance upon campus computers and/or usage of campus facilities for academic study spaces. When asked whether their ability to be successful in their courses has changed now that campus is open, several participants attributed a positive impact to the opening of campus facilities, “The library is open now which is a big deal for me. I was able to start studying peacefully.” A first year student describes, “The library is one of my favorites because it keep me very focused and do my homework whenever I can't do them at home.” The library also provides computer access to students, “I started going to the library spring 2022 [...]. I really appreciated the large computer screens and printers available in there.”

**Hardware and Software Incompatibility.** 16 participants referred to incompatible devices when describing barriers to their academic success and likewise feeling supported when they were loaned computers, “I don’t have enough equipment to learn,” “Chromebooks did the bare minimum in helping me with my academic needs. However, I was lucky enough to switch to an HP laptop from the school.” When participants were asked to consider the technological factors they were dissatisfied with during the COVID-19 campus closure and what has since improved once campus re-opened, several responses referred to unreliable computers, “I like the

fact I don't have to try and figure how to use my laptop or miss class because my laptop isn't working or my internet isn't working.”

For some participants, financial limitations created issues of access to basic software, “The Word and PowerPoint I needed were too expensive to install on my computer,” “I have more access to software now. However, during the pandemic quarantine, I was unable to purchase those, so my work quality was impacted greatly.”

**Insufficient Wifi.** 22 passages described experiences with wifi, but specifically its insufficiency. The majority of responses describing “unstable wifi,” “constant internet issues,” “wifi going out,” etc., came from the question that asked participants to describe what has since improved once campus re-opened. When asked to describe what technological factors have improved since the campus re-opened, one participant explains, “The access to internet! The amount of times my wifi has gone out while on a Zoom Call, or when the meeting buffers and I miss a whole section of lecture. [SCA] having on campus wifi has truly helped!” Some participants described unstable wifi as their biggest barrier for academic success:

My biggest barriers to being successful in my courses would be having a stable internet. Before the pandemic I did not have Wifi in my household and because of online classes I had to purchase a plan in order for me to be able to attend my classes and turn in my work on time. This was an extra fee that at the time we were struggling to even pay rent.

Another student described, “my internet was spotty time by time, making it hard to take tests and do assignments.”

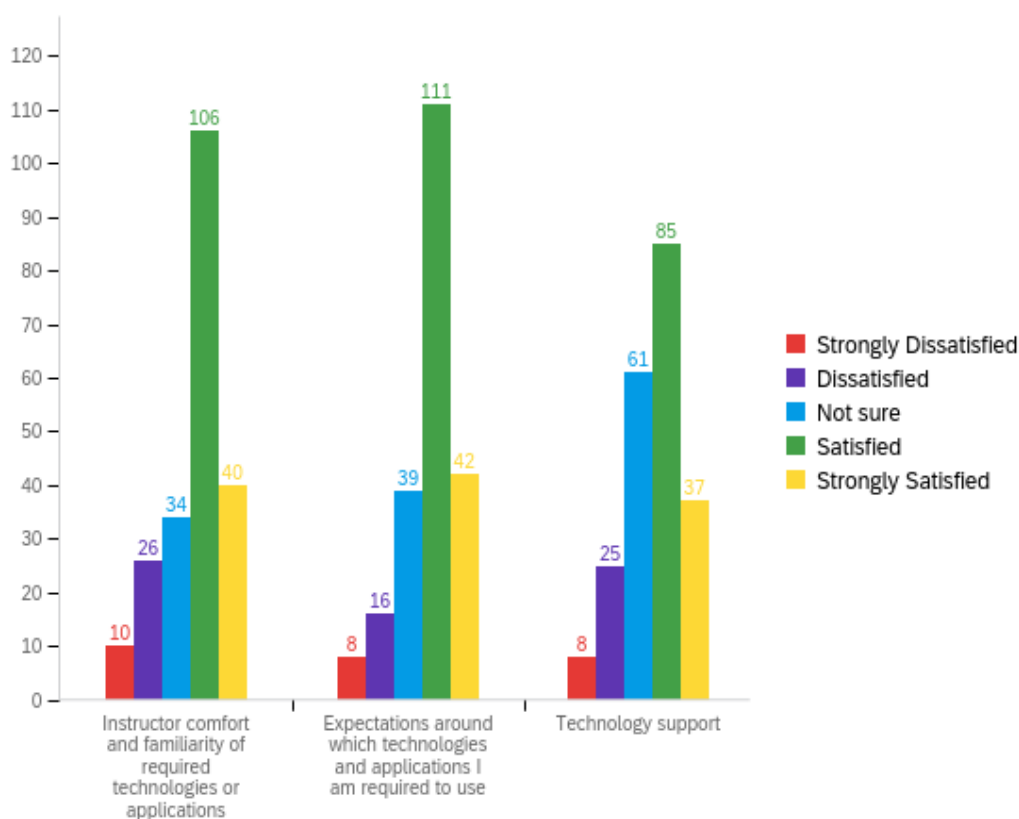
### ***Digital Skills***

Participants were asked to assess their satisfaction with instructor comfort and familiarity of required technologies or applications ( $n = 216$ ), expectations around which technologies and applications they were required to use ( $n = 216$ ) and technology support ( $n = 216$ ). In all three

factors, the majority of participants indicated some level of satisfaction. Figure 15 demonstrates the levels of satisfaction participants had with the above-mentioned technological factors.

**Figure 15**

*Level of Satisfaction with Instructors Digital Skills, Technological Expectations and Support*



76% ( $n = 146$ ) of participants indicated some level of satisfaction with instructor comfort and familiarity of required technologies or applications, 71% ( $n = 153$ ) of participants indicated some level of satisfaction with expectations towards their required use of technology and 56% ( $n = 122$ ) of participants indicated some level of satisfaction with technology support. Therefore, in regards to technology, the quantitative data suggests that the majority of participants were satisfied with their wifi access, the reliability of their hardware devices and access to software, and the technological expectations required of them, the technological skills of their instructors

and the technological support. The open-ended survey questions to be discussed later in this chapter provide more context and insight regarding technology during the COVID-19 pandemic.

### ***Thematic Analysis***

Digital Skills as a thematic category resulted in 51 coded passages for two themes. Positively, grit and growth mindset describe characteristics participants displayed that helped them navigate challenges during the pandemic. Negatively, lack of motivation and time management describes academic skill deficiencies. Table 6 displays the frequency of each theme with their corresponding code counts.

**Table 6**

#### *Digital Skills Themes*

<b>Digital/Technology Skills</b>	<b>51</b>
Lack of Motivation and Time Management	31
Grit and Growth Mindset	20

**Lack of Motivation and Time Management.** 31 coded passages described participants' lack of motivation and struggle with time management. When participants were asked to describe their biggest barriers (if any) to being successful in their courses during the COVID-19 pandemic, several participants expressed sentiments such as "I cannot arrange the time properly" and "the biggest barrier I had was having the willpower to finish assignments."

Participants were also asked to tell a story of how the COVID-19 campus closure impacted their education. One first-year student used the phrase "COVID hangover" to describe a type of disorientation--becoming "easily distracted," lacking focus, and motivation. A third-year student shared a similar sentiment describing that they weren't "motivated like before. I was struggling to keep up with homework and classes. It felt very disoriented. Routine was thrown

off.” As another participant described, with the campus closure, routines were disrupted which affected time management:

The biggest barrier during this pandemic for me is having to improve my time management. This wouldn't be an issue if I was in person as I would already have a schedule to follow; however, when you're at home all day, you tend to lose track of time a lot and this may result in the forgetting to do assignments.

**Grit and Growth Mindset.** 20 coded passages revealed participants making concerted efforts to persevere through the challenges faced as a result of the pandemic. Several participants indicated overcoming, “By trying I overcome all difficulty,” “I had to mentally overcome the overwhelming feeling of failure I'd feel during that time.” One third-year student described the steps they took to be successful in the new, unknown environment:

I have never ever attended any online course before the pandemic. When all courses changed to online, I had a difficult time [...]. I had to change that because I want to be successful in classes. I changed my study method: more active, asked more questions, and read a lecture at least 3 times before class time. The priority thing was contacting Professors during their office hours. Besides that, I set up a group with my friends in the same class and review the lecture every week. By doing these things, the online classes were no longer stressful for me.

## **Learning Online**

The final section of the survey contained six close-ended questions consisting of multiple choice, true or false, and likert scale and two open-ended questions. The data collected in this section focused on the following three subcategories: Technology comfort and preference, Communication and connection, and Barriers to learning during the expeditious transitions amidst the COVID-19 pandemic at SCA. The quantitative and thematic findings will be discussed according to each subcategory below.

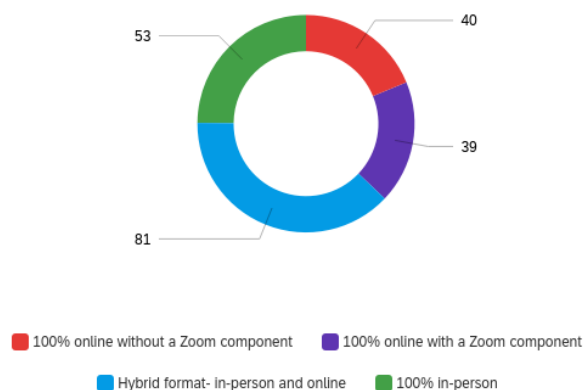
### ***Technology Comfort and Preference***

Participants were asked to identify their top choice learning format and their top choice counseling format as a representation for student support services. While the data suggests a

slight difference in preference in regards to how students learn and how they prefer to receive services, for both learning and receiving counseling support, participants preferred to do so online. Figure 16 demonstrates top preferred learning modality for learning and Figure 17 for receiving counseling services.

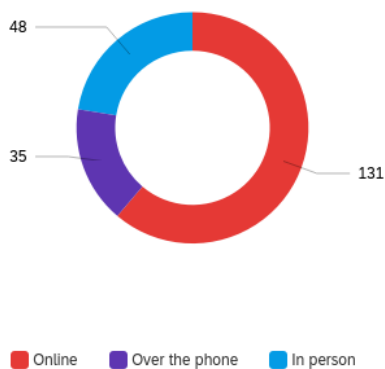
**Figure 16**

*Top Preferred Learning Format*



**Figure 17**

*Top Preferred Counseling Format*



When it came to preferred learning modality ( $n = 213$ ), the majority of participants preferred some sort of online modality and only 25% ( $n = 53$ ) preferred a 100% in-person learning format. 38% ( $n = 81$ ) preferred a hybrid format--incorporating both in-person and

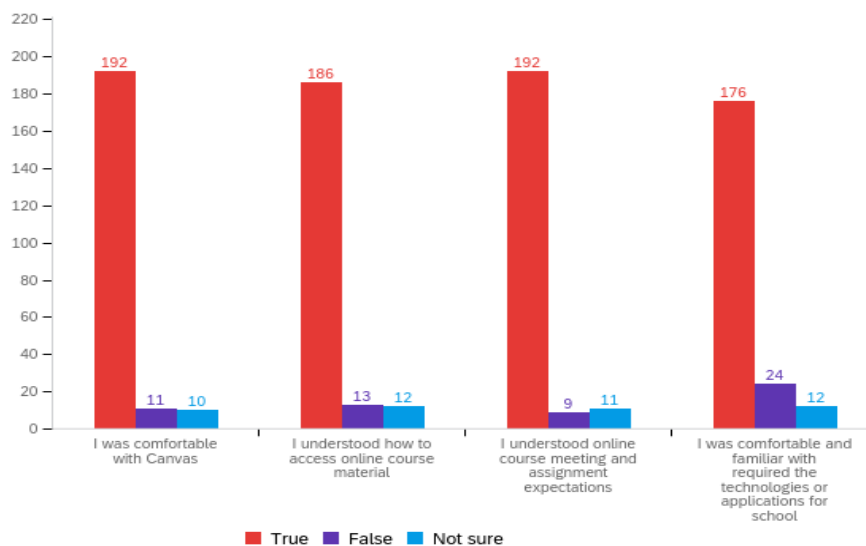
online components, and 37% ( $n = 79$ ) preferred 100% online with or without a Zoom component. At SCA, hybrid courses contain both online and in-person requirements within the same course.

For counseling services ( $n = 214$ ), at 61% ( $n = 131$ ) the majority of students preferred online counseling appointments. 22% ( $n = 48$ ) preferred academic counseling appointments in-person and 16% ( $n = 35$ ) preferred over the phone. For both learning and receiving online counseling services, only one-fourth of the participants or lower preferred to receive them online.

Participants were also asked to indicate their comfortability and understanding of Canvas LMS ( $n = 213$ ), how to access online course material ( $n = 211$ ), online course meeting and assignment expectations ( $n = 212$ ), and familiarity with the required technologies and applications for school ( $n = 212$ ). In all four categories, the majority of participants indicated that they understood or were comfortable with technology. Figure 18 places each response side by side for comparison.

**Figure 18**

*Comfortability with and Understanding of Technology*



90% ( $n = 192$ ) of participants were comfortable with Canvas LMS and 83% ( $n = 176$ ) were comfortable and familiar with the required technologies for school. Similarly, 91% indicated understanding of online course meetings and assignments ( $n = 192$ ) and 88% ( $n = 186$ ) understood how to access the course material. While the quantitative data suggest comfortability and understanding, many students described difficulty navigating the online learning process.

### ***Thematic Analysis***

Technology comfort and preference as a thematic category resulted in 170 coded passages for two themes. The two themes were organized according to the participants' learning modality preference and comfort. Table 7 displays the frequency of each theme with their corresponding code counts. Direct quotes are provided for each of the two themes.

**Table 7**

#### *Technology Comfort and Preference Themes*

<b>Technology Comfort and Preference</b>	<b>170</b>
In-person modality preferred	107
Online Modality preferred	63

**In-person modality preferred.** 107 coded passages revealed the preference for in-person courses and learning. Participants were asked “Now that campus is open, has your ability to be successful in your courses changed?” and the majority of students indicated their preference for in-person learning environments. Reasons for preferring in-person instruction included being able to focus better in-person, “I wasn’t able to focus as much as I used to back in high school, when classes were in person rather than online,” preferring “hands on” experiences, less distractions “Online is harder to learn because being stuck with so many people at home” and better communication with instructors, “Communication, although professors responded quickly,

it's not the same as getting answers in person and students seemed less interactive compared to in person.” Other participants vaguely described an energy that was missing online “some courses really need to be in person so that students can "feel" the material or the vibe such as speaking classes or anatomy.”

**Online modality preferred.** While the majority of participants indicated their preference for in-person learning environments, 63 coded passages revealed strong preferences for online learning options. Several participants were grateful for the opportunity to learn online, “The option to still do online schooling has been very helpful to me as I now have adjusted my life to being able to do things online that were not really an option pre covid.”

Similarly, students described feeling “supported by SCA seeing how many online opportunities there were available” while others feared being required to return in person, “I have an extreme amount of anxiety about attending in person classes.” Even with an increase of in-person course options, most participants indicated the desire for online options, “I was able to stay virtual even with the transition to more in person classes” ; “I am a mom with a son who is 10 that is fighting cancer and I would love to stay virtual to keep myself and my son safe and still pursue my schooling.”

Many participants “found it convenient to study online” and included receiving online services, “I like how the EOPS office went online which made it more convenient and reassuring during the time.” There were several responses indicating fear that online course options would no longer be available post-COVID, “There are not as many classes offered online anymore,” “[my biggest barrier] is having to go back in person [...] I moved during the pandemic far away from school.”

### ***Communication and Connection***

Participants were given four statements related to SCA's ability to communicate and convey important messaging to students and whether the participants felt connected with their peers during the pandemic. 89% ( $n = 189$ ) of total responses ( $n = 212$ ) indicated that the participants understood SCA's COVID-19 related policies and 68% ( $n = 145$ ) of participants ( $n = 212$ ) were aware of campus departments available to assist them. Only 40% ( $n = 85$ ) of participants ( $n = 212$ ) indicated that they felt connected to their peers; many participants voiced their concerns regarding connection in the open-ended questions to be discussed below. While 79% ( $n = 167$ ) of participants ( $n = 212$ ) indicated being able to communicate with professors when they needed to, many students elaborated on the contrary in the open-ended questions.

### ***Thematic Analysis***

Communication and connection as a thematic category resulted in 114 coded passages for three themes. Participants described both positive and negative examples of communication and connection throughout the transitions during the pandemic. Table 8 displays the frequency of each theme with their corresponding code counts.

**Table 8**

#### ***Communication and Connection Themes***

<b>Communication and Connection</b>	<b>114</b>
Communication	48
Isolation and Lack of Connection	39
Connection and Engagement	27

**Communication.** 48 coded passages indicated that ineffective communication during the virtual transition was common amongst the participants' experience. Several participants

indicated having trouble communicating with their professors during the campus closure, “I also have trouble contacting any of my professors. When I email that I have questions for them, they reply to me within 1-2 weeks or does not reply at all,” “I had a trouble time getting a reply from my professors for questions or any concerns,” “professors don’t respond via email like they say they do.” When asked whether factors participants were dissatisfied with improved once campus has re-opened, several indicated “getting a hold of professors has been a lot easier since the campus opened up” and “It’s much easier to get in touch with professors in person.” There was a strong preference for “face-to-face communication” with some indicating it was “hard to keep up with all of the messages from professors.”

**Isolation and Lack of Connection.** 39 coded passages revealed the isolation and lack of connection participants experienced during the COVID-19 campus closure. For several participants, one of the biggest barriers to being successful during the pandemic was “when I felt disconnected,” “struggling to find social connections” and feelings of “disconnection with school.” EOPS and clubs on campus were often referred as helping to facilitate connections amongst peers and connections to the campus, “EOPS had many events that made me feel like i wasn’t alone,” “the school held events online which allowed us to connect with one another. This makes my time at SCA less lonely and more bearable.” Participants felt isolated from their peers as well as their professors, “I now get the chance to actually be in class and see my professor lecturing instead of staring straight at the computer. It makes me feel better than staying at home, alone with the computer.”

**Connection and Engagement.** 27 coded passages related specifically to feelings of connection and engagement during the pandemic. The majority of coded passages revealed increased connection and engagement in in-person environments, “Yes I feel much more

connected and engaged in person” , “I feel much more engaged in courses than staring at a screen most of the day.” Similarly, the increased connection enabled some participants to “to make friends with peers easier and that resulted in study groups” affected participants’ motivation, “I feel more motivated now that I am connected to my peers. Friends help me focus better on the courses that I took.”

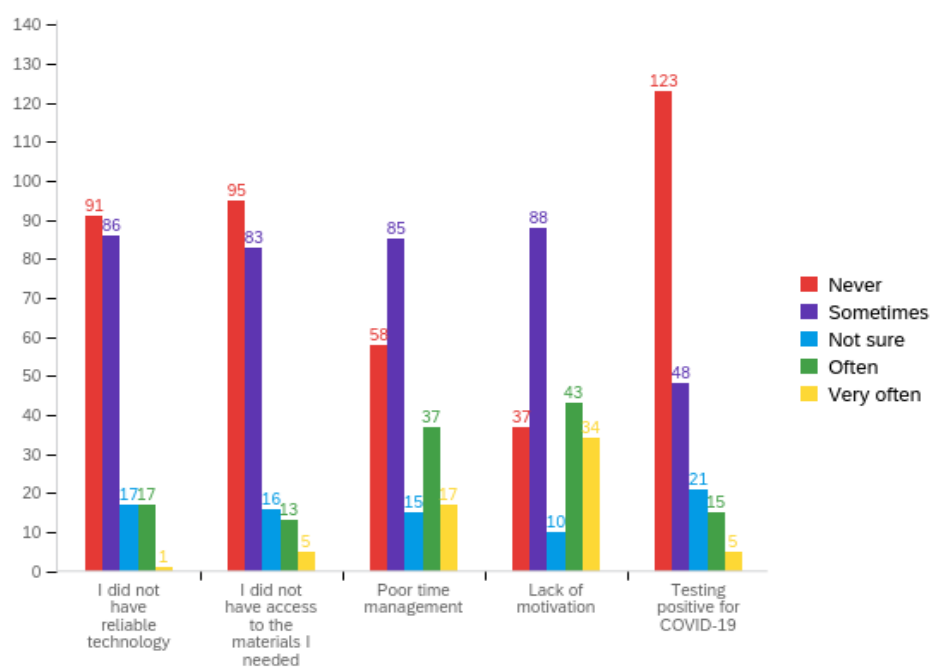
### ***Barriers Outside of the Classroom***

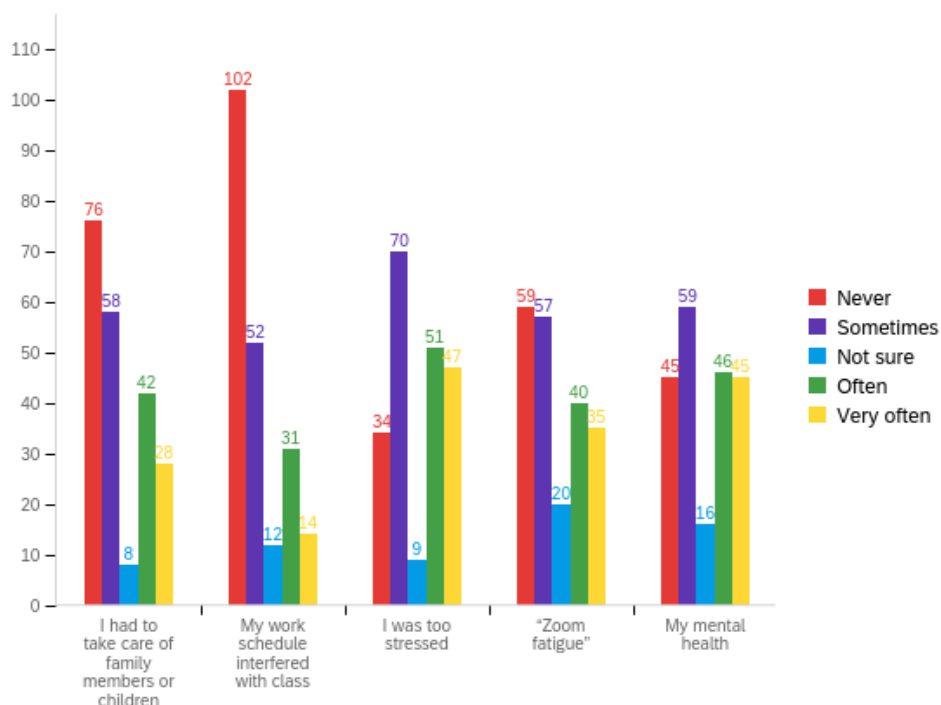
Participants were asked to indicate how often they missed classes or coursework during the pandemic as a result of a variety of reasons; some related to digital skills and technology and others related to health and responsibilities outside of school. “Stress” and “Mental Health” were two of the highest factors impacting the ability and decision to miss courses or coursework.

Figures 19 and 20 demonstrate the results when participants were asked, “During the COVID-19 campus closure, how often did you miss classes or coursework for the following reasons?”

**Figure 19**

#### ***Reasons for Missing Classes or Coursework Part 1***



**Figure 20***Reasons for Missing Classes or Coursework Part 2*

58% of participants ( $n = 123$ ) indicated that testing positive for COVID-19 ( $n = 212$ ) was never a reason for missing class or coursework during the COVID-19 campus closure. Similarly, over 43% of participants ( $n = 91$ ) indicated that not having reliable technology ( $n = 212$ ) and 45% ( $n = 95$ ) indicated that not having access to the materials they needed ( $n = 212$ ) were never reasons for missing class or coursework. However, 66% of participants indicated that “poor time management” ( $n = 139$ ) and 78% ( $n = 165$ ) indicated that “lack of motivation” had at least some influence on participants’ reasoning for missing class or coursework. Reasons related to health and responsibilities outside of school had more fluctuating results.

For 48% of participants ( $n = 102$ ), work schedule never interfered with class. 36% of participants ( $n = 76$ ) never missed coursework or class due to taking care of family members or children. For reasons related to mental health, the results varied and had the highest number of

“very often” responses. 22% of participants indicated that being too stressed ( $n = 28$ ), 17% ( $n = 35$ ) indicated “Zoom Fatigue” and 21% indicated that their “mental health” were very often the reason for missing class and/or coursework during the COVID-19 campus shut down.

### ***Thematic Analysis***

Barriers outside of the classroom as a thematic category resulted in 74 coded passages for one theme: Financial need and assistance. While several barriers outside of the classroom are described throughout the survey, participants markedly indicated financial need as a result of the pandemic. Positively, participants also described gratitude towards financial support.

**Financial Need and Assistance.** 74 coded passages describe the financial need and financial assistance received at SCA during the COVID-19 pandemic. Loss of income or employment was a common experience amongst the participants resulting in financial need, “we experienced a hard time due to my dad getting laid off,” “I had to search for another job since losing my original job.” For one third year student, the financial strain impacted their mental health, “I lost my job, my work closed permanently, and I worked in food service so it was incredibly hard to find another job and I was overly stressed about money. “

EOPS and other support programs on campus provided financial relief for needs beyond academic, “Eops has helped with diapers when I was jobless,” “I could pay bills by [SCA's] financial supports,” “I got kicked out of the house at 17 years old without a job or stream of income and EOPS got me back on my feet.” Additionally, several participants expressed gratitude towards the Higher Education Emergency Relief Fund II (HEERF II) for providing the needed financial relief, “Having emergency financial aid fund was a huge help for my family,” “[SCA] also was able to grant me an emergency grant when I needed it the most.”

## **Summary of Key Findings**

The sample group demographic descriptions, quantitative findings, and thematic analysis of the open-ended survey items resulted in a display of rich experiences contributing to the understanding of the experiences of EOPS students during the expeditious virtual transition as a result of the COVID-19 pandemic. A diverse sample of 249 past and present EOPS students who qualified and received EOPS services any time between the Spring 2020 term until Spring 2022 responded to the request to share their experiences by participating in the electronic survey. The rich responses from the survey inspired several key findings.

While the responses varied amongst the participants, the virtual transition and subsequently the campus closure as a result of COVID-19 resulted in several consequences, negatively impacting participant experiences. COVID-19 had a considerable impact on participants' mental health including but not limited to anxiety, depression, feelings of isolation, and ample stress. Participants exhibited significant financial need along with food insecurities with some experiencing unstable living situations.

Academically, several students lacked the technology hardware and wifi to effectively use software and/or navigate digital systems. Many participants deemed their living situations as an unsuitable for studying, describing distractions that resulted in difficulty to focus. For many participants, communication and connection with peers and professors was ineffective. Classroom engagement online was low. As a result, many participants exhibited low motivation and time management skills subsequently dropping courses and taking fewer units.

However, the expeditious transition also resulted in positive experiences. The majority of EOPS students felt supported by SCA as a result of the holistic comprehensive care of the EOPS program, professors, mental health services, and other student support services on the SCA

campus. While the virtual transition was tumultuous for many, several participants reported that the ability to take online courses allowed the flexibility necessary to take care of responsibilities outside of the classroom. Financial assistance was provided by financial aid and the EOPS program to provide relief for daily necessities.

Several participants described getting used to online courses and now preferring them. While the majority of students described in-person modalities as a more effective way to learn, their close-ended responses indicated a preference for online learning options. Fears still exist amongst many participants, especially as campus is re-opening and online choices are dwindling, but the enforcement of COVID-19 safety precautions on campus have helped to make participants feel safe and supported.

## **Chapter 5: Study Conclusions and Recommendations**

This chapter discusses the findings regarding the experiences of EOPS students during the expeditious transition from in-person to fully remote instruction amidst the COVID-19 pandemic at SCA. This section will present a summary of the study issue and its significance followed by a summary of digital equity and inclusion as the underlying theoretical framework of this study. The methods used to arrive at the key findings and conclusions will be discussed in addition to the implications for practice, study limitations, internal study validity, and recommendations for future research.

### **Study Issue and Significance**

The forced expeditious virtual transition online induced by the COVID-19 pandemic caused a massive disruption to education (Ismaili, 2021; Katz et al., 2021; Prokes & Housel, 2021). While historically, institutions of higher education have experienced many shifts in education, rapid adjustments, societal shifts, etc., the COVID-19 pandemic brought in unique challenges in both immediacy and extent (Prokes & Housel, 2021; Rajab et al., 2020), especially for at-risk populations. COVID-19 exacerbated the inequities that existed in education for years.

The expeditious pace of the transition from in-person to 100% online learning saw historic commitment from students and faculty to adopt online platforms and LMS regardless of preparation, comfort, and access to resources (Ismaili, 2021). In addition to the typical stressors that college students experience such as transitions of maturity, first year adjustments to college, post-graduation plans (Ong & Cheong, 2009; Ross et. al., 1999); the devastating pandemic and the subsequent expeditious move to online learning increased rates of burnout, with students exhibiting higher levels of exhaustion and cynicism (Gonzalez-Ramirez et al., 2021). COVID-19 severely impacted students' mental health (U.S. Department of Education's Office for Civil

Rights, 2021). Digital skills and engagement were impacted not just by a lack of technological access during COVID-19, but also by high levels of stress and mental illness.

Students who at one time may have preferred virtual learning environments were deprived of choice and thus preparations for online learning--a brooding ground for educational inequities amongst vulnerable populations. Technology presents both possibilities and obstacles for higher education institutions (Ismaili, 2021). COVID-19 exacerbated existing digital inequalities for at-risk, disproportionately impacted students on all three levels of the digital divide (California Community College Chancellor's Office, 2021; Gonzalez-Ramirez, et al., 2021; Real, 2021; U.S. Department of Education's Office for Civil Rights, 2021). The EOPS students at SCA are one of many programs experiencing the gravity of their students' situations. This embedded mixed methods study endeavors to identify the described barriers EOPS students faced from the perspective of students during the tumultuous transition of the pandemic. EOPS students represent at-risk student populations, disproportionately impacted by the digital divide due to their low-income status and academic barriers.

### **Theoretical Framework**

This study utilizes digital equity and digital inclusion theoretical frameworks in order to understand the barriers and digital inequities described by EOPS students during the COVID-19 pandemic. Digital equity is the condition in which all individuals without exception have the information and communication technologies necessary for full participation and engagement (Mimura et al., 2021; National Digital Inclusion Alliance, 2021). Digital inclusion includes the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to, and use of, information and communication technologies

(McLaughlin & Resta, 2020). Digital equity is the goal and digital inclusion is the means in which that goal is accomplished.

As technology advances and integrates with education, it can both enhance inclusive instructional practices (Edyburn, 2011; Thomas & Hong, 2013), as well as exacerbate issues of equity (Chandra et al., 2020; Day et al., 2021; Gorski, 2009; Ismaili, 2021; Moldavan et al., 2021). The definition of the digital divide has been expanded to include two additional levels of digital inequality, with access to a device and connectivity only representing the first level of the digital divide (Gonzales, 2016; Katz et al., 2021; McLaughlin & Resta, 2020). The second-level of the digital divide refers to discrepancies in digital skills and engagement (Gonzales, 2016; Katz et al., 2021; McLaughlin & Resta, 2020; Rideout et al., 2016). The third level of the divide is related to undergraduates' online learning experiences including disparities in the benefits, use and application of technology and the internet (Katz et al., 2021; McLaughlin & Resta, 2020). All three levels of the digital divide disproportionately impact people of color, indigenous peoples, low-income households, people with disabilities, people in rural areas and older adults (Moldavan et al., 2021; National Digital Inclusion Alliance, 2021; Stern & Adams, 2010).

Equity is not equality or equal treatment but equal education results; that all students without exception are guaranteed parity in student educational outcomes (Linton, 2011; USC Center for Urban Education, 2018). Bensimon (2005) argues that achievement gaps will persist unless colleges accept responsibility for achieving equity and for creating educational environments that foster the success of all students, especially at-risk student populations. Equity minded practice frames inequity as a problem of practice rather than a problem with students therefore it is the responsibility of the institutions, faculty, and staff to create equity for all students (Malcom-Piqueux & Bensimon, 2017).

## Methods

A mixed methods embedded (concurrent) design was selected to understand the experiences of EOPS students during the COVID-19 virtual transition. Students who qualified for the EOPS program and had received services for any duration of time between the Spring 2020 semester until Spring 2022 at SCA were invited to participate in the study. Former or current EOPS students received an announcement through the Canvas LMS EOPS community center page and/or an email with a link to participate in the electronic survey. The survey link was sent out during finals week at SCA, two days before a holiday weekend and graduation, and was kept open for two weeks. Of the 1200 EOPS students who received an email with a link to the electronic survey, there were 249 total responses, 21% of the targeted population.

The online survey was created and designed using the Qualtrics web-based survey administration tool organized into four general sections that correspond to the literature and research questions: Demographics, COVID-19, Technology and Learning Online. The survey consisted of likert scale, close-ended limited response questions and open-ended qualitative questions. Two content experts from the SCA EOPS program were provided with the research questions and survey items and suggested additions and/or changes to the structure and organization of items. The content experts are experienced community college educators who are familiar with the challenges faced by EOPS students. In order to ensure survey reliability, the final survey underwent an electronic pilot process; it was presented to 15 college-aged students at a different college with similar demographics as the target population.

The captured data was analyzed separately and distinctly and then merged in order to interpret and compare the results. The quantitative data was analyzed within the Qualtrics platform and HyperRESEARCH was the software used for the thematic analysis of the open-

ended responses. The quantitative data was analyzed and summarized primarily through descriptive statistics. Frequency distributions were used for the demographic items. The qualitative data was downloaded from Qualtrics into text files, then uploaded into HyperRESEARCH. An initial code book was developed through an emergent thematic process. An iterative process was then used to code and recode the responses. The quantitative and qualitative findings were analyzed separately. The findings from each data set were compared in order to arrive at the study conclusions. The triangulation of the two forms of data developed a comprehensive and rich understanding of the study issue.

### **Study Conclusions**

Following a comprehensive analysis of the quantitative and qualitative data, four conclusions for this study were determined. The four conclusions are supported by the findings of all data in this study. Each conclusion is presented along with a discussion of the implications for scholarship.

#### ***Conclusion 1: Campus Technological Resources and Facilities are Essential to Assuage the Impact of the Digital Divide***

EOPS students as a representation of the at-risk student population for this study has as one of its characteristics low-socioeconomic status. EOPS students live below the poverty line. Having limited financial resources results in technological barriers when participating in online education as was evidenced by this study's findings.

Participants were asked to identify the devices they use to primarily access online course content and internet at home. The quantitative data revealed that the majority (68%) of students owned their own personal computer, laptop, or tablet to access online course content. When it came to internet access, 43% had access to broadband internet service and 38% used their cell

phone data. Similarly, most students were at least satisfied with their access to reliable internet (65%), and digital devices (83%).

However, the open-ended responses revealed that satisfaction with devices and wifi coincides with the campus technological resources made available to students:

When transitioning to the online format, I needed a new laptop to help me attending zoom meetings, and doing homework. So, I applied for a relief program at school and got support to obtain my new laptop. I feel thankful for that.

245 of the 249 total participants in the study identified as being a part of the EOPS programs.

Participants who had not identified as receiving services may have qualified for the EOPS program and attended orientation but did not continue long enough to consider being a part of EOPS. The EOPS program includes as part of its services laptop loans and wifi hotspots as described by one participant, “I felt very supported by [SCA] during the pandemic because I received emails about technology assistance and financial aid from both the school and EOPS. The transition was hard but [SCA] made it very manageable.”

Furthermore, several students described campus facilities being re-opened as a primary reason impacting their ability to be successful since campus has re-opened. Several participants shared technological relief once campus re-opened, “I less depend on the software and technology since I can access the computer center at [SCA]” and:

[What changed when campus reopened was] The access to internet! The amount of times my wifi has gone out while on a Zoom Call, or when the meeting buffers and I miss a whole section of lecture. [SCA] having on-campus wifi has truly helped!

The quantitative data suggested that most EOPS students were satisfied with their technology. The qualitative data indicated that many students were informed of the campus technological resources that assuaged the impact of the first level of the digital divide—lack of hardware and software. Similarly, the data suggests that campus reopening and thereby its campus facilities provided stress-free, quiet, study environments away from the distractions at

home, “It was hard to focus at home and my family situation was rough at that time so I felt so trapped without having in person school available.”

**Implications for Scholarship.** Although the initial definition of the digital divide has been expanded to include two additional levels of digital inequality, researchers have coined the term, “digital divide” to describe the lack of access to a device and appropriate internet connectivity amongst demographic groups (Compaine, 2001; Katz, et al., 2021; McLaughlin & Resta, 2020). The findings of this study align with the literature that technology needs to be up-to-date and stable for effective virtual learning environments to be sustainable (Al-Samarraie, 2018). While most participants indicated access to reliable internet, 39% of participants indicated primarily using their mobile device as a hot-spot. Access to technology in low-income communities points to ongoing struggles related to broader resource limitations associated with poverty and social inequality (Gonzales, 2016; Ragnedda & Muschert, 2013). Especially with rising inflation costs and ongoing financial strain as a result of lost income during the pandemic, disparities in internet access should be considered from the perspective of the ongoing economic and social cost to maintain access for low-income communities (Gonzales, 2016). Access to the internet and reliable hardware and technology is more difficult when access to basic human needs such as food, transportation, and healthcare are also difficult (Gonzales, 2016; Sims, 2013). Providing reliable computers, wifi, and device loans minimizes the impact of this first level of the digital divide.

### ***Conclusion 2: Mental Health is a Critical Component for Adult Student Success***

The focus of this study was to understand the described barriers of EOPS students during the COVID-19 pandemic. A thorough analysis of the data resulted in findings that revealed the negative impact COVID-19 had on students' mental health. Especially amidst the ongoing changes and transitions related to the pandemic, results indicate the emphatic ongoing need for mental health support.

The described impact on participants' mental health was stronger than any other reported barrier. When asked to indicate their level of concern regarding their mental health, the largest response was very concerned at 41% with another 40% demonstrating some level of concern. With the exception of having high levels of concern for paying rent/mortgage (45%), no other barrier yielded higher rates of concern or dissatisfaction. Reasons for which participants' mental health was impacted included witnessing death and hospitalizations of loved ones, isolation and fear, loss of income impacting basic needs including but not limited to food and shelter, violence reported in the media, crime reported on campus, etc. Households of low socioeconomic status and families of color are more likely than higher-income and White families to contract COVID-19 (U.S. Department of Health & Human Services, 2021). The high levels of concern made it difficult for participants to focus and prioritize their academics, "My teenager was struggling with suicide and it made focusing on class hard", "I was depressed for a couple of months which hindered my life and my efficiency in my classes." Findings indicated that the strain on participants' mental health played a role in participants' decision to drop courses and suspend their education:

I felt good about taking classes online since I experience a lot of anxiety in in-person classes anyway but after the year and entering the second year of the pandemic and staying at home a lot, I became really unmotivated and even more anxious to complete my classes and have kept dropping classes since.

Positively, mental health services on the SCA campus were described several times in the qualitative data when participants were asked to describe a time they felt supported. The mental health services offered through the student health center on campus helped the participants to “cope,” “adapt,” “navigate the stress and decline in mental health during covid,” etc. The prevalence of anxiety and depression amongst participants established an impetrative need for mental health services to continue (at a minimum) and to increase in order to stabilize completion and academic success.

**Implications for Scholarship.** Findings for this study align with the literature related to COVID-19’s inequitable impact on mental health, especially for low-income, at-risk populations. CARES act funds and other economic relief efforts during the pandemic are often insufficient to aid low-income households and low-income workers, renters, and undocumented families (U.S. Department of Health & Human Services, 2021). The unprecedented mental stress from multiple directions impacting multiple facets of daily life make it difficult to concentrate, focus, and prioritize education.

COVID-19 exacerbated the internal barriers (Ibacache et al., 2021), the discrepancies in digital skills and engagement (Katz et al., 2021), thus instigating the second level of the digital divide. In addition to the self-regulation motivation, and previous education experience necessary to be successful in an online learning environment (Buzzetto-Hollywood et al., 2018; Katz et al., 2021), COVID-19 severely impacted students’ mental health (U.S. Department of Education's Office for Civil Rights, 2021). Academic success and engagement in online learning environments are impacted not just by a lack of technological access during COVID-19, but as a result of stress and mental illness.

***Conclusion 3: Holistic, Comprehensive Student Support Services Solidifies the Foundational Supports Necessary for Student Success***

This study's findings indicate that holistic care and comprehensive student services solidifies the foundational supports necessary for student success; especially during emergency situations. Most participants indicated that they felt supported by SCA during the pandemic and that SCA has done a good job of helping them to adapt to the changes in instruction during the virtual transition. The target population of this study were students who had received services from EOPS at any point during the campus closure. While the EOPS student demographic reflects at-risk populations, disproportionately impacted by the inequities within education, the EOPS program was designed to provide comprehensive services that go “over and above” expectations. Therefore, this study highlights the experiences of at-risk students who have access to comprehensive student support services.

Overall, the study's findings show that the majority of students who indicated feeling supported also recognized EOPS for providing the support. Individual staff and counseling faculty were described throughout the data, as well as programmatic events and supports. The comprehensive services that served the student holistically—beyond academics—played a major role in participants' academic success. EOPS was the most acknowledged student support program with 118 coded responses speaking positively of EOPS support and services:

EOPS care system really supported me throughout the experience. It was hard but I received a lot of mental support from the counselors [...]. It really helped me a lot in many ways and helped me overcome the pandemic and helped me grow as a person in general.

The counselor that works with EOPS [...] has been my biggest help and support. [They] helped me with my academic needs, but [they] also helped me find COVID testing near me when it was hard to book an appointment. They also helped me stay on track with my courses. The counseling services were above and beyond.

The findings also highlight instructors support with 76% of participants indicating some level of agreement that instructors showed care and concern. When asked to tell a story when they felt most supported, several participants described care that went beyond their academic needs, “My professors highly encouraged me to stay, as they stated ‘you worked way too hard just to quit now, it’s difficult times but you can do it!’ I took their words and decided to follow through.” The supports described by participants often described a human connection first, facilitating an opportunity to receive extra support in the form of referrals for additional resources, emotional support, and/or academic assistance.

Additionally, the findings of this study indicate several participants experienced loss of income and severe financial strain, creating food and housing insecurities. Several participants demonstrated food insecurities, expressing gratitude and acknowledging support from the SCA campus food pantry. The strain and pressure induced by the COVID-19 pandemic outside of school impeded participants’ ability to be successful in school. Comprehensive student services, particularly a program such as EOPS that facilitates human connection and access to resources, provides foundational supports necessary for low-income, disproportionately impacted students to be successful academically.

**Implications for Scholarship.** The COVID-19 pandemic exacerbated long-standing disparities in access to basic needs such as health care and healthy food for many families, especially low-income families of color (U.S. Department of Health & Human Services, 2021). The findings aligned with the literature regarding the tens of millions of people who lost their jobs in early 2020 with several participants elaborating on their financial difficulties. Achievement differences for both high school and college graduation rates particularly impact low-income students, especially students of color, ELL, and students with disabilities (Darling-

Hammond et al., 2014). During the COVID-19 pandemic and shelter-in-place orders, non-traditional students who were already vulnerable due to multiple life stressors were especially affected (Babb et al., 2021).

One of the ways in which community colleges alleviate increasing the equity gap and mitigate the challenges of student retention and completion, especially for disproportionately impacted students, is by providing access to student support services and programs. The EOPS program has statistically proven to have a positive impact on student retention and persistence (Willett et al., 2012). Findings for this study align with the literature regarding the positive impact EOPS comprehensive services has on student success.

***Conclusion 4: Online Learning will Most Likely Continue to be the Preferred Choice of Adult Learners as it Provides the Autonomy and Creates Flexibility and Options for Meeting Basic Needs***

The findings show that both in-person and online modalities are valued by participants. 107 coded passages revealed the preference for in-person courses and learning. 55% of participants have never taken an online course with another 16% only having taken a few at most; for most participants, online learning was new. Therefore, several open-ended responses indicated reasons why online learning in an emergency remote teaching environment created barriers for learning. The rapid transition added additional barriers with participants finding it difficult to “keep up with messages [emails]” and others desiring “hands-on experiences.”

Nevertheless, when participants were asked what their top preferred learning modality was, 37% of participants indicated 100% online and another 38% indicated a hybrid format as their top preferred learning modality. The 63 responses that indicated a preference for online learning modalities primarily listed reasons of convenience and flexibility. Several responses that reported online learning to be a barrier during the pandemic also indicated, “I got used to it” or “I

figured it out” often with the help of resources and campus supports. Although participants acknowledged that in-person learning modalities facilitated a better environment for their learning according to their experience, several of the same participants still chose online learning options as their preferred learning modality.

EOPS students bear several responsibilities outside of their academic responsibilities. Participants listed gratitude for being able to “stay at home to take care of [their] children,” to “be able to work while they went to school full time,” to “save money on gas” and to not have to make choices between food and transportation. The findings indicated that the responsibilities borne by EOPS students outside of the classroom took precedence over their experiences in the classroom.

**Implications for Scholarship.** This study’s findings align with the literature related to the needs of at-risk adult student populations. The term “non-traditional” student is typically referred to students 25 years of age and over but now has been broadened to include characteristics not typically associated with college such as delaying entry to college by at least a year, having dependents, being employed full-time, being financially independent, attending school part-time, etc. (Ross-Gordon, 2011). During the COVID-19 pandemic and shelter-in-place orders, non-traditional students who were already vulnerable due to multiple life stressors were especially affected (Babb et al., 2021).

Online education assists in providing diverse learning options, appealing to students who require flexibility (Bowen, 2013; McManus et al., 2017; Pei & Wu, 2019; Roache et al., 2020). Over the last decade, the use of technology in education has exponentially increased worldwide (Chinkes & Julien, 2019; Dunn & Kennedy, 2019); the pandemic forced students to learn online. The findings aligns with the literature that indicates that online education offerings have

increased in popularity and course offerings as it provides the autonomy and creates flexibility and options for meeting basic needs.

### **Recommendations for Practice**

The findings indicate that over the last two years during the COVID-19 pandemic, students have faced unprecedented change both physically and psychologically. These consequences have the potential to affect the work of colleges and universities for a generation (Day et al., 2021). At a minimum, the findings suggest the following recommendations for practice: an updated needs assessment, continued mental health services, investment in the EOPS program, and digital skills training.

#### ***Updated Needs Assessment***

As society adapts to a new normal, colleges must learn and inquire of their students what best serves them in this new transition and environment implementing holistic supports and comprehensive care along the way. According to the California Community College Chancellor's Office (2021), the mission and vision of the California Community College (CCC) system, simply put, is "putting students first." Under an androgogical model that respects the autonomy of adult learners along with the mission and vision of the CCC system, colleges must assess what the current, up to date, needs of their community—their students—are. At a minimum, a follow-up survey should inquire of students' needs through, yet again, another transition back to campus. Additionally, society today is not the same as it was pre-pandemic. Presenting the findings of this research is a basic first step in helping students to find connection and validation regarding their experiences during the pandemic. Following up with the community is essential to ensure the curriculum, course offerings, and support services match the needs of the community it serves post pandemic.

### ***Mental Health Services***

The findings indicate that a student-centered model post-pandemic must begin by nurturing student social and emotional well-being by providing mental health services. Extended stress, loss, grief, isolation, and uncertainty has taken a toll on many students' psychological well-being (U.S. Department of Education's Office for Civil Rights, 2021). The findings indicate that the emotional and social barriers as a result of the pandemic impacted and inhibited students' ability to learn effectively. The severity of traumatic exposure affects the subsequent adjustment to the trauma; the longer the duration of an interruption, the greater the time to recover (Davis et al., 2010; Gonzalez-Ramirez, et al., 2021). Maintaining and increasing mental health services is essential, especially with the ongoing change.

### ***Continued Investment and Support of the EOPS Program***

Community colleges are pivotal for expanding access to higher education for populations that have been historically excluded (Gupton, 2017; Klempin & Karp, 2015; Mellow, 2018; Pusser et al., 2009). Investment in student support services and programs, such as the EOPS program that provides comprehensive “over and above” care to students, is an act of digital inclusion. The EOPS program creates community and facilitates connections between students and their needed resources whether that be digital resources or access to basic needs. It is imperative before an emergency takes place for institutions of higher education, especially community colleges where a large proportion of their population are “non-traditional” students, adult learners, low-income students, and students of color (Snart, 2017), to invest in equity programs such as EOPS that statistically yield positive student success outcomes for at-risk populations.

### ***Digital Skills Training for Faculty Staff and Students***

The community college's open admission and flexible options demonstrates a critical access point to higher education. In order to meet the changing needs of students, community colleges must invest in the training necessary to transition what was learned in emergency remote teaching environments into effective digital learning environments. Distance education assists in providing diverse learning options, appealing to students who require flexibility (Bowen, 2013; McManus et al., 2017; Pei & Wu, 2019; Roache et al., 2020). As community colleges transition into a "new normal" as a result of the pandemic, At-risk student populations need and desire the autonomy and flexible learning options that online modalities allow. However, in order to navigate and successfully implement virtual learning options, faculty, staff and students need the digital skills to do so.

The researcher recommends holding ongoing trainings for faculty for effective implementation of digital resources and to create effective and accessible online courses. In order to eradicate the effects of the digital divide and facilitate digital inclusion practices, a digital skills course should be developed or embedded in existing curriculum. Both students and faculty need continued training on online courses and digital skills in order to maximize the benefits of online course offering and to keep up with the changing needs of society.

### **Limitations and Study Validity**

This study focused on one group of students who met the criteria for being considered at-risk—students who qualified and received services from EOPS at any point during the pandemic. Since the participants qualified for the EOPS program, they had access to comprehensive student support services, counseling, financial assistance, and care. The results of the study indicate that most of the participants utilized and benefited from EOPS services. Therefore, the results of this

study does not reflect the needs and the experiences of all at risk students. Additionally, SCA is one of 116 California community colleges. The results of the study will be used to guide future programming and to help inform future decisions impacting at risk student populations but does not accommodate for generalization to the broader California community college system.

The electronic survey was released to participants during a time of ongoing change. Within the time-frame of the survey's release, COVID-19 precautions on the SCA campus changed twice. Due to the changing nature of COVID policies, the decision was made to close the survey early after two weeks. Although the structure and content of the survey instrument was validated by content experts, the order of the survey sections could have increased the likelihood of participants completing the survey. Similarly, the length of the survey could have been shorter to encourage completion.

Several strategies were involved to ensure study validity. First, the survey was validated by content experts and piloted prior to distribution. Two content experts from the SCA EOPS program were provided with the research questions and survey items and suggested additions and/or changes to the structure and organization of items. The content experts are experienced community college educators who were familiar with the challenges faced by EOPS students. Following survey content validation, an electronic pilot process occurred to ensure survey reliability. The final survey was presented to 15 college-aged students at a different college who met similar demographics to EOPS students.

In relation to the qualitative component of this study, researchers should reflect how on their personal background, culture, and experiences could potentially shape interpretations especially during the coding process (Creswell & Creswell, 2018). Because of the interpretations involved with qualitative analysis, I implemented reflexivity throughout the duration of the study

to minimize potential research bias. I recorded notes and memos during the process of research and reflected on how my own personal experiences with EOPS students may shape my interpretations of the themes and codes. A rigorous analysis process was used including the use of qualitative analysis software to provide a transparent process of the coding process. Engaging with a peer-reviewer prior to the interpretation of thematic analysis findings provided support for a reliable interpretation process. Lastly, the triangulation of the two forms of data in answering research questions and arriving at study conclusions supports the internal validity of this research. This triangulation of types of data enhances the likelihood that conclusions are accurate (Creswell & Plano Clark, 2011).

### **Recommendations for Future Research**

This research provided insight and an understanding of the barriers experienced by EOPS students during the pandemic. Future research is necessary in order to continue to capture the changes related to the pandemic and virtual learning modalities and preference. Due to the vast changes to society and education as a result of the pandemic, the researcher recommends a study in order to capture up-to-date adult learning needs contributing to an updated androgogical model. Furthermore, the researcher recommends expanding the targeted population to include additional input from at-risk students. The rich data set acquired by this study reflects the experiences of at-risk students who have access to and receive comprehensive care and support. The researcher recommends broadening the target population to include at-risk students who are not in an equity program such as EOPS for comparison.

### **Closing Comments**

Prior to the pandemic, there has been a growing awareness and interest for institutions of higher education to establish an academic continuity plan for cases of crises such as natural

disasters, acts of violence, and pandemics that force institutions to temporarily close unexpectedly of an uncertain duration (Day, 2015). In California, several colleges have had to temporarily shut down their campuses as a result of fires in the area. Yet, when the campus closed abruptly as a result of the pandemic, there was minimal instruction, minimal guidelines; it was clear there was not much of a plan. The responsibility to be successful in an emergency remote teaching environment during a global pandemic primarily fell upon the student.

The California community colleges system asserts that their goal is to combat rising inequality, yet decisions are being made by leadership that are void of the student voice and by those who directly serve them on the ground level. Equity minded practice frames inequity as a problem of practice rather than a problem with students, the pandemic, etc. It is the responsibility of the institutions to create equity for all students (Malcom-Piqueux & Bensimon, 2017). Institutions must model the expectations placed upon students that require them to adapt to the multitude of changes in policies by being willing to adapt to their changing needs.

A student-centered approach acknowledges the changes in our society and communities and does not assume that the services institutions currently have in place continue to meet students' needs. With the unprecedented changes that have impacted our community, community colleges that serve non-traditional adult learners need to recognize students' need for autonomy and flexibility that can be met with efficient and effective online learning options. Approaching the data with an equity lens looks like acknowledging that the students who need online options the most are simultaneously the ones who lack the skill set to be successful in them. The responsibility falls on the institution to close that equity gap and to develop curriculum that supports and strengthens students to be successful in whatever modality that suits them best. Having a vision to put students first requires a tangible and informed plan to do so.

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## APPENDIX

### Notice of Approval for Human Research

Pepperdine University  
24255 Pacific Coast Highway  
Malibu, CA 90263  
TEL: 310-506-4000

#### NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: April 06, 2022

Protocol Investigator Name: Melissa Rosado

Protocol #: 22-03-1790

Project Title: CLOSING THE DIGITAL DIVIDE: UNDERSTANDING THE BARRIERS EXPERIENCED BY DISPROPORTIONATELY IMPACTED STUDENTS DURING THE COVID-19 PANDEMIC

School: Graduate School of Education and Psychology

Dear Melissa Rosado:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at [community.pepperdine.edu/irb](http://community.pepperdine.edu/irb).

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

cc: Mrs. Katy Carr, Assistant Provost for Research